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WITH EFFECT FROM 1ST JULY, 2017

Electrification Products Price List (₹)



Electrification products

ABB is a global leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. ABB in India serves customers in process, manufacturing and consumer industries, utilities, the oil & gas sector and infrastructure markets through a wide manufacturing and marketing network.

ABB offers a full range of low- and medium-voltage solutions to connect, protect, control and measure a wide range of electrical systems for all major industries, including the residential sector.

The business improves the reliability and efficiency of electrical installations through modular substation packages, distribution automation products, switchgear, circuit breakers, measuring and sensing devices, control products, wiring accessories, and enclosures and cabling systems,

including KNX systems designed to integrate and automate a building's lighting, ventilation, heating, and security and data communication networks.

ABB's product range serves the diverse needs of customers, offering value for money and high levels of quality and reliability. These products are backed by the technological expertise of ABB's centres of excellence across the globe, each of which excel in a specific range of low voltage products.

ABB's electrification products offering in India are designed, manufactured and tested in-house in conformance with requirements of the ISO 9000 series. These products conform to the latest IEC standards, EN specifications, national standards such as IS, BS, VDE, etc., in addition to the "CE" mark.

Electrification products

Price List (₹)

Protection and connection

Building products

Installation products

Capacitors and filter modules

Distribution automation

Other details



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ABB's comprehensive range of breakers and switches

The range of ABB breakers and switches ranks amongst the most extensive on the market with a full range of innovative solutions for various applications, helping to optimise resources, reduce energy costs, boost productivity.

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- Moulded case circuit breakers
- Air circuit breakers
- HRC fuse & Fuse base
- Switch disconnecter fuse

- Switch disconnectors
- Changeover switches - Manual & Motorized
- Auto transfer switches
- Cam switches
- Cable distribution cabinet - Kabeldon
- Fuse gear - Easyline and Inline (Fuse switch disconnector)
- Switch disconnecter for DC and photovoltaic application
- MCCB for DC and photovoltaic application



Introducing new SACE Tmax XT NEW

Simply XTraordinary

1



ABB SACE is proud to present the extraordinary result of a long and intense R&D project to you: the new SACE Tmax XT up to 250A. This is a range of moulded-case circuitbreakers created to fulfil all plant requirements, whether these be standard or technologically advanced - circuitbreakers are able to achieve performances with very high short-circuit protection values. The new SACE Tmax XT can also be equipped with fully updated electronic trip units and fitted with exceptional devices of the latest generation. There are also all types of accessories available, which are easy to install thanks to the rapid assembly system. This is just a taste of the SACE Tmax XT world - a world built on absolute excellence, a world which is Simply XTraordinary.

ArTu. Born certified.

Fully checked and certified (IEC 60439-1 and IEC 61439-1 and 2 Standard) by an external independent organisation (Acea Lovag), the ArTu switchgear is a synonym of safety and quality. The certification is the fruit of severe tests carried out on the whole configuration, consisting of metalwork structures, circuit-breakers and busbar system.

The ArTu K series switchgear is ideal for primary distribution switchgear (PowerCenter type) upto 6300A with air and moulded-case circuit-breakers and any internal segregations up to Form 4, and for floor-mounted secondary distribution switchgear with moulded-case and modular circuit-breakers. The switchgear have been tested for Internal Arc and Seismic.



Emax - Low voltage air circuit breakers

- CT (Rogowski coil) range of 400 - 6300A (E1,E2,E3,E4 and E6) with breaking capacity range of 42-150KA
- Configured breakers are now available in E1, E2 and E3 frames
- SACE Emax circuit-breakers and their accessories conform to the international IEC 60947, EN 60947 CEI EN 60947 and IEC 61000 standards and comply with following EC directives "Low Voltage Directive" (LVD) no 73/23 EEC
- "Electromagnetic Compatibility Directive" (EMC) nr. 89/336 EEC
- Complete range of common accessories
- Double insulation
- Same height and depth for the whole range
- Protection releases provide complete set of standard protection function, advanced protection functions, Measurement functions
- Optional modules (measurements, signalling, communication, wireless com) to upgrade the protection releases
- Neutral protection from OFF to 200%
- Interchangeability of releases
- Low Voltage switch disconnectors upto 6300 amps and automatic circuit breakers upto 5000 amps in 1000V DC

Note : Prices on request



Faults: no problem



Extremely simple



Completely new protection releases



Modularity

Emax - Low voltage air circuit breakers

Configured breaker		Pole	PR121 LI	PR121 LSIG	PR122 LSIG
Frame	Rating				
E1 - 50KA -Withdrawable moving part - WMP	800A Manual	3P	1SDA055712R1	1SDA055714R1	1SDA055717R1
	1000A Manual		1SDA059214R1	1SDA059222R1	1SDA059234R1
	1250A Manual		1SDA055744R1	1SDA055746R1	1SDA055749R1
	1600A Manual		1SDA055776R1	1SDA055778R1	1SDA055781R1
E2 - 65KA -Withdrawable moving part - WMP	2000A Manual		1SDA055936R1	1SDA055938R1	1SDA055941R1
E3 - 65KA -Withdrawable moving part - WMP	2500A Manual		1SDA056128R1	1SDA056130R1	1SDA056133R1
	3200A Manual		1SDA056160R1	1SDA056162R1	1SDA056165R1
E4 - 75KA -Withdrawable moving part - WMP	4000A Manual		1SDA056800R1	1SDA056802R1	1SDA056805R1
E1 - Withdrawable fixed part - WFP - HR-HR	FIXED PART WFP HR-HR	3P	1SDA059666R1		
E2 - Withdrawable fixed part - WFP-HR-HR			1SDA059667R1		
E3 - Withdrawable fixed part - WFP - HR-HR			1SDA059669R1		
E4 - Withdrawable fixed part - WFP - HR-HR			1SDA059670R1		
E1 - 50KA -Withdrawable moving part - WMP	800A Manual	4P	1SDA055720R1	1SDA055722R1	1SDA055725R1
	1000A Manual		1SDA059216R1	1SDA059224R1	1SDA059236R1
	1250A Manual		1SDA055752R1	1SDA055754R1	1SDA055757R1
	1600A Manual		1SDA055784R1	1SDA055786R1	1SDA055789R1
E2S - 65KA -Withdrawable moving part - WMP	2000A Manual		1SDA055944R1	1SDA055946R1	1SDA055949R1
E3 - 65KA -Withdrawable moving part - WMP	2500A Manual		1SDA056136R1	1SDA056138R1	1SDA056141R1
	3200A Manual		1SDA056168R1	1SDA056170R1	1SDA056173R1
E4 - 75KA -Withdrawable moving part - WMP	4000A Manual		1SDA056808R1	1SDA056810R1	1SDA056813R1
E1 - Withdrawable fixed part - WFP - HR-HR	FIXED PART WFP HR-HR	4P	1SDA059762R1		
E2 - Withdrawable fixed part - WFP-HR-HR			1SDA059763R1		
E2S - Withdrawable fixed part - WFP-HR-HR			1SDA059764R1		
E3 - Withdrawable fixed part - WFP - HR-HR			1SDA059765R1		
E4 - Withdrawable fixed part - WFP - HR-HR	1SDA059766R1				

* All the configured breaker will have accessories fitted from the factory

- Note:
1. Withdrawable fixed parts (WFP) and withdrawable moving parts (WMP) are to be ordered together for a draw out complete breaker
 2. To convert the breaker from manual operated (MDO or MF) to electrical operated (EDO or EF), order MDO/EDO conversion kit which comprises of closing coil, opening coil and motor operator. Suitable operating voltage for the conversion kit has to be mentioned.
 3. For other current rating and breaking capacity ACB requirement, contact our nearest sales office

Tmax moulded case circuit breakers

Tmax moulded-case circuit-breakers guarantee an extremely high performance level while being progressively smaller in size, simple to install and able to provide increasingly better safety guarantees for the operator.

In addition to being ideal for the secondary distribution of alternate and direct current, they feature dedicated solutions for all application requirements.

Moulded-case circuit-breakers can be used in low voltage civil and industrial installations with 1 to 3200 A operating current. The Tmax family includes 9 circuit-breaker sizes in three- or four-pole versions:

- XT1, XT2, XT3 and XT4 up to 250A;
- T4, T5 and T6 up to 1000A;
- T7 and T8 up to 3200A.

The ultimate short-circuit breaking capacity (I_{cu}) at 415V ranges from 18kA to 200kA, or up to 100kA for 690V.

The following ranges are available:

- Circuit-breakers for AC and DC power distribution;
- Circuit-breakers for zone selectivity;
- Circuit-breakers for motor protection;
- Circuit-breakers for up to 1150V AC and 1000V DC applications;
- Switch-disconnectors.

Tmax circuit-breakers can be equipped with thermomagnetic, magnetic only or electronic trip units; all of which are interchangeable.

Since assembly instructions are simple, trip units can quickly and easily be replaced; even in the field.

All this makes the circuit-breakers very easy to operate with considerable savings due to rationalized stock management.

All Tmax circuit breakers can be enhanced with a vast range of standardized accessories. This convenience not only cuts down on inventory, but creates an extremely flexible and easily managed solution.



Tmax power distribution circuit breakers

Type	I _u (40° C)[A]	U _e [V]		Category	Release	I _{cu} (380 - 415 V AC) [kA]										
		AC	DC			16	25	36	50	70	85	100	120	150	200	
XT1	160	690	500	A	TMD / TMF MF / MA	B	C	N	S	H						
XT2	160	690	500	A	TMD / TMA MF / MA Ekip LS /I Ekip I Ekip LSI Ekip LSI G Ekip M-I Ekip M-LIU Ekip M-LRIU Ekip N-LS/I			N	S	H			L	V		
XT3	250	690	500	A	MF/MA TMD TMG			N	S							
XT4	250	690	500	A	TMD / TMA MF / MA Ekip LS /I Ekip I Ekip LSI Ekip LSI G Ekip E-LSIG Ekip M-LIU Ekip M-LRIU Ekip G-LS/I Ekip N-LS/I			N	S	H			L	V		
T5	400 630	690 1150	750 1000	B (400 A) A (630 A)	TMA (500 A) TMG (500 A) PR221DS PR222DS Ekip M Ekip E-LSIG			N	S	H			L		V	
T6	630 800 1000	690 1150	750 1000	B (630A - 800 A) A (1000 A)	TMA (800 A) PR221DS PR222DS Ekip M PR223DS/EF			N	S	H		L		V		
T7	800 1000 1250 1600	690		B	PR231/P PR232/P PR331/P PR332/P				S	H			L	V		

Trip Units

Thermal magnetic trip units

- MA - Magnetic only trip unit with adjustable magnetic thresholds for motor protection
- TMF - Fixed thermal and fixed magnetic for power distribution
- TMD - Adjustable thermal (70-100%of I_n) and fixed magnetic (10 x I_n) for power distribution
- TMA - Adjustable thermal (70-100% of I_n) and adjustable magnetic (5-10 of I_n) for power distribution
- TMG - Adjustable thermal (70-100% of I_n) and low fixed magnetic (3 x I_n) for generator protection

Microprocessor based electronic trip units

Ekip LS/I or Ekip LSI	L = 0.40 - 1 of I _n	Ekip LSI G or Ekip E-LSIG	L = 0.4 - 1 of I _n	Ekip M-LIU	L = 0.4 - 1 of I _n	Ekip M-LRIU	L = 0.4 - 1 of I _n
	S = 1 - 10 of I _n		S = 0.6 - 10 of I _n		I = 6 - 13 of I _n		R = 3 - 9 of I _n
	I = 1 - 10 of I _n		I = 1.5 - 12 of I _n		U* = ON or OFF		I = 6 - 13 of I _n
			G = 0.2 - 1 of I _n				G = 0.2 - 1 of I _n
							U* = ON or OFF
PR221	L = 0.40 - 1 of I _n	PR222	L = 0.4 - 1 of I _n	PR231	L = 0.4 - 1 of I _n	PR331	L = 0.4 - 1 of I _n
	S = 1 - 10 of I _n		S = 0.6 - 10 of I _n		S = 1 - 10 of I _n		S = 0.6 - 10 of I _n
	I = 1 - 10 of I _n		I = 1.5 - 12 of I _n		I = 1 - 12 of I _n		I = 1.5 - 15 of I _n
			G = 0.2 - 1 of I _n				G = 0.2 - 1 of I _n

L = Overload S = Short circuit I = Instantaneous short circuit G = Earth fault

U = phase loss (U): With selector in ON position, circuit breaker trips if at least one current phase is lower than 0.1xI_n and at least a second one higher than 0.25xI_n;

Ekip N-LS/I : Neutral can be set in the OFF or ON positions, at 100% or at 160% of the phases

Ekip G-LS/I : neutral, in four-pole circuit-breakers, can be set in the OFF, ON positions at 50% or 100% of the phases;

PR 223 EF Early fault detection and prevention from T4 - T7. Details on request

Note: For detailed information about trip units, refer technical catalogue.

Tmax power distribution circuit breakers

XT1



Breaking Capacity at 415VAC

	Icu	Ics(Icu)
B	18kA	100%
C	25kA	100%
N	36kA	100%

TMD

Frame	In (A)	Poles	B		C		N	
			Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
XT1 160	16	3	1SDA066799R1	5,700	1SDA080825R1*	6,130	1SDA080827R1*	8,270
	20		1SDA066800R1		1SDA080826R1*		1SDA080828R1*	
	25		1SDA066801R1 ■		1SDA067391R1 ■		1SDA080829R1 ■	
	32		1SDA066802R1 ■		1SDA067392R1 ■		1SDA067411R1 ■	
	40		1SDA066803R1 ■		1SDA067393R1 ■		1SDA067412R1 ■	
	50		1SDA066804R1 ■		1SDA067394R1 ■		1SDA067413R1 ■	
	63		1SDA066805R1 ■		1SDA067395R1 ■		1SDA067414R1 ■	
	80		1SDA066806R1 ■		1SDA067396R1 ■		1SDA067415R1 ■	
	100		1SDA066807R1 ■		1SDA067397R1 ■		1SDA067416R1 ■	
	125	1SDA066808R1 ■	8,060	1SDA067398R1 ■	9,440	1SDA067417R1 ■	9,540	
	160	1SDA066809R1 ■	9,260	1SDA067399R1 ■	12,180	1SDA067418R1 ■	12,720	
	16	4	1SDA066810R1	7,860	1SDA080840R1*	8,890	1SDA080842R1*	10,450
	20		1SDA066811R1		1SDA080841R1*		1SDA080843R1*	
	25		1SDA066812R1		1SDA067400R1		1SDA080844R1	
	32		1SDA066813R1		1SDA067401R1		1SDA067419R1	
	40		1SDA066814R1		1SDA067402R1		1SDA067420R1	
	50		1SDA066815R1		1SDA067403R1		1SDA067421R1	
	63		1SDA066816R1 ■		1SDA067404R1 ■		1SDA067422R1 ■	
80	1SDA066817R1		1SDA067405R1		1SDA067423R1			
100	1SDA066818R1 ■		1SDA067406R1 ■		1SDA067424R1 ■			
125	1SDA066888R1 ■	9,970	1SDA067409R1 ■	11,230	1SDA067427R1 ■	12,270		
160	1SDA066821R1 ■	12,720	1SDA067410R1 ■	14,540	1SDA067428R1 ■	15,450		

*TMF trip unit

■ Stock items

Tmax power distribution circuit breakers

XT1

1



Breaking Capacity at 415VAC

	Icu	Ics(Icu)
S	50kA	75%
H	70kA	50%

TMD / TMF*

Frame	In (A)	Poles	S		H	
			Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
XT1 160	16	3	1SDA080830R1*	9,090	1SDA080835R1*	10,910
	20		1SDA080831R1*		1SDA080836R1*	
	25		1SDA080832R1 ■		1SDA080837R1 ■	
	32		1SDA080833R1 ■		1SDA080838R1 ■	
	40		1SDA080834R1		1SDA080839R1	
	50		1SDA067431R1		1SDA067449R1	
	63		1SDA067432R1 ■		1SDA067450R1 ■	
	80		1SDA067433R1 ■		1SDA067451R1 ■	
	100		1SDA067434R1 ■		1SDA067452R1 ■	
	125		1SDA067435R1 ■		1SDA067453R1 ■	
	160	1SDA067436R1 ■	14,540	1SDA067454R1 ■	18,180	
	16	4	1SDA080845R1*	13,180	1SDA080850R1*	15,000
	20		1SDA080846R1*		1SDA080851R1*	
	25		1SDA080847R1		1SDA080852R1	
	32		1SDA080848R1		1SDA080853R1	
	40		1SDA080849R1		1SDA080854R1	
	50		1SDA067439R1		1SDA067457R1	
	63		1SDA067440R1 ■		1SDA067458R1 ■	
	80		1SDA067441R1		1SDA067459R1	
	100		1SDA067442R1 ■		1SDA067460R1 ■	
125	1SDA067445R1 ■		15,450		1SDA067463R1 ■	
160	1SDA067446R1 ■	17,270	1SDA067464R1 ■	19,090		

*TMF trip unit

XT3

Breaking Capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	75%
S	50KA	50%

TMD

Frame	In (A)	Poles	N		S	
			Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
XT3 250	200	3	1SDA068058R1 ■	15,450	1SDA068220R1 ■	18,000
	250		1SDA068059R1 ■	17,720	1SDA068221R1 ■	20,720
	200	4	1SDA068069R1 ■	19,990	1SDA068231R1 ■	23,080
	250		1SDA068070R1 ■	22,720	1SDA068232R1 ■	24,450

■ Stock items

Tmax power distribution circuit breakers

XT2 / XT4



Breaking Capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%

TMD / TMA*

Frame	In (A)	Poles	N		S		H		
			Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	
XT2160	1.6	3	1SDA067000R1	10,540	1SDA067540R1	11,540	1SDA067584R1	16,000	
	2		1SDA067001R1		1SDA067541R1		1SDA067585R1		
	2.5		1SDA067002R1		1SDA067542R1		1SDA067586R1		
	3.2		1SDA067003R1		1SDA067543R1		1SDA067587R1		
	4		1SDA067004R1		1SDA067544R1		1SDA067588R1		
	5		1SDA067005R1		1SDA067545R1		1SDA067589R1		
	6.3		1SDA067006R1		1SDA067546R1		1SDA067590R1		
	8		1SDA067007R1		1SDA067547R1		1SDA067591R1		
	10		1SDA067008R1		1SDA067548R1		1SDA067592R1		
	12.5		1SDA067009R1		1SDA067549R1		1SDA067593R1		
	16		1SDA067010R1		1SDA067550R1		1SDA067594R1		
	20		1SDA067011R1		1SDA067551R1		1SDA067595R1		
	25		1SDA067012R1 ■		1SDA067552R1 ■		1SDA067596R1		
	32		1SDA067013R1 ■		1SDA067553R1 ■		1SDA067597R1		
	40		1SDA067014R1		1SDA067554R1		1SDA067598R1		15,540
	50		1SDA067015R1		1SDA067555R1		1SDA067599R1		
	63	1SDA067016R1 ■	1SDA067556R1 ■	1SDA067600R1					
	80	1SDA067017R1 ■	1SDA067557R1 ■	1SDA067601R1					
	100	1SDA067018R1 ■	1SDA067558R1 ■	1SDA067602R1					
	125	1SDA067019R1 ■	1SDA067559R1 ■	1SDA067603R1	21,540				
	160	1SDA067020R1 ■	1SDA067560R1 ■	1SDA067604R1	24,630				
	1.6	4	1SDA067021R1	14,000	1SDA067561R1	15,180	1SDA067605R1	19,540	
	2		1SDA067022R1		1SDA067562R1		1SDA067606R1		
	2.5		1SDA067023R1		1SDA067563R1		1SDA067607R1		
	3.2		1SDA067024R1		1SDA067564R1		1SDA067608R1		
	4		1SDA067025R1		1SDA067565R1		1SDA067609R1		
	5		1SDA067026R1		1SDA067566R1		1SDA067610R1		
	6.3		1SDA067027R1		1SDA067567R1		1SDA067611R1		
	8		1SDA067028R1		1SDA067568R1		1SDA067612R1		
	10		1SDA067029R1		1SDA067569R1		1SDA067613R1		
	12.5		1SDA067030R1		1SDA067570R1		1SDA067614R1		
	16		1SDA067031R1		1SDA067571R1		1SDA067615R1		
20	1SDA067032R1		1SDA067572R1		1SDA067616R1				
25	1SDA067033R1		1SDA067573R1		1SDA067617R1				
32	1SDA067034R1		1SDA067574R1		1SDA067618R1				
40	1SDA067035R1		1SDA067575R1		1SDA067619R1		19,180		
50	1SDA067036R1		1SDA067576R1		1SDA067620R1				
63	1SDA067037R1 ■	1SDA067577R1 ■	1SDA067621R1						
80	1SDA067038R1	1SDA067578R1	1SDA067622R1						
100	1SDA067039R1 ■	1SDA067579R1 ■	1SDA067623R1						
125	1SDA067042R1 ■	1SDA067582R1 ■	1SDA067626R1	23,630					
160	1SDA067043R1 ■	1SDA067583R1 ■	1SDA067627R1	28,900					

■ Stock items * 40 amps onwards

Tmax power distribution circuit breakers

XT2 / XT4

1



Breaking Capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%

TMA

Frame	In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
XT4 250	200	3	1SDA068090R1	18,180	1SDA068310R1	20,450	1SDA068343R1	25,900
	225		1SDA068091R1	20,450	1SDA068311R1	20,900	1SDA068344R1	27,270
	250		1SDA068092R1 ■	20,900	1SDA068312R1 ■	21,900	1SDA068345R1	27,720
	200	4	1SDA068109R1	24,540	1SDA068329R1	27,720	1SDA068362R1	31,810
	225		1SDA068110R1	24,990	1SDA068330R1	28,170	1SDA068363R1	32,260
	250		1SDA068111R1 ■	25,450	1SDA068331R1 ■	28,630	1SDA068364R1	33,540

Ekip LS/I

Frame	In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
XT2 160	10	3	1SDA067054R1	16,630	1SDA067800R1	19,990	1SDA067857R1	22,360
	25		1SDA067055R1		1SDA067801R1		1SDA067858R1	
	63		1SDA067056R1 ■	14,810	1SDA067802R1 ■	18,180	1SDA067859R1	20,540
	100		1SDA067057R1 ■	18,450	1SDA067803R1 ■	24,180	1SDA067860R1	33,580
	160		1SDA067058R1 ■		1SDA067804R1 ■		1SDA067861R1	
XT4 250	250	1SDA068126R1 ■	24,720	1SDA068475R1 ■	30,860	1SDA068515R1	33,580	
XT2 160	10	4	1SDA067090R1	21,090	1SDA067833R1	24,900	1SDA067890R1	27,900
	25		1SDA067091R1		1SDA067834R1		1SDA067891R1	
	63		1SDA067092R1 ■	19,270	1SDA067835R1 ■	23,080	1SDA067892R1	26,080
	100		1SDA067093R1 ■	25,990	1SDA067836R1 ■	32,350	1SDA067893R1	35,080
	160		1SDA067095R1 ■		1SDA067838R1 ■		1SDA067895R1	
XT4 250	250	1SDA068147R1 ■	32,260	1SDA068495R1 ■	36,030	1SDA068535R1	38,990	

Ekip LSIG

Frame	In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
XT2 160	10	3	1SDA067072R1	32,720	1SDA067815R1	34,990	1SDA067872R1	42,260
	25		1SDA067073R1		1SDA067816R1		1SDA067873R1	
	63		1SDA067074R1	30,900	1SDA067817R1	33,170	1SDA067874R1	40,440
	100		1SDA067075R1	33,170	1SDA067818R1	35,900	1SDA067875R1	43,170
	160		1SDA067076R1		1SDA067819R1		1SDA067876R1	
XT4 250	250	1SDA068141R1	34,540	1SDA068490R1	36,810	1SDA068530R1	44,990	
XT2 160	10	4	1SDA067108R1	38,900	1SDA067851R1	41,620	1SDA067908R1	50,350
	25		1SDA067109R1		1SDA067852R1		1SDA067909R1	
	63		1SDA067110R1	37,080	1SDA067853R1	39,810	1SDA067910R1	48,530
	100		1SDA067111R1	39,810	1SDA067854R1	43,080	1SDA067911R1	51,800
	160		1SDA067113R1		1SDA067856R1		1SDA067913R1	
XT4 250	250	1SDA068162R1	41,440	1SDA068510R1	44,170	1SDA068550R1	53,990	

■ Stock items

Tmax power distribution circuit breakers

XT2 / XT4



Breaking Capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%

Breaking part

Frame	Poles	N		S		H	
		Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
XT2 160	3	1SDA068163R1	Upon Request	1SDA068164R1	Upon Request	1SDA068165R1	Upon Request
XT4 160		1SDA068289R1		1SDA068290R1		1SDA068291R1	
XT4 250		1SDA068173R1		1SDA068174R1		1SDA068175R1	
XT2 160	1SDA068168R1	1SDA068169R1		1SDA068170R1			
XT4 160	1SDA068294R1	1SDA068295R1		1SDA068296R1			
XT4 250	1SDA068178R1	1SDA068179R1		1SDA068180R1			

Loose trip units

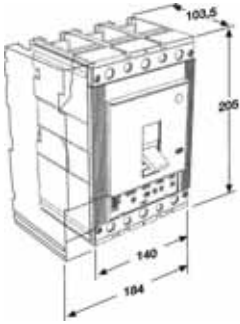
Frame	Trip Unit	In (A)	Poles	XT2		XT4	
				Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
Ekip N-LS/I	40	4	-	1SDA067375R1	-	1SDA068048R1	-
	63			1SDA067376R1		1SDA068049R1	
	100			-		1SDA068050R1	
	160			-		1SDA068051R1	
Ekip G-LS/I	25	3	-	1SDA067362R1	Upon Request	1SDA068038R1	Upon Request
	63			1SDA067363R1		1SDA068039R1	
	100			1SDA067364R1		1SDA068040R1	
	160			1SDA067365R1		1SDA068041R1	
	250			-		1SDA068042R1	
	25	4		1SDA067368R1		1SDA068043R1	
	63			1SDA067369R1		1SDA068044R1	
	100			1SDA067370R1		1SDA068045R1	
	160			1SDA067372R1		1SDA068046R1	
	250			-		1SDA068047R1	



Tmax power distribution circuit breakers

T5

1



Breaking capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%



T5 400 TMA

In (A)	Poles	N		S		H	
		Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
320	3	1SDA054436R1 ■	26,000	1SDA054440R1 ■	27,500	1SDA054444R1	34,150
400		1SDA054437R1 ■		1SDA054441R1 ■		1SDA054445R1	
320	4	1SDA054477R1	31,500	1SDA054479R1	33,500	1SDA054481R1	39,630
400		1SDA054478R1		1SDA054480R1		1SDA054482R1	

PR221 DS-LS/I

400	3	1SDA054317R1 ■	33,620	1SDA054333R1 ■	36,850	1SDA054349R1	44,610
400	4	1SDA054325R1 ■	41,750	1SDA054341R1 ■	47,700	1SDA054357R1	55,760

PR222DS/P-LSIG

400	3	1SDA054323R1 ■	49,920	1SDA054339R1 ■	52,040	1SDA054355R1	64,680
400	4	1SDA054331R1	56,780	1SDA054347R1	58,410	1SDA054363R1	72,490

PR222DS/PD-LSIG

400	3	1SDA081522R1	72,830	1SDA081525R1	74,940	1SDA081528R1	87,580
400	4	1SDA081531R1	75,960	1SDA081534R1	81,310	1SDA081537R1	95,390

Note: Order X3 connector - 1SDA055059R1 along with PR222DS/PD-LSIG

T5 630 TMA

In (A)	Poles	N		S		H	
		Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
500	3	1SDA054456R1 ■	31,820	1SDA054461R1 ■	34,570	1SDA054465R1	44,080
500	4	1SDA054487R1	40,730	1SDA054489R1	44,610	1SDA054491R1	53,520

PR221 DS-LS/I

630	3	1SDA054396R1 ■	35,800	1SDA054404R1 ■	44,100	1SDA054412R1	47,480
630	4	1SDA054400R1	48,750	1SDA054408R1	53,090	1SDA054416R1	61,920

PR222DS/P-LSIG

630	3	1SDA054399R1 ■	53,090	1SDA054407R1 ■	55,220	1SDA054415R1	66,910
630	4	1SDA054403R1	61,600	1SDA054411R1	67,960	1SDA054419R1	91,440

PR222DS/PD-LSIG

630	3	1SDA081523R1	76,000	1SDA081526R1	78,120	1SDA081529R1	89,810
630	4	1SDA081532R1	84,500	1SDA081535R1	90,870	1SDA081538R1	114,340

Note: Order X3 connector - 1SDA055059R1 along with PR222DS/PD-LSIG

■ Stock items

Tmax power distribution circuit breakers

Ekip E-LSIG NEW

New integrated solution for energy measurement

The new Ekip E-LSIG has been designed to satisfy all the applications where energy consumption management, power quality control and compactness of the system are important aspects of the installation.

Protection

The trip unit Ekip E-LSIG provides -in addition to the traditional circuit protection functions L, S, I and G- also Over Voltage and Under Voltage protections. The settings can be modified both manually, via selectors, or electronically via Ekip T&P or Modbus Communication line. With this new solution also the thermal memory -useful in order to improve the accuracy of the trip unit operation.

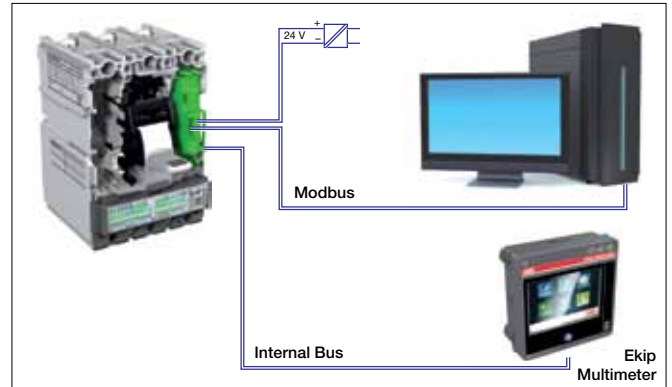
Measurements

Thanks to the integration of current and voltage sensors, Ekip E-LSIG can perform the measurements of the main electrical quantities and of the advanced Power quality indicators such as Power factor, Frequency and peak factor, Energy, Power Harmonic analysis and THD.

Accessories

The new Ekip E-LSIG can be accessorized with the following electrical devices for Tmax or Tmax XT trip units

- Aux-E, electronic auxiliary contacts
- MOE-E, stored energy motor operator
- Aux-S51, contact for signaling electronic trip unit tripped



- HMI030 or Ekip multimeter, interface on the front of the switchgear
- Current sensor for external neutral
- Ekip T&P, test and configuration kit

with the addition of the Ekip Com in the Tmax XT circuit-breaker, you can:

- acquire and transmit a wide range of information via remote control;
- accomplish the circuit-breaker opening and closing commands by means of the motor operator in the electronic version (MOE-E);
- know the state of the circuit-breaker (open/closed/trip) via remote control;
- setting the configuration and programming the unit, such as the current thresholds and the protection function curves.

and is totally compatible with all the electrical and mechanical accessories for Tmax or Tmax XT breaking parts.

XT4

N				S		H		
Frame	In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
XT4 160	40	3	1SDA069601R1	Upon request	1SDA069611R1	Upon request	1SDA069621R1	Upon request
	63		1SDA069602R1		1SDA069612R1		1SDA069622R1	
	100		1SDA069603R1		1SDA069613R1		1SDA069623R1	
	160		1SDA069604R1		1SDA069614R1		1SDA069624R1	
XT4 250	250		1SDA069605R1		1SDA069615R1		1SDA069625R1	
XT4 160	40	4	1SDA069606R1	Upon request	1SDA069616R1	Upon request	1SDA069626R1	Upon request
	63		1SDA069607R1		1SDA069617R1		1SDA069627R1	
	100		1SDA069608R1		1SDA069618R1		1SDA069628R1	
	160		1SDA069609R1		1SDA069619R1		1SDA069629R1	
XT4 250	250		1SDA069610R1		1SDA069620R1		1SDA069630R1	

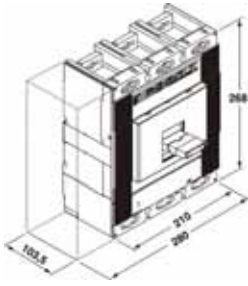
T5

N				S		H		
Frame	In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
T5 400	320	3	1SDA081043R1	Upon request	1SDA081044R1	Upon request	1SDA081045R1	Upon request
	400		1SDA081048R1		1SDA081049R1		1SDA081050R1	
T5 630	630		1SDA081063R1		1SDA081064R1		1SDA081065R1	
T5 400	320	4	1SDA081053R1	Upon request	1SDA081045R1	Upon request	1SDA081055R1	Upon request
	400		1SDA081058R1		1SDA081059R1		1SDA081060R1	
T5 630	630		1SDA081068R1		1SDA081069R1		1SDA081070R1	

Tmax power distribution circuit breakers

T6

1



Breaking Capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%



T6 630

TMA

In (A)	Poles
630	3
630	4

N	
Ordering Code	L.P.(₹)
1SDA060202R1 ■	36,630
1SDA060210R1	43,910

S	
Ordering Code	L.P.(₹)
1SDA060204R1 ■	37,700
1SDA060211R1	48,400

H	
Ordering Code	L.P.(₹)
1SDA060206R1	44,900
1SDA060212R1	55,840

T6 800

TMA

In (A)	Poles
800	3
800	4

N	
Ordering Code	L.P.(₹)
1SDA060214R1 ■	47,300
1SDA060222R1	53,440

S	
Ordering Code	L.P.(₹)
1SDA060216R1 ■	59,540
1SDA060223R1	58,550

H	
Ordering Code	L.P.(₹)
1SDA060218R1	50,630
1SDA060224R1	60,830

PR221 DS-LS/I

In (A)	Poles
800	3
800	4

N	
Ordering Code	L.P.(₹)
1SDA060268R1 ■	56,770
1SDA060273R1	64,800

S	
Ordering Code	L.P.(₹)
1SDA060278R1 ■	63,640
1SDA060283R1	79,060

H	
Ordering Code	L.P.(₹)
1SDA060289R1	77,910
1SDA060294R1	96,460

PR222DS/P-LSIG

In (A)	Poles
800	3
800	4

N	
Ordering Code	L.P.(₹)
1SDA060271R1 ■	84,280
1SDA060276R1	97,390

S	
Ordering Code	L.P.(₹)
1SDA060281R1 ■	88,220
1SDA060286R1	99,670

H	
Ordering Code	L.P.(₹)
1SDA060292R1	98,230
1SDA060297R1	1,15,610

PR222DS/PD-LSIG

In (A)	Poles
800	3
800	4

N	
Ordering Code	L.P.(₹)
1SDA081540R1	107,180
1SDA081543R1	120,290

S	
Ordering Code	L.P.(₹)
1SDA081546R1	111,120
1SDA081549R1	122,580

H	
Ordering Code	L.P.(₹)
1SDA081552R1	121,130
1SDA081555R1	138,520

T6 1000

PR221 DS-LS/I

In (A)	Poles
1000	3
1000	4

N	
Ordering Code	L.P.(₹)
1SDA060537R1	87,080
1SDA060542R1	1,26,020

S	
Ordering Code	L.P.(₹)
1SDA060547R1	93,960
1SDA060556R1	1,31,750

H	
Ordering Code	L.P.(₹)
1SDA060561R1	1,12,280
1SDA060566R1	1,60,390

PR222DS/P-LSIG

In (A)	Poles
1000	3
1000	4

N	
Ordering Code	L.P.(₹)
1SDA060540R1	1,14,570
1SDA060545R1	1,52,390

S	
Ordering Code	L.P.(₹)
1SDA060554R1	126,020
1SDA060559R1	1,60,390

H	
Ordering Code	L.P.(₹)
1SDA060564R1	1,54,670
1SDA060569R1	1,94,770

PR222DS/PD-LSIG

In (A)	Poles
1000	3
1000	4

N	
Ordering Code	L.P.(₹)
1SDA081541R1	137,470
1SDA081544R1	175,290

S	
Ordering Code	L.P.(₹)
1SDA081547R1	148,920
1SDA081550R1	183,290

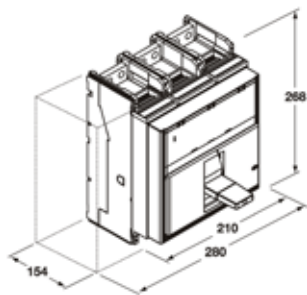
H	
Ordering Code	L.P.(₹)
1SDA081553R1	177,570
1SDA081556R1	215,770

Note: Extended front (EF) terminals are supplied as standard in T6 1000A MCCB
Order X3 connector - 1SDA055059R1 along with PR222DS/PD-LSIG

■ Stock items

Tmax power distribution circuit breakers

T7



Breaking Capacity at 415VAC

	Icu	Ics(Icu)
S	50KA	100%
H	70KA	100%



1

T7 1250

PR231/P LS/I

In (A)	Poles
1250	3
1250	4

S	
Ordering Code	L.P.(₹)
1SDA062866R1	1,20,120
1SDA062874R1	1,50,880

H	
Ordering Code	L.P.(₹)
1SDA062898R1	1,62,980
1SDA062906R1	1,94,700

PR331/P LSIG

1250	3
1250	4

1SDA062868R1	1,54,440
1SDA062876R1	1,71,530

1SDA062900R1	1,85,290
1SDA062908R1	2,18,580

PR332/P LSIG

In (A)	Poles
1250	3
1250	4

Ordering Code	L.P.(₹)
1SDA062871R1	1,60,480
1SDA062879R1	1,83,170

Ordering Code	L.P.(₹)
1SDA062903R1	1,98,360
1SDA062911R1	2,30,090

T7 1600

PR231/P LS/I

In (A)	Poles
1600	3
1600	4

S	
Ordering Code	L.P.(₹)
1SDA062994R1	1,38,300
1SDA063002R1	1,66,060

H	
Ordering Code	L.P.(₹)
1SDA063026R1	1,79,040
1SDA063034R1	2,16,020

PR331/P LSIG

1600	3
1600	4

1SDA062996R1	1,60,480
1SDA063004R1	1,88,750

1SDA063028R1	2,03,030
1SDA063036R1	2,36,330

PR332/P LSIG

1600	3
1600	4

1SDA062999R1	1,74,130
1SDA063007R1	200,360

1SDA063031R1	2,15,030
1SDA063039R1	2,52,790

T7 1250M

PR231/P LS/I

In (A)	Poles
1250	3
1250	4

S	
Ordering Code	L.P.(₹)
1SDA062882R1	1,38,300
1SDA062889R1	1,79,870

H	
Ordering Code	L.P.(₹)
1SDA062914R1	1,80,620
1SDA062922R1	2,17,100

PR331/P LSIG

1250	3
1250	4

1SDA062884R1	1,61,450
1SDA062892R1	1,87,680

1SDA062916R1	2,05,610
1SDA062924R1	2,41,000

PR332/P LSIG

1250	3
1250	4

1SDA062887R1	1,71,530
1SDA062895R1	1,99,310

1SDA062919R1	2,16,020
1SDA062927R1	2,53,980

Tmax power distribution circuit breakers

T7

1

T7 1600M PR231/P LS/I

		S		H	
In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
1600	3	1SDA063010R1	1,53,380	1SDA063042R1	2,01,940
1600	4	1SDA063018R1	1,85,190	1SDA063050R1	2,41,490

PR331/P LSIG

1600	3	1SDA063012R1	1,76,180	1SDA063044R1	2,24,340
1600	4	1SDA063020R1	2,08,440	1SDA063052R1	2,65,480

PR332/P LSIG

1600	3	1SDA063015R1	1,87,680	1SDA063047R1	2,36,330
1600	4	1SDA063023R1	2,18,530	1SDA063055R1	2,77,480

Note : For Motorizable T7 M frame, order along with above code, motor operator, shunt opening coil & shunt closing coil of required voltage.

Tmax motor protection circuit breakers

Characteristics of circuit-breakers for protecting motors

MF/MA

Main characteristics:

- available for XT1, XT2, XT3 and XT4 in the three-pole version only, these trip units are mainly used for protecting motors, in conjunction with a thermal relay and a contactor;

Protections:

- against instantaneous short-circuit (I) for XT1: for $I_n \leq 6.3A$ the protection threshold is adjustable from $4..11xI_n$; whereas for $I_n > 6.3A$ the protection threshold I is adjustable from $3..11xI_n$;
- against instantaneous short-circuit (I) for XT2: for $I_n \leq 12.5A$ the protection threshold I is fixed at $14xI_n$, whereas for $I_n > 12.5A$ the protection threshold I is adjustable from $6..14xI_n$;
- against instantaneous short-circuit (I) for XT3: the protection threshold I is adjustable from $6..12xI_n$;
- against instantaneous short-circuit (I) for XT4: the protection threshold I is adjustable from $5..10xI_n$; the magnetic protection setting is made by turning the relative cursor on the front of the release.

Ekip M-I

Main characteristics:

- only available for XT2 in three-pole version. It is normally used in combination with a thermal relay and a contactor for motor protection;

Protections:

- against instantaneous short-circuit (I): protection threshold adjustable from $6..14xI_n$, with instantaneous trip curve; manual setting by means of the special dip-switches positioned on the front of the trip unit, which allow its adjustment even with the trip unit off;

LED:

- fixed green LED which indicates correct operation of the trip unit; the LED lights up for a current over $0.2xI_n$;

Test connector positioned on the front of the trip unit:

- for connection of the Ekip TT test unit, which allows the trip test and the LED test;
- for connection of the Ekip T&P unit, which allows the measurements to be read, to carry out the trip test and to carry out the protection function test;
- self-supply starting from a minimum current of $0.2 \times I_n$.

Ekip M-LIU

Main characteristics:

- available for XT2 and XT4 in the three-pole version, this device protects motors. The L protection function protects the motor against overloads, in accordance with the indications and classes defined by standard IEC 60947-4-1;

Protections:

- against overloads (L): $0.4..1xI_n$ adjustable threshold. The operating time is established by choosing the operating class defined by Standard IEC 60947-4-1: Class 3E, 5E, 10E, 20E;
- against short-circuits (I): $6..13xI_n$ adjustable threshold with instantaneous operating time;
- against phase loss (U): the protection can be selected either in the ON or OFF position. With selector in ON position, circuit breaker trips if at least one current phase is lower than $0.1xI_n$ and at least a second one higher than $0.5xI_n$; manual setting using the relative dip-switches on the front of the release;
- LED on with steady green light indicating that the trip unit is supplied correctly. The LED comes on when the current exceeds $0.2xI_n$;
- red LED for each protection:
 - L: LED with steady red light, indicates pre-alarm for current exceeding $0.9xI_n$;
 - L: LED with flashing red light, indicates alarm for current exceeding setted threshold;
 - LIU: LED with steady red light, shows that the protection has tripped. After the circuitbreaker has opened, connect the Ekip TT or Ekip T&P accessory to find out which protection function tripped the trip unit;
- release Ekip M-LIU is equipped with a trip coil disconnection detection device that detects whether the opening solenoid has disconnected. Signalling is made by all the red LEDs flashing simultaneously;
- test connector on the front of the release:
 - to connect the Ekip TT trip test unit, which allows trip test, LED test and signalling about the latest trip happened;
 - to connect the Ekip T&P unit, which allows the measurements to be read, the trip test to be conducted and the protection function test to be carried out;
- thermal memory always active;
- self-supply starting from a minimum current of $0.2xI_n$.

Tmax motor protection circuit breakers

Ekip M-LRIU

Main characteristics:

- available for XT2 and XT4 in the three-pole version, this device is generally used for protecting integrated motors;

– Protections:

- against overloads (L): $0.4 \dots 1 \times I_n$ adjustable threshold. The operating time is established by choosing the operating class defined by standard IEC 60947-4-1;
- rotor locking (R): with adjustable threshold in the OFF position or from $3 \dots 9 \times I_1$, with settable operating time;
- against instantaneous short-circuits (I): with adjustable threshold from $6 \dots 13 \times I_n$ and instantaneous operating time;
- against phase loss (U): With selector in ON position, circuit breaker trips if at least one current phase is lower than $0.1 \times I_n$ and at least a second one higher than $0.25 \times I_n$;

– setting:

- manual setting using the relative dip-switches on the front of the trip unit, which allow the settings to be made even when the trip unit is off;
- electronic setting, made both locally using Ekip T&P or Ekip Display accessory and via remote control, by means of the dialogue unit Ekip Com. Use of electronic setting allows other functions to be activated:

- **function for protection against earth faults (G): $0.2 \dots 1 \times I_n$ adjustable protection threshold, with a time constant trip curve;**

- duty mode setting (Normal/Heavy):

- the Normal duty mode requires use of a circuit-breaker and a contactor. In the case of tripping, the Ekip M-LRIU release commands the opening of the contactor via PR212/CI;
- the Heavy duty mode foresees circuit-breaker opening for all overcurrent conditions, and just the function of motor operation is entrusted to the contactor;

– BACK UP function:

- this protection is designed to handle the situation whereby, in the Normal duty mode, the opening command transmitted to the contactor via PR212/CI has not been implemented, i.e. the contactor has not tripped. If this happens, the Ekip M-LRIU release transmits a trip command directly to the circuit-breaker after having waited a time defined. A waiting time between the command transmitted to the contactor and the back-up command transmitted to the circuit-breaker is required so as to take the contactor opening time into account;

– PTC protection setting:

- PTC: this protection, monitors the temperature inside the protected motor by means of a PTC sensor. If the temperature is too high, the Ekip M-LRIU release will command contactor opening (if the mode is “Normal”) or circuit-breaker opening (if the mode is “Heavy”). To realize this protection is necessary to order the connector available for PTC;
- LED on with steady green light indicating that the trip unit is supplied correctly. The LED comes on when the current exceeds $0.2 \times I_n$;
- red LED for each protection;
- thermal memory always active;
- self-supply from a minimum current of $0.2 \times I_n$ up;
- **with the addition of the Ekip Com in the circuit-breaker, you can:**
 - acquire and transmit a wide range of information via remote control;
 - accomplish the circuit-breaker opening and closing commands by means of the motor operator in the electronic version (MOE-E);
 - know the state of the circuit-breaker (open/closed/trip) via remote control;
 - setting the configuration and programming parameters of the unit, such as the current thresholds and the protection function curves.

Tmax motor protection circuit breakers

XT2 / XT4



Breaking capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%

MF/MA*

Frame	In (A)	Poles	N		S		H	
			Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
XT2 160	1	3	1SDA067044R1	11,450	1SDA067760R1	12,370	1SDA067770R1	13,580
	2		1SDA067045R1		1SDA067761R1		1SDA067771R1	
	4		1SDA067046R1		1SDA067762R1		1SDA067772R1	
	8.5		1SDA067047R1		1SDA067763R1		1SDA067773R1	
	12.5		1SDA067048R1		1SDA067764R1		1SDA067774R1	
	20		1SDA067049R1		1SDA067765R1		1SDA067775R1	
	32		1SDA067050R1		1SDA067766R1		1SDA067776R1	
	52		1SDA067051R1		1SDA067767R1		1SDA067777R1	
	80		1SDA067052R1		1SDA067768R1		1SDA067778R1	
	100		1SDA067053R1		1SDA067769R1		1SDA067779R1	
XT4 250	160	1SDA076529R1	13,540	1SDA076530R1	14,180	1SDA076535R1	18,630	
	200	1SDA068121R1	23,950	1SDA068440R1	26,080	1SDA068450R1	31,300	

* 20 amps onwards

Ekip M-I

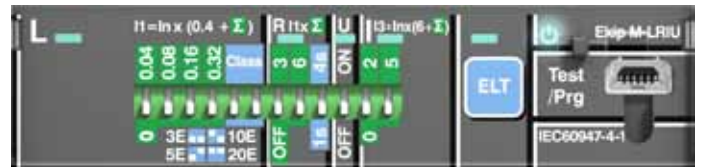
NEW

Frame	In (A)	Poles	N		S		H	
			Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
XT2 160	20	3	1SDA067086R1	15,130	1SDA067829R1	18,180	1SDA067886R1	19,180
	32		1SDA067087R1		1SDA067830R1		1SDA067887R1	
	52		1SDA067088R1		1SDA067831R1		1SDA067888R1	
	100		1SDA067089R1		1SDA067832R1		1SDA067889R1	
	160		1SDA067063R1		18,720		1SDA067809R1	
XT4 250	250	1SDA068131R1	28,630	1SDA068480R1	31,080	1SDA068520R1	36,810	

Loose trip units EKIP M-LIU

NEW

Frame	In (A)	Poles	Ordering Code	L.P.(₹)
XT2	25	3	1SDA067352R1	Upon request
	63		1SDA067353R1	
	100		1SDA067354R1	
	160		1SDA067355R1	



Ekip M-LRIU

Frame	In (A)	Poles	Ordering Code	L.P.(₹)
XT2	25	3	1SDA067357R1	Upon request
	63		1SDA067358R1	
	100		1SDA067359R1	
XT4	160	1SDA068036R1	Upon request	
	200	1SDA068037R1		

Tmax motor protection circuit breakers

XT3

1



Breaking capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	75%
S	50KA	50%

MA

N

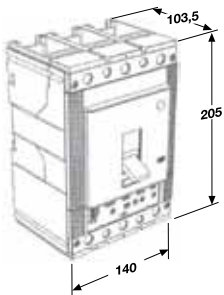
S

Frame	In (A)	Poles
XT3 250	100	3
	125	
	160	
	200	

Ordering Code	L.P.(₹)
1SDA068071R1	13,540
1SDA068072R1	
1SDA068073R1	
1SDA068074R1	15,540

Ordering Code	L.P.(₹)
1SDA068279R1	14,090
1SDA068280R1	
1SDA068281R1	
1SDA068282R1	

T5



Breaking capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%



T5 400

PR221 DS-I

N

S

H

In (A)	Poles
400	3

Ordering Code	L.P.(₹)
1SDA054319R1	32,970

Ordering Code	L.P.(₹)
1SDA054335R1	36,140

Ordering Code	L.P.(₹)
1SDA054351R1	43,740

Ekip M-LRIU

NEW

N

S

In (A)	Poles
320	3
400	3

Ordering Code	L.P.(₹)
1SDA054551R1	53,120
1SDA054552R1	

Ordering Code	L.P.(₹)
1SDA054553R1	59,580
1SDA054554R1	

T5 630

PR221 DS-I

N

S

H

In (A)	Poles
630	3

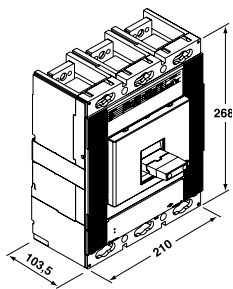
Ordering Code	L.P.(₹)
1SDA054397R1	35,110

Ordering Code	L.P.(₹)
1SDA054405R1	39,330

Ordering Code	L.P.(₹)
1SDA054413R1	46,560

Tmax motor protection circuit breakers

T6



Breaking capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%



T6 800

PR221 DS-I

In (A)	Poles
800	3

N	
Ordering Code	L.P.(₹)
1SDA060269R1	56,770

S	
Ordering Code	L.P.(₹)
1SDA060279R1	63,640

H	
Ordering Code	L.P.(₹)
1SDA060290R1	77,910

Ekip M-LRIU

NEW

In (A)	Poles
630	3

Ordering Code	L.P.(₹)
1SDA060311R1	74,680

Ordering Code	L.P.(₹)
1SDA060312R1	81,660

Ordering Code	L.P.(₹)
1SDA060313R1	94,830

T6 1000

PR221 DS-I

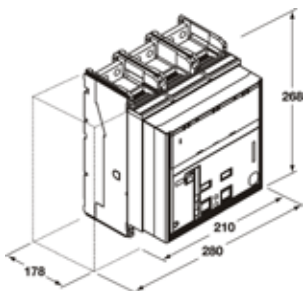
In (A)	Poles
1000	3

N	
Ordering Code	L.P.(₹)
1SDA060538R1	87,080

S	
Ordering Code	L.P.(₹)
1SDA060548R1	93,960

H	
Ordering Code	L.P.(₹)
1SDA060562R1	1,19,760

T7



Breaking Capacity at 415VAC

	Icu	Ics
S	50KA	100%
H	70KA	100%



T7 1250

PR231/P I

In (A)	Poles
1250	3
1250	4

S	
Ordering Code	L.P.(₹)
1SDA062865R1	1,14,080
1SDA062873R1	1,48,380

H	
Ordering Code	L.P.(₹)
1SDA062897R1	1,61,880
1SDA062905R1	1,93,600

T7 1600

PR231/P I

In (A)	Poles
1600	3
1600	4

S	
Ordering Code	L.P.(₹)
1SDA062993R1	1,37,230
1SDA063001R1	1,64,530

H	
Ordering Code	L.P.(₹)
1SDA063025R1	1,78,050
1SDA063033R1	2,13,430

T7 1250M

PR231/P I

In (A)	Poles
1250	3
1250	4

S	
Ordering Code	L.P.(₹)
1SDA062881R1	1,41,060
1SDA062889R1	1,63,470

H	
Ordering Code	L.P.(₹)
1SDA062913R1	1,79,630
1SDA062921R1	2,16,020

T7 1600M

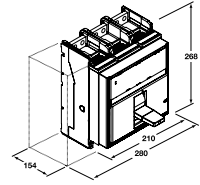
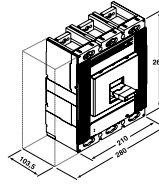
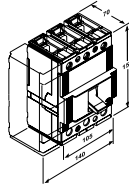
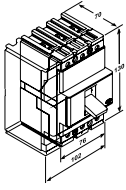
PR231/P I

In (A)	Poles
1600	3
1600	4

S	
Ordering Code	L.P.(₹)
1SDA063009R1	1,52,420
1SDA063017R1	1,83,170

H	
Ordering Code	L.P.(₹)
1SDA063041R1	2,00,950
1SDA063049R1	2,41,000

Tmax switch disconnectors



1

XT1D - Fixed (F), I_{cw} (1s) = 2 kA

XT1D 160 F F

Poles	In(A)	Ordering Code	L.P.(₹)
3	160	1SDA068208R1	7,360
4	160	1SDA068209R1	11,000

XT3D - Fixed (F), I_{cw} (1s) = 3 kA

XT3D 250 F F

In(A)	Ordering Code	L.P.(₹)
250	1SDA068210R1	16,590
250	1SDA068211R1	19,860

XT4D- Fixed (F), I_{cw} (1s) = 3,6 kA

T4D 250 F F

Poles	In(A)	Ordering Code	L.P.(₹)
3	250	1SDA068212R1	18,790
4	250	1SDA068213R1	24,970

T5D- Fixed (F) , I_{cw} (1s) = 3,6 kA

T5D 400 F F

Poles	In(A)	Ordering Code	L.P.(₹)
3	400	1SDA054599R1	24,430
4	400	1SDA054600R1	31,020

T5D 630 F F

In(A)	Ordering Code	L.P.(₹)
500	1SDA054601R1	29,740
500	1SDA054602R1	37,920

T6D - Fixed (F), I_{cw} (1s) = 15 kA

T6D 630 F F

Poles	In(A)	Ordering Code	L.P.(₹)
3	630	1SDA060343R1	33,660
4	630	1SDA060344R1	40,470

T6D 800 F F

In(A)	Ordering Code	L.P.(₹)
800	1SDA060345R1	37,170
800	1SDA060346R1	60,750

T6D 1000 E F

In(A)	Ordering Code	L.P.(₹)
1000	1SDA060594R1	64,780
1000	1SDA060595R1	80,930

T7D- Fixed (F), I_{cw} (1s) = 20 kA

T7D 1000 F F

Poles	In(A)	Ordering Code	L.P.(₹)
3	1000	1SDA062032R1	73,540
4	1000	1SDA062033R1	93,740

T7D 1250 F F

In(A)	Ordering Code	L.P.(₹)
1250	1SDA062036R1	100,160
1250	1SDA062037R1	123,200

T7D 1600 F F

In(A)	Ordering Code	L.P.(₹)
1600	1SDA062040R1	1,14,840
1600	1SDA062041R1	1,41,340

T7D M - Fixed (F), I_{cw} (1s) = 20 kA

T7D 1000 M F F

Poles	In(A)	Ordering Code	L.P.(₹)
3	1000	1SDA062034R1	90,790
4	1000	1SDA062035R1	114,900

T7D 1250 M F F

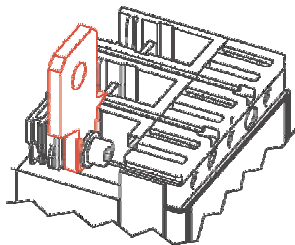
In(A)	Ordering Code	L.P.(₹)
1250	1SDA062038R1	1,14,840
1250	1SDA062039R1	1,41,340

T7D 1600 M F F

In(A)	Ordering Code	L.P.(₹)
1600	1SDA062042R1	1,26,420
1600	1SDA062043R1	1,57,550

Tmax accessories

Accessories for T-Max MCCBs



Extended Spreaded terminals - ES			
Frame	Description	Ordering code	L.P.(₹)
XT1	KIT ES XT1 6pcs	1SDA066891R1	1,550
	KIT ES XT1 8pcs	1SDA066892R1	2,090
XT2	KIT ES XT2 6pcs	1SDA066895R1	2,110
	KIT ES XT2 8pcs	1SDA066896R1	2,590
XT3	KIT ES XT3 6pcs	1SDA066899R1	2,270
	KIT ES XT3 8pcs	1SDA066900R1	2,910
XT4	KIT ES XT4 6pcs	1SDA066903R1	2,640
	KIT ES XT4 8pcs	1SDA066904R1	3,320
T5	Kit EST5 6pcs	1SDA055038R1	3,770
	Kit EST5 8pcs	1SDA055039R1	5,020

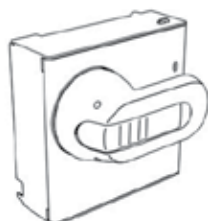
Note: Phase barrier supplied as standard with above copper spreaders.

Separator - PB			
Frame	Description	Ordering code	L.P.(₹)
XT1-XT3	PB 25mm 4pcs XT1-XT3 3p	1SDA066674R1	620
	PB 100mm 4pcs XT1-XT3 3p	1SDA066676R1	620
	PB 200mm 4pcs XT1-XT3 3p	1SDA066678R1	780
	PB 25mm 6pcs XT1-XT3 4p	1SDA066679R1	920
	PB 100mm 6pcs XT1-XT3 4p	1SDA066681R1	920
	PB 200mm 6pcs XT1-XT3 4p	1SDA066683R1	1,160
XT2-XT4	PB 25mm 4pcs XT2-XT4 3p	1SDA069062R1	620
	PB 100mm 4pcs XT2-XT4 3p	1SDA066675R1	650
	PB 200mm 4pcs XT2-XT4 3p	1SDA066677R1	990
	PB 25mm 6pcs XT2-XT4 4p	1SDA069063R1	920
	PB 100mm 6pcs XT2-XT4 4p	1SDA066680R1	990
	PB 200mm 6pcs XT2-XT4 4p	1SDA066682R1	1,490
T5	PB100 4 pcs - Low T4, T5	1SYN850207R0001 ■	870
	PB100mm 4pcs T4-5-T7-A3 3P	1SDA054970R1	810
	PB 100mm 6pcs T4-5-T7-A3 3P	1SDA054971R1	1,300
	PB100 4 pcs - Low T4, T5	1SYN850207R0001 ■	870
	PB100 6 pcs - Low T4, T5 - 400A	1SYN850210R0001	1,250

Note: For T5 630A contact the nearest sales office

Rotary handle operating mechanism

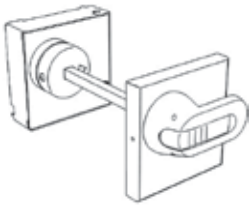
Direct - RHD			
Frame	Description	Ordering code	L.P.(₹)
XT1-XT4	RHD XT1-XT3 F/P STANDARD DIRECT	1SDA066475R1	1,450
	RHD XT2-XT4 F/P STANDARD DIRECT	1SDA069053R1	1,730
	RHD XT2-XT4 W STANDARD DIRECT	1SDA066476R1	1,730
T5	RHD Normal for Fixed/Plug-in T4-T5	1SDA054926R1 ■	3,110
	RHD_EM Emergency for Fixed/Plug-in T4-T5	1SDA054927R1	3,340
	RHD Normal for Withdrawable T4-T5	1SDA054928R1	3,450
	RHD_EM Emergency for Withdrawable T4-T5	1SDA055234R1	3,880
T6	RHD Normal for Fixed T6	1SDA060405R1	4,250
	RHD Normal for Withdrawable T6	1SDA060407R1	5,360
	RHD_EM Emergency for Fixed T6	1SDA060406R1	5,620
T7	RHD_EM Emergency for Withdrawable T6	1SDA060408R1	5,930
	RHD Normal for Fixed/Plug-in T7	1SDA062120R1	5,530
	RHD_EM Emergency for Fixed/Withdrawable T7	1SDA062121R1	6,030



■ Stock items

Tmax accessories

1



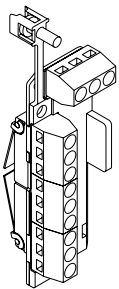
Transmitted - RHE			
Frame	Description	Ordering code	L.P.(₹)
XT1-XT4	RHE XT1-XT3 F/P STANDARD RETURNED(250mm)	1SDA082810R1	1,350
	RHE XT1-XT3 F/P STANDARD RETURNED (500mm)	1SDA066479R1	1,550
	RHE XT2-XT4 F/P STANDARD RETURNED (250mm)	1SDA082811R1	1,800
	RHE XT2-XT4 F/P STANDARD RETURNED (500mm)	1SDA069055R1	2,000
	RHE XT2-XT4 W STANDARD RETURNED	1SDA066480R1	2,000
	RHS L XT2-XT4 F/P STAND. SX LATERAL	1SDA069058R1	3,140
	RHS R XT2-XT4 F/P STAND. DX LATERAL	1SDA069060R1	3,140
T5	RHE Normal for Fixed/Plug-in T4-T5 250mm	1SDA070447R1 ■	2,900
	RHE_EM Emergency for Fixed/Plug-in T4-T5	1SDA054930R1	5,590
	RHE Normal for Withdrawable T4-T5	1SDA054933R1	5,300
	RHE_EM Emergency for Withdrawable T4-T5	1SDA054934R1	5,520
T6	RHE Normal for Fixed T6	1SDA060409R1 ■	5,540
	RHE Normal for Withdrawable T6	1SDA060411R1	6,440
	RHE_EM Emergency for Fixed T6	1SDA060410R1	6,940
	RHE_EM Emergency for Withdrawable T6	1SDA060412R1	6,440
T7	RHE Normal for Fixed/Plug-in T7	1SDA062122R1	6,720
	RHE_EM Emergency for Fixed/Withdrawable T7	1SDA062123R1	8,040



Electrical signals

Auxillary Contact - AUX (uncabled version)

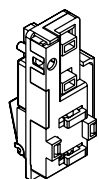
Frame	Description	Ordering code	L.P.(₹)
XT1...XT4	AUX 1Q 250Vac/dc XT1...XT4	1SDA066422R1	820
	AUX 1Q 24Vdc XT1...XT4	1SDA066423R1	1,270



Auxillary Contact - AUX

Frame	Description	Ordering code	L.P.(₹)
T5..T6(1)	AUX 1Q 1SY 250V AC/DC T1...T6 (1)	1SDA051368R1 ■	1,440
	AUX 3Q 1SY 250V AC/DC T1...T6 (1)	1SDA051369R1 ■	2,330
	AUX 3Q 1SY 24V DC T1...T6 (1)	1SDA054914R1	2,240
T5	AUX-SA 1 S51 T4-T5	1SDA055050R1	
T7M-X1	AUX 2Q 24V DC T7M-X1	1SDA062101R1	1,440
	AUX 2Q 400V AC T7M-X1	1SDA062102R1	
T7M-X1	AUX SA T7M-X1 S51 24VDC	1SDA066100R1	5,520
	AUX SA T7M-X1 S51 250VAC	1SDA063553R1	6,430
T7	AUX 1Q + 1SY 24V DC T7	1SDA062103R1	2,240
	AUX 1Q + 1SY 400V AC T7	1SDA062104R1	

Note: For T7 TM in Withdrawable Version Sliding Contact Blocks for Fixed and moving Part are Necessary

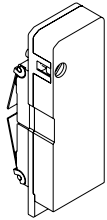


Cabled Contact in Electronic Version

Frame	Description	Ordering code	L.P.(₹)
T5	AUX-E-C 1Q 1SY T4-T5	1SDA054916R1	5,220
T6	AUX-E-C 1Q 1SY T6	1SDA064161R1	5,530

■ Stock items

Tmax accessories



Auxiliary Contact Cabled-Version - AUX - C

Frame	Description	Ordering code	L.P.(₹)
XT1....XT4	AUX-C 1Q+1SY 250V AC/DC XT1..XT4 F/P	1SDA066431R1	1,360
	AUX-C 2Q+1SY 250VAC/DC XT1..XT4 F/P	1SDA066433R1	2,180
	AUX-C 3Q+1SY 250VAC/DC XT2..XT4 F/P	1SDA066434R1	2,590
	AUX-C 3Q+2SY 250VAC/DC XT2-XT4 F/P	1SDA066436R1	3,180
	AUX-C 2Q+2SY+1S51 250VAC/DC XT2-XT4 F/P	1SDA066438R1	3,450
	AUX-C 2Q 400V AC XT2-XT4 F/P	1SDA066440R1	1,640
	AUX-C 1Q+1SY 400Vac XT2-XT4 F/P	1SDA066444R1	2,610
	AUX-C 1Q+1SY 24Vdc XT1..XT4 F/P	1SDA066446R1	1,910
	AUX-C 3Q+1SY 24VDC XT2..XT4 F/P	1SDA066448R1	3,000
T5-T6	AUX-C 1Q 1SY 250V AC/DC C T4-T5-T6	1SDA054910R1	2,100
	AUX-C 1Q 1SY 400V AC C T4-T5-T6	1SDA054912R1	3,100
	AUX-C 2Q 400V AC C T4-T5-T6	1SDA054913R1	3,550
	AUX-C 3Q 1SY 24VDC C T4-T5-T6	1SDA054915R1	3,020
	AUX-C 3Q 1SY 250V AC/DC C T4-T5-T6	1SDA054911R1	3,940

Opening release

Shunt Opening Release - SOR (Uncabled version)

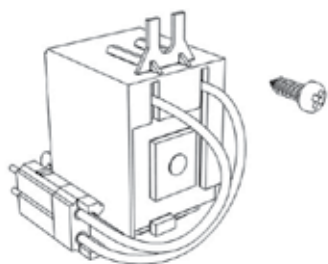
Frame	Description	Ordering code	L.P.(₹)
XT1....XT4	SOR XT1..XT4 12 VDC	1SDA066313R1	1,910
	SOR XT1..XT4 24-30 V AC/DC	1SDA066314R1	
	SOR XT1..XT4 48-60 V AC/DC	1SDA066315R1	
	SOR XT1..XT4 110...127 V ac-110...125 V dc	1SDA066316R1	
	SOR XT1..XT4 220...240 V ac-220...250 V dc	1SDA066317R1	
	SOR XT1..XT4 380-440 V ac	1SDA066318R1	
	SOR XT1..XT4 480-525 V ac	1SDA066319R1	
T5-T6	SOR 12V DC T4-T5-T6	1SDA054862R1	2,890
	SOR 24V AC/DC T4-T5-T6	1SDA054863R1	
	SOR 48...60V AC/DC T4-T5-T6	1SDA054864R1	
	SOR 110...120V AC-110...125V DC T4-T5-T6	1SDA054865R1	
	SOR 220...240V AC-220...250V DC T4-T5-T6	1SDA054866R1 ■	
	SOR 380...440V AC T4-T5-T6	1SDA054867R1	
	SOR 480...500V AC T4-T5-T6	1SDA054868R1	
T7-T7M-X1	SOR 24V AC/DC T7-T7M-X1	1SDA062065R1	5,660
	SOR 30V AC/DC T7-T7M-X1	1SDA062066R1	
	SOR 48V AC/DC T7-T7M-X1	1SDA062067R1	
	SOR 60V AC/DC T7-T7M-X1	1SDA062068R1	
	SOR 110...120V AC/DC T7-T7M-X1	1SDA062069R1	
	SOR 120...127V AC/DC T7-T7M-X1	1SDA063547R1	
	SOR 220...240V AC/DC T7-T7M-X1	1SDA063548R1 ■	
	SOR 240...250V AC/DC T7-T7M-X1	1SDA062070R1	
	SOR 380...400V AC T7-T7M-X1	1SDA062071R1	
SOR 415...440V AC T7-T7M-X1	1SDA062072R1		

Note: For T7 TM in Withdrawable Version Sliding Contact Blocks for Fixed and Moving Part are Necessary

■ Stock items

Tmax accessories

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Shunt opening release - SOR - C (Cabled version)				
Frame	Description	Ordering code	L.P.(₹)	
XT1...XT4	SOR-C XT1...XT4 F/P 12 Vdc	1SDA066321R1	2,910	
	SOR-C XT1...XT4 F/P 24-30 Vac/dc	1SDA066322R1		
	SOR-C XT1...XT4 F/P 48-60 Vac/dc	1SDA066323R1		
	SOR-C XT1...XT4 F/P 110-127Vac-110-125Vdc	1SDA066324R1		
	SOR-C XT1...XT4 F/P 220-240Vac-220-250Vdc	1SDA066325R1		
	SOR-C XT1...XT4 F/P 380-440 Vac	1SDA066326R1		
	SOR-C XT1...XT4 F/P 480-525 Vac	1SDA066327R1		
	SOR-C XT2-XT4 W 12 Vdc	1SDA066328R1		3,410
	SOR-C XT2-XT4 W 24-30 Vac/dc	1SDA066329R1		
	SOR-C XT2-XT4 W 48-60 Vac/dc	1SDA066330R1		
	SOR-C XT2-XT4 W 110-127Vac-110-125Vdc	1SDA066331R1		
	SOR-C XT2-XT4 W 220-240Vac-220-250Vdc	1SDA066332R1		
SOR-C XT2-XT4 W 380-440 Vac	1SDA066333R1			
SOR-C XT2-XT4 W 480-525 Vac	1SDA066334R1	5,110		
T5-T6	SOR-C 12V DC T4-T5-T6		1SDA054869R1	
	SOR-C 24V AC/DC T4-T5-T6		1SDA054870R1	
	SOR-C 48...60V AC/DC T4-T5-T6		1SDA054871R1	
	SOR-C 110...120V AC-110...125V DC T4-T5-T6		1SDA054872R1	
	SOR-C 220...240V AC-220...250V DC T4-T5-T6		1SDA054873R1	
	SOR 380...440V AC T4-T5-T6	1SDA054875R1		
SOR 480...500V AC T4-T5-T6	1SDA054868R1			

Test unit- SOR

Frame	Description	Ordering code	L.P.(₹)
T7-T7M-X1-E1/6	SOR test unit T7-T7M-X1-E1/6	1SDA050228R1	26,540

Under voltage release - UVR (Uncabled version)

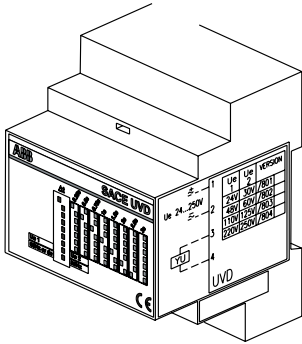
Frames	Description	Ordering code	L.P.(₹)
XT1...XT4	UVR XT1...XT4 24-30 VAC/DC	1SDA066389R1	3,590
	UVR XT1...XT4 48 VAC/DC	1SDA069064R1	
	UVR XT1...XT4 60 VAC/DC	1SDA066390R1	
	UVR XT1...XT4 110-127Vac-110-125Vdc	1SDA066391R1	
	UVR XT1...XT4 220-240Vac-220-250Vdc	1SDA066392R1	
	UVR XT1...XT4 380-440 Vac	1SDA066393R1	
	UVR XT1...XT4 480-525 Vac	1SDA066394R1	
T5-T6	UVR 24V AC/DC T4-T5-T6	1SDA054880R1	6,690
	UVR 48V AC/DC T4-T5-T6	1SDA054881R1	
	UVR 60V AC/DC T4-T5-T6	1SDA054882R1	
	UVR 110...120V AC-110...125V DC T4-T5-T6	1SDA054883R1	
	UVR 220...240V AC-220...250V DC T4-T5-T6	1SDA054884R1	
	UVR 380...440V AC T4-T5-T6	1SDA054885R1	
	UVR 480...500V AC T4-T5-T6	1SDA054886R1	
T7-T7M-X1	UVR 24V AC/DC T7-T7M-X1	1SDA062087R1	7,530
	UVR 30V AC/DC T7-T7M-X1	1SDA062088R1	
	UVR 48V AC/DC T7-T7M-X1	1SDA062089R1	
	UVR 60V AC/DC T7-T7M-X1	1SDA062090R1	
	UVR 110...120V AC/DC T7-T7M-X1	1SDA062091R1	
	UVR 120...127V AC/DC T7-T7M-X1	1SDA063551R1	
	UVR 220...240V AC/DC T7-T7M-X1	1SDA063552R1	
	UVR 240...250V AC/DC T7-T7M-X1	1SDA062092R1	
	UVR 380...400V AC T7-T7M-X1	1SDA062093R1	
	UVR 415...440V AC T7-T7M-X1	1SDA062094R1	

Note: For T7 TM in Withdrawable version sliding contact blocks for Fixed and Moving part are necessary

■ Stock items

Tmax accessories

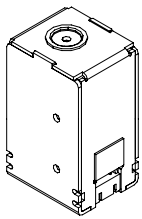
Under Voltage Release C - UVR - C (Cabled version)			
Frame	Description	Ordering code	L.P.(₹)
XT1....XT4	UVR-C XT1...XT4 F/P 24-30 VAC/DC	1SDA066396R1	5,590
	UVR-C XT1...XT4 F/P 48 Vac/dc	1SDA069065R1	
	UVR-C XT1...XT4 F/P 60 Vac/dc	1SDA066397R1	
	UVR-C XT1...XT4 F/P 110-127Vac-110-125Vdc	1SDA066398R1	
	UVR-C XT1...XT4 F/P 220-240Vac-220-250Vdc	1SDA066399R1	
	UVR-C XT1...XT4 F/P 380-440 Vac	1SDA066400R1	
	UVR-C XT1...XT4 F/P 480-525 Vac	1SDA066401R1	
	UVR-C XT2-XT4 W 24-30 Vac/dc	1SDA066403R1	
	UVR-C XT2-XT4 W 48 Vac/dc	1SDA069066R1	
	UVR-C XT2-XT4 W 60 Vac/dc	1SDA066404R1	
	UVR-C XT2-XT4 W 110-127Vac-110-125Vdc	1SDA066405R1	
	UVR-C XT2-XT4 W 220-240Vac-220-250Vdc	1SDA066406R1	
	UVR-C XT2-XT4 W 380-440 Vac	1SDA066407R1	
	UVR-C XT2-XT4 W 480-525 Vac	1SDA066408R1	
T5-T6	UVR-C 24V AC/DC T4-T5-T6	1SDA054887R1	9,040
	UVR-C 48V AC/DC T4-T5-T6	1SDA054888R1	



Time Delay Device for Under Voltage Release- UVD			
Frame	Description	Ordering code	L.P.(₹)
XT1....XT4	UVD T1...T6 - XT1...XT4 24...30 Vac/dc	1SDA051357R1	30,560
	UVD T1...T6 - XT1...XT4 48...60 Vac/dc	1SDA051358R1	
	UVD T1...T6 - XT1...XT4 110...125 Vac/dc	1SDA051360R1	
	UVD T1...T6 - XT1...XT4 220...250 Vac/dc	1SDA051361R1	
T5...T6	UVD 24...30V AC/DC T1...T6	1SDA051357R1	33,620
	UVD 48...60V AC/DC T1...T6	1SDA051358R1	
	UVD 110...125V AC/DC T1...T6	1SDA051360R1	
T7-T7M-X1	UVD 220...250V AC/DC T1...T6	1SDA051361R1	10,520
	UVD 24/30V AC/DC E1/6 - T7-T7M-X1	1SDA038316R1	
	UVD 48V AC/DC E1/6 - T7-T7M-X1	1SDA038317R1	
	UVD 60V AC/DC E1/6 - T7-T7M-X1	1SDA038318R1	
	UVD 110...125V AC/DC E1/6 - T7-T7M-X1	1SDA038319R1	
	UVD 220...250V AC/DC E1/6 - T7-T7M-X1	1SDA038320R1	

Note: Order along with relative UV release

Shunt Closing Release

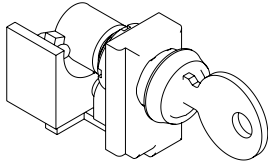


Frame	Description	Ordering code	L.P.(₹)
T7M-X1	SCR 24V AC/DC T7M-X1	1SDA062076R1	7,160
	SCR 30V AC/DC T7M-X1	1SDA062077R1	
	SCR 48V AC/DC T7M-X1	1SDA062078R1	
	SCR 60V AC/DC T7M-X1	1SDA062079R1	
	SCR 110...120V AC/DC T7M-X1	1SDA062080R1	
	SCR 120...127V AC/DC T7M-X1	1SDA063549R1	
	SCR 220...240V AC/DC T7M-X1	1SDA063550R1	
	SCR 240...250V AC/DC T7M-X1	1SDA062081R1	
	SCR 380...400V AC T7M-X1	1SDA062082R1	
	SCR 415...440V AC T7M-X1	1SDA062083R1	

Note: For T7 M in withdrawable version sliding blocks for fixed and moving part are necessary

Key lock

Key Lock - KLC			
Frame	Description	Ordering code	L.P.(₹)
KLC for Manual Breaker			
XT1....XT4	KLC XT1 KEY LOCK RONIS ON CB DIFF.KEY	1SDA066593R1	1,730
	KLC XT1 KEY LOCK RONIS ON CB TYPE A	1SDA066594R1	
	KLC XT1 KEY LOCK RONIS ON CB TYPE B	1SDA066595R1	
	KLC XT1 KEY LOCK RONIS ON CB TYPE C	1SDA066596R1	
	KLC XT1 KEY LOCK RONIS ON CB TYPE D	1SDA066597R1	
	KLC XT1 KEY LOCK RONIS EQ.FEL.A OP/CL	1SDA066598R1	
	KLC XT2-XT4 KEY LOCK RONIS SE.OP.XC.BRE.	1SDA066599R1	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE A	1SDA066600R1	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE B	1SDA066601R1	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE C	1SDA066602R1	
	KLC XT2-XT4 KEY LOCK RONIS ON CB TYPE D	1SDA066603R1	
	KLC XT2-XT4 KEY LOCK RONIS EQ.FE.A OP/CL	1SDA066604R1	
	KLC XT3 KEY LOCK RONIS SEV.OP. X C.BREA.	1SDA066605R1	
	KLC XT3 KEY LOCK RONIS ON CB TYPE A	1SDA066606R1	
	KLC XT3 KEY LOCK RONIS ON CB TYPE B	1SDA066607R1	
	KLC XT3 KEY LOCK RONIS ON CB TYPE C	1SDA066608R1	
	KLC XT3 KEY LOCK RONIS ON CB TYPE D	1SDA066609R1	
	KLC XT3 KEY LOCK RONIS EQ.FEL.A OP/CL	1SDA066610R1	
T7	KLC-D Key Lock - Different Key in Open Position T7	1SDA062134R1	2,960
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7	1SDA062135R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7	1SDA062136R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7	1SDA062137R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7	1SDA062138R1	
	KLC Arrangement for Ronis Key Lock T7	1SDA062139R1	
T7 M	KLC-D Different Key in open Position T7M	1SDA062141R1	3,110
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7M	1SDA062142R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7M	1SDA062143R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7M	1SDA062144R1	
	KLC-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7M	1SDA062145R1	
	KLC Same Key Ronis-Profalux T7M	1SDA062146R1	



Pad Lock - KLC			
Frame	Description	Ordering code	L.P.(₹)
KLC for Manual Breaker			
XT1....XT4	PLL XT1-XT3 REMOV.PADL.DEVICE OPEN PLUG.	1SDA066588R1	1,270
	PLL XT1-XT3 PADLOCKS DEVICE OPEN	1SDA066589R1	
	PLL XT2-XT4 PADLOCKS DEVICE OPEN	1SDA066590R1	
	PLL XT1-XT3 PADLOCKS DEVICE OP/CL	1SDA066591R1	
	PLL XT2-XT4 PADLOCKS DEVICE OP/CL	1SDA066592R1	



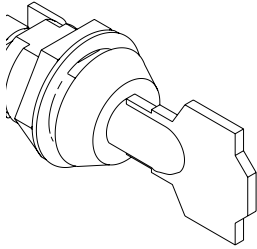
Key Lock for Rotary Handle - RHL			
Frame	Description	Ordering code	L.P.(₹)
XT1....XT4	RHL XT1...XT4 KEY LOCK RONIS SEVERAL	1SDA066617R1	1,360
	RHL XT1...XT4 KEY LOCK RONIS TYPE A	1SDA066618R1	
	RHL XT1...XT4 KEY LOCK RONIS TYPE B	1SDA066619R1	
	RHL XT1...XT4 KEY LOCK RONIS TYPE C	1SDA066620R1	
	RHL XT1...XT4 KEY LOCK RONIS TYPE D	1SDA066621R1	
	RHL XT1...XT4 KEY LOCK RONIS SEVER. OP/CL	1SDA066622R1	
	RHL XT1...XT4 KEY LOCK RONIS SEVER. OP/CL	1SDA069182R1	
	MOL-D XT1-XT3 KEY LOCK RONIS DIFF. KEY	1SDA066623R1	



Tmax accessories

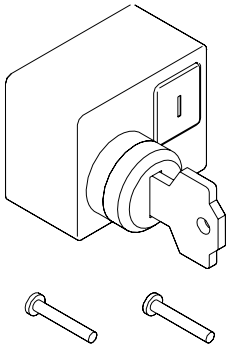
Key Lock for Front / Rotary / Fixed Part- KLF

Frame	Description	Ordering code	L.P.(₹)
T5	KLF-D Lock for Front / Rotary Handle - Different Key in open Position T4-T5	1SDA054939R1	2,870
	KLF-S Block for Front / Rotary Handle - Same Key (N. 20005) T4-T5	1SDA054940R1 ■	
	KLF-S Block for Front / Rotary Handle - Same Key (N. 20006) T4-T5	1SDA054941R1	
	KLF-S Block for Front / Rotary Handle - Same Key (N. 20007) T4-T5	1SDA054942R1	
	KLF-S Block for Front / Rotary Handle - Same Key (N. 20008) T4-T5	1SDA054943R1	
T5-T6	KLF-D FP Different Key for Each Circuit Breaker T4-T5-T6	1SDA055230R1	2,710
	KLF-D FP Same Key for Different Groups of Circuit Breaker T4-T5-T6	1SDA055231R1	
	KLF-D Ronis Fixed Part- Lock Type Ronis T4-T5-T6	1SDA055233R1	
T6	KLF-D Different Key in open Position T6	1SDA060658R1	2,800
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20005) T6	1SDA060659R1 ■	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20006) T6	1SDA060660R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20007) T6	1SDA060661R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20008) T6	1SDA060662R1	
T7	KLF-D Different Key in open Position T7	1SDA063555R1	2,800
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20005) T7	1SDA063556R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20006) T7	1SDA063557R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20007) T7	1SDA063558R1	
	KLF-S Same Key for Different Groups of Circuit Breakers (N. 20008) T7	1SDA063559R1	
	KLF Arrangement for ronis key lock T7	1SDA063560R1	
	KLF Arrangement for profalux key lock T7	1SDA063561R1	



Key lock for motor operated- MOL

Frame	Description	Ordering code	L.P.(₹)
XT1-XT3	MOL-S XT1-XT3 KEY LOCK RONIS TYPE A	1SDA066624R1	2,900
	MOL-S XT1-XT3 KEY LOCK RONIS TYPE B	1SDA066625R1	
	MOL-S XT1-XT3 KEY LOCK RONIS TYPE C	1SDA066626R1	
	MOL-S XT1-XT3 KEY LOCK RONIS TYPE D	1SDA066627R1	
XT2-XT4	MOL-D XT2-XT4 KEY LOCK RONIS DIFF. KEY	1SDA066629R1	2,900
	MOL-S XT2-XT4 KEY LOCK RONIS TYPE A	1SDA066630R1	
	MOL-S XT2-XT4 KEY LOCK RONIS TYPE B	1SDA066631R1	
	MOL-S XT2-XT4 KEY LOCK RONIS TYPE C	1SDA066632R1	
	MOL-S XT2-XT4 KEY LOCK RONIS TYPE D	1SDA066633R1	
	MOL-M XT2-XT4 KEY LOCK RONIS MAN. OPER.	1SDA066634R1	
T5	MOL-D - Same Key T4-T5	1SDA054904R1	2,900
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20005) T4-T5	1SDA054905R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20006) T4-T5	1SDA054906R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20007) T4-T5	1SDA054907R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20008) T4-T5	1SDA054908R1	
T5-T6	MOL-M - Lock only on manual operation - Same Key T4-T5-T6	1SDA054909R1	
T6	MOL-D - Different key T6	1SDA060611R1	2,900
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20005) T6	1SDA060612R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20006) T6	1SDA060613R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20007) T6	1SDA060614R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20008) T6	1SDA060615R1	



Motor operator with direct action - MOD

Frame	Description	Ordering code	L.P.(₹)
XT1 - XT3	MOD XT1-XT3 24 V dc	1SDA066457R1	19,090
	MOD XT1-XT3 48...60 V dc	1SDA066458R1	19,090
	MOD XT1-XT3 110...125 V ac/dc	1SDA066459R1	16,360
	MOD XT1-XT3 220...250 V ac/dc	1SDA066460R1	16,360
	MOD XT1-XT3 380...440 V ac	1SDA066461R1	19,090
	MOD XT1-XT3 480...525 V ac	1SDA066462R1	19,090



■ Stock items

Tmax accessories

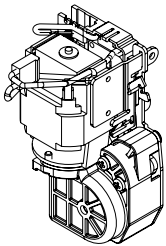
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Stored Energy Motor Operator - MOE			
Frame	Description	Ordering code	L.P.(₹)
XT2-XT4	MOE XT2-XT4 24 V dc	1SDA066463R1	28,170
	MOE XT2-XT4 48...60 V dc	1SDA066464R1	28,170
	MOE XT2-XT4 110...125 V ac/dc	1SDA066465R1	24,540
	MOE XT2-XT4 220...250 V ac/dc	1SDA066466R1	24,540
	MOE XT2-XT4 380...440 V ac	1SDA066467R1	28,170
	MOE XT2-XT4 480...525 V ac	1SDA066468R1	28,170
T5	MOE 24 V DC T4-T5	1SDA054894R1	29,540
	MOE 48...60 V DC T4-T5	1SDA054895R1	
	MOE 110...125 V AC / DC T4-T5	1SDA054896R1	
	MOE 220...250 V AC / DC T4-T5	1SDA054897R1 ■	
	MOE 380 V AC T4-T5	1SDA054898R1	
T6	MOE 24 V DC T6	1SDA060395R1	35,940
	MOE 48...60 V DC T6	1SDA060396R1	
	MOE 110...125 V AC/DC T6	1SDA060397R1	
	MOE 220...250 V AC/DC T6	1SDA060398R1	
	MOE 380 V AC T6	1SDA060399R1	



Stored Energy Motor Operator with Electronics - MOE-E			
Frame	Description	Ordering code	L.P.(₹)
XT2 - XT4	MOE-E XT2-XT4 24V dc X REM.CONTR.	1SDA066469R1	28,160
	MOE-E XT2-XT4 48...60V dc X REM.CONTR.	1SDA066470R1	
	MOE-E XT2-XT4 110...125V ac/d X REM.CONTR.	1SDA066471R1	
	MOE-E XT2-XT4 220...250V ac/dc X REM.CONTR.	1SDA066472R1	
	MOE-E XT2-XT4 380...440V ac X REM.CONTR.	1SDA066473R1	
	MOE-E XT2-XT4 480...525V ac X REM.CONTR.	1SDA066474R1	
T5	MOE-E 24 V DC T4-T5	1SDA054899R1	41,640
	MOE-E 48...60 V DC T4-T5	1SDA054900R1	
	MOE-E 110...125 V AC / DC T4-T5	1SDA054901R1	
	MOE-E 220...250 V AC / DC T4-T5	1SDA054902R1	
	MOE-E 380 V AC T4-T5	1SDA054903R1	
T6	MOE-E 24 V DC T6	1SDA060400R1	46,700
	MOE-E 48...60 V DC T6	1SDA060401R1	
	MOE-E 110...125 V AC/DC T6	1SDA060402R1	
	MOE-E 220...250 V AC/DC T6	1SDA060403R1	
	MOE-E 380 V AC T6	1SDA060404R1	



Spring Charging Motor- M			
Frame	Description	Ordering code	L.P.(₹)
T7M	M 24...30V AC/DC T7M	1SDA062113R1	35,940
	M 48...60V AC/DC T7M	1SDA062114R1	37,840
	M 100...130V AC/DC T7M	1SDA062115R1	35,940
	M 220...250V AC/DC T7M	1SDA062116R1	
	M 380...415V AC T7M	1SDA062117R1	



High insulating terminal covers - HTC			
Frame	Description	Ordering code	L.P.(₹)
XT1...XT4	HTC XT1 3p TERMINAL COVERS HIGH 2pcs	1SDA066664R1	2,270
	HTC XT2 3p TERMINAL COVERS HIGH 2pcs	1SDA066666R1	2,590
	HTC XT3 3p TERMINAL COVERS HIGH 2pcs	1SDA066668R1	2,820
	HTC XT4 3p TERMINAL COVERS HIGH 2pcs	1SDA066670R1	3,140
	HTC XT1 4p TERMINAL COVERS HIGH 2pcs	1SDA066665R1	3,040
	HTC XT2 4p TERMINAL COVERS HIGH 2pcs	1SDA066667R1	3,450
	HTC XT3 4p TERMINAL COVERS HIGH 2pcs	1SDA066669R1	3,770
	HTC XT4 4p TERMINAL COVERS HIGH 2pcs	1SDA066671R1	4,180

■ Stock items

Tmax accessories



Low insulating terminal covers - LTC			
Frame	Description	Ordering code	L.P.(₹)
XT1....XT4	LTC XT1 3p TERMINAL COVERS LOW 2pcs	1SDA066655R1	1,640
	LTC XT2 3p TERMINAL COVERS LOW 2pcs	1SDA066657R1	1,640
	LTC XT3 3p TERMINAL COVERS LOW 2pcs	1SDA066660R1	1,730
	LTC XT4 3p TERMINAL COVERS LOW 2pcs	1SDA066662R1	1,730
	LTC XT1 4p TERMINAL COVERS LOW 2pcs	1SDA066656R1	1,910
	LTC XT2 4p TERMINAL COVERS LOW 2pcs	1SDA066659R1	1,910
	LTC XT3 4p TERMINAL COVERS LOW 2pcs	1SDA066661R1	2,140
	LTC XT4 4p TERMINAL COVERS LOW 2pcs	1SDA066663R1	2,450
T5	LTC 3p T5	1SDA054968R1	2,330
	LTC 4p T5	1SDA054969R1	3,060
T6	LTC 3p T6	1SDA014038R1	2,530
	LTC 4p T6	1SDA014039R1	3,380
T7-T7M	LTC 3p T7-T7M	1SDA063093R1	3,890
	LTC 4p T7-T7M	1SDA063094R1	5,00

Dialogue Unit - PR 222/DS-PD			
Frame	Description	Ordering code	L.P.(₹)
T5-T6	PR222DS/PD LSI T4-T5-T6	1SDA055066R1	24,150
	PR222DS/PD LSIG T4-T5-T6	1SDA055067R1	25,200

Note : Order X3 connector along with dialogue unit

Dialogue Unit - Ekip E-LSIG			
Frame	Description	Ordering code	L.P.(₹)
T5	DIALOG Ekip E-LSIG MOD.T5 (EXTR)	1SDA081094R1	20,900

X3 Connector			
Frame	Description	Ordering code	L.P.(₹)
T5-T6	X3 Connector for fixed circuit-breaker PR222DS or PR223DS	1SDA055059R1	3,180
	X3 Connector for plug-in/withdrawable circuit-breaker	1SDA055061R1	

Measurement Module - VM210			
Frame	Description	Ordering code	L.P. (₹)
T5-T6	VM210 T4-T5-T6	1SDA059602R1	24,580

Note : Order X4 connector along with measurement module
Mounted only with PR223/DS

X4 Connector			
Frame	Description	Ordering code	L.P. (₹)
T5-T6	X4 Connector for fixed circuit-breaker	1SDA055060R1	3,180
	X4 Connector for plug-in/withdrawable circuit-breaker	1SDA055062R1	

Interface Module - EP010			
Frame	Description	Ordering code	L.P. (₹)
T5-T6	EP010 - Interface Module for PR222/PD	1SDA059469R1	22,560

Note : Converter for Modbus to ASI, DeviceNet & Profibus for MCCB & ACB. Used along with dialogue module

Tmax accessories

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Residual current devices			
Frame	Description	Ordering code	L.P.(₹)
XT1	RC Inst x XT1 3p F	1SDA067122R1	18,180
	RC Sel x XT1 3p F	1SDA067123R1	18,180
	RC Sel 200 x XT1 4p F	1SDA067121R1	26,360
	RC Inst x XT1 4p F	1SDA067124R1	21,090
	RC Sel x XT1 4p F	1SDA067125R1	21,090
XT2	RC Sel x XT2 4p F	1SDA067126R1	38,810
	RC Inst x XT3 3p F	1SDA067127R1	45,530
XT3	RC Sel x XT3 3p F	1SDA067128R1	52,620
	RC Inst x XT3 4p F	1SDA067129R1	48,990
	RC B Type x XT3 4p F	1SDA067132R1	76,250
	RC Sel x XT3 4p F	1SDA067130R1	54,440
T5	RC222/5 4p Fixed T5	1SDA054955R1	44,710



Automation Transfer switch - ATS

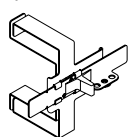
Automatic Transfer Switch			
Frame	Description	Ordering code	L.P.(₹)
XT2-XT4/ T5- T7/ E1-E6	ATS021	1SDA065523R1	74,520
	ATS022	1SDA065524R1	81,800

Note : ATS will be used along with either two motorized ACB or MCCBs with required interlocking and changeover base plate as per the requirement.



Mechanical Interlock Between Circuit Breakers

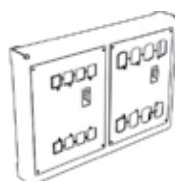
Frame	Description	Ordering code	L.P.(₹)
XT1....XT4	MIR-HR XT1..XT4 MECH INTERLOCK HOR. 2 CB	1SDA066637R1	12,270
	MIR-VR XT1..XT4 MECH INTERLOCK VER. 2 CB	1SDA066638R1	
	MIR-P PLATE x XT1 F	1SDA066639R1	5,870
	MIR-P PLATE x XT2 F	1SDA066641R1	
	MIR-P PLATE x XT3 F	1SDA066643R1	
	MIR-P PLATE x XT4 F	1SDA066645R1	



Mechanical Interlock Between Circuit Breakers - MIR - to be used with copper spreaders only

Frame	Description	Ordering code	L.P.(₹)
T5	MIR-HB Horizontal Interlock Frame Unit T4-T5	1SDA054946R1	9,250
	MIR-VB Vertical Interlock Frame Unit T4-T5	1SDA054947R1	
	MIR-P Plate for Interlock Type D T5 400 (F-P-W) or T5 630 (F)+T5 400 (F-P-W) or T5 630 (F)	1SDA054951R1	4630
	MIR-P Plate for Interlock Type E T5 400 (F-P-W) or T5 630 (F) + T5 630 (P-W)	1SDA054952R1	
	MIR-P Plate for Interlock Type F T5 630 (P-W) + T5 630 (P-W)	1SDA054953R1	
T6	MIR-H Horizontal Mechanical Interlock T6	1SDA060685R1	14,650
	MIR-V Vertical Mechanical Interlock T6	1SDA060686R1	

Note: For interlocking in T4-T5, Order both Frame and Plate unit



Mechanical Interlock with Cables Between 2 Circuit Breakers

Frame	Description	Ordering code	L.P.(₹)
T7-T7M	Cable Kit for InterlockT7-T7M	1SDA062127R1	6,100
	Cable Kit for InterlockT7-T7M with E1-6	1SDA064568R1	6,640
	Plate for Interlock T7-T7M Fixed	1SDA062129R1	24,280
	Plate for Interlock T7-T7M withdrawble	1SDA062131R1	25,980

Note: It is Necessary to Order 2 Plate and one Kit of Cables

Tmax accessories



Accessories for electronic trip units			
Frame	Description	Ordering code	L.P.(₹)
XT2 - XT4	EKIP LED METER x LSI-LSIG-M/LRIU XT2-XT4	1SDA068660R1	9,270
	EKIP DISPLAY x LSI-LSIG-M/LRIU XT2-XT4	1SDA068659R1	10,910
	EKIP COM x LSI-LSIG-M/LRIU XT2-XT4 F/P	1SDA068661R1	16,360
	EKIP COM x LSI-LSIG-M/LRIU XT2-XT4 W	1SDA068662R1	
	KIT x CONNECTION Vaux 24Vdc XT2-XT4 F/P	1SDA066980R1	3,360
	KIT x CONNECTION Vaux 24Vdc XT2-XT4 W	1SDA066981R1	3,810
	EKIP Multimeter display on front of the switch board	1SDA074192R1	Upon request
T4-T5-T6-T7-XT2-XT4/E1-E6	HMI030 interface on the front of switchgear	1SDA063143R1	29,960



Test and configuration unit			
Frame	Description	Ordering code	L.P.(₹)
XT2 - XT4	Ekip TT Trip test unit	1SDA066988R1	5,450



Bracket for fixing onto DIN rail			
Frame	Description	Ordering code	L.P.(₹)
XT1	KIT DIN50022 XT1 3p PLATE DIN	1SDA066652R1	1,360
	KIT DIN50022 XT1 4p PLATE DIN	1SDA066419R1	1,450
	KIT DIN50022 XT1+RC Sel 200 PLATE DIN	1SDA067134R1	1,590
	KIT DIN50022 XT1+RC PLATE DIN	1SDA067135R1	1,730
XT3	KIT DIN50022 XT3 3p PLATE DIN	1SDA066420R1	1,730
	KIT DIN50022 XT3 4p PLATE DIN	1SDA066421R1	1,730
	KIT DIN50022 XT3+RC PLATE DIN	1SDA067139R1	1,910
XT2	KIT DIN50022 XT2-XT4 PLATE DIN	1SDA066653R1	1,360



IP54 Protection for transmitted rotary handle			
Frame	Description	Ordering code	L.P.(₹)
XT1....XT4	IP54 Protection for transmitted rotary handle-RHE	1SDA066587R1	2,090

Tmax conversion kit

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Plug-in and drawout conversion

Frame	Pole	Type	Description	Ordering code	L.P.(₹)
XT1	3P	Plugin Kit	KIT P MP XT1 3p	1SDA066276R1	3,910
			XT1 P FP 3p EF	1SDA068183R1	7,270
XT2			KIT P MP XT2 3p	1SDA066278R1	4,360
			XT2 P FP 3p EF	1SDA068187R1	7,950
XT3			KIT P MP XT3 3p	1SDA066280R1	5,450
			XT3 P FP 3p EF	1SDA068192R1	8,180
XT4			KIT P MP XT4 3p	1SDA066282R1	6,310
			XT4 P FP 3p EF	1SDA068196R1	8,770
T5			KIT MP T5 400 P 3p	1SDA054843R1	8,650
			T5 400 P FP 3p EF	1SDA054749R1	18,590
	KIT MP T5 630 P 3p	1SDA054847R1	10,500		
	T5 630 P FP 3p EF	1SDA054762R1	22,170		
XT2	Drawout kit	KIT W MP XT2 3p	1SDA066284R1	7,270	
		XT2 W FP 3p EF	1SDA068200R1	16,360	
XT4		KIT W MP XT4 3p	1SDA066286R1	9,270	
		XT4 W FP 3p EF	1SDA068204R1	17,180	
T5		KIT MP T5 400 W 3p	1SDA054845R1	13,620	
		T5 400 W FP 3p EF	1SDA054755R1	30,830	
		KIT MP T5 630 W 3p	1SDA054849R1	17,410	
T6		T5 630 W FP 3p EF	1SDA054768R1	36,770	
		KIT MP T6 630/800 W 3p	1SDA060390R1	18,170	
T7		T6 W FP 3p EF	1SDA060384R1	38,390	
	KIT MP T7-T7M-X1 W 3p	1SDA062162R1	29,630		
		T7-X1 W FP 3p EF-EF	1SDA062045R1	62,460	

Note: The plug-in version must be composed as follows

- 1) Fixed circuit-breaker
- 2) Conversion kit from fixed into moving part of plug-in
- 3) Fixed part of plug-in

Note: The withdrawable version must be composed as follows

- 1) Fixed circuit-breaker

2) Conversion kit from fixed into moving part of withdrawable

3) Fixed part of withdrawable

4) Front for lever operating mechanism or rotary handle or motor operator

5) Sliding contacts blocks if the circuit-breaker is automatic or fitted with electrical accessories (only for T7)

Tmax conversion kit

Plug-in and drawout conversion



Frame	Pole	Type	Description	Ordering code	L.P.(₹)
XT1	4P	Plug-in Kit	KIT P MP XT1 4p	1SDA066277R1	5,180
			XT1 P FP 4p EF	1SDA068185R1	10,270
XT2			KIT P MP XT2 4p	1SDA066279R1	5,680
			XT2 P FP 4p EF	1SDA068190R1	5,680
XT3			KIT P MP XT3 4p	1SDA066281R1	6,410
			XT3 P FP 4p EF	1SDA068194R1	11,220
XT4			KIT P MP XT4 4p	1SDA066283R1	8,360
			XT4 P FP 4p EF	1SDA068198R1	11,630
T5			KIT MP T5 400 P 4p	1SDA054844R1	11,360
			T5 400 P FP 4p EF	1SDA054752R1	24,660
	KIT MP T5 630 P 4p	1SDA054848R1	13,950		
	T5 630 P FP 4p EF	1SDA054765R1	29,410		
XT2	4P	Drawout Kit	KIT W MP XT2 4p	1SDA066285R1	10,720
			XT2 W FP 4p EF	1SDA068202R1	22,180
XT4			KIT W MP XT4 4p	1SDA066287R1	12,270
			XT4 W FP 4p EF	1SDA068206R1	22,990
T5			KIT MP T5 400 W 4p	1SDA054846R1	18,070
			T5 400 W FP 4p EF	1SDA054758R1	41,090
			KIT MP T5 630 W 4p	1SDA054850R1	20,660
			T5 630 W FP 4p EF	1SDA054771R1	49,090
T6			KIT MP T6 630/800 W 4p	1SDA060391R1	22,280
			T6 W FP 4p EF	1SDA060387R1	49,740
T7	KIT MP T7-T7M-X1 W 4p	1SDA062163R1	34,500		
	T7-X1 W FP 4p EF-EF	1SDA062049R1	83,520		

Accessories:

Frame / Type	Description	Ordering code	L.P.(₹)
Connector	Socket-plug panel connector with 3PINS (XT1...XT4)	1SDA066409R1	1,130
	Socket-plug panel connector with 6PINS (XT1...XT4)	1SDA066410R1	2,240
	Socket-plug panel connector with 9PINS (XT1...XT4)	1SDA066411R1	3,410
	Socket-plug panel connector with 15PINS (XT1...XT4)	1SDA066412R1	5,640
	Socket-plug connector of Moving Part 12PINS (XT2...XT4)	1SDA066413R1	6,090
	Socket-plug connector of Fixed Part 12PINS (XT2...XT4)	1SDA066414R1	6,090
	Connector 4th pole SOR-PS-SOR (XT2...XT4)	1SDA066415R1	1,120
	Connector 4th pole UVR (XT2...XT4)	1SDA066418R1	1,020
	ADP 5pin SOR-C /UVR-C T4-T5-T6 P/W	1SDA055173R1	1,940
	ADP 6pin AUX -C T4-T5-T6 P/W	1SDA054922R1	1,670
	ADP 10pin MOE AUE -C T4-T5-T6 P/W	1SDA054924R1	2,140
	ADP 12pin AUX -C T4-T5-T6 P/W	1SDA054923R1	2,740
MOT T7M	LEFT SLIDING CONTAC.MP C.BR.T7-T7M-X1	1SDA062164R1	4,540
	LEFT SLIDING CONTAC.FP C.BR.T7M-X1	1SDA062167R1	6,710
SOR/SCR/UVR/AUX - T7-T7M	RIGHT SLIDING CONTAC.MP C.BR.T7-T7M-X1	1SDA062166R1	4,540
	RIGHT SLIDING CONTAC.FP C.BR.T7M-X1	1SDA062169R1	6,710
Central Block for T7-T7M	Central block - MP T7 - T7M	1SDA062165R1	4,540
	Central block - FP T7 - T7M	1SDA062168R1	6,710

Tmax PV: photovoltaic range moulded case switch disconnecter



Tmax PV is the latest T Generation product up to 1600 A / 1100 V DC / 1500V DC.

- IEC 60947-3 certification
- 6 different sizes: from the compact T1 (which can be mounted on DIN rail) to the high-performance T7, available in the two versions, with lever operating mechanism and motor operator
- Rated insulation voltage up to 1150 V DC /1500V DC
- Advantages like
 - excellent performance-dimensions
 - vast and complete range of accessories for all requirements
 - Complete remote control with MOE options

Rated current In (A)	Rated Voltage	Description	Version / Poles	Ordering Code	L.P. (₹)
160	1100 V DC	T1D/PV 160 4p F FC Cu 1100V DC	Fixed / 4p	1SDA069816R1	Upon Request
200		T3D/PV 200 4p F FC Cu 1100V DC	Fixed / 4p	1SDA069822R1	
250		T4D/PV 250 4p F F 1100V DC	Fixed / 4p	1SDA069823R1	
500		T5D /PV 500 4p F F 1100V DC	Fixed / 4p	1SDA069824R1	
800		T6D/PV 800 4p F F 1100V DC	Fixed / 4p	1SDA069825R1	
1250		T7D/PV 1250 4p F F 1100V DC	Fixed / 4p	1SDA069826R1	
1250M		T7D/PV 1250 4p F F M 1100V DC	Fixed / 4p	1SDA069827R1	
1600		T7D/PV 1600 4p F F 1100V DC	Fixed / 4p	1SDA069828R1	
1600M		T7D/PV 1600 4p F F M 1100V DC	Fixed / 4p	1SDA069829R1	

Rated current In (A)	Rated Voltage	Description	Version / Poles	Ordering Code	L.P. (₹)
250	1500V DC	T4D/PV-E 250 4p F F 1500V DC	Fixed / 4p	1SDA073559R1	Upon Request
500		T5D/PV-E 500 4p F F 1500V DC	Fixed / 4p	1SDA076898R1	
1250		T7D/PV-E 1250 4p F F M 1500V DC	Fixed / 4p	1SDA073560R1	
1600		T7D/PV-E 1600 4p F F M 1500V DC	Fixed / 4p	1SDA073561R1	
250	1500V DC	KIT 2JUMPER U 2+2PS T4D/PV 250	Kit jumpers	1SDA070454R1	Upon Request
500		KIT 2JUMPER U 2+2PS T5D/PV-E 500	Kit jumpers	1SDA076899R1	
1250		KIT JUMPER U 2+2PS T7D/PV 1250	Kit jumpers	1SDA070429R1	
1600		KIT JUMPER U 2+2PS T7D/PV 1600	Kit jumpers	1SDA070431R1	

*For information contact our nearest sales office

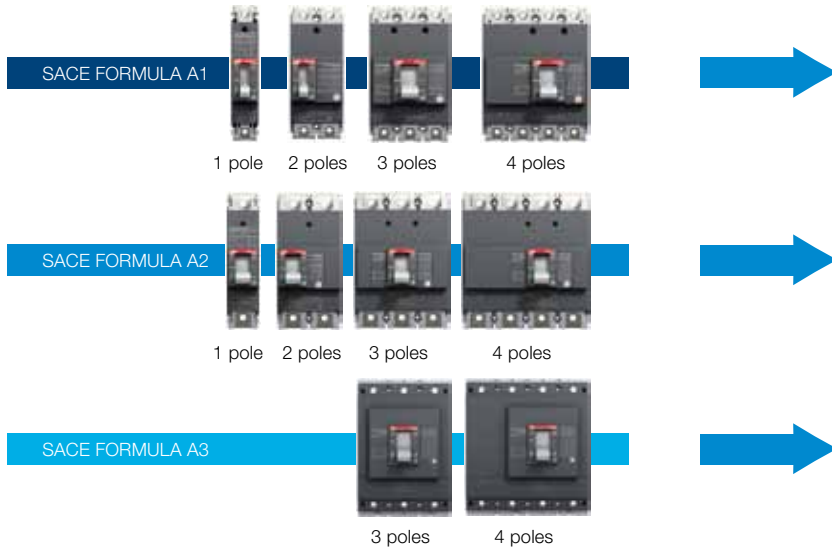
*Jumper kit is compulsory to order with 1500V DC version

FORMULA moulded case circuit breaker

New low voltage moulded case circuit breakers up to 630A

General characteristics

- Conforms to IEC 60947-2
- Fixed thermal magnetic release throughout the range
- Compact dimensions
- Common range of accessories
- Available in 1P, 2P, 3P & 4 pole versions
- Line-load reversibility
- Suitable for DC application till 250Vdc
- Operation voltage till 550VAC, insulation voltage of 690VAC and impulse voltage of 6kV



FORMULA A1

- Rated current, In 15...125A
- 1, 2, 3, 4 pole versions
- Icu = 10, 18, 25, 36KA

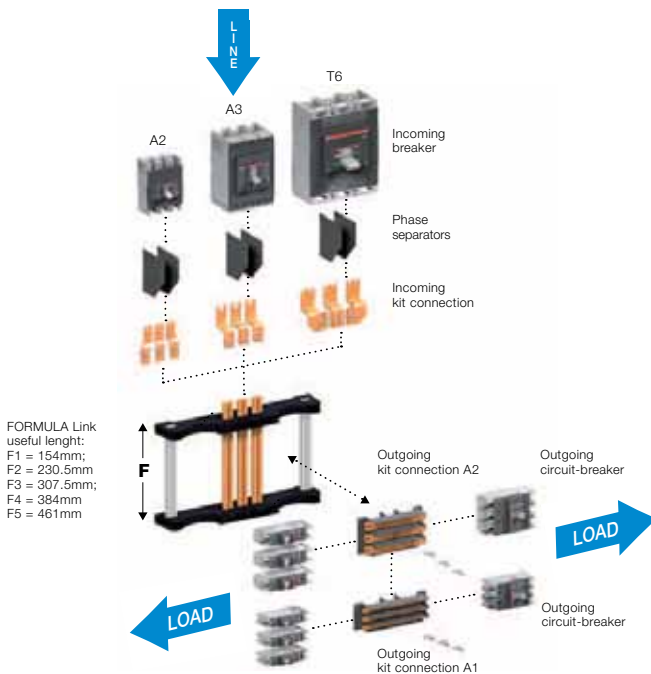
FORMULA A2

- Rated current, In 125...250A
- 1, 2, 3, 4 pole versions
- Icu = 18, 25, 36KA

FORMULA A3

- Rated current, In 320...630A
- 3, 4 pole versions
- Icu = 36, 50KA

FORMULA link system



FORMULA moulded case circuit breakers

- FORMULA link in accordance with IEC 60439 Standard
- FORMULA link is a component of a power distribution system which divides the main power supply over different users
- The FORMULA link is characterised on the supply side by a main circuit-breaker which protects the whole distribution

- system, and on the load side by smaller sized circuit-breakers, dedicated to the individual users
- FORMULA link assembly for total discrimination between upstream and downstream devices

1

FORMULA link - Electrical characteristics

FORMULA link frame	[A]	250	400	630/800
Incoming breaker		A2	A3	T6
Outgoing breaker		A1	A1-A2	A1-A2
Rated operational voltage 50/60 Hz	[V]	550AC	550AC	550AC
Rated insulation voltage	[V]	690AC	690AC	690AC
Rated short time withstand current (1s)	[kA]	30	40	40



Fixed thermal and fixed magnetic MCCB

A1 125 TMF

A1A 125 Icu = 10KA

A 1B 125 Icu = 18KA

A 1C 125 Icu = 25KA

A 1N 125 Icu = 36KA

In(A)	Poles	Ordering Code	LP.(€)	Ordering Code	LP.(€)	Ordering Code	LP.(€)	Ordering Code	LP.(€)
16	3	1SDA068746R1	2,470	1SDA068747R1	3,310	1SDA068748R1	4,010	1SDA068749R1	4,730
25		1SDA066512R1		1SDA066699R1		1SDA066711R1		1SDA066723R1	
32		1SDA068757R1 ■		1SDA068758R1 ■		1SDA068759R1 ■		1SDA068760R1 ■	
40		1SDA066514R1		1SDA066701R1		1SDA066713R1		1SDA066725R1	
50		1SDA066515R1 ■		1SDA066702R1		1SDA066714R1		1SDA066726R1	
63		1SDA068768R1 ■		1SDA068769R1 ■		1SDA068770R1 ■		1SDA068771R1 ■	
80		1SDA066518R1 ■		1SDA066705R1 ■		1SDA066717R1		1SDA066729R1	
100		1SDA066520R1 ■		1SDA066707R1 ■		1SDA066719R1 ■		1SDA066731R1 ■	
125	1SDA066521R1 ■	2,910	1SDA066708R1 ■	3,820	1SDA066720R1 ■	4,270	1SDA066732R1 ■	4,980	
16	4	1SDA068750R1	3,310	1SDA068751R1	4,210	1SDA068752R1	5,170	1SDA068753R1	6,010
25		1SDA066526R1		1SDA066735R1		1SDA066747R1		1SDA066759R1	
32		1SDA068761R1 ■		1SDA068762R1		1SDA068763R1		1SDA068764R1	
40		1SDA066528R1		1SDA066737R1		1SDA066749R1		1SDA066761R1	
50		1SDA066529R1		1SDA066738R1		1SDA066750R1		1SDA066762R1	
63		1SDA068772R1 ■		1SDA068773R1 ■		1SDA068774R1 ■		1SDA068775R1 ■	
80		1SDA066532R1		1SDA066741R1		1SDA066753R1		1SDA066765R1	
100		1SDA066534R1 ■		1SDA066743R1 ■		1SDA066755R1 ■		1SDA066767R1 ■	
125	1SDA066535R1	3,550	1SDA066744R1	4,460	1SDA066756R1	5,430	1SDA066768R1	6,460	

■ Stock items

FORMULA moulded case circuit breakers

A2 250 TMF

In(A)	Poles
160	3
200	
250	
160	4
200	
250	

A2B 250 Icu = 18KA

Ordering Code	L.P. (₹)
1SDA066549R1 ■	7,820
1SDA066551R1 ■	
1SDA066553R1 ■	
1SDA066555R1	9,950
1SDA066557R1 ■	
1SDA066559R1 ■	

A2C 250 Icu = 25KA

Ordering Code	L.P. (₹)
1SDA066776R1 ■	8,400
1SDA066778R1 ■	
1SDA066780R1 ■	
1SDA066788R1	10,940
1SDA066790R1 ■	
1SDA066792R1 ■	

A2N 250 Icu = 36KA

Ordering Code	L.P. (₹)
1SDA066782R1 ■	9,570
1SDA066784R1 ■	
1SDA066786R1 ■	
1SDA066794R1	12,340
1SDA066796R1 ■	
1SDA066798R1 ■	

A3 400 TMF

In(A)	Poles
320	3
400	
320	4
400	

A3N 400 Icu = 36KA

Ordering Code	L.P. (₹)
1SDA066560R1	23,250
1SDA066561R1	
1SDA066568R1	30,100
1SDA066569R1	

A3S 400 Icu = 50KA

Ordering Code	L.P. (₹)
1SDA066562R1	25,320
1SDA066563R1	
1SDA066570R1	32,930
1SDA066571R1	

A3 630 TMF

In(A)	Poles
500	3
630	
500	4
630	

A3N 630 Icu = 36KA

Ordering Code	L.P. (₹)
1SDA066564R1	25,190
1SDA066566R1	30,100
1SDA066572R1	32,550
1SDA066574R1	38,360

A3S 630 Icu = 50KA

Ordering Code	L.P. (₹)
1SDA066565R1	27,380
1SDA066567R1	33,600
1SDA066573R1	34,870
1SDA066575R1	43,910

Accessories

Terminals			
Front extended spread terminal - ES	Poles	Ordering Code	L.P. (₹) 6 pieces
A1	3P	1SDA082242R1	440
A2		1SDA082247R1	1,100

Terminals			
Front extended spread terminal - ES	Poles	Ordering Code	L.P. (₹) 8 pieces
A1	4	1SDA082243R1	600
A2		1SDA082248R1	1,240

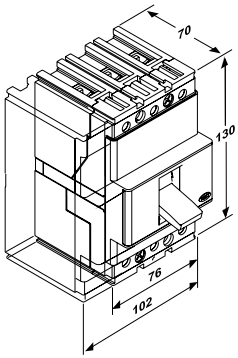
Rotary handle	Description	A1-A2	
		Ordering code	L.P. (₹)
Shunt opening release – SOR-C Cabled version	RHD - Operating mechanism direct handle	1SDA066154R1	1,180
	RHE - Operating mechanism transmitted handle	1SDA066158R1	1,550
	SOR-C 220...240 VAC - 220...250 VDC	1SDA066137R1	1,820
Auxiliary contacts – AUX-C Cabled version	SOR-C 380...440 VAC	1SDA066138R1	1,680
	AUX-C 1Q + 1SY 250 VAC/DC	1SDA66149R1	1,620
Undervoltage release – UVR-C Cabled version	UVR-C 220...240 VAC - 220...250 VDC	1SDA066146R1	3,470
	UVR-C 380...440 VAC	1SDA066147R1	

■ Stock items

Tmax power distribution circuit breakers

T1

1



Breaking Capacity at 415VAC

	Icu	Ics(Icu)
B	16KA	100%
C	25KA	100%
N	36KA	75%



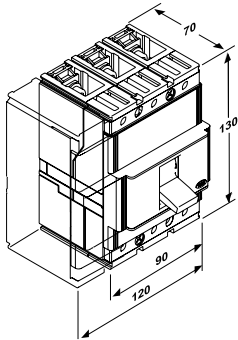
TMD

TMD		B		C		N				
In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)			
16	3	1SDA050870R1	6,840	-	-	-	-			
20		1SDA050871R1		-	-	-	-			
25		1SDA050872R1 ■		1SDA050894R1	-	-	-	-		
32		1SDA050873R1 ■		1SDA050895R1 ■	1SDA050917R1 ■	7,350	1SDA050918R1	10,140		
40		1SDA050874R1 ■		1SDA050896R1 ■	1SDA050918R1					
50		1SDA050875R1 ■		1SDA050897R1 ■	1SDA050919R1					
63		1SDA050876R1 ■		1SDA050898R1 ■	1SDA050920R1 ■					
80		1SDA050877R1 ■		1SDA050899R1 ■	1SDA050921R1					
100		1SDA050878R1 ■		1SDA050900R1 ■	1SDA050922R1 ■					
125		1SDA050879R1 ■		1SDA050901R1 ■	1SDA050923R1 ■		11,890			
160	1SDA050880R1 ■	1SDA050902R1 ■	1SDA050924R1 ■	15,700						
16	1SDA050881R1	-	-	-	-					
20	1SDA050882R1	-	-	-	-					
25	1SDA050883R1	1SDA050905R1	-	-	-					
32	1SDA050884R1	1SDA050906R1	9,430	1SDA050905R1	10,670	1SDA050928R1	13,030			
40	1SDA050885R1	1SDA050907R1		1SDA050906R1						
50	1SDA050886R1	1SDA050908R1		1SDA050907R1						
63	1SDA050887R1 ■	1SDA050909R1 ■		1SDA050908R1						
80	1SDA050888R1	1SDA050910R1		1SDA050909R1 ■						
100	1SDA050889R1 ■	1SDA050911R1 ■		1SDA050910R1						
125	1SDA050890R1 ■	1SDA050912R1 ■		1SDA050911R1 ■		13,490				
160	1SDA050936R1 ■	1SDA050937R1 ■		1SDA050912R1 ■		17,710		1SDA050933R1 ■	15,160	
									1SDA050934R1 ■	18,980

■ Stock items

Tmax power distribution circuit breakers

T2



Breaking Capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%



1

TMD

In (A)	Poles	N		S		H	
		Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
1.6	3	1SDA050940R1	12,120	1SDA050984R1	13,280	1SDA051028R1	18,390
2		1SDA050941R1		1SDA050985R1		1SDA051029R1	
2.5		1SDA050942R1		1SDA050986R1		1SDA051030R1	
3.2		1SDA050943R1		1SDA050987R1		1SDA051031R1	
4		1SDA050944R1		1SDA050988R1		1SDA051032R1	
5		1SDA050945R1		1SDA050989R1		1SDA051033R1	
6.3		1SDA050946R1		1SDA050990R1		1SDA051034R1	
8		1SDA050947R1		1SDA050991R1		1SDA051035R1	
10		1SDA050948R1		1SDA050992R1		1SDA051036R1	
12.5		1SDA050949R1		1SDA050993R1		1SDA051037R1	
16		1SDA050950R1		1SDA050994R1		1SDA051038R1	
20		1SDA050951R1		1SDA050995R1		1SDA051039R1	
25		1SDA050952R1 ■		1SDA050996R1 ■		1SDA051040R1	
32		1SDA050953R1 ■		1SDA050997R1 ■		1SDA051041R1	
40		1SDA050954R1		1SDA050998R1		1SDA051042R1	
50		1SDA050955R1		1SDA050999R1		1SDA051043R1	
63	1SDA050956R1 ■	1SDA051000R1 ■	1SDA051044R1				
80	1SDA050957R1 ■	1SDA051001R1	1SDA051045R1				
100	1SDA050958R1 ■	1SDA051002R1 ■	1SDA051046R1				
125	1SDA050959R1 ■	1SDA051003R1 ■	1SDA051047R1				
160	1SDA050960R1 ■	1SDA051004R1 ■	1SDA051048R1				
1.6	4	1SDA050962R1	16,100	1SDA051006R1	17,460	1SDA051050R1	22,480
2		1SDA050963R1		1SDA051007R1		1SDA051051R1	
2.5		1SDA050964R1		1SDA051008R1		1SDA051052R1	
3.2		1SDA050965R1		1SDA051009R1		1SDA051053R1	
4		1SDA050966R1		1SDA051010R1		1SDA051054R1	
5		1SDA050967R1		1SDA051011R1		1SDA051055R1	
6.3		1SDA050968R1		1SDA051012R1		1SDA051056R1	
8		1SDA050969R1		1SDA051013R1		1SDA051057R1	
10		1SDA050970R1		1SDA051014R1		1SDA051058R1	
12.5		1SDA050971R1		1SDA051015R1		1SDA051059R1	
16		1SDA050972R1		1SDA051016R1		1SDA051060R1	
20		1SDA050973R1		1SDA051017R1		1SDA051061R1	
25		1SDA050974R1		1SDA051018R1		1SDA051062R1	
32		1SDA050975R1		1SDA051019R1		1SDA051063R1	
40		1SDA050976R1		1SDA051020R1		1SDA051064R1	
50		1SDA050977R1		1SDA051021R1		1SDA051065R1	
63	1SDA050978R1 ■	1SDA051022R1 ■	1SDA051066R1				
80	1SDA050979R1	1SDA051023R1	1SDA051067R1				
100	1SDA050980R1 ■	1SDA051024R1 ■	1SDA051068R1				
125	1SDA051115R1 ■	1SDA051117R1 ■	1SDA051119R1				
160	1SDA051116R1 ■	1SDA051118R1 ■	1SDA051120R1				

■ Stock items

Tmax power distribution circuit breakers

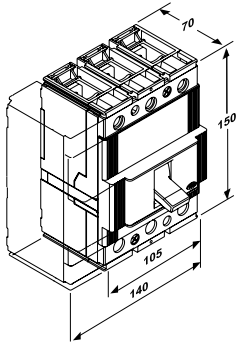
T2

PR221 DS-LS/I

1

PR221 DS-LS/I		N		S		H	
In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
10	3	1SDA051123R1	17,040	1SDA051133R1	20,900	1SDA051143R1	23,620
25		1SDA051124R1		1SDA051134R1		1SDA051144R1	
63		1SDA051125R1 ■		1SDA051135R1 ■		1SDA051145R1	
100		1SDA051126R1 ■		1SDA051136R1 ■		1SDA051146R1	
160		1SDA051127R1 ■		1SDA051137R1 ■		1SDA051147R1	
10	4	1SDA051128R1	21,220	1SDA051138R1	27,800	1SDA051148R1	31,980
25		1SDA051129R1		1SDA051139R1		1SDA051149R1	
63		1SDA051130R1		1SDA051140R1		1SDA051150R1	
100		1SDA051131R1		1SDA051141R1		1SDA051151R1	
160		1SDA051613R1		1SDA051614R1		1SDA051615R1	
			22,160		26,550		30,000
			29,890		37,210		40,340

T3



Breaking Capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	75%
S	50KA	50%



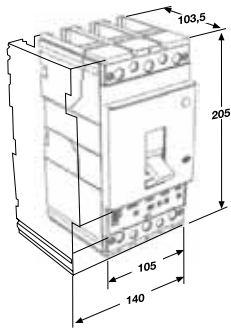
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TMD		N		S	
In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
200	3	1SDA051246R1 ■	17,770	1SDA051268R1 ■	20,690
250		1SDA051247R1 ■	20,390	1SDA051269R1 ■	23,830
200	4	1SDA051305R1 ■	22,990	1SDA051309R1 ■	26,550
250		1SDA051306R1 ■	26,130	1SDA051310R1 ■	28,120

■ Stock items

Tmax power distribution circuit breakers

T4



Breaking Capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%



T4 250 TMA

		N	S	H
In (A)	Poles	Ordering Code	Ordering Code	Ordering Code
80	3	1SDA054174R1	1SDA054192R1	1SDA054210R1
100		1SDA054175R1	1SDA054193R1	1SDA054211R1
125		1SDA054176R1	1SDA054194R1	1SDA054212R1
160		1SDA054177R1	1SDA054195R1	1SDA054213R1
200		1SDA054178R1 ■	1SDA054196R1 ■	1SDA054214R1
250	1SDA054179R1 ■	1SDA054197R1 ■	1SDA054215R1	
80	4	1SDA054183R1	1SDA054201R1	1SDA054219R1
100		1SDA054184R1	1SDA054202R1	1SDA054220R1
125		1SDA054271R1	1SDA054275R1	1SDA054279R1
160		1SDA054272R1	1SDA054276R1	1SDA054280R1
200		1SDA054273R1 ■	1SDA054277R1 ■	1SDA054281R1
250	1SDA054274R1 ■	1SDA054278R1 ■	1SDA054282R1	
		L.P.(₹)	L.P.(₹)	L.P.(₹)
		21,530	25,900	29,830
		22,970	26,470	31,270
		25,900	28,260	32,680
		28,160	32,340	36,520
		29,280	32,910	36,840
		30,590	34,050	39,690

PR221 DS-LS/I

250	3	1SDA053999R1 ■	28,780	1SDA054023R1 ■	35,490	1SDA054047R1	38,630
250	4	1SDA054011R1 ■	37,350	1SDA054035R1 ■	41,430	1SDA054059R1	44,840

PR222DS/P-LSIG

100	3	1SDA054006R1 ■	41,310	1SDA054030R1 ■	42,940	1SDA054054R1	54,270
160		1SDA054007R1 ■		1SDA054031R1 ■		1SDA054055R1	
250		1SDA054008R1 ■		1SDA054032R1 ■		1SDA054056R1	
100	4	1SDA054018R1	50,000	1SDA054042R1	52,720	1SDA054066R1	65,570
160		1SDA054019R1		1SDA054043R1		1SDA054067R1	
250		1SDA054020R1 ■		1SDA054044R1 ■		1SDA054068R1	

PR222DS/PD-LSIG

100	3	1SDA081497R1	66,390	1SDA081501R1	68,020	1SDA081505R1	79,350
160		1SDA081498R1		1SDA081502R1		1SDA081506R1	
250		1SDA081499R1		1SDA081503R1		1SDA081507R1	
100	4	1SDA081509R1	75,090	1SDA081513R1	77,810	1SDA081517R1	90,660
160		1SDA081510R1		1SDA081514R1		1SDA081518R1	
250		1SDA081511R1		1SDA081515R1		1SDA081519R1	

Note: Order X3 connector - 1SDA055059R1 along with PR222DS/PD-LSIG

T4 320

PR221 DS-LS/I

		N	S	H
In (A)	Poles	Ordering Code	Ordering Code	Ordering Code
320	3	1SDA054117R1 ■	1SDA054125R1 ■	1SDA054133R1
320	4	1SDA054121R1	1SDA054129R1	1SDA054137R1
		L.P.(₹)	L.P.(₹)	L.P.(₹)
		34,480	38,440	44,660
		42,390	48,610	55,960

■ Stock items

Tmax power distribution circuit breakers

T4

PR222DS/P-LSIG

		N		S		H	
In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
320	3	1SDA054120R1 ■	50,880	1SDA054128R1 ■	52,000	1SDA054136R1	62,170
320	4	1SDA054124R1	56,520	1SDA054132R1	58,790	1SDA054140R1	70,090

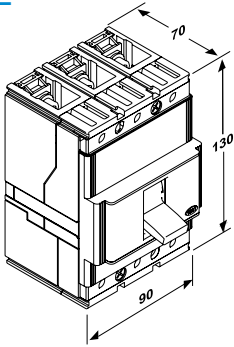
PR222DS/PD-LSIG

320	3	1SDA081500R1	75,960	1SDA081504R1	77,090	1SDA081508R1	87,260
320	4	1SDA081512R1	81,600	1SDA081513R1	77,810	1SDA081520R1	95,170

Note: Order X3 connector - 1SDA055059R1 along with PR222DS/PD-LSIG

Tmax motor protection circuit breakers

T2



Breaking capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%



T2 160

MF

		N		S		H	
In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
1	3	1SDA053110R1	13,170	1SDA053121R1	14,230	1SDA053132R1	15,620
1.6		1SDA053111R1		1SDA053122R1		1SDA053133R1	
2		1SDA053112R1		1SDA053123R1		1SDA053134R1	
2.5		1SDA0531131R1		1SDA053124R1		1SDA053135R1	
3.2		1SDA053114R1		1SDA053125R1		1SDA053136R1	
4		1SDA053115R1		1SDA053126R1		1SDA053137R1	
5		1SDA053116R1		1SDA053127R1		1SDA053138R1	
6.5		1SDA053117R1		1SDA053128R1		1SDA053139R1	
8.5		1SDA053118R1		1SDA053129R1		1SDA053140R1	
11		1SDA053119R1		1SDA053130R1		1SDA053141R1	
12.5		1SDA053120R1		1SDA053131R1		1SDA053142R1	

MA

20	3	1SDA051207R1	12,960	1SDA051216R1	14,020	1SDA051224R1	15,410
32		1SDA051208R1		1SDA051217R1		1SDA051225R1	
52		1SDA051209R1		1SDA051218R1		1SDA051226R1	
80		1SDA051210R1		1SDA051219R1		1SDA051227R1	
100		1SDA051211R1		1SDA051220R1		1SDA051228R1	

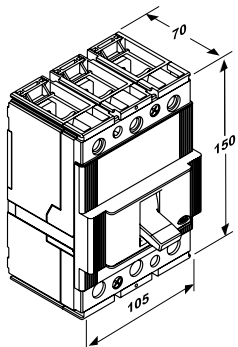
PR221 DS-I

		N		S		H	
In (A)	Poles	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
10	3	1SDA051163R1	17,380	1SDA051174R1	20,900	1SDA051184R1	22,000
25		1SDA051164R1		1SDA051175R1		1SDA051185R1	
63		1SDA051165R1		1SDA051176R1		1SDA051186R1	
100		1SDA051166R1		1SDA051177R1		1SDA051187R1	
160		1SDA051168R1		1SDA051178R1		1SDA051188R1	

■ Stock items

Tmax motor protection circuit breakers

T3



Breaking capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	75%
S	50KA	50%

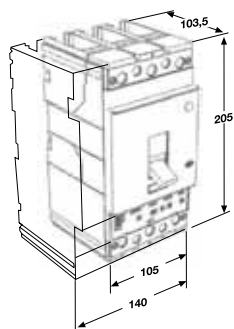


T3 250 MA

In (A)	Poles
100	3
125	
160	
200	

N		S	
Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
1SDA051315R1	15,850	1SDA051320R1	16,200
1SDA051316R1			
1SDA051317R1			
1SDA051318R1			
1SDA051323R1	18,390		

T4



Breaking capacity at 415VAC

	Icu	Ics(Icu)
N	36KA	100%
S	50KA	100%
H	70KA	100%



T4 250 MA

In (A)	Poles
125	3
160	
200	

N		S	
Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
1SDA054298R1	27,550	1SDA054304R1	30,000
1SDA054299R1			
1SDA054300R1			

PR221 DS-I

In (A)	Poles
250	3
320	

N		S	
Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
1SDA054002R1	32,930	1SDA054026R1	35,740
1SDA054118R1	36,040	1SDA054126R1	38,910

H	
Ordering Code	L.P.(₹)
1SDA054050R1	42,330
1SDA054134R1	46,910

Ekip M-LRIU

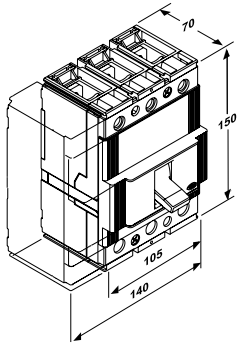
In (A)	Poles
100	3
160	
200	

N		S	
Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
1SDA054522R1	46,510	1SDA054525R1	51,740
1SDA054523R1			
1SDA054524R1			

Tmax generator protection circuit breaker

T3

1



Breaking Capacity at 415VAC

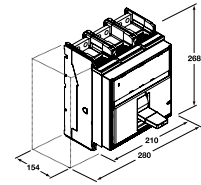
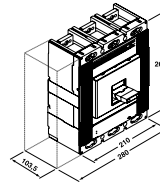
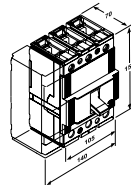
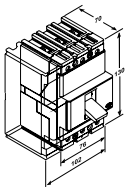
	Icu	Ics
N	36KA	75%
S	50KA	50%



T3 TMG

In (A)	Poles	N		S	
		Ordering Code	L.P.(₹)	Ordering Code	L.P.(₹)
200	3	1SDA055110R1	16,950	1SDA055124R1	20,180
250		1SDA055111R1	19,670	1SDA055125R1	23,200
200	4	1SDA055117R1	22,200	1SDA055131R1	25,730
250		1SDA055118R1	25,220	1SDA055132R1	27,250

Tmax switch disconnectors



T1D - Fixed (F), Icw (1s) = 2,2 kA

T1D 160 F FC Cu

Poles	In(A)	Ordering Code	L.P.(₹)
3	160	1SDA051325R1	8,830
4	160	1SDA051326R1	13,200

T3D - Fixed (F), Icw (1s) = 3.6 kA

T3D 250 F F

In(A)	Ordering Code	L.P.(₹)
250	1SDA051327R1	19,080
250	1SDA051328R1	22,840

T4D- Fixed (F), Icw (1s) = 3,6 kA

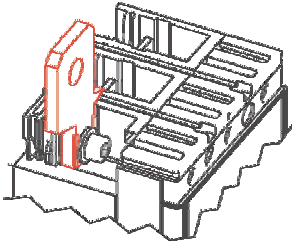
T4D 250 F F

Poles	In(A)	Ordering Code	L.P.(₹)
3	250	1SDA057172R1	22,450
4	250	1SDA057173R1	28,950

T4D 320 F F

In(A)	Ordering Code	L.P.(₹)
320	1SDA054597R1	24,090
320	1SDA054598R1	31,650

Tmax accessories



Accessories for T-Max MCCBs

Extended Spreaded terminals - ES			
Frame	Description	Ordering code	L.P.(₹)
T1	Kit EST1 6pcs	1SYN450201R0001 ■	1,150
	Kit EST1 8pcs	1SYN450207R0001 ■	1,350
T2	Kit EST2 6pcs	1SYN450202R0001 ■	1,640
	Kit EST2 8pcs	1SYN450208R0001 ■	1,850
T3	Kit EST3 6pcs	1SYN450203R0001 ■	1,790
	Kit EST3 8pcs	1SYN450209R0001 ■	2,140
T4	Kit EST4 6pcs	1SYN450204R0001 ■	1,600
	Kit EST4 8pcs	1SYN450210R0001	2,370

Note: Phase barrier supplied as standard with above aluminium spreaders

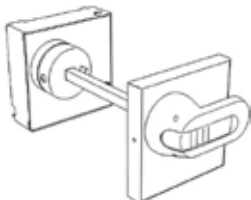


Seperators - PB			
Frame	Description	Ordering code	L.P.(₹)
T1	PB100 4 pcs - Low T1	1SYN850205R0001 ■	570
	PB100 6 pcs - Low T1	1SYN850208R0001	680
T2-T3	PB100 4 pcs - Low T2-T3	1SYN850206R0001 ■	680
	PB100 6 pcs - Low T2-T3	1SYN850209R0001	940
T4	PB100 4 pcs - Low T4, T5	1SYN850207R0001 ■	790
	PB100 6 pcs - Low T4, T5 - 400A	1SYN850210R0001	1,140

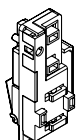
Rotary handle operating mechanism



Direct - RHD			
Frame	Description	Ordering code	L.P.(₹)
T1-T2-T3	RHD Normal T1-T2-T3	1SDA051381R1 ■	2,040
	RHD_EM Emergency T1-T2-T3	1SDA051382R1	2,300
T4	RHD Normal for Fixed/Plug-in T4-T5	1SDA054926R1 ■	3,420
	RHD_EM Emergency for Fixed/Plug-in T4-T5	1SDA054927R1	3,680
	RHD Normal for Withdrawable T4-T5	1SDA054928R1	3,800
	RHD_EM Emergency for Withdrawable T4	1SDA055234R1	4,270



Transmitted - RHE			
Frame	Description	Ordering code	L.P.(₹)
T1-T2-T3	RHE_S T1-T2-T3 250MM	1SDA070207R1 ■	2,130
	RHE_EM Emergency T1-T2-T3	1SDA051384R1	3,680
T4	RHE Normal for Fixed/Plug-in T4-T5 250mm	1SDA070447R1 ■	3,190
	RHE_EM Emergency for Fixed/Plug-in T4-T5	1SDA054930R1	6,150
	RHE Normal for Withdrawable T4-T5	1SDA054933R1	4,820
	RHE_EM Emergency for Withdrawable T4-T5	1SDA054934R1	6,070

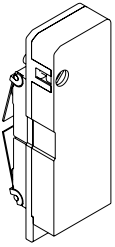
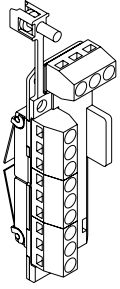


Cabled Contact in Electronic Version			
Frame	Description	Ordering code	L.P.(₹)
T4	AUX-E-C 1Q 1SY T4-T5	1SDA054916R1	4,740

■ Stock items

Tmax accessories

1



Electrical signals

Auxiliary Contact - AUX (Uncabled version)

Frame	Description	Ordering code	L.P.(₹)
T1...T4(1)	AUX 1Q 1SY 250V AC/DC T1...T6 (1)	1SDA051368R1 ■	1,580
	AUX 3Q 1SY 250V AC/DC T1...T6 (1)	1SDA051369R1 ■	2,560
	AUX 3Q 1SY 24V DC T1...T6 (1)	1SDA054914R1	2,460
T4	AUX-SA 1 S51 T4-T5	1SDA055050R1	1,580

Auxiliary Contact Cabled-Version - AUX - C

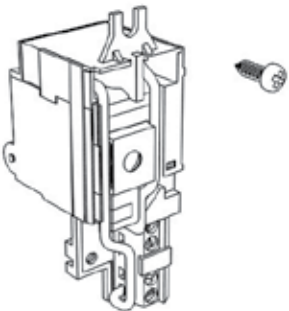
Frame	Description	Ordering code	L.P.(₹)
T1-T2-T3 (1)	AUX-C 1Q 1SY 250 V AC/DC T1-T2-T3 (1)	1SDA051370R1	1,910
	AUX-C 3Q 1SY 250 V AC/DC T1-T2-T3 (1)	1SDA051371R1	3,580
	AUX-C 3Q 1SY T1-T2-T3 (1)	1SDA055361R1	3020
T2	AUX-C 1Q 1SY 1S51 - PR221 T2	1SDA053704R1 ■	2,340
	AUX-C 2Q 1SY - PR221 T2	1SDA055504R1	2,690
T4	AUX-C 1Q 1SY 250V AC/DC C T4-T5-T6	1SDA054910R1	1,910
	AUX-C 1Q 1SY 400V AC C T4-T5-T6	1SDA054912R1	2,820
	AUX-C 2Q 400V AC C T4-T5-T6	1SDA054913R1	3,230
	AUX-C 3Q 1SY 24VDC C T4-T5-T6	1SDA054915R1	3,320
	AUX-C 3Q 1SY 250V AC/DC C T4-T5-T6	1SDA054911R1	3,580

Opening release

Shunt Opening Release - SOR (Uncabled version)

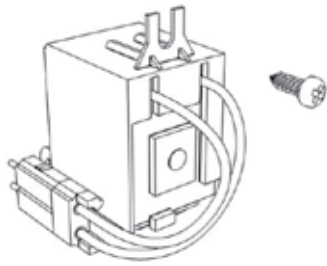
Frame	Description	Ordering code	L.P.(₹)
T1-T2-T3	SOR 12V DC T1-T2-T3	1SDA053000R1	1,880
	SOR 24...30V AC/DC T1-T2-T3	1SDA051333R1	
	SOR 48...60V AC/DC T1-T2-T3	1SDA051334R1	
	SOR 110...127V AC-110...125V DC T1-T2-T3	1SDA051335R1	
	SOR 220...240V AC-220...250V DC T1-T2-T3	1SDA051336R1 ■	
	SOR 380...440V AC T1-T2-T3	1SDA051337R1	
	SOR 480...525V AC T1-T2-T3	1SDA051338R1	
T4	SOR 12V DC T4-T5-T6	1SDA054862R1	3,180
	SOR 24V AC/DC T4-T5-T6	1SDA054863R1	
	SOR 48...60V AC/DC T4-T5-T6	1SDA054864R1	
	SOR 110...120V AC-110...125V DC T4-T5-T6	1SDA054865R1	
	SOR 220...240V AC-220...250V DC T4-T5-T6	1SDA054866R1 ■	
	SOR 380...440V AC T4-T5-T6	1SDA054867R1	
	SOR 480...500V AC T4-T5-T6	1SDA054868R1	

Note (1): Cannot be used with T2 MCCB fitted with PR221DS trip unit

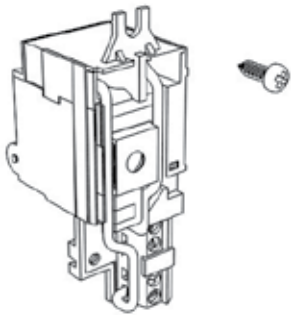


■ Stock items

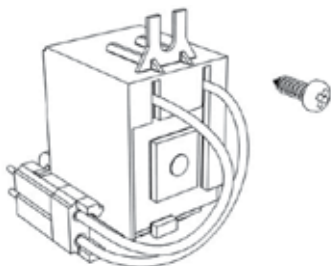
Tmax accessories



Shunt opening release - SOR - C			
Frame	Description	Ordering code	L.P.(₹)
T1-T2-T3	SOR-C 12V DC T1-T2-T3	1SDA053001R1	3,010
	SOR-C 24 ...30V AC/DC T1-T2-T3	1SDA051339R1	
	SOR-C 48...60V AC/DC T1-T2-T3	1SDA051340R1	
	SOR-C 110...127V AC-110...125V DC T1-T2-T3	1SDA051341R1	
	SOR-C 220...240V AC-220...250V DC T1-T2-T3	1SDA051342R1	
	SOR-C 380...440V AC T1-T2-T3	1SDA051343R1	
	SOR-C 480...525V AC T1-T2-T3	1SDA051344R1	
T4	SOR-C 12V DC T4-T5-T6	1SDA054869R1	5,620
	SOR-C 24V AC/DC T4-T5-T6	1SDA054870R1	
	SOR-C 48...60V AC/DC T4-T5-T6	1SDA054871R1	
	SOR-C 110...120V AC-110...125V DC T4-T5-T6	1SDA054872R1	
	SOR-C 220...240V AC-220...250V DC T4-T5-T6	1SDA054873R1	
	SOR 380...440V AC T4-T5-T6	1SDA054875R1	
	SOR 480...500V AC T4-T5-T6	1SDA054868R1	



Under voltage release - UVR (Uncabled version)			
Frames	Description	Ordering code	L.P.(₹)
T1-T2-T3	UVR 24 ...30V AC/DC T1-T2-T3	1SDA051345R1	3,760
	UVR 48V AC/DC T1-T2-T3	1SDA051346R1	
	UVR 60V AC/DC T1-T2-T3	1SDA052333R1	
	UVR 110...127V AC-110...125V DC T1-T2-T3	1SDA051347R1	
	UVR 220...240V AC-220...250V DC T1-T2-T3	1SDA051348R1 ■	
	UVR 380...440V AC T1-T2-T3	1SDA051349R1 ■	
	UVR 480...500V AC T1-T2-T3	1SDA051350R1	
T4	UVR 24V AC/DC T4-T5-T6	1SDA054880R1	6,080
	UVR 48V AC/DC T4-T5-T6	1SDA054881R1	
	UVR 60V AC/DC T4-T5-T6	1SDA054882R1	
	UVR 110...120V AC-110...125V DC T4-T5-T6	1SDA054883R1	
	UVR 220...240V AC-220...250V DC T4-T5-T6	1SDA054884R1 ■	
	UVR 380...440V AC T4-T5-T6	1SDA054885R1 ■	
	UVR 480...500V AC T4-T5-T6	1SDA054886R1	

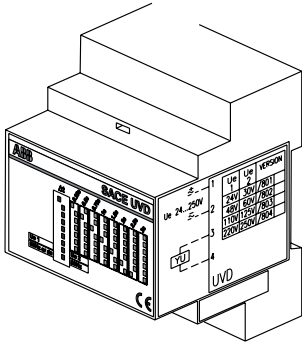


Under Voltage Release C - UVR - C (Cabled version)			
Frame	Description	Ordering code	L.P.(₹)
T1-T2-T3	UVR-C 24...30 V AC/DC T1-T2-T3	1SDA051351R1	7,530
	UVR-C 48V AC/DC T1-T2-T3	1SDA051352R1	
	UVR-C 110...127V AC-110...125VDC T1-T2-T3	1SDA051353R1	
	UVR-C 220...240V AC-220...250VDC T1-T2-T3	1SDA051354R1	
	UVR-C 380...440V AC T1-T2-T3	1SDA051355R1	
	UVR-C 480...500V AC T1-T2-T3	1SDA051356R1	
	UVR-C 60V AC/DC T1-T2-T3	1SDA052335R1	
T4	UVR-C 24V AC/DC T4-T5-T6	1SDA054887R1	8,220
	UVR-C 48V AC/DC T4-T5-T6	1SDA054888R1	

■ Stock items

Tmax accessories

1



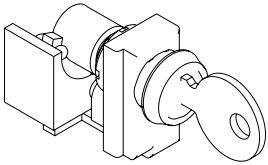
Time Delay Device for Under Voltage Release- UVD

Frame	Description	Ordering code	L.P.(₹)
T1...T4	UVD 24...30V AC/DC T1...T6	1SDA051357R1	29,130
	UVD 48...60V AC/DC T1...T6	1SDA051358R1	
	UVD 110...125V AC/DC T1...T6	1SDA051360R1	
	UVD 220...250V AC/DC T1...T6	1SDA051361R1	

Note: Order along with relative UV release

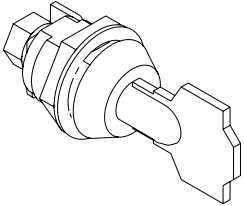
Key lock

Key Lock - KLC



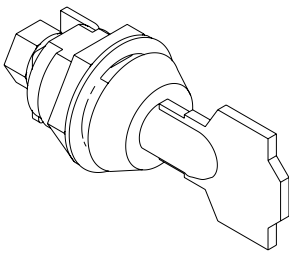
Frame	Description	Ordering code	L.P.(₹)
KLC for Manual Breaker			
T1	KLC Ronis Same Key T1	1SDA051395R1	1,770
	KLC Same Key T1	1SDA053528R1	
T2	KLC Ronis Same Key T2	1SDA052015R1	
	KLC Same Key T2	1SDA053529R1	
T3	KLC Ronis Same Key T3	1SDA052016R1	
	KLC Same Key T3	1SDA053530R1	

Key Lock for Rotary Handle - RHL



Frame	Description	Ordering code	L.P.(₹)
T1-T2-T3	RHL Different keys in open position for rotary handleT1-T2-T3	1SDA051389R1	2,040
	RHL Same Keys in open position for rotary handleT1-T2-T3	1SDA051390R1	900
	RHL Different keys in open /closed position for rotary handle T1-T2-T3	1SDA052021R1	900
	RHL Same Keys in open position for rotary handleT1-T2-T3	1SDA060147R1	900
	RHL Same Keys in open position for rotary handleT1-T2-T3	1SDA060148R1	900
	RHL Same Keys in open position for rotary handleT1-T2-T3	1SDA060149R1	900

Key Lock for Front / Rotary / Fixed Part- KLF

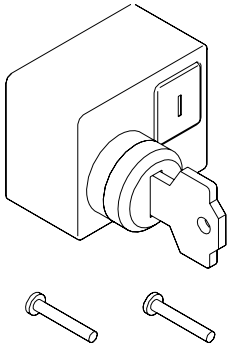


Frame	Description	Ordering code	L.P.(₹)
T4	KLF-D Lock for Front / Rotary Handle - Different Key in open PositionT4-T5	1SDA054939R1	2,610
	KLF-S Block for Front / Rotary Handle - Same Key (N. 20005) T4-T5	1SDA054940R1	
	KLF-S Block for Front / Rotary Handle - Same Key (N. 20006) T4-T5	1SDA054941R1	
	KLF-S Block for Front / Rotary Handle - Same Key (N. 20007) T4-T5	1SDA054942R1	
	KLF-S Block for Front / Rotary Handle - Same Key (N. 20008) T4-T5	1SDA054943R1	

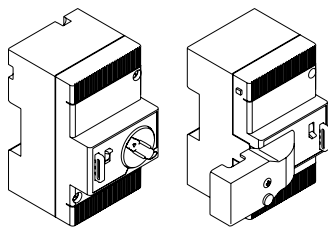
■ Stock items

Tmax accessories

Key lock for motor operated- MOL



Frame	Description	Ordering code	L.P.(₹)
T4	MOL-D - Same Key T4-T5	1SDA054904R1	3,190
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20005) T4-T5	1SDA054905R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20006) T4-T5	1SDA054906R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20007) T4-T5	1SDA054907R1	
	MOL-S - Same Key for Different Groups of Circuit Breakers (N. 20008) T4-T5	1SDA054908R1	



Motor operated

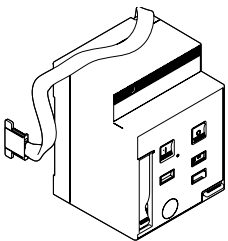
Solenoid Operator - MOS

Frame	Description	Ordering code	L.P.(₹)
T1-T2-T3	MOS Superimposed 48...60V DC T1-T2-T3	1SDA059596R1	17,520
	MOS Superimposed 110...250V AC-110...250V DC T1-T2-T3	1SDA059597R1 ■	
T1-T2	MOS Side-by-side 48...60V DC T1-T2	1SDA059598R1	21,260
	MOS Side-by-side 110...250V AC-110...250V DC T1-T2	1SDA059599R1	

Note: It is always Fitted with Socket - Plug Connector

Stored Energy Motor Operator - MOE

Frame	Description	Ordering code	L.P.(₹)
T4	MOE 24 V DC T4-T5	1SDA054894R1	28,860
	MOE 48...60 V DC T4-T5	1SDA054895R1	
	MOE 110...125 V AC / DC T4-T5	1SDA054896R1	
	MOE 220...250 V AC / DC T4-T5	1SDA054897R1 ■	
	MOE 380 V AC T4-T5	1SDA054898R1	

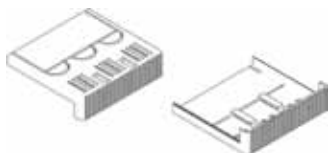


Stored Energy Motor Operator with Electronics - MOE-E

Frame	Description	Ordering code	L.P.(₹)
T4	MOE-E 24 V DC T4-T5	1SDA054899R1	37,840
	MOE-E 48...60 V DC T4-T5	1SDA054900R1	
	MOE-E 110...125 V AC / DC T4-T5	1SDA054901R1	
	MOE-E 220...250 V AC / DC T4-T5	1SDA054902R1	
	MOE-E 380 V AC T4-T5	1SDA054903R1	

Low insulating terminal covers - LTC

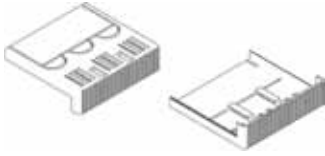
Frame	Description	Ordering code	L.P.(₹)
T1	LTC 3p T1	1SDA051421R1	1,700
	LTC 4p T1	1SDA051422R1	2,020
T2	LTC 3p T2	1SDA051423R1	1,700
	LTC 4p T2	1SDA051424R1	2,020
T3	LTC 3p T3	1SDA051425R1	1,790
	LTC 4p T3	1SDA051426R1	2,220
T4	LTC 3p T4	1SDA054966R1	1,790
	LTC 4p T4	1SDA054967R1	2,530



■ Stock items

Tmax accessories

1



Low insulating terminal covers - LTC

Frame	Description	Ordering code	L.P.(₹)
T1	LTC 3p T1	1SDA051421R1	1,870
	LTC 4p T1	1SDA051422R1	2,220
T2	LTC 3p T2	1SDA051423R1	1,870
	LTC 4p T2	1SDA051424R1	2,220
T3	LTC 3p T3	1SDA051425R1	1,970
	LTC 4p T3	1SDA051426R1	2,440
T4	LTC 3p T4	1SDA054966R1	1,970
	LTC 4p T4	1SDA054967R1	2,780

Dialogue Unit - PR 222/DS-PD

Frame	Description	Ordering code	L.P.(₹)
T4	PR222DS/PD LSI T4-T5-T6	1SDA055066R1	21,950
	PR222DS/PD LSIG T4-T5-T6	1SDA055067R1	22,900

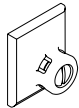
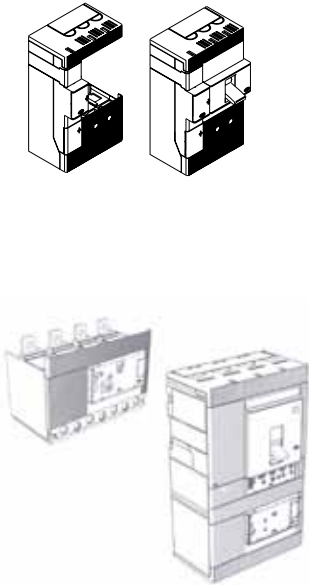
Note : Order X3 connector along with dialogue unit

Residual current releases

SACE RC22x

Frame	Description	Ordering code	L.P.(₹)
T1	RC221/1 3p Fixed T1	1SDA051398R1	18,930
	RC221/1 4p Fixed T1	1SDA051401R1	22,090
	RC222/1 3p Fixed T1	1SDA051400R1	18,930
	RC222/1 4p Fixed T1	1SDA051402R1	22,090
	RC222/1 Mod200mm 4p Fixed T1	1SDA053869R1	27,350
T2	RC221/2 4p Fixed T2	1SDA051405R1	23,680
	RC222/2 3p Fixed T2	1SDA051404R1	19,470
	RC222/2 4p Fixed T2	1SDA051406R1	23,680
T3	RC221/3 3p Fixed T3	1SDA051407R1	24,190
	RC221/3 4p Fixed T3	1SDA051409R1	32,080
	RC222/3 3p Fixed T3	1SDA051408R1	24,190
T4	RC222/3 4p Fixed T3	1SDA051410R1	37,860
	RC222/4 4p Fixed T4	1SDA054954R1	39,960
	RC223/4 4p Fixed T4 250	1SDA054956R1	47,330

Note: The Residual Current Releases for the T2 and T3 Circuit Breakers always Supplied Complete with FC Cu Terminal Kit

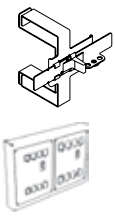


Mechanical Interlock Between Circuit Breakers - MIF

Frame	Description	Ordering code	L.P.(₹)
T1-T2-T3	MIF Mechanical Interlock Between 2 Breakers T1-T2-T3	1SDA051396R1	4,250
	MIF Mechanical Interlock Between 3 Breakers T1-T2-T3	1SDA052165R1	7,700

Note: Incompatible with the front accessories (solenoid operator, rotary handle operating mechanism) and with the residual current releases.

Tmax accessories



Mechanical Interlock Between Circuit Breakers - MIR - to be used with copper spreaders only			
Frame	Description	Ordering code	L.P.(₹)
T3	MIR-H Horizontal Mechanical Interlock T3	1SDA063324R1	7,800
	MIR-V Vertical Mechanical Interlock T3	1SDA063325R1	
T4	MIR-HB Horizontal Interlock Frame Unit T4-T5	1SDA054946R1	8,410
	MIR-VB Vertical Interlock Frame Unit T4-T5	1SDA054947R1	
	MIR-P Plate for Interlock Type A T4 (F-P-W) + T4 (F-P-W)	1SDA054948R1	

Note: For interlocking in T4-T5, Order both Frame and Plate unit

Tmax conversion kit

Plug-in and drawout conversion

Frame	Pole	Type	Description	Ordering code	L.P.(₹)	
T2	3P	Plugin Kit	KIT MP T2 P 3p KIT CONVERSION	1SDA051411R1	4,540	
			T2 P FP 3p F	1SDA051329R1	8,330	
T3			KIT MP T3 P 3p KIT CONVERSION	1SDA051413R1	5,730	
			T3 P FP 3p F	1SDA051331R1	8,550	
T4			KIT MP T4 P 3p	1SDA054839R1	6,610	
			T4 P FP 3p EF	1SDA054737R1	9,200	
		T4 W FP 3p EF	1SDA054743R1	18,070		
T2		4P	Plugin Kit	KIT MP T2 P 4p KIT CONVERSION	1SDA051412R1	5,950
				T2 P FP 4p F	1SDA051330R1	11,250
T3				KIT MP T3 P 4p KIT CONVERSION	1SDA051414R1	6,710
				T3 P FP 4p F	1SDA051332R1	11,790
T4				KIT MP T4 P 4p	1SDA054840R1	8,760
	T4 P FP 4p EF			1SDA054740R1	12,220	
T4	Drawout Kit	KIT MP T4 W 4p	1SDA054842R1	12,870		
		T4 W FP 4p EF	1SDA054746R1	24,110		

Accessories:

Frame / Type	Description	Ordering code	L.P.(₹)
Connector	ADP 5pin SOR-C /UVR-C T4-T5-T6 P/W	1SDA055173R1	2,140
	ADP 6pin AUX -C T4-T5-T6 P/W	1SDA054922R1	1,520
	ADP 10pin MOE AUE -C T4-T5-T6 P/W	1SDA054924R1	1,940
	ADP 12pin AUX -C T4-T5-T6 P/W	1SDA054923R1	2,490

Note: The plug-in version must be composed as follows

- 1) Fixed circuit-breaker
- 2) Conversion kit from fixed into moving part of plug-in
- 3) Fixed part of plug-in

2) Conversion kit from fixed into moving part of withdrawable

- 3) Fixed part of withdrawable
- 4) Front for lever operating mechanism or rotary handle or motor operator

Note: The withdrawable version must be composed as follows

- 1) Fixed circuit-breaker

Switches

1

ABB has a wide portfolio of low voltage switches. They are suitable for diverse applications, in motor control centers, in switch boards and as main switches in various equipments and machines. From single to 8 poles and combination switches for change-over, automatic transfer, bypass, reversing etc.

Switch-disconnectors 16 – 4000 A

The switch disconnector is largely used as the main switch in low voltage switchgears for distribution of power, starting and stopping motors and isolating loads during maintenance.

The range from 16 to 125 Amps are either base plate or door mounted by snap-on or screw fitting front operated 3, 4, 6 and 8-pole are available as standard.

From 160 to 4000 Amps the switch disconnectors, also called load break switches, are designed as pole modules and they are available as 1, 2, 3 and 4-pole versions, front or side operated.

Switch Disconnector fuses 16 – 1250A

The switch disconnector fuse is used as the main switch in low voltage switchgears in industry for distributing power and protecting motors, cables and other devices against short circuits and over loads.

The switch disconnector fuses are available for all types of fuse links, DIN, BS, NFC, UL, CSA.

The range includes single pole to four pole versions, front- or side-operated. The pole module design enables location of the operating mechanism in any position together with the direction of the terminals giving flexibility to installation in different types of cubicle designs.

Change-over and transfer switches 16 – 3200 A

ABB's change-over and transfer switches are designed to

transfer loads from one power source to another in a wide variety of applications.

The range includes switches from 16 to 3200 Amperes, which can be operated manually, remotely by using a motor or automatically.

ABB's change-over and transfer switches are tested according to IEC 60947-6-1 and IEC 60947-3 standards. The switches have ratings in AC31 and AC33 utilization categories, up to 415 V. In motorized switches, the motor operators have a wide voltage operation range.

Enclosed switches.16 – 1600 A

The ABB enclosed switches are suitable for power distribution in factories and buildings, as local motor isolators and as main switches. Each incoming supply shall be provided with a hand operated main switch-disconnector according to the Machine Directive EN 60204 and isolate reliably the electrical equipment from the supply. ABB enclosed switches are designed and tested to meet these requirements and complies with IEC 60947-3.

The enclosed switches are easy to install and safe to use in industrial, public and residential environments. The indication of the handle is always reliable and lockable in the OFF-position with a standard padlock. ABB's long experience in switch disconnects guarantees a long and safe use

Cam switches 10 – 315 A

ABB's new OC, OM, ON and OL rotary cam switches offer a complete range of cam switches for control, instrumentation and motor starting applications, maximizing the benefits and optimizing your use of assets. The standard cam switches provide you with a variety of functionalities for the most common mounting types and applications with minimum footprint area.



DC switch disconnectors for PV application



OTDC 10...32A

- Modular Design.
- Simple and fast installation
- DIN rail or screw mounted
- Tunnel terminals for easy termination
- Shortcircuit bars are pre-installed as standard.
- Maximum energy efficiency.
- Available in plastic enclosure.



OTDC 100A....1600A

- ABB offers a compact DC switch range for single and multi circuit disconnecting
- Carefully designed arc plates and dual magnetic breaking, breaking power is optimized across the entire current range.
- As a result of symmetric pole design, the connections are independent of polarity. The user can make the connections in both ways.
- OTDC is the only DC switch in the market that has visible contacts.
- The mechanism can be located between the poles or on the side of the switch.
- Special four pole versions can be made for double circuit applications
- The operation of the switch is not vulnerable to voltage peaks and it is independent of the user (quick make quick brake).
- The switches are available in direct mounting handle version as well as external door mounted handle version
- The power losses are very low, results in high efficiency.

Rated current In (A)	Rated Voltage	Description	Ordering Code	L.P. (₹)
10	1000 V DC	OTDC16F2	1SCA121454R1001	Upon Request
16		OTDC16F3	1SCA121457R1001	
25		OTDC25F3	1SCA121458R1001	
32		OTDC32F3	1SCA121459R1001	
100		OTDC100E11K	1SCA127730R1001	
160		OTDC160E11K	1SCA127736R1001	
200		OTDC200E11K-I	1SCA145988R1001	
250		OTDC250E11K-I	1SCA145994R1001	
315		OTDC315E11K-I	1SCA146000R1001	
400		OTDC400E11K-I	1SCA146009R1001	
500		OTDC500E11K-I	1SCA146018R1001	
630		OTDC630EPP22K	1SCA137209R1001	
800		OTDC800EPP22K	1SCA137212R1001	
1000		OTDC1000E22K	1SCA143710R1001	
1250		OTDC1250E22K	1SCA143716R1001	
1600	OTDC1600E22K	1SCA143719R1001		
315	1500 V DC	OTDC315EV12K	1SCA132259R1001	Upon Request
400		OTDC400EV12K	1SCA132254R1001	
500		OTDC500EV12K	1SCA132255R1001	

Note: The above are direct mounted handle version, we also offer door mounted handle as suffix P version of same ratings.

*For information contact our nearest sales office

ONE20

Enclosed switches for residential and commercial installations

1

ONE20 switches can be used as main switches or for local isolation in various applications, such as HVAC, residential water pumps and heat pumps or commercial lighting.

High quality

ABB is synonym of quality: each ONE20 switch is tested and approved at the factory. The enclosures are made of durable materials with high UV resistance, which makes it suitable for indoor or outdoor use.

Reduced installation time

Compression glands are included in the delivery. They can be easily installed on the threaded knock-out cable entry.

Simple and modern design

The enclosure is compact and has the same size for 2, 3 and 4 pole types. ONE20 is available in three colors.

Maximized safety

The handle can be padlocked in the OFF position with up to three padlocks and in ON position with one padlock.

Features

- Available in 2-, 3- and 4- pole versions
- Thermal current (Ith) 20A
- Color options: light grey, dark grey, red-yellow
- Weather proof enclosure due to high IP class (IP67) and
- UV resistant material



Enclosed Switches ONE20

Poles	Description	Ordering code	L.P. (₹)
2	ONE20M2W	1SCA138456R1001	890
3	ONE20M3W	1SCA138457R1001	1,320
4	ONE20M4W	1SCA138459R1001	1,550
2	ONE20M2G	1SCA135532R1001	890
3	ONE20M3G	1SCA135535R1001	1,320
4	ONE20M4G	1SCA135538R1001	1,550
2	ONE20M2Y	1SCA135533R1001	890
3	ONE20M3Y	1SCA135536R1001	1,320
4	ONE20M4Y	1SCA135540R1001	1550

Easyline - XLP

Fuse Switch Disconnecter 1, 2, 3 & 4P for both AC and DC application 160...630A

All units are applicable for AC Voltage, and the 1-pole and 2-pole range are also rated for DC voltage. In addition to be used as single apparatus, the 3-pole range from size 00 to size 3 (160A - 630A) are also designed to be used in distribution systems by use of a busbar adapter for easy installation. The Busbar adapters are available for 40mm, and 60mm distance in-between centre of the phases for

each busbarsystems. The whole EasyLine range got a sturdy, uniform design that is operator friendly and safe with IP 30 from front in closed position and IP 20 in open position. EasyLine Fuse Switch Disconnectors are developed and type tested according to IEC60947-3 and based on a long history, going back to 1958 when we successfully introduced the manually dependent operated LHB.



Features

- All the XLP cable terminals can be delivered with integrated bolts for cable lugs or with integrated bridge clamps (BC) for easy direct cable connection.
- Typetested according to EN60947-3
- Easy to recycle / EN14001 standards
- Quick-make operation device
- Integrated IP20 cable termination
- IP30 degree of protection from the front
- Replacement compatible to similar types in the market
- Voltage measuring from the front
- V-0 plastic materials

Advantages

- Easy to install
- Easy to operate
- Sturdy design
- High personal safety
- Wide range of cable terminals and snap-on accessories
- Compact, add-on Electronic Fuse Monitoring (EFM)
- Busbar adapters

Applications

- UPS: Uninterruptible Power Supply, used for the power supply for computer/servers, storage devices, communication network systems, industry control systems, etc.
- Telecom Power Supplies.
- General protection in smaller distribution panels using 1-pole or 2-pole configurations AC or DC.

Fusegear - Fuse Switch Disconnecter

Description	Ordering code	L.P. (₹)
XLP000-6CC	1SEP201428R0001	3,500
XLP00-6BC	1SEP101890R0002	4,500
XLP1-6BC	1SEP101891R0002	11,500
XLP2-6BC	1SEP101892R0002	18,000
XLP3-6BC	1SEP101975R0002	29,500

InLine II - ZLBM/ZHBM Designed for the future

1

ABB is proud to introduce the latest technology of Fuse Switch Disconnectors to ensure the best stability and highest safety in the power distribution network.

The new generation InLine II also offers the highest level of personal safety during operation and service.



Features

- Available as 160A, 250A, 400A and 630A types in combination with NH/DIN HRC Fuse Links acc. to EN/IEC 60269
- Type tested in accordance to EN/IEC 60947-3
- 1 - pole and 3 - pole variants
- For vertical and horizontal installations
- Designed for 185mm busbar distance
- IP30 degree of protection from the front
 - Padlocking in open and closed position at the 3 - pole version
 - Padlocking in closed position at the 1 - pole version
- Park position with possible padlocking at the 1 - pole type
- Sealing solutions
- Wide range of accessories and cable terminal connections
- Compatible dimensions to equivalent products in the market

Advantages

- High level of personal safety by:
 - Safe and reliable operation ON/OFF
 - Safe and simple replacement of the NH fuse links

- Universal terminal bolts offering standing bolt or fixed nut for high flexibility of cable connections
- Variants with integrated V-clamps
- Available in two alternative depths (ZLBM/ZHBM), L-version (ZLBM) will save space in Cable Distribution Cabinets by offering reduced depth
- Easy installation of current transformers in the H-version (ZHBM)
- Variants with non corrosive steel materials (stainless steel)
- Designed for intelligent communication to support a high level of stability in the power distribution network

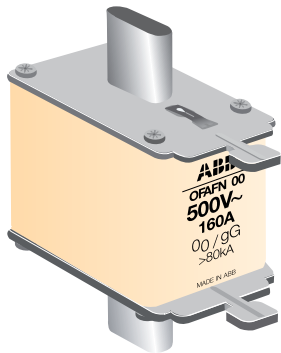
Applications

- Cable distribution cabinets (CDC)
- Low voltage distribution in compact secondary substations (CSS)
- Distribution boards for industry, housing and office buildings
- Installations

OFAF HRC fuse links and base, DIN-type

DIN -type fuse links, gG, 500 V, 80 kA

The ordering code includes one fuse link, the delivery batch is according to the column.



Fuse size	Rated current In (A)	Description	Delivery batch [pcs]	Ordering Code	L.P. (₹)
000	2	OFAFN000GG2	6	1SCA107747R1001	190
	6	OFAFN000GG6	6	1SCA107748R1001	
	10	OFAFN000GG10	6	1SCA107749R1001	
	16	OFAFN000GG16	6	1SCA107750R1001	
	20	OFAFN000GG20	6	1SCA107751R1001	
	25	OFAFN000GG25	6	1SCA107751R1002	
	32	OFAFN000GG32	6	1SCA107752R1001 ■	
00	63	OFAFN000GG63	6	1SCA107753R1001 ■	440
	6	OFAFN00GG6	6	1SCA107754R1001	
	10	OFAFN00GG10	6	1SCA107755R1001	
	16	OFAFN00GG16	6	1SCA107756R1001	
	20	OFAFN00GG20	6	1SCA107757R1001	
	25	OFAFN00GG25	6	1SCA107758R1001	
	32	OFAFN00GG32	6	1SCA107759R1001	
	50	OFAFN00GG50	6	1SCA107760R1001	
	63	OFAFN00GG63	6	1SCA107761R1001	
	80	OFAFN00GG80	6	1SCA107762R1001	
	100	OFAFN00GG100	6	1SCA107763R1001	
	125	OFAFN00GG125	6	1SCA107764R1001 ■	
	160	OFAFN00GG160	6	1SCA107765R1001 ■	
	0	160	OFAF0H160 ¹	3	
200		OFAF0H200 ¹	3	1SCA022629R5140 ■	
32		OFAFN1GG32	6	1SCA107766R1001	
50		OFAFN1GG50	6	1SCA107767R1001	
63		OFAFN1GG63	6	1SCA107768R1001	
1	80	OFAFN1GG80	6	1SCA107769R1001	635
	100	OFAFN1GG100	6	1SCA107770R1001	
	125	OFAFN1GG125	6	1SCA107771R1001	
	160	OFAFN1GG160	6	1SCA107772R1001	
	200	OFAFN1GG200	3	1SCA107773R1001	
	250	OFAFN1GG250	3	1SCA107774R1001 ■	
2	100	OFAFN2GG100	3	1SCA107775R1001	930
	125	OFAFN2GG125	3	1SCA107776R1001	
	250	OFAFN2GG250	3	1SCA107778R1001	
	315	OFAFN2GG315	3	1SCA107779R1001	
	400	OFAFN2GG400	3	1SCA107780R1001 ■	
3	315	OFAFN3GG315	3	1SCA107781R1001	1,440
	500	OFAFN3GG500	3	1SCA107783R1001	
	630	OFAFN3GG630	3	1SCA107784R1001	
	800	OFAFN3GG800	3	1SCA107785R1001	



Fuse size	Rated current In (A)	Description	Ordering Code	L.P. (₹)
00	160	Fuse Base - Din type	1SCA833001R2001 ■	360
1	250		1SCA833001R2002 ■	720
2	400		1SCA833001R2003 ■	1,230
3	630		1SCA833001R2004 ■	1,640

OFF HRC fuse links and base, BS-type

BS -type fuse links, gG, 415 V, 80 kA

The type code includes one fuse link, but the delivery batch is according to the column.

Fuse size	Rated current In [A]	Description	Delivery batch [pcs]	L.P. (₹)	Delivery batch [pcs]
Offset blade tag fuse link					
F1	2	OFFNF1GG2	10	1SCA107786R1001	60
	4	OFFNF1GG4	10	1SCA107787R1001	
	6	OFFNF1GG6	10	1SCA107788R1001	
	10	OFFNF1GG10	10	1SCA107789R1001	
	16	OFFNF1GG16	10	1SCA107790R1001	
	20	OFFNF1GG20	10	1SCA107791R1001 ■	
	25	OFFNF1GG25	10	1SCA107792R1001	70
	32	OFFNF1GG32	10	1SCA107793R1001 ■	
Offset bolted tag fuse link					
A2	6	OFFNA2GG6	10	1SCA107795R1001	90
	10	OFFNA2GG10	10	1SCA107796R1001	
	16	OFFNA2GG16	10	1SCA107798R1001	
	20	OFFNA2GG20	10	1SCA107827R1001	
	25	OFFNA2GG25	10	1SCA107800R1001	
A3	32	OFFNA2GG32	10	1SCA107801R1001 ■	115
	40	OFFNA3GG40	10	1SCA107803R1001	
	50	OFFNA3GG50	10	1SCA107804R1001	
A4	63	OFFNA3GG63	10	1SCA107805R1001 ■	240
	50	OFFNA4GG50	10	1SCA107806R1001	
	63	OFFNA4GG63	10	1SCA107807R1001	
	80	OFFNA4GG80	10	1SCA107808R1001	
	100	OFFNA4GG100	10	1SCA107809R1001	
	125	OFFNA4GG125	10	1SCA107810R1001 ■	
Central bolted tag fuse link					
B1	50	OFFNB1GG50	10	1SCA107811R1001	285
	63	OFFNB1GG63	10	1SCA107812R1001	
	80	OFFNB1GG80	10	1SCA107813R1001	
	100	OFFNB1GG100	10	1SCA107814R1001	
B2	125	OFFNB2GG125	10	1SCA107816R1001	430
	160	OFFNB2GG160	5	1SCA107817R1001	
	200	OFFNB2GG200	5	1SCA107818R1001 ■	
B3	250	OFFNB3GG250	1	1SCA107819R1001 ■	615
	315	OFFNB3GG315	1	1SCA107820R1001	655
B4	400	OFFNB4GG400	1	1SCA107822R1001	1,080
C1	400	OFFNC1GG400	1	1SCA107823R1001	1,640
C2	500	OFFNC2GG500	1	1SCA107824R1001	1,850
C2	630	OFFNC2GG630	1	1SCA107825R1001	1,850
C3	800	OFFNC3GG800	1	1SCA107826R1001	2,340



Fuse size	Rated current In [A]	Description	Delivery batch [pcs]	Ordering Code	L.P. (₹)
F1	20	Control Fuse Base	100	1SYN833001R2005 ■	125
	32		100	1SYN833001R2009 ■	150

OESA/OS switch disconnecter fuse, DIN-type

DIN type

32 - 800A SDF supplied with shaft and handle

Mechanism at the end of the switch fuse



Rated current In [A]	Poles	Recommend Fuse size	Description	Ordering code	L.P. (₹)	
32	2	000/ 00	OESA0032D2	1SCA022108R4330	1,920	
63			OESA0063D2	1SCA022080R5470	2,395	
100		00	OESA00100D2	1SCA022080R5210	4,620	
125			OESA125D2	1SYN833039R2012	6,180	
160		0	OESA00160D2	1SCA022108R4500	6,600	
200			OS200D02P	1SCA022759R9220	8,510	
250		0-1	OS250D02P	1SCA022760R0170	10,590	
315		0-2	OS315D02P	1SYN833040R2012	14,070	
400			OS400D02P	1SCA022811R2740	15,800	
630		3	OS630D02P	1SCA107745R1001	26,910	
800	OS800D02P		1SCA022837R2650	30,540		
32	3	000/ 00	OESA00-32	1SCA022058R7710	2,110	
63			OESA 00-63	1SCA022057R6850	2,900	
100		00	OESA00100	1SCA022025R7830	5,570	
125			OESA 00125	OESA00125 ■	7,460	
160		0	OESA00-160	1SCA022077R8130 ■	7,990	
200			OS200D03P	1SYN022709R9500 ■	10,290	
250		0-1	OS250D03P	1SYN022719R0090	12,810	
315		0-2	OS315D03P	1SYN953046P3001	17,010	
400			OS400D03P	1SYN022719R0250	19,110	
630		3	OS630D03P	1SYN022825R2830 ■	32,540	
800			OS800D03P	1SYN022825R4880	34,640	
32		TPN	000/ 00	OESA0032N	OESA0032N ■	2,215
63				OESA0063N	OESA0063N ■	3,000
100			00	OESA00100N	OESA00100N	5,890
125				OESA00125N	OESA00125N ■	7,880
160			0	OESA00160N	OESA00160N	8,820
200	OS200D03N3P			1SYN022749R8710 ■	11,130	
250	0-1		OS250D03N3P	1SYN022749R9430	13,440	
315	0-2		OS315D03N3P	1SYN953047P3001	18,060	
400			OS400D03N3P	1SYN022753R9320 ■	19,940	
630	3		OS630D03N3P	1SYN100858R1001 ■	33,060	
800			OS800D03N3P	1SYN100859R1001	35,680	
32	4		000/ 00	OESA 00-32A4	1SCA022067R7610	2,420
63				OESA 00-63A4	1SCA022057R7740	3,150
100			00	OESA00100A4	1SCA022043R6760	6,100
125				OESA00125A4	OESA00125A4	8,400
160			0	OESA 00-160A4	1SCA022080R7840	9,440
200		OS200D04N2P		1SYN022709R9680	12,180	
250		0-1	OS250D04N2P	1SYN022719R2380	14,280	
315		0-2	OS315D04N2P	1SYN953048P3001	20,740	
400			OS400D04N2P	1SYN022719R2460	22,040	
630		3	OS630D04N2P	1SYN022825R4290	35,270	
800			OS800D04N2P	1SYN022825R5180	40,050	

Notes:

4th pole of all SFU's are 100% rated and are in the switched neutral (SN) version.

Contact our nearest sales office

- For 1250A Switch disconnecter fuse requirement
- For mechanism inbetween poles configuration
- For Motorized Switch disconnecter fuse requirement
- For 4th pole with fuse protection
- For Switch disconnecter fuse with direct mounting handle

OESA/OS switch disconnecter fuse, BS-type

BS

32 - 800A SDF supplied with shaft and handle

Mechanism at the end of the switch fuse

1



Rated current In [A]	Poles	Recommend Fuse size	Description	Ordering code	L.P. (₹)
32	2	A2	OESA32G2	1SCA022108R6110	1,705
63		A3	OESA63G2	1SCA022108R6380	2,325
100		A4	OESA100G2	1SCA022087R7970	4,520
125			OESA125G2	1SYN833038R2012	5,740
160		B2	OESA160B2	1SCA022082R6550	6,260
200		B1-B2	OS200B02P	1SCA022769R7820	7,560
250		B1-B3	OS250B02P	1SCA022769R9440	9,640
315			OS315B02P	1SCA022817R3450	13,980
400		B1-B4	OS400B02P	1SCA022813R7220	14,240
630		C1-C2	OS630B02P	1SCA113529R1001	24,740
800		C1-C3	OS800B02P	1SCA022837R6480	29,520
32		3	A2	OESA32G1	1SCA022057R1540
63	A3		OESA63G1	1SCA022057R0310 ■	2,790
100	A4		OESA100G1	1SCA022042R0920 ■	5,470
125			OESA125G1	OESA125G1	6,930
160	B2		OESA160B3	1SCA022076R9570	7,560
200	B1-B2		OS200B03P	1SYN022709R9330	9,140
250	B1-B3		OS250B03P	1SYN022750R6660	11,660
315			OS315B03P	1SYN022719R0680	16,910
400	B1-B4		OS400B03P	1SYN022719R0840	17,220
630	C1-C2		OS630B03P	1SYN022825R5850	29,920
800	C1-C3		OS800B03P	1SYN022825R7550	35,680
32	TPN		A2	OESA32G1N	OESA32G1N ■
63		A3	OESA63G1N	OESA63G1N ■	2,900
100		A4	OESA100G1N	OESA100G1N ■	5,780
125			OESA125G1N	OESA125G1N ■	7,140
160		B2	OESA160B3N	OESA160B3N	7,780
200		B1-B2	OS200B03N3P	1SYN022750R0620 ■	9,770
250		B1-B3	OS250B03N3P	1SYN022750R8010 ■	12,600
315			OS315B03N3P	1SYN022753R8940	17,320
400		B1-B4	OS400B03N3P	1SYN022753R9160	18,170
630		C1-C2	OS630B03N3P	1SYN100860R1001	30,430
800		C1-C3	OS800B03N3P	1SYN100861R1001	34,100
32		4	A2	OESA32G4	1SCA022059R9040
63	A3		OESA63G4	1SCA022057R1110	3,150
100	A4		OESA100G4	1SCA022043R7570	6,830
125			OESA125G4	OESA125G4	8,400
160	B2		OESA160B4	1SCA022080R3690	9,440
200	B1-B2		OS200B04N2P	1SYN022709R9410	12,280
250	B1-B3		OS250B04N2P	1SYN022750R7800	14,490
315			OS315B04N2P	1SYN022719R2710	20,780
400	B1-B4		OS400B04N2P	1SYN022719R2890	20,990
630	C1-C2		OS630B04N2P	1SYN022825R6230	36,210
800	C1-C3		OS800B04N2P	1SYN022825R8010	41,460

Note:

4th pole of all SFU's are 100% rated and are in the switched neutral (SN) version.

Contact our nearest sales office

- For 1250A Switch disconnecter fuse requirement
- For mechanism in between poles configuration
- For Motorized Switch disconnecter fuse requirement
- For 4th pole with fuse protection

■ Stock items

Accessories for OESA/OS switch disconnecter fuse, 32..800 A



Phase barriers

Frame	Pole	Height (mm)	Description	Ordering code	L.P. (₹)
OS200...400	3	100	PB100 low	1SDA054970R1	550
	4	100	PB100 low	1SDA054971R1	800



Auxiliary contacts

Frame	Contact function	Description	Ordering Code	L.P. (₹)
OESA 32...160	1NO+1NC	OESAZX 15	OESAZX 15 ■	450
	2NO+2NC	OESAZX 16	OESAZX 16 ■	875
OS200...800	1NO	OA1G10	1SCA022353R4970 ■	470
	1NC	OA3G01	1SCA022456R7410 ■	525
Screw mounting to the left side of the switch		OEA28	1SCA022714R8810 ■	625

Note: OEA 28 has to be order along with 200 & 250A TPN switch only

Fuse monitor



Frame	Rated voltage [Vac]	Description	Ordering code	L.P. (₹)
OS200...800	100...260	OFS260	1SCA022716R0180	6,460
	380...690	OFS690	1SCA022715R9920	6,620

Wrapped neutral link



Frame	Description	Ordering Code	L.P. (₹)
OESA32...63	OESAZX87	OESAZX 87	410
OESA100	OESAZX 86/1	OESAZX 86 / 1	730
OESA125...160	OESAZX86	OESAZX 86	805
OS200...250	OXN250	1SCA022752R9950	3,680
OS315...400	OXN400	1SCA022770R3060	9,620
OS630...800	OXN800S	1SCA022831R4880	11,030

Handle Adaptor

OHB145...OHB175	OHBZX200	1SCA125960R1001	1,170
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Handles



Frame	Description	Ordering code	L.P. (₹)
OESA32...63	YASDB51	YASDB 51 ■	670
OESA100...160	YASDB10	YASDB 10 ■	1,010
OS200...250	OHB80J6	1SCA022381R0240 ■	1,380
OS315...400	OHB145J12	1SCA022381R2110 ■	1,685
OS630...800	OHB175J12	1SCA022381R2450 ■	2,000

Shaft



Frame	Description	Ordering code	L.P. (₹)
OESA/OS32...250	OMP6X210	1SCA022295R6080 ■	345
OS315...400	OMP12X250	1SCA022325R6980 ■	695
OS630...800	OMP12X280	1SCA022137R5140 ■	900

Fuse covers for OESA switch disconnecter fuse



Frame	Type	Description	Ordering code	L.P. (₹)
32...63	DIN	Fuse cover	1SYN833035R2012 ■	65
32...63	BS		1SYN833036R2012 ■	65
100...160	DIN		1SYN833037R2012 ■	75

Note: Ordering code mentioned above for fuse cover is per piece

■ Stock items

OT switch disconnectors

Front operated switch-disconnectors

OT 16-3150A switch disconnector supplied with extended shaft and IP 65 pistol type handle

1



- Contact our nearest sales office
- For Door mounted switch disconnector
 - For different configuration of Shaft and Handle(selector type)
 - For 6 & 8pole switch disconnector requirement



Rated current In [A]	Poles	Description	Ordering code	L.P. (₹)
16	3	OT16F3	1SYN104811R1001	2,070
25		OT25F3	1SYN104857R1001	2,100
40		OT40F3	1SYN104902R1001	2,160
63		OT63F3	1SYN105332R1001	2,190
80		OT80F3	1SYN105798R1001	3,540
100		OT100F3	1SYN105004R1001	4,710
125		OT125F3	1SYN105033R1001	4,800
160		OT160G03P	1SCA135139R1001	6,100
16	4	OT16F4N2	1SYN104829R1001	2,230
25		OT25F4N2	1SYN104886R1001	2,320
40		OT40F4N2	1SYN104932R1001	2,370
63		OT63F4N2	1SYN105365R1001	2,700
80		OT80F4N2	1SYN105413R1001	4,630
100		OT100F4N2	1SYN105018R1001	4,890
125		OT125F4N2	1SYN105051R1001	5,050
160		OT160G04P	1SCA135140R1001	8,370
160	2	OT160EV02P	1SCA120508R1001	5,780
200		OT200E02P	1SCA022751R1400	6,130
250		OT250E02P	1SCA022735R2500	7,570
315		OT315E02P	1SCA022866R5590	8,710
400		OT400E02P	1SCA022741R7210	11,740
630		OT630E02P	1SCA022866R5670	14,710
800		OT800E02P	1SCA022835R4830	18,170
1000		OT1000E02P	1SCA105795R1001	37,830
1250		OT1250E02P	1SCA106136R1001	45,400
1600		OT1600E02P	1SCA106142R1001	60,520
2000		OT2000E02P	1SCA120025R1001	75,650
2500		OT2500E02P	1SCA113956R1001	94,570
3200	OT3200E02P	1SCA128581R1001	1,36,180	
4000	OT4000E02P	1SCA128595R1001	1,58,880	
160	3	OT160EV03P	1SCA120514R1001	6,400
200		OT200E03P	1SCA022712R0800	7,150
250		OT250E03P	1SCA022710R0100	8,830
315		OT315E03P	1SCA022718R8510	9,670
400		OT400E03P	1SCA022718R8780	13,040
630		OT630E03P	1SCA022718R8940	16,150
800		OT800E03P	1SCA022718R9410	20,180
1000		OT1000E03P	1SCA022860R5930	39,510
1250		OT1250E03P	1SCA022860R6230	50,440
1600		OT1600E03P	1SCA022860R6580	67,250
2000		OT2000E03P	1SCA108036R1001	82,390
2500		OT2500E03P	1SCA104972R1001	1,05,070
3200	OT3200E03P	1SCA128481R1001	1,51,310	
4000	OT4000E03P	1SCA12484R1001	1,76,520	
160	4	OT160EV04P	1SCA120521R1001	8,830
200		OT200E04P	1SCA022713R4930	9,010
250		OT250E04P	1SCA022710R0520	10,090
315		OT315E04P	1SCA022719R1730	10,930
400		OT400E04P	1SCA022719R1810	14,050
630		OT630E04P	1SCA022719R2030	19,180
800		OT800E04P	1SCA022719R2110	23,120
1000		OT1000E04P	1SCA022860R6150	52,120
1250		OT1250E04P	1SCA022860R6310	65,570
1600		OT1600E04P	1SCA022860R6740	84,060
2000		OT2000E04P	1SCA108038R1001	99,200
2500		OT2500E04P	1SCA105140R1001	1,21,890
3200	OT3200E04P	1SCA128482R1001	1,63,920	
4000	OT4000E04P	1SCA124856R1001	1,84,930	

- Note:
- Contact our nearest sales office
- For requirement of Motorized isolators
 - For mechanism in between poles configuration
 - For switch disconnector with direct mounted handle
 - For Side operated switches

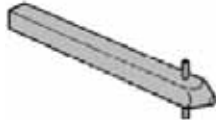
Accessories for OT switch disconnectors

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Handles

Frame	Description	Ordering code	L.P. (₹)
OT16...125	OHB45J6	1SCA022380R8770 ■	810
OT160...250	OHB65J6	1SCA022380R9660	1,100
OT315...400	OHB95J12	1SCA022381R0830	1,260
OT630...800	OHB125J12	1SCA022381R1560	1,360
OT1000...4000	OHB274J12	1SCA115920R1001	3,880



Shaft

Frame	Description	Ordering code	L.P. (₹)
OT16...125	OXF6X170	1SCA108224R1001 ■	290
OT160...250	OXF6X210	1SCA022295R6080	345
OT315...800	OXF12X185	1SCA022325R6710	550
OT1000...4000	OXF12X280	1SCA022137R5140	900



Auxiliary contact

Frame	Contact function	Description	Ordering code	L.P. (₹)
OT16...4000	1NO	OA1G10	1SCA022353R4970 ■	470
OT16...125	1NC	OA1G01	1SCA022353R4890 ■	470
OT160EV...4000	1NC	OA3G01	1SCA022456R7410 ■	525



Phase barrier

Frame	Poles	Description	Ordering code	L.P. (₹)
OT160...OT800	3	PB100 low	1SDA054970R1	810
OT160...OT800	4	PB100 low	1SDA054971R1	1,170
OT1000...2500	3 & 4	OTB1600/6	1SCA100768R1001	3,500
OT3200...4000	3 & 4	OTB4000/6	1SCA129040R1001	3,540



Mechanical interlock mechanism

(Prevents one switch from closing to ON-position, if the other is not in OFF-position)

Frame	Shaft distance [mm]	Description	Ordering code	L.P. (₹)
OT16...125	100	OTZW24	1SCA022639R5610	1,770
OT160...250	190	OTZW10	1SCA022431R5280	2,150
OT315...400	250	OETLZW14	1SCA022077R3410	5,470
OT315...800	300	OETLZW3	1SCA022049R0380	5,720
OT315...4000	500	OETLZW15	1SCA022081R9340	6,360



Terminal shrouds snap-on mounting, transparent

For 3-pole switches

Frame	Description	Ordering code	L.P. (₹)
OT 16...40F3	OTS40T3	1SCA105317R1001	300
OT63...80F3	OTS63T3	1SCA022353R6750	220
OT 100...125F3	OTS125T3	1SCA022379R9680	450

Note:

for requirement of terminal shrouds for higher current rating contact our nearest sales office

OT manual changeover switches

Manual changeover switches, I-O-II -operation

Supplied with extended shaft and IP 65 pistol type handle

Rated current In [A]	Poles	Description	Ordering code	L.P. (₹)
16	3	OT16F3C	1SYN104816R1001	3,200
25		OT25F3C	1SYN104863R1001	4,050
40		OT40F3C	1SYN104913R1001	4,380
63		OT63F3C	1SYN105338R1001	5,720
80		OT80F3C	1SYN105402R1001	6,300
100		OT100F3C	1SYN105008R1001	8,410
125		OT125F3C	1SYN105037R1001	8,830
16	4	OT16F4C	1SYN104831R1001	4,050
25		OT25F4C	1SYN104877R1001	4,200
40		OT40F4C	1SYN104934R1001	4,630
63		OT63F4C	1SYN105369R1001 ■	6,480
80		OT80F4C	1SYN105418R1001	6,810
100		OT100F4C	1SYN105019R1001 ■	10,020
125		OT125F4C	1SYN105054R1001	10,260
Supplied with bridging bars, extended shaft and IP 65 pistol type handle				
160	3	OT160E03CP	1SYN022772R6510	12,190
200		OT200E03CP	1SYN022771R7520	12,610
250		OT250E03CP	1SYN022771R3450	15,140
315		OT315E03CP	1SYN022772R6780	18,490
400		OT400E03CP	1SYN022771R8500	21,860
630		OT630E03CP	1SYN022785R6050	32,790
800		OT800E03CP	1SYN022785R6300	42,030
1000		OT1000E03CP	1SYN022872R1680	1,13,480
1250		OT1250E03CP	1SYN022872R0790	1,26,090
1600		OT1600E03CP	1SYN022872R1840	1,55,510
2000		OT2000E03CP	1SYN103908R1001	2,35,370
2500	OT2500E03CP	1SYN105615R1001	2,56,380	
3200	OT3200E03CP	1SYN129156R1001	3,69,860	
160	4	OT160E04CP	1SYN022775R9440	14,290
200		OT200E04CP	1SYN022771R7280 ■	14,710
250		OT250E04CP	1SYN022775R4640 ■	16,390
315		OT315E04CP	1SYN022775R7150	20,010
400		OT400E04CP	1SYN022771R8680 ■	23,540
630		OT630E04CP	1SYN022785R6130	40,360
800		OT800E04CP	1SYN022785R6210	48,760
1000		OT1000E04CP	1SYN022872R1500	1,30,290
1250		OT1250E04CP	1SYN022872R1250	1,36,180
1600		OT1600E04CP	1SYN022872R2310	1,68,120
2000		OT2000E04CP	1SYN103912R1001	3,02,610
2500	OT2500E04CP	1SYN103906R1001	3,36,240	
3200	OT3200E04CP	1SYN129158R1001	4,41,310	

Note:

1. For 6 pole change over
2. For manual/motorized bypass switch
3. For manual closed transition
4. For wide phase manual change over

OT automatic transfer switches

Automatic transfer switches, I - O - II operation

Supplied with bridging bars and handle



Automatic operation, equipped with OMD300 controller unit

Rated current In [A]	Poles	Description	Ordering code	L.P.(₹)
160	4	OTM160E4C3D230C	1SYN106305R1001	88,420
200		OTM200E4C3D230C	1SYN106309R1001	91,400
250		OTM250E4C3D230C	1SYN106313R1001	94,380
315		OTM315E4C3D230C	1SYN106317R1001	98,850
400		OTM400E4C3D230C	1SYN106318R1001	1,04,310
630		OTM630E4C3D230C	1SYN108726R1001	1,39,080
800		OTM800E4C3D230C	1SYN108728R1001	1,83,780
1000		OTM1000E4C3D230C	1SYN112852R1001	1,98,690
1250		OTM1250E4C3D230C	1SYN112851R1001	2,28,490
1600		OTM1600E4C3D230C	1SYN112848R1001	2,98,030



Automatic operation, equipped with OMD800 controller unit with display

160	4	OTM160E4C8D230C	1SYN101020R1001	1,19,210
200		OTM200E4C8D230C	1SYN101021R1001	1,24,180
250		OTM250E4C8D230C	1SYN101022R1001	1,29,150
315		OTM315E4C8D230C	1SYN101063R1001	1,34,110
400		OTM400E4C8D230C	1SYN101064R1001	1,49,010
630		OTM630E4C8D230C	1SYN108453R1001	1,63,920
800		OTM800E4C8D230C	1SYN108455R1001	1,98,690
1000		OTM1000E4C8D230C	1SYN112861R1001	2,53,320
1250		OTM1250E4C8D230C	1SYN112864R1001	2,78,160
1600		OTM1600E4C8D230C	1SYN112867R1001	3,47,700

Note:

- Motor voltage U_e 220-240 V AC
- For 3 pole requirement contact the nearest sales office

OT motorized changeover switches

Changeover switches, motor operation, I-O-II -operation

Supplied with bridging bars and handle

1



Rated current In [A]	Poles	Description	Ordering code	L.P.(₹)
40	3	OTM40F3CMA230V	1SYN120096R1001	25,840
63		OTM63F3CMA230V	1SYN120095R1001	27,320
80		OTM80F3CMA230V	1SYN120093R1001	29,800
100		OTM100F3CMA230V	1SYN120071R1001	31,290
125		OTM125F3CMA230V	1SYN120070R1001	32,290
160		OTM160E3CM230C	1SYN022845R8610	37,750
200		OTM200E3CM230C	1SYN022845R8960	38,250
250		OTM250E3CM230C	1SYN022845R9260	47,190
315		OTM315E3CM230C	1SYN022847R1210	47,690
400		OTM400E3CM230C	1SYN022847R1630	57,380
630		OTM630E3CM230C	1SYN103567R1001	64,570
800		OTM800E3CM230C	1SYN103570R1001	95,980
1000		OTM1000E3CM230C	1SYN112677R1001	1,43,060
1250		OTM1250E3CM230C	1SYN112676R1001	1,56,970
1600		OTM1600E3CM230C	1SYN112678R1001	1,88,750
2000		OTM2000E3CM230C	1SYN112709R1001	3,18,150
2500		OTM2500E3CM230C	1SYN112710R1001	3,49,450
40		4	OTM40F4CMA230V	1SYN120102R1001
63	OTM63F4CMA230V		1SYN120101R1001	29,310
80	OTM80F4CMA230V		1SYN120100R1001	30,800
100	OTM100F4CMA230V		1SYN120098R1001	31,800
125	OTM125F4CMA230V		1SYN120097R1001	33,780
160	OTM160E4CM230C		1SYN022848R1510	38,750
200	OTM200E4CM230C		1SYN022846R1590	38,950
250	OTM250E4CM230C		1SYN022846R1910	47,690
315	OTM315E4CM230C		1SYN022847R2870	48,680
400	OTM400E4CM230C		1SYN022847R3250	61,100
630	OTM630E4CM230C		1SYN022873R1990	66,060
800	OTM800E4CM230C		1SYN022872R8340	99,340
1000	OTM1000E4CM230C		1SYN112703R1001	1,44,050
1250	OTM1250E4CM230C		1SYN112702R1001	1,57,960
1600	OTM1600E4CM230C		1SYN112704R1001	1,93,720
2000	OTM2000E4CM230C		1SYN112712R1001	3,44,220
2500	OTM2500E4CM230C		1SYN112713R1001	3,75,520

Note:

Motor voltage Ue 110-240 V AC/DC (OTM40...125A)

Motor voltage Ue 220-240 V AC (OTM160...2500A)

OMD control units can be purchased separately for their motorized changeover switches in order to build an ATS by themselves. Contact nearest sales office for making selection

Contact our nearest sales office

- For motor voltage Ue 110...125 V AC/DC (160A-2500A)
- For motor voltage Ue = 48V DC (160A-2500A)

OT automatic transfer switches

Automatic transfer switches, I - O - II operation

Supplied with bridging bars and handle



Automatic operation, equipped with OMD300 controller unit

Rated current In [A]	Poles	Description	Ordering code	L.P.(₹)
160	4	OTM160E4C3D230C	1SYN106305R1001	88,420
200		OTM200E4C3D230C	1SYN106309R1001	91,400
250		OTM250E4C3D230C	1SYN106313R1001	94,380
315		OTM315E4C3D230C	1SYN106317R1001	98,850
400		OTM400E4C3D230C	1SYN106318R1001	1,04,310
630		OTM630E4C3D230C	1SYN108726R1001	1,39,080
800		OTM800E4C3D230C	1SYN108728R1001	1,83,780
1000		OTM1000E4C3D230C	1SYN112852R1001	1,98,690
1250		OTM1250E4C3D230C	1SYN112851R1001	2,28,490
1600		OTM1600E4C3D230C	1SYN112848R1001	2,98,030



Automatic operation, equipped with OMD800 controller unit with display

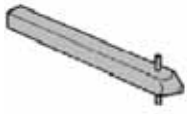
Rated current In [A]	Poles	Description	Ordering code	L.P.(₹)
160	4	OTM160E4C8D230C	1SYN101020R1001	1,19,210
200		OTM200E4C8D230C	1SYN101021R1001	1,24,180
250		OTM250E4C8D230C	1SYN101022R1001	1,29,150
315		OTM315E4C8D230C	1SYN101063R1001	1,34,110
400		OTM400E4C8D230C	1SYN101064R1001	1,49,010
630		OTM630E4C8D230C	1SYN108453R1001	1,63,920
800		OTM800E4C8D230C	1SYN108455R1001	1,98,690
1000		OTM1000E4C8D230C	1SYN112861R1001	2,53,320
1250		OTM1250E4C8D230C	1SYN112864R1001	2,78,160
1600		OTM1600E4C8D230C	1SYN112867R1001	3,47,700

Note:

- Motor voltage Ue 220-240 V AC
- For 3 pole requirement contact the nearest sales office

Accessories for changeovers (manual, motorized, ATS)

1



Shaft

Frame	Description	Ordering code	L.P. (₹)
OT16...125F_C	OSP6X170	1SCA108224R1001 ■	290
OT160...250_C	OSP6x161	1SCA022067R1760	290
OT315...400_C	OSP12x166	1SCA022325R7100	460
OT630...3200_C	OSP12x185	1SCA022325R6710	550



Handle

Frame	Description	Ordering code	L.P. (₹)
OT16...125F_C	OHB45J6E311	1SCA022817R2130 ■	1,890
OT160...250_C	OHB65J6E011	1SCA022383R2480	2,090
OT315...400_C	OHB95J12E011	1SCA022621R0760	2,390
OT630...800_C	OHB125J12E011	1SCA022589R3340	2,640
OT1000...3200_C	OHB200J12PE011	1SCA022873R4230	5,780



Auxiliary contacts

Frame	Contact functions	Installation side	Description	Ordering code	L.P. (₹)
OT16...125F_C OTM40...125	1NO	Right	OA1G10	1SCA022353R4970	470
	1NC	Right	OA8G01	1SCA022744R2240	850
	1NO	Left	OA7G10	1SCA022673R1140	750
	1NC	Left	OA1G01	1SCA022353R4890	470
OT160...3200 OTM160...2500	1NO	Right	OA1G10	1SCA022353R4970 ■	470
	1NC	Right	OA3G01	1SCA022456R7410 ■	525



Phase barriers

3-pole change-overs need 8 barriers and 4-pole change-overs need 12 barriers for full protection.

Frame	Poles	Description	Ordering code	L.P. (₹)
OT160...800 OTM160...800	3	PB100 low	1SDA054970R1	810
	4	PB100 low	1SDA054971R1	1,170



Basic ATS controller for motorised change over

Frame	Description	Ordering code	L.P. (₹)
40...2500A	ODPS230	1SCA122946R1001	10,920

Note: Contact our nearest sales office for more information

Kabeldon low voltage switchgear system

Kabeldon low voltage distribution system by ABB is used to build modern systems for various applications, from substations and cable distribution cabinets to distribution boards in industry.



1

Features of the Kabeldon IP-system are its simplicity and reliability. These are the most important factors when you want to achieve low operating costs and high delivery reliability in a distribution system.

- Busbars of continuously-extruded aluminium sections, insulated with a layer of polyamid.
- The busbar has a touch-proof contact slot. This ensures safety regardless of where on the busbar the switching device will be placed.
- Blade fuses in all of the fuse-switch disconnectors.
- The switching devices can be arranged in any order, regardless of rated current
- All parts, busbars and devices, fulfil IP2X protection in accordance with IEC 60529*).
- Switching devices 100-1600 A.
- It is easy to add new switching devices to existing distribution boards.
- Switching devices are mounted on and connected to the busbar system in the same operation.
- Switching devices can be connected when the system is live.
- Always voltage-free ("dead") when changing fuses.
- Busbars are available with rated currents from 400 to 1600 A.
- Switching devices, connectors and busbars combine to form a modular system. Each module is 12.5 mm. The modular system makes planning easier.
- The compact design of the switching devices makes them suitable for use in many different types of distribution boards.
- All switching devices have a utilisation category so that they can be used in cable distribution cabinets, substations and other distribution boards.

Note : For more details contact the nearest sales office.

ABB's comprehensive range of LV control products

1

The range of ABB control products ranks amongst the most extensive on the market with a full range of innovative solutions for Control & Protection, Motor Starting, Intelligent motor management, measurement and monitoring and connection applications.

The business unit is comprised of 3 main product families :

- Control & Protection
- Electronic Relays
- Connection Devices

Our products

Our products are already among the most extensive in the market and we are constantly adding new products in order to meet ever changing customer needs.

Quality and reliability are built into every device to ensure total performance satisfaction, even in the most demanding applications.

We offer a very modern and competitive range of contactors, softstarters, starters, manual motorstarters, a wide range of electronic relays and overload relays, together with an extended program of pilot devices.

Our offering

- Contactors
- Manual motor starters
- Thermal overload relays
- Electronic overload relays
- Soft starters
- Intelligent Motor Management Systems
 - Universal Motor Controllers
 - Communication Fieldbus Plugs
- Electronic Products and Relays
 - Timers
 - Measuring and monitoring relays
 - Power Supplies
 - Analog Signal converters
 - Interface Relays & Optocouplers
- Jokab Safety Systems
- Pilot devices
- Arc Guard Systems
- Current & Voltage Sensors
- Terminal blocks



Auxiliary contactors



Standard control contactors

No. of Contacts	Contact Configuration		AC operated			DC operated		
	NO	NC	Type Code Reference	Order Code	L.P.(₹)	Type Code Reference	Order Code	L.P.(₹)
4	2	2	N22E **	1SBH141001R□□22 ■	970	NL22E **	1SBH143001R□□22 ■	1,490
4	3	1	N31E **	1SBH141001R□□31 ■		NL31E **	1SBH143001R□□31 ■	
4	4	0	N40E **	1SBH141001R□□40 ■		NL40E **	1SBH143001R□□40 ■	

Refer coil voltage & codes mentioned below.

AC/DC operated

No. of Contacts	Contact Configuration		AC/DC operated			AC/DC operated low consumption*		
	NO	NC	Type Code Reference	Order Code	L.P.(₹)	Type Code Reference	Order Code	L.P.(₹)
4	2	2	NF22E **	1SBH137001R□□22 ■	1,820	NFZ22E **	1SBH136001R□□22	2,150
4	3	1	NF31E **	1SBH137001R□□31 ■		NFZ31E **	1SBH136001R□□31	
4	4	0	NF40E **	1SBH137001R□□40 ■		NFZ40E **	1SBH136001R□□40	

Refer coil voltage & codes mentioned below.

*Allows direct control by PLC output ≥ 24 V DC 500 mA

Coil voltages and codes

N range (AC operated)

Voltage	Voltage	Code
V - 50Hz	V - 60Hz	□□
24	24	8 1 ■
110	110 ... 120	8 4
220 ... 230	230 ... 240	8 0 ■
400 ... 415	415 ... 440	8 6 ■

NL (DC operated)

Voltage	Code
V DC	□□
24	8 1
48	8 3
110	8 6
240	8 9

NF range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
24...60	20...60	1 1
48...130	48...130	1 2
100...250	100...250	1 3
250...500	250...500	1 4

NFZ range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
-	12...20	2 0
24...60	20...60	2 1
48...130	48...130	2 2
100...250	100...250	2 3

Note: For Non standard coil voltage, other than this contact us for price

■ Stock items

3 pole contactors: AX09...AX370 : AC operated

NEW

AX Contactor

AX contactors are mainly used for controlling 3-phase motors and power circuits up to 690 V AC.

These contactors are of the block type design with

- 3 main poles and built-in auxiliary contact
- control circuit: AC operated
- add-on auxiliary contact blocks for front or side mounting and a wide range of accessories.

1

Contactors: 3-pole – AC Operated

AC1 duty Amps	AC3 rating at 415V		Auxiliary Contacts		Type Code	Order Code	L.P.(₹)
	Amps	kW					
22	9	4	1NO	-	AX09-30-10	1SBL901074R□□10	810
22	9	4	-	1NC	AX09-30-01	1SBL901074R□□01	810
25	12	5.5	1NO	-	AX12-30-10	1SBL911074R□□10	900
25	12	5.5	-	1NC	AX12-30-01	1SBL911074R□□01	900
27	18	9	1NO	-	AX18-30-10	1SBL921074R□□10	980
27	18	9	-	1NC	AX18-30-01	1SBL921074R□□01	980
32	25	11	1NO	-	AX25-30-10	1SBL931074R□□10	1,410
32	25	11	-	1NC	AX25-30-01	1SBL931074R□□01	1,410
55	32	15	1NO	-	AX32-30-10	1SBL281074R□□10	2,920
55	32	15	-	1NC	AX32-30-01	1SBL281074R□□01	2,920
60	40	18.5	1NO	-	AX40-30-10	1SBL321074R□□10	4,550
60	40	18.5	-	1NC	AX40-30-01	1SBL321074R□□01	4,550
100	50	25	1NO	1NC	AX50-30-11	1SBL351074R□□11	5,720
115	65	30	1NO	1NC	AX65-30-11	1SBL371074R□□11	7,730
125	80	37	1NO	1NC	AX80-30-11	1SBL411074R□□11	9,540
145	96	45	1NO	1NC	AX95-30-11	1SFL431074R□□11	11,070
160	115	55	1NO	1NC	AX115-30-11	1SFL981074R□□11	13,740
190	150	75	1NO	1NC	AX150-30-11	1SFL991074R□□11	18,380
250	185	90	1NO	1NC	AX185-30-11	1SFL491074R□□11	21,570
275	205	110	1NO	1NC	AX205-30-11	1SFL501074R□□11	25,960
400	265	132	1NO	1NC	AX260-30-11	1SFL547074R□□11	31,210
500	305	160	1NO	1NC	AX300-30-11	1SFL587074R□□11	37,600
600	370	200	1NO	1NC	AX370-30-11	1SFL607074R□□11	46,480

Complete the contactor code by replacing □□ with desired coil voltages as per below table

Auxiliary contactors: NX

NX Contactor

NX contactors are mainly used for switching auxiliary circuits and control circuits.

These contactors are of the block type design with

- 4 poles. Contactor relays have mechanically linked auxiliary contact elements.
- add-on auxiliary contact blocks for front or side mounting and a wide range of accessories.



No. of Contacts	Contact Configuration		Type Code Reference	AC operated	
	NO	NC		Order Code	L.P.(₹)
4	2	2	NX22E	1SBH901074R□□22	850
4	3	1	NX31E	1SBH901074R□□31	
4	4	0	NX40E	1SBH901074R□□40	

Coil voltages and codes AX and NX range

Voltage		Voltage		Code
V - 50Hz		V - 60Hz		□□
24	24	24	24	8 1
110	110	110	110	8 4
220 ... 230	220 ... 230	220 ... 230	220 ... 230	8 0
400 ... 415	400 ... 415	400 ... 415	400 ... 415	8 6

Note: Complete the contactor code by replacing □□ with desired coil voltages as per above table.

■ Stock items

Auxiliary contact block

Description	Mounting on Contactors	Contact Configuration		Type Code Reference	Order Code	L.P.(₹)
		NO	NC			
Front mounted single pole add-on blocks	AX09...AX150, NX 4-pole	1NO	-	CA5X-10	1SBN019010R1010	150
		-	1NC	CA5X-01	1SBN019010R1001	150
Front mounted Four pole add-on blocks	AX09...AX150, NX 4-pole	2NO	2NC	CA5X-22E	1SBN019040R1022	560
		3NO	1NC	CA5X-31E	1SBN019040R1031	
		4NO	-	CA5X-40E	1SBN019040R1040	
		-	4NC	CA5X-04E	1SBN019040R1004	
Side mounted 2 pole add-on blocks	AX09...AX80, NX 4-pole	1NO	1NC	CAL5X-11	1SBN019020R1011	530
		1NO	1NC	CAL18X-11	1SBN019820R1011	540
	AX95...AX205	1NO	1NC	CAL18X-11B	1SBN019820R3311	540
		1NO	1NC	CAL19-11	1SBN010820R1011 ■	630
		1NO	1NC	CAL19-11B	1SBN010820R3311 ■	630

Surge suppressors

For contactor types	Voltage Range	Type Code reference	Order Code	L.P.(₹)
AX09...AX150	24...50V AC/DC	RV 5/50	1SBN050010R1000	640
	50...133V AC/DC	RV 5/133	1SBN050010R1001	
	110...250V AC/DC	RV 5/250	1SBN050010R1002 ■	
	250...440V AC/DC	RV 5/440	1SBN050010R1003	
AX09...AX40	24...50V AC	RC 5-1/50	1SBN050100R1000	640
	50...133V AC	RC 5-1/133	1SBN050100R1001	
	110...250V AC	RC 5-1/250	1SBN050100R1002 ■	
AX50...AX150	24...50V AC	RC 5-2/50	1SBN050200R1000	670
	50...133V AC	RC 5-2/133	1SBN050200R1001	
	110...250V AC	RC 5-2/250	1SBN050200R1002 ■	940
	250...440V AC	RC 5-2/440	1SBN050200R1003	
AX185...AX205	250...440	RC 5-3/440	1SBN050300R1003	1,910

Mechanical interlocks

For contactor types	Description	Type Code reference	Order Code	L.P.(₹)
AX09...AX40	Horizontal Mechanical Interlock	VM 5-1	1SBN030100R1000 ■	440
AX09...AX40	Horizontal Mechanical & Electrical Interlock with 2NC contacts	VE 5-1	1SBN030110R1000 ■	670
AX50...AX115	Horizontal Mechanical & Electrical Interlock with 2NC contacts	VE 5-2	1SBN030210R1000 ■	1,340
AX185...AX205	Horizontal with 2NC contacts	VM 300H	1SBN034700R1000	2,770
AX260...AX370	Horizontal Mechanical Interlock	VM19	1SBN030300R1000	2,860

Note: Refer technical catalogue for proper selection.



VM5-1



VM300

■ Stock items

3 pole contactors: AC operated



1

Contactors: 3-pole – AC Operated

AC1 duty Amps	AC3 rating at 415V			Auxiliary Contacts	Type Code	Order Code	L.P.(₹)	
	Amps	hP	kW					
25	9	5.5	4	1NO	-	A09-30-10 **	1SBL141001R□□10 ■	940
25	9	5.5	4	-	1NC	A09-30-01 **	1SBL141001R□□01 ■	940
27	12	7.5	5.5	1NO	-	A12-30-10 **	1SBL161001R□□10 ■	1,060
27	12	7.5	5.5	-	1NC	A12-30-01 **	1SBL161001R□□01 ■	1,060
30	17	12.5	7.5	1NO	-	A16-30-10 **	1SBL181001R□□10 ■	1,220
30	17	12.5	7.5	-	1NC	A16-30-01 **	1SBL181001R□□01 ■	1,220
45	26	15	11	1NO	-	A26-30-10 **	1SBL241001R□□10 ■	1,750
45	26	15	11	-	1NC	A26-30-01 **	1SBL241001R□□01 ■	1,750
55	32	20	15	1NO	-	A30-30-10 **	1SBL281001R□□10 ■	3,370
55	32	20	15	-	1NC	A30-30-01 **	1SBL281001R□□01 ■	3,370
60	37	30	18.5	1NO	-	A40-30-10 **	1SBL321001R□□10 ■	5,400
60	37	30	18.5	-	1NC	A40-30-01 **	1SBL321001R□□01 ■	5,400
100	50	40	25	-	-	A50-30-00 **	1SBL351001R□□00 ■	6,110
115	65	50	37	-	-	A63-30-00 **	1SBL371001R□□00 ■	8,590
125	75	60	40	-	-	A75-30-00 **	1SBL411001R□□00 ■	10,790
145	96	70	55	1NO	1NC	A95-30-11**	1SFL431001R□□11 ■	13,700
160	110	75	59	1NO	1NC	A110-30-11**	1SFL451001R□□11 ■	16,660
250	145	100	75	1NO	1NC	A145-30-11**	1SFL471001R□□11 ■	22,050
275	185	115	90	1NO	1NC	A185-30-11**	1SFL491001R□□11 ■	27,250
350	205	150	110	1NO	1NC	AF205-30-11**	1SFL527002R□□11	30,300
400	265	175	140	1NO	1NC	AF265-30-11**	1SFL547002R□□11	35,790
500	305	215	160	1NO	1NC	AF305-30-11**	1SFL587002R□□11	41,520
600	370	270	200	1NO	1NC	AF370-30-11**	1SFL607002R□□11	52,920
600	400	300	220	1NO	1NC	AF400-30-11**	1SFL577001R□□11	56,300
700	460	340	250	1NO	1NC	AF460-30-11**	1SFL597001R□□11	70,620
800	580	470	355	1NO	1NC	AF580-30-11**	1SFL617001R□□11	98,580
1050	750	570	425	1NO	1NC	AF750-30-11**	1SFL637001R□□11	1,50,300
1260	-	-	-	1NO	1NC	AF1250-30-11**	1SFL647001R□□11	Upon request
1350	860	-	500	1NO	1NC	AF1350-30-11**	1SFL657001R□□11	
1650	1050	-	600	1NO	1NC	AF1650-30-11**	1SFL677001R□□11	
2050	-	-	-	1NO	1NC	AF2050-30-11**	1SFL707001R□□11	
2650	-	-	-	1NO	1NC	AF2650-30-11**	1SFL667001R□□11	

Complete the contactor type code by replacing ** with desired coil voltage AF contactors have advanced electronic coil interface with wideband AC/DC coil For AG contactors (AC contactors with wide band coil 200...240 V AC) R38 coil code to be considered and additional cost of Rs. 125 applicable on the MRP of A contactors.

Coil voltages and codes: A 09 ... A 185, range

Voltage	Voltage	Code
V - 50Hz	V - 60Hz	□□
24	24	8 1
110	110 ... 120	8 4 ■
220 ... 230	230 ... 240	8 0 ■
400 ... 415	415 ... 440	8 6 ■

New AF205...AF370 range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
24...60	20...60	1 1
48...130	48...130	1 2
100...250	100...250	1 3
250...500	250...500	1 4

AF400 and above (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
-	24...60	6 8
48...130	48...130	6 9
100...250	100...250	7 0
250...500	250...500	7 1

Note: For Non standard coil voltage, other than this contact us for price

4 pole contactors: AC operated



Contactors: 4-pole (AC operated)

Rating at 415V AC1 Amps	Main Contact Arrangement		Auxiliary Contacts		Type Code Reference	Order Code	L.P.(₹)
25	4NO	-	-	-	A09-40-00 **	1SBL141201R□□□00	1,250
25	2NO	2NC	-	-	A09-22-00 **	1SBL141501R□□□00	1,480
30	4NO	-	-	-	A16-40-00 **	1SBL181201R□□□00	1,320
30	2NO	2NC	-	-	A16-22-00 **	1SBL181501R□□□00	1,550
45	4NO	-	-	-	A26-40-00 **	1SBL241201R□□□00	2,360
45	2NO	2NC	-	-	A26-22-00 **	1SBL241501R□□□00	2,960
70	4NO	-	-	-	A45-40-00**	1SBL331201R□□□00	6,210
70	2NO	2NC	-	-	A45-22-00**	1SBL331501R□□□00	8,880
100	4NO	-	-	-	A50-40-00**	1SBL351201R□□□00	8,880
125	4NO	-	-	-	A75-40-00**	1SBL411201R□□□00	11,830
125	2NO	2NC	-	-	A75-22-00**	1SBL411501R□□□00	13,550
160	4NO	-	-	-	AF116-40-00 NEW	1SFL427102R□□□00	19,570
200	4NO	-	-	-	AF140-40-00 NEW	1SFL447102R□□□00	23,860
275	4NO	-	-	-	AF190-40-00 NEW	1SFL487102R□□□00	33,400
350	4NO	-	-	-	AF205-40-00 NEW	1SFL527102R□□□00	39,130
400	4NO	-	-	-	AF265-40-00 NEW	1SFL547102R□□□00	46,500
500	4NO	-	-	-	AF305-40-00 NEW	1SFL587102R□□□00	57,260
525	4NO	-	-	-	AF370-40-00 NEW	1SFL607102R□□□00	68,710
800	4NO	-	1NO	1NC	EK550-40-11 **	SK827041 - □□	1,09,740
1000	4NO	-	1NO	1NC	EK1000-40-11 **	SK827044 - □□	1,52,690

NEW AF contactors are with wide band coil can be operated on both AC and DC Voltages, with built-in Surge suppressors

Complete the contactor type code by replacing ** with desired coil voltage

Coil voltages and codes: A 09 ... A 75 , range

Voltage V - 50Hz	Voltage V - 60Hz	Code □□
24	24	8 1
110	110 ... 120	8 4
220 ... 230	230 ... 240	8 0
400 ... 415	415 ... 440	8 6

Coil voltages and codes: New AF 116 - AF 370 (AC/DC operated)

Voltage V 50/60 Hz	Voltage V DC	Code □□
24...60	20...60	1 1
48...130	48...130	1 2
100...250	100...250	1 3
250...500	250...500	1 4

Note: For Non standard coil voltage, other than this contact us for price

Coil voltages and codes: EK 550 ... EK 1000

Voltage V - 50Hz	Voltage V - 60Hz	Code □□
-	110	A E
110	120	A F
220 ... 230	*	A L
230 ... 240	-	A M
400 ... 415	-	A R

(1) The connection polarities indicated close to the coil terminals must be respected: A1 for the positive pole and A2 for the negative pole.

3 pole contactors AL and TAL range: DC operated

AL.., TAL.. contactors are mainly used for controlling 3-phase motors and more generally for controlling power circuits both ac & dc. These contactors have a low power consumption

for direct control from PLC outputs. Consequently they are perfectly adapted for all applications associated with PLC control.

1



AL Contactors

AC 1 duty Amps	AC3 rating at 415V			Auxiliary contacts		Type code reference	Order Code	L.P.(₹)
	Amps	hP	kW					
25	9	5	4	1NO	-	AL 9-30-10	1SBL143001R□□10 ■	1,580
25	9	5	4	-	1NC	AL 9-30-01	1SBL143001R□□01 ■	1,580
27	12	7.5	5.5	1NO	-	AL 12-30-10	1SBL163001R□□10 ■	1,720
27	12	7.5	5.5	-	1NC	AL 12-30-01	1SBL163001R□□01 ■	1,720
30	17	10	7.5	1NO	-	AL 16-30-10	1SBL183001R□□10 ■	2,200
30	17	10	7.5	-	1NC	AL 16-30-01	1SBL183001R□□01 ■	2,200
45	26	20	11	1NO	-	AL 26-30-10	1SBL243001R□□10 ■	2,770
45	26	20	11	-	1NC	AL 26-30-01	1SBL243001R□□01 ■	2,770
55	32	25	15	1NO	-	AL 30-30-10	1SBL283001R□□10 ■	5,970
55	32	25	15	-	1NC	AL 30-30-01	1SBL283001R□□01 ■	5,970
60	37	30	18.5	1NO	-	AL 40-30-10	1SBL323001R□□10 ■	7,160
60	37	30	18.5	-	1NC	AL 40-30-01	1SBL323001R□□01 ■	7,160



TAL Contactors

AC 1 duty Amps	AC3 rating at 415V			Auxiliary contacts		Type code reference	Order Code	L.P.(₹)
	Amps	hP	kW					
25	9	5	4	1NO	-	TAL 9-30-10	1SBL143061R□□10	1,860
25	9	5	4	-	1NC	TAL 9-30-01	1SBL143061R□□01	1,860
27	12	7.5	5.5	1NO	-	TAL 12-30-10	1SBL163061R□□10	2,070
27	12	7.5	5.5	-	1NC	TAL 12-30-01	1SBL163061R□□01	2,070
30	17	10	7.5	1NO	-	TAL 16-30-10	1SBL183061R□□10	2,450
30	17	10	7.5	-	1NC	TAL 16-30-01	1SBL183061R□□01	2,450
45	26	20	11	1NO	-	TAL 26-30-10	1SBL243061R□□10	3,340
45	26	20	11	-	1NC	TAL 26-30-01	1SBL243061R□□01	3,340
55	32	25	15	1NO	-	TAL 30-30-10	1SBL283061R□□10	6,590
55	32	25	15	-	1NC	TAL 30-30-01	1SBL283061R□□01	6,590
60	37	30	18.5	1NO	-	TAL 40-30-10	1SBL323061R□□10	7,350
60	37	30	18.5	-	1NC	TAL 40-30-01	1SBL323061R□□01	7,350

Coil voltages and codes: AL

Voltage	Code
V DC	□□
24	8 1
110	8 6 ■
240	8 9

Other voltages: consult us.

Coil voltages and codes: TAL

Voltage	Code
V DC	□□
25...45	5 2
77...143	6 2
90...150	6 6
152...264	6 8

■ Stock items

Contactors for special application - capacitors switching

Contactors for capacitor switching: 3 pole – AC operated: Peak current - unlimited

kVAR Rating at 415V	Peak inrush current	Auxiliary Contacts	Type Code reference	Order Code	L.P.(₹)
Type UA..RA with in-built damping resistors:					
12.5	Unlimited	1NO	UA16-30-10RA **	1SBL181024R□□10 ■	2,340
22	Unlimited	1NO	UA26-30-10RA **	1SBL241024R□□10 ■	3,920
30	Unlimited	1NO	UA30-30-10RA**	1SBL281024R□□10 ■	4,490
40	Unlimited	--	UA50-30-00RA	1SBL351024R□□00	12,410
50	Unlimited	--	UA63-30-00RA**	1SBL371024R□□00	13,360
60	Unlimited	--	UA75-30-00RA**	1SBL411024R□□00	14,610
70	Unlimited	--	UA95-30-00RA**	1SFL431024R□□00	16,990
80	Unlimited	--	UA110-30-00RA**	1SFL451024R□□00	18,660

Type UA..RA with in-built damping resistors

Complete the contactor type code by replacing ** with desired coil voltage

Price for UAF 50-30 - 00RA..... UAF110-30-00RA (with wide band electronic coil 100...250V AC/DC) on request



Peak current $\hat{I} \leq 100$ times the rms current

kVAR Rating at 415V	Max peak current \hat{I}	Auxiliary contacts fitted		Type	Order code	L.P.(₹)
		NO	NC			
kvar	kA					
12.5	1.8	1	0	UA16-30-10	1SBL181022R□□10	1,820
20	3	1	0	UA26-30-10	1SBL241022R□□10	2,260
27.5	33.5	1	0	UA30-30-10	1SBL281022R□□10	4,010
33	5	0	0	UA50-30-00	1SBL351022R□□00	9,070
45	6.5	0	0	UA63-30-00	1SBL371022R□□00	9,540
50	7.5	0	0	UA75-30-00	1SBL411022R□□00	11,360
65	9.3	1	1	UA95-30-11	1SBL431022R□□11	14,310
75	10.5	1	1	UA110-30-11	1SBL451022R□□11	17,900

Single step - Peak current $\hat{I} \leq 30$ times the rms current

kVAR Rating at 415V	Type Code	Order Code	L.P.(₹)
60	A95-30-11**	1SFL431001R□□11 ■	Refer page number 84
70	A110-30-11**	1SFL451001R□□11 ■	
90	A145-30-11**	1SFL471001R□□11 ■	
110	A185-30-11**	1SFL491001R□□11 ■	
130	AF205-30-11**	1SFL527002R□□11	
145	AF265-30-11**	1SFL547002R□□11	
165	AF305-30-11**	1SFL587002R□□11	
200	AF370-30-11**	1SFL607002R□□11	
210	AF400-30-11**	1SFL577001R□□11	
240	AF460-30-11**	1SFL597001R□□11	
285	AF580-30-11**	1SFL617001R□□11	
400	AF750-30-11**	1SFL637001R□□11	

Coil voltages and codes UA...RA

Voltage	Voltage	Code
□□□ V - 50Hz	□□□ V - 60Hz	□□
24	24	8 1
110	110 ... 120	8 4 ■
220 ... 230	230 ... 240	8 0 ■
400 ... 415	415 ... 440	8 6 ■

Note: Refer page no 84 for selection of AF contactor coil voltage

Contactors for DC circuit switching: AC/DC operated

Coil	Current Ratings at 440V DC			Type Code reference	Order Code	L.P.(₹)
	DC-1	DC-3	DC-5			
AC	100A	85A	50A	GA75-10-11 **	1SBL411025R□□11	Upon request
DC	100A	85A	50A	GAE75-10-11 **	1SBL419025R□□11	

Complete the contactor type code by replacing ** with desired coil voltage

Coil	Current Ratings at 1000V DC		Type Code reference	Order Code	L.P.(₹)
	DC-1 L/R 1 ms				
AC/DC	275A		GAF185-10-11	1SFL497025R□□11	Upon request
	450A		GAF300-10-11	1SFL557025R□□11	
	700A		GAF460-10-11	1SFL597025R□□11	
	1050A		GAF750-10-11	1SFL637025R□□11	
	1250A		GAF1250-10-11	1SFL647025R□□11	
	1650A		GAF1650-10-11	1SFL677025R□□11	
	2050A		GAF2050-10-11	1SFL707025R□□11	

DC3, DC5 ratings refer technical catalog

Coil voltages and codes: GA 75

Voltage	Voltage	Code
V - 50Hz	V - 60Hz	□□
24	24	8 1
110	110 ... 120	8 4
220 ... 230	230 ... 240	8 0
400 ... 415	415 ... 440	8 6

Coil voltages and codes: GAE 75

Voltage	Code
V d.c.	□□
12	8 0
24	8 2
42	8 1
110	8 6
240	8 9

Coil voltages and codes: GAF range (AC/DC operated)

Voltage	Voltage	Code
V 50/60 Hz	V DC	□□
-	24...60	6 8
48...130	48...130	6 9
100...250	100...250	7 0
250...500	250...500	7 1

Accessories for contactors

Auxiliary contact block

Description	Mounting on Contactors	Contact Configuration		Type Code Reference	Order Code	L.P.(₹)			
		NO	NC						
Front mounted single pole add-on blocks	A9...A110, AL9...AL40, TAL9...TAL40, AE45...AE110, TAE45...TAE110, N,NL &UA	1NO	-	CA5-10	1SBN010010R1010 ■	160			
		-	1NC	CA5-01	1SBN010010R1001 ■	160			
		4NO	-	CA 5-40 E	1SBN010040R1040	790			
		3NO	1NC	CA 5-31 E	1SBN010040R1031				
		2NO	2NC	CA 5-22 E	1SBN010040R1022				
Side mounted 2 pole add-on blocks	A9...A75, AL9...AL40, TAL9...TAL40, AE45...AE75, TAE45...TAE75, N,NL & UA 16..75	1NO	1NC	CAL5-11	1SBN010020R1011 ■	550			
		A95...A300, AE95...AE110, TAE95...TAE110, AF95...AF110, UA95...UA110, A400...AF2050	1NO	1NC	CAL18-11	1SFN010720R1011 ■	630		
			A145...A300	AF400...AF2050	1NO	1NC		CAL18-11B	1SFN010720R3311 ■
			AF205...AF370	1NO	1NC	CAL19-11		1SFN010820R1011 ■	
				1NO	1NC	CAL 19-11B		1SFN010820R3311 ■	

Auxiliary contact blocks for EK Range of contactors:

Description	Mounting on Contactors	Contact Configuration		Type Code Reference	Order Code	L.P.(₹)
		NO	NC			
Side mounting Two Pole Auxiliary contact blocks	EK110 ... EK1000	1NO	1NC	CAL16-11A	SK829002-A	630
		1NO	1NC	CAL16-11B	SK829002-B	
		1NO	1NC	CAL16-11C	SK829002-C	
		1NO	1NC	CAL16-11D	SK829002-D	

* Refer technical catalogue for proper selection.

Accessories for contactors

Surge suppressors



For contactor types	Voltage Range	Type Code reference	Order Code	L.P.(₹)
AL9...AL40,	12...32 DC	RT 5/32	1SBN050020R1000	640
AE45...AE110,	25...65 DC	RT 5/65	1SBN050020R1001	
TAL9...TAL40	50...90 DC	RT 5/90	1SBN050020R1002	
TAE45...TAE110	77...150 DC	RT 5/150	1SBN050020R1003	
NL/TNL,	150...264 DC	RT5/264	1SBN050020R1004	
A9...A110, AL9...AL40,	24...50V AC/DC	RV 5/50	1SBN050010R1000	640
AE45...AE10,TAL9...	50...133V AC/DC	RV 5/133	1SBN050010R1001	
TAL40, TAE45...	110...250V AC/DC	RV 5/250	1SBN050010R1002 ■	
TAE110, N/NL/TNL	250...440V AC/DC	RV 5/440	1SBN050010R1003	
A9...A40, N	24...50V AC	RC 5-1/50	1SBN050100R1000	640
	50...133V AC	RC 5-1/133	1SBN050100R1001	
	110...250V AC	RC 5-1/250	1SBN050100R1002 ■	
	250...440V AC	RC 5-1/440	1SBN050100R1003	
A45...A110	24...50V AC	RC 5-2/50	1SBN050200R1000	670
	50...133V AC	RC 5-2/133	1SBN050200R1001	
	110...250V AC	RC 5-2/250	1SBN050200R1002 ■	940
	250...440V AC	RC 5-2/440	1SBN050200R1003	
A145...A300	250...440	RC 5-3/440	1SBN050300R1003	1,910
EK550...EK1000	48...110V/AC	RC-EH 800/110	SK 829 007-C	1,910
	220...600V/AC	RC-EH 800/600	SK 829 007-D	

Mechanical interlocks



VM5-1



VM300

For contactor types	Description	Type Code reference	Order Code	L.P.(₹)
A9...A40, AL9...AL40	Horizontal Mechanical Interlock	VM 5-1	1SBN030100R1000 ■	440
A9...A40, AL9...AL40	Horizontal Mechanical & Electrical Interlock with 2NC contacts	VE 5-1	1SBN030110R1000 ■	670
A30...A110	Horizontal Mechanical & Electrical Interlock with 2NC contacts	VE 5-2	1SBN030210R1000 ■	1,340
A95...A185, A210...A300	Horizontal with 2NC contacts	VM 300H	1SBN034700R1000	2,770
EK110...EK150	Horizontal Mechanical Interlock	VH145	SK829071-A	3,680
EK175...EK210	Horizontal Mechanical Interlock	VH300	SK829071-B	4,290
AF116...AF146 and AF190, AF205	Horizontal Mechanical Interlock	VM140/190	1SBN034403R1000	2,770
AF190, AF205 and AF265 ... AF370	Horizontal Mechanical Interlock	VM205/265	1SBN035203R1000	2,770
AF116...AF370	Horizontal Mechanical Interlock	VM19	1SBN030300R1000	2,860

Note: Refer technical catalogue for proper selection.

Mechanical latching units

Description

For converting standard contactors into latched contactors. The WB75-A block contains a mechanical latching device with electromagnetic impulse unlatching (AC or DC) or manual unlatching. Captive screw type connecting terminals, built-in cable clamps, M3.5 (+, -) pozidriv 2 screw with screwdriver guidance; delivered untightened and protected against accidental direct contact.

Ordering Details



For contactors	Rated control circuit voltage U _c		Type	Order code	L.P.(₹)
	V 50 Hz or DC	V 60 Hz			
N, NL, A9-A75	24	24...28	WB75-A	FPTN372726R1001	5,060
	220...230	220...255	WB75-A	FPTN372726R1006	5,060

■ Stock items

NF / AF contactors

Wide band AC / DC Operated - with Screw Terminals

1

Description

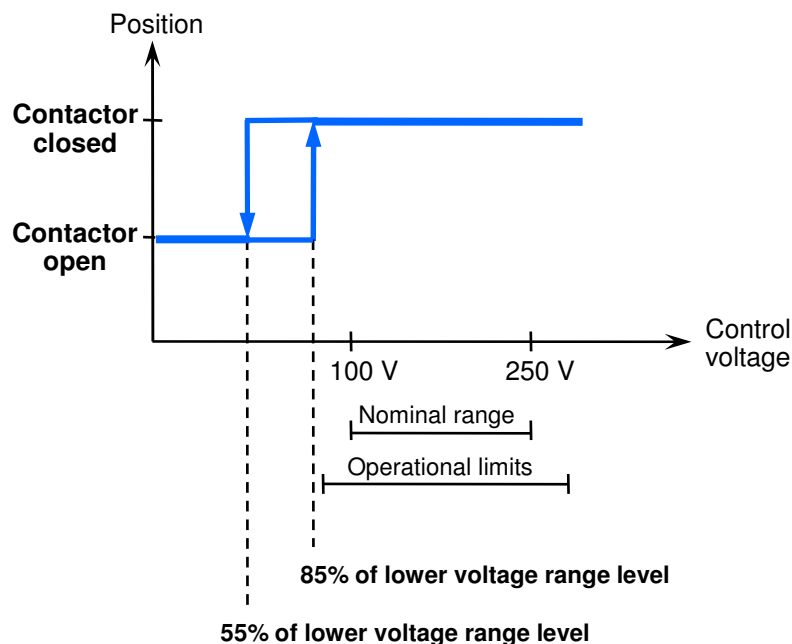
- **NF / AF contactor** include an electronic coil interface accepting a wide control voltage U_c min. ... U_c max. only four coils cover control voltages between 24...500 V 50/60 Hz or 20...500 V DC
- **NF / AF contactor** can manage large control voltage variations. One coil (e.g. 100...250 V 50/60 Hz - DC) can be used for different control voltages used worldwide without any coil change.
- **NF...Z / AF...Z contactor** equipped with a Z coil type allow direct control by 24 V DC 500 mA PLC-output and obtain a reduced holding coil consumption.
- **NF / AF contactor** have built-in surge protection and do not require additional surge suppressors.

Control contactors : Wide band AC/DC operated with low power consumption & in built surge suppressor for order code refer page no. 54



Innovative solution from ABB

- Electronically controlled coil
- Distinct drop out- and pick up value
- 20ms sags and dip immunity
- Fulfills SEMI - F47- 0200 surge suppressors.
 - Specification for processing equipment regarding voltage drop immunity.



3 pole contactors AF range: Wide band AC / DC operated

AF contactors are built in with

- Universal coil operable on wide band AC / DC voltages ranging from 70% Uc min - 110% Uc max
- Surge Suppressors
- Low power consumption coil

NEW



AC1 duty Amps	AC3 rating at 415V			Auxiliary Contacts		Type Code	Order code	L.P.(₹)
	Amps	hP	kW					
25	9	5.5	4	1NO	-	AF09-30-10-□□	1SBL137001R□□10	1,770
				-	1NC	AF09-30-01-□□	1SBL137001R□□01	1,770
28	12	7.5	5.5	1NO	-	AF12-30-10-□□	1SBL157001R□□10	1,900
				-	1NC	AF12-30-01-□□	1SBL157001R□□01	1,900
30	18	12.5	7.5	1NO	-	AF16-30-10-□□	1SBL177001R□□10	2,340
				-	1NC	AF16-30-01-□□	1SBL177001R□□01	2,340
45	26	15	11	-	-	AF26-30-00-□□	1SBL237001R□□00	3,130
50	32	20	18	-	-	AF30-30-00-□□	1SBL277001R□□00	6,590
50	38	25	18.5	-	-	AF38-30-00-□□	1SBL297001R□□00	7,440
70	40	30	18.5	-	-	AF40-30-00-□□	1SBL347001R□□00	8,210
100	53	40	22	-	-	AF52-30-00-□□	1SBL367001R□□00	10,410
105	65	50	30	-	-	AF65-30-00-□□	1SBL387001R□□00	12,410
125	80	60	37	-	-	AF80-30-00-□□	1SBL397001R□□00	14,800
130	96	70	45	-	-	AF96-30-00-□□	1SBL407001R□□00	18,130
160	116	75	55	1NO	1NC	AF116-30-11-□□	1SFL427001R□□11	19,380
200	140	100	75	1NO	1NC	AF140-30-11-□□	1SFL447001R□□11	24,580
225	146	100	75	1NO	1NC	AF146-30-11-□□	1SFL467001R□□11	25,770
275	490	120	90	1NO	1NC	AF190-30-11-□□	1SFL487002R□□11	29,960
350	205	150	110	1NO	1NC	AF205-30-11-□□	1SFL527002R□□11	30,300
400	265	175	140	1NO	1NC	AF265-30-11-□□	1SFL547002R□□11	35,790
500	305	215	160	1NO	1NC	AF305-30-11-□□	1SFL587002R□□11	41,520
600	370	270	200	1NO	1NC	AF370-30-11-□□	1SFL607002R□□11	52,920
For AF400...AF750 refer Table B for coil codes								
600	400	300	220	1NO	1NC	AF400-30-11**	1SFL577001R□□11	56,300
700	460	340	250	1NO	1NC	AF460-30-11**	1SFL597001R□□11	70,620
800	580	470	355	1NO	1NC	AF580-30-11**	1SFL617001R□□11	98,580
1050	750	570	425	1NO	1NC	AF750-30-11**	1SFL637001R□□11	1,50,300

Coil voltages and codes: New AF09...AF370 range (AC/DC operated)

Voltage V 50/60 Hz	Voltage V DC	Code □□
24...60	20...60	1 1
48...130	48...130	1 2
100...250	100...250	1 3
250...500	250...500	1 4

AF400 and above range (AC/DC operated)

Voltage V 50/60 Hz	Voltage V DC	Code □□
-	24...60	6 8
48...130	48...130	6 9
100...250	100...250	7 0
250...500	250...500	7 1

4 pole contactors: Wide band AC / DC operated

New AF Contactors: 4 pole – AC / DC Operated

NEW

Rating at 415V AC1 Amps	Main Contact Arrangement		Auxiliary Contacts		Type Code Reference	Order code	L.P.(₹)
25	4NO	-	-	-	AF09-40-00-□□	1SBL137201R□□□00	2,200
	2NO	2NC	-	-	AF09-22-00-□□	1SBL137501R□□□00	2,770
30	4NO	-	-	-	AF16-40-00-□□	1SBL177201R□□□00	2,580
	2NO	2NC	-	-	AF16-22-00-□□	1SBL177501R□□□00	3,390
45	4NO	-	-	-	AF26-40-00-□□	1SBL237201R□□□00	4,200
	2NO	2NC	-	-	AF26-22-00-□□	1SBL237501R□□□00	5,150
55	4NO	-	-	-	AF38-40-00-□□	1SBL297201R□□□00	8,150
	2NO	2NC	-	-	AF38-22-00-□□	1SBL297501R□□□00	10,090
70	4NO	-	-	-	AF40-40-00-□□	1SBL347201R□□□00	12,580
	2NO	2NC	-	-	AF40-22-00-□□	1SBL347501R□□□00	13,550
100	4NO	-	-	-	AF52-40-00-□□	1SBL367201R□□□00	14,030
125	4NO	-	-	-	AF80-40-00-□□	1SBL397201R□□□00	16,750
	2NO	2NC	-	-	AF80-22-00-□□	1SBL397501R□□□00	19,610
160	4NO	-	-	-	AF116-40-00-□□	1SFL427102R□□□00	19,570
200	4NO	-	-	-	AF140-40-00-□□	1SFL447102R□□□00	23,860
275	4NO	-	-	-	AF190-40-00-□□	1SFL487102R□□□00	33,400
350	4NO	-	-	-	AF205-40-00-□□	1SFL527102R□□□00	39,130
400	4NO	-	-	-	AF265-40-00-□□	1SFL547102R□□□00	46,500
500	4NO	-	-	-	AF305-40-00-□□	1SFL587102R□□□00	57,260
525	4NO	-	-	-	AF370-40-00-□□	1SFL607102R□□□00	68,710

Coil voltages and codes: New AF range (AC/DC operated)

Voltage V 50/60 Hz	Voltage V DC	Code □□
24...60	20...60	1 1
48...130	48...130	1 2
100...250	100...250	1 3
250...500	250...500	1 4

Accessories for AF contactors



CA4-10



CAL4-11



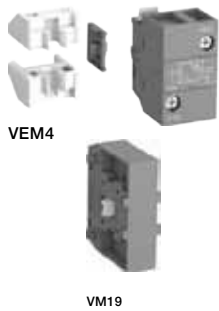
CAL19-11

Auxiliary contact block

Description	Mounting on Contactors	Contact Configuration		Type Code Reference	Order Code	L.P.(₹)
		NO	NC			
Front mounted 1 pole add-on blocks	AF09....AF96 / NF	1NO	-	CA4-10	1SBN010110R1010	190
		-	1NC	CA4-01	1SBN010110R1001	190
Front mounted 4 pole add-on blocks	AF09....AF38 / NF	4NO	-	CA4-40E	1SBN010140R1040	800
		3NO	1NC	CA4-31E	1SBN010140R1031	800
		2NO	2NC	CA4-22E	1SBN010140R1022	800
		-	4NC	CA4-04E	1SBN010140R1004	800
Side mounted 2 pole add-on blocks	AF96...AF370	1NO	1NC	CAL19-11	1SFN010820R1011	630
	AF09....AF96 / NF	1NO	1NC	CAL19-11B	1SFN010820R3311	630
		1NO	1NC	CAL4-11	1SBN010120R1011	550

* Refer technical catalogue for proper selection.

Accessories for AF contactors NEW



Mechanical interlocks

Description	For contactor types	Type Code reference	Order Code	L.P.(₹)
Horizontal Mechanical Interlock	AF09...AF38	VM 4	1SBN030105T1000	540
Horizontal Mechanical & Electrical Interlock	AF09...AF38	VEM 4	1SBN030111R1000	940
Horizontal Mechanical Interlock	AF40...AF96	VM96-4	1SBN033405T1000	1,910
Horizontal Mechanical Interlock	AF116...AF146 and AF190. AF205	VM140/190	1SFN034403R1000	2,770
Horizontal Mechanical Interlock	AF190, AF205 and AF265 ... AF370	VM205/265	1SFN035203R1000	2,770
Horizontal Mechanical Interlock	AF116...AF370	VM19	1SFN030300R1000	2,860

Note: Refer technical catalogue for proper selection.

Mechanical latching units

Ordering Details



For contactors	Rated control circuit voltage U _c		Type	Order code	L.P.(₹)
	V 50 Hz or DC	V 60 Hz			
AF09-AF65, NF	24	24...28	WB75-A	FPTN372726R1001	5,060
	220...230	220...255	WB75-A	FPTN372726R1006	5,060

Ordering Details

NEW



For contactors	Rated control circuit voltage U _c	Type	Order code	L.P.(₹)
NF(Z),AF(Z)09...38,AF40...65	24V DC	WA4-10	1SBN040100R1010	2,000
NF(Z),AF(Z)09...38,AF40...65	24-60V50/60HZ-DC	WA4-11	1SBN040100R1011	2,000
NF(Z),AF(Z)09...38,AF40...65	48-130V50/60HZ-DC	WA4-12	1SBN040100R1012	2,000
NF(Z),AF(Z)09...38,AF40...65	100-250V50/60HZ-DC	WA4-13	1SBN040100R1013	2,000
NF(Z),AF(Z)09...38,AF40...65	250-500V50/60HZ-DC	WA4-14	1SBN040100R1014	2,000
AF80...96	24-60V50/60HZ-DC	WA4-96-11	1SBN040200R1011	2,000
AF80...96	48-130V50/60HZ-DC	WA4-96-12	1SBN040200R1012	2,000
AF80...96	100-250V50/60HZ-DC	WA4-96-13	1SBN040200R1013	2,000
AF80...96	250-500V50/60HZ-DC	WA4-96-14	1SBN040200R1014	2,000

Electronic timers

For contactor types	Time delay range selected by switch	Delay type	Auxiliary contacts	Type	Order Code	L.P.(₹)
AF09 ... AF96	0.1...1 s	ON-delay	1NO + 1NC	TEF4-ON	1SBN020112R1000	5,320
	1...10 s 10...100 s	OFF-delay	1NO + 1NC	TEF4-OFF	1SBN020114R1000	5,060

Note: Rated control circuit voltage U_c 24...240 V 50/60 Hz or DC.

Connecting links with manual motor starters

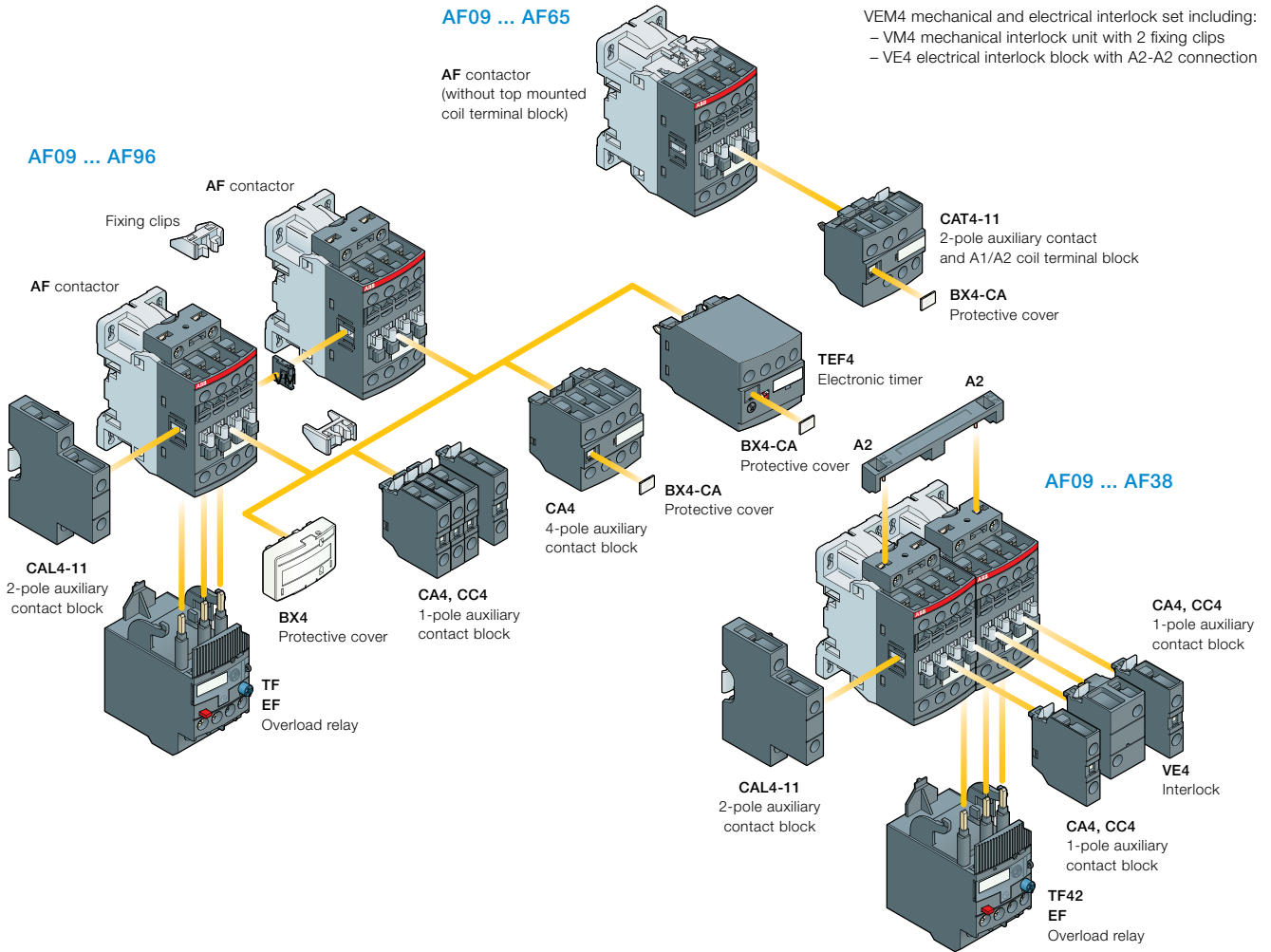
For contactor types	Used with	Type	Order Code	L.P.(₹)
AF09 ... AF16	MS116-0.16 ... MS116-25, MS132-0.16 ... MS132-25	BEA16-4	1SBN081306T1000	360
AF26 ... AF30	MS116-0.16 ... MS116-16, MS132-0.16 ... MS132-10	BEA26-4	1SBN082306T1000	420
	MS116-20 ... MS116-32, MS132-12 ... MS132-32	BEA38-4	1SBN082306T2000	440

Connection sets for reversing contactors

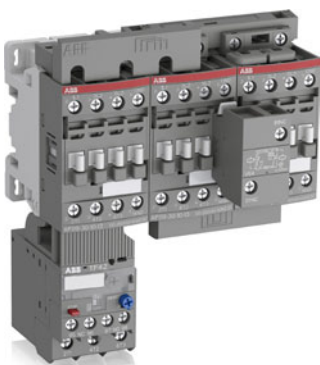
For contactor types	Type	Order Code	L.P.(₹)
AF09 ... AF16	BER16-4	1SBN081311R1000	910
AF26 ... AF30	BER38-4	1SBN082311R1000	1,230
AF40 ... AF65	BER65-4	1SBN083411R1000	1,480
AF80 ... AF96	BER96-4	1SBN083911R1000	2,580

Connection sets for star-delta starting

For contactor types	Type	Order Code	L.P.(₹)
AF09 ... AF16	BEY16-4	1SBN081313R2000	1,230
AF26 ... AF30	BEY38-4	1SBN082713R2000	1,910
AF40 ... AF65	BEY65-4	1SBN083413R2000	2,450
AF80 ... AF96	BEY96-4	1SBN083913R2000	3,150



AF the premium range



The AF contactor is compact

The AF contactor is compact in size and has had its width reduced by up to 30% thanks to an 80% reduction of the coil's energy consumption.

The AF contactor is flexible

AF09...AF370 is perfect for motor starting applications and for solutions where space is limited. Interlocked reversing pairs require no spacing between contactors meaning you can fit more functionality into cabinets or other small enclosures.

Installation contactors



EN/ESB20	EN/ESB24	EN/ESB40	EN/ESB63
Switching heatings and resistors, AC-1 / AC-7a			
Rated operational current I _g (NO)			
20 A	24 A	40 A	63 A
Rated operational current I _g (NC)			
20 A	24 A	30 A	30 A
Rated operational power, 1-phase at 230 V			
4 kW	5.3 kW	8.8 kW	13.8 kW
Rated operational power, 3-phase at 400 V			
	16 kW	26 kW	41 kW
Switching motors, AC-3 / AC-7b			
Rated operational current I _g (NO)			
9 A	9 A	22 A	30 A
Rated operational current I _g (NC)			
9 A	6 A		
Rated operational power, 1-phase at 230 V			
1.3 kW	2.2 kW	5.5 kW	8 kW
Rated operational power, 3-phase at 400 V			
	4 kW	11 kW	15 kW
Module width			
18 mm	36 mm	54 mm	54 mm

EN-Types - with benefits for service

EN-Types have an integrated 3-position switch for manual and automatic operation.

Contacts	Type	Order No.	L.P.(₹)
20 A 2-pole (No aux.-contact block possible)			
2NO	ESB 20-20 24 V 50/60 Hz	GHE3211102R0001	2,630
2NO	ESB 20-20 230 V 50/60 Hz	GHE3211102R0006	2,630
2NC	ESB 20-02 24 V 50/60 Hz	GHE3211202R0001	2,770
2NC	ESB 20-02 230 V 50/60 Hz	GHE3211202R0006	2,770
1NO, 1NC	ESB 20-11 24 V 50/60 Hz	GHE3211302R0001	2,670
1NO, 1NC	ESB 20-11 230 V 50/60 Hz	GHE3211302R0006	2,670
24 A 2-pole (1 aux.-contact block possible)			
2NO	ESB 24-20 24 V AC/DC	GHE3291402R0006	2,860
2NO	ESB 24-20 24 V AC/DC	GHE3291402R0001	
24 A 4-pole (1 aux.-contact block possible)			
4NO	ESB 24-40 24 V AC/DC	GHE3291102R0001	2,860
4NO	ESB 24-40 230-240 V AC/DC	GHE3291102R0006	
2NO, 2NC	ESB 24-22 24 V AC/DC	GHE3291302R0001	
2NO, 2NC	ESB 24-22 230-240 V AC/DC	GHE3291302R0006	
40 A 2-/3-/4-pole (1 aux.-contact block possible)			
2NO	ESB 40-20 24 V AC/DC	GHE3491402R0001	4,580
2NO	ESB 40-20 230 V AC/DC	GHE3491402R0006	4,580
3NO	ESB 40-30 24 V AC/DC	GHE3491502R0001	4,830
3NO	ESB 40-30 230 V AC/DC	GHE3491502R0006	4,830
4NO	ESB 40-40 24 V AC/DC	GHE3491102R0001	5,150
4NO	ESB 40-40 230 V AC/DC	GHE3491102R0006	5,150
2NO, 2NC	ESB 40-22 24 V AC/DC	GHE3491302R0001	5,250
2NO, 2NC	ESB 40-22 230 V AC/DC	GHE3491302R0006	5,250
63 A 2-/3-/4-pole (1 aux.-contact block possible)			
2NO	ESB 63-20 24 V AC/DC	GHE3691402R0001	5,870
2NO	ESB 63-20 230 V AC/DC	GHE3691402R0006	5,870
3NO	ESB 63-30 230 V AC/DC	GHE3691502R0006	5,870
4NO	ESB 63-40 24 V AC/DC	GHE3691102R0001	6,870
4NO	ESB 63-40 230 V AC/DC	GHE3691102R0006	6,870

Functions:

- Switch in position “AUTO” : standard control
- Switch in position “O” : Supply to coil interrupted
- Switch in position “I” : Manually switched on (a trigger signal at the coil terminal initiates the switch moving into “AUTO” position)

Contacts	Type	Order No.	L.P.(₹)
20 A 2-pole (No aux.-contact block possible)			
2NO	EN 20-20 24 V 50 Hz	GHE3221101R0001	Upon request
2NO	EN 20-20 230 V 50 Hz	GHE3221101R0006	
24 A 3-pole (1 aux.-contact block possible)			
3NO	EN 24-30 230-240 V AC/DC	GHE3261501R0006	Upon request
24 A 4-pole (1 aux.-contact block possible)			
4NO	EN 24-40 24 V AC/DC	GHE3261101R0001	Upon request
4NO	EN 24-40 230-240 V AC/DC	GHE3261101R0006	
40 A 3-pole (1 aux.-contact block possible)			
3NO	EN 40-30 230 V AC/DC	GHE3421501R0006	Upon request
40 A 4-pole (1 aux.-contact block possible)			
4NO	EN 40-40 24 V AC/DC	GHE3421101R0001	Upon request
4NO	EN 40-40 230 V AC/DC	GHE3421101R0006	
Accessories			
2NO	EH 04-20, Aux.-contact block	GHE3401321R0001	Upon request
1NO, 1NC	EH 04-11, Aux.-contact block	GHE3401321R0002	
distance pcs	ESB-DIS Spacer	GHE3201902R0001	
Seal	ESBPLK24	GHE3201903R0001	

Mini contactors



Mini contactors with screw connection: 3 pole - AC operated

AC1 duty Amps	AC3 rating at 415V			Auxiliary Contacts	Type Code Reference	Order Code	L.P.(₹)
	Amps	hP	kW				
16A	9	5.5	4	1NO -	B06-30-10 **	GJL1211001R□10□	930
16A	9	5.5	4	- 1NC	B06-30-01 **	GJL1211001R□01□	
20A	12	7.5	5.5	1NO -	B07-30-10 **	GJL1311001R□10□	1,020
20A	12	7.5	5.5	- 1NC	B07-30-01 **	GJL1311001R□01□	

Complete the contactor type code by replacing ** with desired coil voltage

Mini contactors with screw connection: 3 pole - DC operated

AC1 duty Amps	AC3 rating at 415V			Auxiliary Contacts	Type Code Reference	Order Code	L.P.(₹)
	Amps	hP	kW				
16A	9	5.5	4	1NO -	BC6-30-10 **	GJL1213001R□10□	1,300
16A	9	5.5	4	- 1NC	BC6-30-01 **	GJL1213001R□01□	
20A	12	7.5	5.5	1NO -	BC7-30-10 **	GJL1313001R□10□	1,350
20A	12	7.5	5.5	- 1NC	BC7-30-01 **	GJL1313001R□01□	

Mini reversing contactors with screw connection: 3 pole - AC operated

AC1 duty Amps	AC3 rating at 415V			Auxiliary Contacts	Type Code Reference	Order Code	L.P.(₹)
	Amps	hP	kW				
16A	9	5.5	4	1NO -	VB06-30-10 **	GJL1211901R□10□	2,700
16A	9	5.5	4	- 1NC	VB06-30-01 **	GJL1211901R□01□	2,700
20A	12	7.5	5.5	1NO -	VB07-30-10 **	GJL1311901R□10□	2,850
20A	12	7.5	5.5	- 1NC	VB07-30-01 **	GJL1311901R□01□	2,850

Complete the contactor type code by replacing ** with desired coil voltage

Mini reversing contactors with screw connection: 3 pole - DC operated

AC1 duty Amps	AC3 rating at 415V			Auxiliary Contacts	Type Code Reference	Order Code	L.P.(₹)
	Amps	hP	kW				
16A	9	5.5	4	1NO -	VBC6-30-10 **	GJL1213901R□10□	2,310
16A	9	5.5	4	- 1NC	VBC6-30-01 **	GJL1213901R□01□	2,310
20A	12	7.5	5.5	1NO -	VBC7-30-10 **	GJL1313901R□10□	3,090
20A	12	7.5	5.5	- 1NC	VBC7-30-01 **	GJL1313901R□01□	3,090

Complete the contactor type code by replacing ** with desired coil voltage

Mini contactors are also available in 4 pole (4NO / 2NO + 2NC)

Mini auxiliary contactor 4 pole with screw connection

Control Circuit	Contact Configuration		Type Code Reference	Order Code	L.P.(₹)
	NO	NC			
AC	2NO	2NC	K6-22Z**	GJH121 1001 R□22□	1,030
	3NO	1NC	K6-31Z **	GJH121 1001 R□31□	
	4NO	-	K6-40E **	GJH121 1001 R□40□	
DC	2NO	2NC	KC6-22Z**	GJH121 3001 R□22□	1,290
	3NO	1NC	KC6-31Z **	GJH121 3001 R□31□	
	4NO	-	KC6-40E **	GJ 121 3001 R□40□	

Coil voltage for mini contactors

AC		DC	
50-60Hz	Code	DC V	Code
24	0 ... 1	24	0 ... 1
48	0 ... 3	110 ... 125	0 ... 4
110 ... 127	8 ... 4	220 ... 240	0 ... 5
220 ... 240	8 ... 0		
380 ... 415	8 ... 5		

Complete the contactor type code by replacing ** with desired coil voltage

Auxiliary contact blocks for mini contactors, 4 A, 240 V AC-15 / 2.5 A, 24V DC-13

Ordering details

For contactor types	Auxiliary contacts	Type	Order Code	L.P.(₹)
Front mounted instantaneous auxiliary contact blocks 1)				
B6-, B7-30-10, BC6-, BC7-30-10	1NO + 1NC	CAF6-11M	GJL1201330R0003	540
VB6, VB7, VBC6, VBC7, VB6A, VB7A	2NO	CAF6-20M	GJL1201330R0007	
VBC6A, VBC7A	2NC	CAF6-02M	GJL1201330R0011	
Side mounted instantaneous auxiliary contact block 1)				
B6-, B7-30-10, BC6-, BC7-30-10	1NO + 1NC	CA6-11M	GJL1201317R0003	540

Spares for contactors

Spare coils for A range

For contactor types	Type Code Reference	Order Code	L.P.(₹)
N, A9...A16, UA16..RA	ZA16 **	1SBN151410R□□06 ■	720
A26...A40;UA26..UA30 RA	ZA40 **	1SBN152410R□□06 ■	830
A45...A75;UA50..UA75 RA	ZA75 **	1SBN153510R□□06 ■	2,440
A95...A110; UA95..UA110 RA	ZA110 **	1SFN154310R□□06 ■	3,200
A145...A185	ZA185 **	1SFN154710R□□06 ■	5,230
A210...A300	ZA300 **	1SFN155110R□□06 ■	5,800

Spare coils for AF range

For contactor types	Type Code Reference	Order Code	L.P.(₹)
AF45...AF75	ZAF75	1SBN153570R□□06 ■	6,680
AF95...AF110	ZAF110	1SFN153370R□□06 ■	8,970
AF145...AF185	ZAF185	1SFN154770R□□06 ■	10,500
AF210,AF260 &AF300	ZAF300	1SFN155170R□□06	19,090
AF400...AF460	ZAF460**	1SFN155770R□□06	22,430
AF580...AF750**	ZAF750**	1SFN156170R□□06	29,110

Coil voltages & codes

N range, A09.....A300, UA....RA			AF45...AF750		
Voltage V-50 Hz	Voltage V-60 Hz	Code	Voltage V-50/60 Hz	Voltage V..dc	Code
24	24	81	24...60	24...60	68
110	110...120	84	48...130	48...130	69
220...230	230...240	80	100...250	100...250	70
400...415	415...440	86	250...500	250...500	71

Spare contact sets for 3 pole

Description	For contactor types	Type Code Reference	Order Code	L.P.(₹)
Contact set for 3 -pole contactors consisting of 6 fixed contacts, 3 moving contacts, springs and the required screws	A/AF/AE/TAE50	ZL 50	1SBN163503R1000 ■	3,870
	A/AF/AE/TAE63	ZL 63	1SBN163703R1000 ■	5,400
	A/AF/AE/TAE75	ZL 75	1SBN164103R1000 ■	6,780
	A/AF/AE/TAE95	ZL 95	1SFN164303R1000 ■	8,920
	A/AF/AE/TAE110	ZL 110	1SFN164503R1000 ■	9,410
	A/AF145	ZL 145	1SFN164703R1000 ■	11,930
	A/AF185	ZL 185	1SFN164903R1000 ■	14,990
	A/AF210	ZL 210	1SFN165103R1000 ■	18,130
	A/AF260	ZL 260	1SFN165303R1000 ■	21,950
	A/AF300	ZL 300	1SFN165503R1000 ■	26,250
	AF400	ZL 400	1SFN165703R1000	31,490
	AF460	ZL 460	1SFN165903R1000	38,840
	AF 580	ZL 580	1SFN166103R1000	65,370
	AF 750	ZL 750	1SFN166303R1000	82,070
	UA 50	ZLU 50	1SBN163502R1000 ■	3,870
	UA 63	ZLU 63	1SBN163702R1000 ■	5,400
	UA 75	ZLU 75	1SBN164102R1000 ■	6,780

Spare contact sets for 3 pole for AX

For contactor types	Type Code Reference	Order Code	L.P.(₹)
AX50	ZLX50	1SBN163506R1000	3,440
AX65	ZLX65	1SBN163706R1000	4,580
AX80	ZLX80	1SBN164106R1000	5,730
AX95	ZLX95	1SFN164306R1000	6,680
AX115	ZLX115	1SFN169806R1000	8,120
AX150	ZLX150	1SFN169906R1000	10,790
AX185	ZLX185	1SFN164906R1000	12,700
AX205	ZLX205	1SFN165006R1000	15,460
AX260	ZLX260	1SFN165403R1000	Upon Request
AX300	ZLX300	1SFN165803R1000	
AX370	ZLX370	1SFN166003R1000	

Spare coils for AX range

For contactor types	Type Code Reference	Order Code	L.P.(₹)
AX25	ZAX25	1SBN158910R□□36	670
AX40	ZAX40	1SBN152810R□□36	760
AX80	ZAX80	1SBN153510R□□36	2,390
AX150	ZAX150	1SFN159910R□□36	3,630
AX205	ZAX205	1SFN155010R□□36	5,150
AX370	ZAX370	1SFN156010R□□36	Upon request

Complete the contactor type code by replacing □□ with desired coil voltage from page no 66

■ Stock items

DOL and star delta starters

Direct on line starter:

Rating at 415V 50Hz		Back - up Fuse rating (A)	Type Code Reference	Order Code	L.P.(₹)
HP	kW				
0.25	0.18	4A	MA-0.25 **	1SYN140318R□□25	2,940
0.50	0.37	4A	MA-0.50 **	1SYN140318R□□05	2,940
0.75	0.52	6A	MA-0.75 **	1SYN140318R□□75	2,940
1.00	0.75	6A	MA-1.00 **	1SYN140318R□□10	2,940
1.50	1.10	10A	MA-1.50 **	1SYN140318R□□15	2,940
2.00	1.50	10A	MA-2.00 **	1SYN140318R□□20	2,940
3.00	2.20	16A	MA-3.00 **	1SYN140318R□□30	2,940
5.00	3.70	25A	MA-5.00 **	1SYN140318R□□50	2,940
7.50	5.50	32A	MA-7.50 **	1SYN160318R□□75	2,940
10.00	7.50	32A	MA-10.00 **	1SYN180318R□□10	3,180

Fully automatic Star Delta starter:

HP rating at 415V	Type Code Reference	Order Code	L.P.(₹)
12.5	SDA-12.5 **	1SYN184322R□□00	10,980
15	SDA-15 **	1SYN242322R□□00	11,930
20	SDA-20 **	1SYN244322R□□00	13,840
25	SDA-25 **	1SYN246322R□□00	14,410
30	SDA-30 **	1SYN282322R□□00	17,420
35	SDA-35 **	1SYN284322R□□00	19,330
40	SDA-40 **	1SYN322322R□□00	23,460
50	SDA-50 **	1SYN352342R□□00	28,160
60	SDA-60 **	1SYN372342R□□00	36,220
75	SDA-75 **	1SYN412342R□□00	42,470

Complete the starter type code by replacing the ** with the desired coil voltage.

Voltage	Code
220 ... 230 V coil	3 8
400 ... 415 V coil	8 6

DOL Starter with IP65 enclosure



4KE 7.5KW 415V, IP65 compact plastic enclosure with double insulation



Description	Order code	L.P.(₹)
DRAS09-29P 4.0 kW 415V, 415V coil	1SBK104035R2900	5,150
DRAS12-29P 5.5 kW 415V, 415V coil	1SBK114035R2900	5,530
DRAS16-29P 7.5 kW 415V, 415V coil	1SBK124035R2900	7,440

Note: T16 OLR to be ordered separately. Plz refer page no. 82 for reference.

■ Stock items

Manual motor starter

0.10 to 32 A – with thermal and electromagnetic protection

Description

MS116 Manual motor starters with short Circuit, overload and phase loss protection

Direct on line starter:



Rated Power 415V KW	Ie current setting Range Amp	S/C Icu Breaking Capacity kA	Type	Order code	L.P.(₹)
0.03	0.10 ... 0.16	50	MS116-0.16	1SAM250000R1001	2,600
0.06	0.16 ... 0.25	50	MS116-0.25	1SAM250000R1002	2,600
0.09	0.25 ... 0.40	50	MS116-0.4	1SAM250000R1003	2,600
0.12	0.40 ... 0.63	50	MS116-0.63	1SAM250000R1004	2,960
0.25	0.63 ... 1.00	50	MS116-1.0	1SAM250000R1005	2,960
0.55	1.00 ... 1.60	50	MS116-1.6	1SAM250000R1006	2,970
0.75	1.60 ... 2.50	50	MS116-2.5	1SAM250000R1007	2,970
1.5	2.50 ... 4.00	50	MS116-4.0	1SAM250000R1008	3,010
2.2	4.00 ... 6.30	50	MS116-6.3	1SAM250000R1009	3,010
4.0	6.30 ... 10.0	50	MS116-10	1SAM250000R1010	3,110
5.5	8.00 ... 12.0	25	MS116-12	1SAM250000R1012	3,530
7.5	10.0 ... 16.0	16	MS116-16	1SAM250000R1011	3,920
9.0	16.0 ... 20.0	15	MS116-20	1SAM250000R1013	4,260
12.5	20.0 ... 25.0	15	MS116-25	1SAM250000R1014	4,390
15.5	25.0 ... 32.0	10	MS116-32	1SAM250000R1015	7,660

MS132 Manual motor starters with Short Circuit, overload and phase loss protection



0.03	0.10 ... 0.16	100	MS132-0.16	1SAM350000R1001	3,380
0.06	0.16 ... 0.25	100	MS132-0.25	1SAM350000R1002	3,380
0.09	0.25 ... 0.40	100	MS132-0.4	1SAM350000R1003	3,380
0.12	0.40 ... 0.63	100	MS132-0.63	1SAM350000R1004	3,670
0.25	0.63 ... 1.00	100	MS132-1.0	1SAM350000R1005	3,700
0.55	1.00 ... 1.60	100	MS132-1.6	1SAM350000R1006	3,870
0.75	1.60 ... 2.50	100	MS132-2.5	1SAM350000R1007	3,870
1.5	2.50 ... 4.00	100	MS132-4.0	1SAM350000R1008	3,890
2.2	4.00 ... 6.30	100	MS132-6.3	1SAM350000R1009	3,940
4.0	6.30 ... 10.0	100	MS132-10	1SAM350000R1010	4,220
5.5	8.00 ... 12.0	100	MS132-12	1SAM350000R1012	4,640
7.5	10.0 ... 16.0	100	MS132-16	1SAM350000R1011	5,140
9.0	16.0 ... 20.0	100	MS132-20	1SAM350000R1013	5,520
12.5	20.0 ... 25.0	50	MS132-25	1SAM350000R1014	5,630
15.5	25.0 ... 32.0	50	MS132-32	1SAM350000R1015	8,970

MO132 Manual motor starters with short circuit protection only



0.03	0.16	100	MO132-0.16	1SAM360000R1001	3,230
0.06	0.25	100	MO132-0.25	1SAM360000R1002	3,230
0.09	0.40	100	MO132-0.4	1SAM360000R1003	3,230
0.12	0.63	100	MO132-0.63	1SAM360000R1004	3,510
0.25	1.0	100	MO132-1.0	1SAM360000R1005	3,550
0.55	1.6	100	MO132-1.6	1SAM360000R1006	3,550
0.75	2.5	100	MO132-2.5	1SAM360000R1007	3,550
1.5	4.0	100	MO132-4.0	1SAM360000R1008	3,600
2.2	6.3	100	MO132-6.3	1SAM360000R1009	3,600
4.0	10	100	MO132-10	1SAM360000R1010	3,730
5.5	12	100	MO132-12	1SAM360000R1012	3,730
7.5	16	100	MO132-16	1SAM360000R1011	3,730
9.0	20	100	MO132-20	1SAM360000R1013	4,080
12.5	25	50	MO132-25	1SAM360000R1014	4,220
15.5	32	50	MO132-32	1SAM360000R1015	8,710

Manual motor starter

MS132-T circuit breakers for transformer protection



1

Description

MS132-T Circuit breakers for transformer protection are electro mechanical protection devices specially designed to protect control transformers on the primary side. The short-circuit current setting is fixed to 20 times the operating current to handle the high inrush current generated by transformers.

le current setting Range Amp	S/C Icu Breaking Capacity kA	Type	Order code	L.P.(₹)
0.10 ... 0.16	100	MS132-0.16T	1SAM340000R1001	3,790
0.16 ... 0.25	100	MS132-0.25T	1SAM340000R1002	3,790
0.25 ... 0.40	100	MS132-0.4T	1SAM340000R1003	3,790
0.40 ... 0.63	100	MS132-0.63T	1SAM340000R1004	4,110
0.63 ... 1.00	100	MS132-1.0T	1SAM340000R1005	4,150
1.00 ... 1.60	100	MS132-1.6T	1SAM340000R1006	4,340
1.60 ... 2.50	100	MS132-2.5T	1SAM340000R1007	4,340
2.50 ... 4.00	100	MS132-4.0T	1SAM340000R1008	4,360
4.00 ... 6.30	100	MS132-6.3T	1SAM340000R1009	4,420
6.30 ... 10.0	100	MS132-10T	1SAM340000R1010	4,730
8.00 ... 12.0	100	MS132-12T	1SAM340000R1012	5,210
10.0 ... 16.0	100	MS132-16T	1SAM340000R1011	5,210
16.0 ... 20.0	100	MS132-20T	1SAM340000R1013	6,300
20.0 ... 25.0	50	MS132-25T	1SAM340000R1014	6,330

MS165, MO165

NEW

Description

MS165 manual motor starters with short circuit, overload and phase loss protection



le current setting Range Amp	S/C Icu Breaking Capacity kA	Type	Order code	L.P.(₹)
10 ... 16	100	MS165-16	1SAM451000R1011	9,350
14 ... 20	100	MS165-20	1SAM451000R1012	9,790
18 ... 25	100	MS165-25	1SAM451000R1013	10,020
23 ... 32	100	MS165-32	1SAM451000R1014	10,740
30 ... 42	50	MS165-42	1SAM451000R1015	10,740
40 ... 54	50	MS165-54	1SAM451000R1016	13,170
52 ... 65	50	MS165-65	1SAM451000R1017	14,030

MO165 manual motor starters with short circuit protection only

Rated operational current Amp	S/C Icu Breaking Capacity kA	Type	Order code	L.P.(₹)
16	100	MO165-16	1SAM461000R1011	9,450
20	100	MO165-20	1SAM461000R1012	9,450
32	100	MO165-32	1SAM461000R1014	9,640
42	50	MO165-42	1SAM461000R1015	10,020
54	50	MO165-54	1SAM461000R1016	11,260
65	50	MO165-65	1SAM461000R1017	11,700

Manual motor starter

MS116, MS132, MO132, MS165, MO165, MS4xx, MO4xx

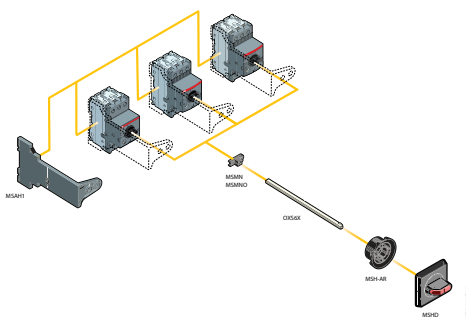
General accessories

Description

With this solution of door coupling rotary mechanism it is possible to operate a Manual Motor Starter in the back of a switch cabinet from outside. The door coupling mechanism prevents opening of the door of a switch cabinet with the Manual Motor Starter in ON position. The complete mechanism includes handle, shaft, driver, shaft alignment ring and shaft supporter. All accessories fit for 6 mm shafts with a maximum length of 180 mm. The degree of protection for handles MSHD is IP64.

1

Ordering details



Frame	Description	Type	Order code	L.P.(₹)
MS116 MS132 MO132 MS165 MO165 MS4xx, MO4xx	SHAFT - Shaft diameter 6 mm. Shaft extension for door coupling driver	OXS6X130	1SCA101655R1001	360
	MSHD - Handle	MSHD-LB ¹⁾	1SAM201920R1001	980
		MSHD-LY ²⁾	1SAM201920R1002	980
		MSHD-LTB ³⁾	1SAM201920R1011	980
		MSHD-LTY ³⁾	1SAM201920R1012	980
	MSMN- Driver	MSMN ⁴⁾	1SAM101923R0002	150
		MSMNO ⁵⁾	1SAM101923R0012	150
	MSH-AR Shaft alignment ring	MSH-AR	1SAM201920R1000	160
MS116, MS132	MSAH1- Shaft supporter	MSAH1	1SAM201909R1021	650

¹⁾ Black in colour

²⁾ Yellow in colour

³⁾ Indication I-O and ON-OFF+Trip indication

⁴⁾ Positioning of ON indication dependent from mounting orientation of the MMS

⁵⁾ Positioning of ON indication independent from mounting orientation of the MMS

■ Stock items

Manual motor starter

Accessories for MS116, MS132, MO132, MS132-T, MS165, MO165

1



AA1-24

Shunt trip					Undervoltage release			
Suitable for	Rated voltage	Type	Order code	L.P.(₹)	Rated voltage	Type	Order code	L.P.(₹)
MS116,	20 ... 24	AA1-24	1SAM201910R1001	2,510	24	UA1-24	1SAM201904R1001	2,050
MS132,	110	AA1-110	1SAM201910R1002	2,510	110	UA1-110	1SAM201904R1004	2,050
MO132,	200-240	AA1-230	1SAM201910R1003	2,510	230	UA1-230	1SAM201904R1005	2,050
MS132-T								
MS165	350-415	AA1-400	1SAM201910R1004	2,510	415	UA1-415	1SAM201904R1007	2,050
MO165								



HKF1-11

Suitable for	Auxiliary contacts – mountable on the front				Auxiliary contacts – mountable on the right		
	Aux contacts	Type	Order code	L.P.(₹)	Type	Order code	L.P.(₹)
MS116,	1NO+1NC	HKF1-11	1SAM201901R1001	570	HK1-11	1SAM201902R1001	740
MS132,	2 NO	HKF1-20	1SAM201901R1002	570	HK1-20	1SAM201902R1002	740
MO132,							
MS132-T	2NC	-	-	-	HK1-02	1SAM201902R1003	740
MS165	1NO	HKF1-10	1SAM201901R1003	350			
MO165	1NC	HKF1-01	1SAM201901R1004	350			



SK1-11

Signaling contacts – mountable on the right

Suitable for	Aux contacts	Type	Order code	L.P.(₹)
MS116,	1NO+1NC	SK1-11**	1SAM201903R1001	980
MS132,	2 NO	SK1-20**	1SAM201903R1002	980
MO132,				
MS132-T	2 NC	SK1-02**	1SAM201903R1003	980
MS132,	1NO+1NC	CK1-11#	1SAM301901R1001	1,390
MS132-T	2 NO	CK1-20#	1SAM301901R1002	1,390
MS165	2 NC	CK1-02#	1SAM301901R1003	1,390
MO165				

**for tripped alarm, max 2 piece

#for short-circuit alarm, max. 2 pieces



CK1-11

Manual motor starter

MS495, MS497 Manual motor starters



Description

Manual motor starters with short Circuit, overload and phase loss protection

Rated Power 415V KW	Ie current setting Range Amp	S/C Icu Breaking Capacity kA	Type	Order code	L.P.(₹)
MS495 Manual motor starters with short Circuit, overload and phase loss protection					
30	45.0 ... 63.0	50	MS495-63	1SAM550000R1007	Upon request
37	57.0 ... 75.0	50	MS495-75	1SAM550000R1008	
45	70.0 ... 90.0	50	MS495-90	1SAM550000R1009	
55	80.0 100.0	50	MS495-100	1SAM550000R1010	
MS497 Manual motor starters with short Circuit, overload and phase loss protection					
15	22.0 ... 32.0	100	MS497-32	1SAM580000R1004	Upon request
18.5	28.0 ... 40.0	100	MS497-40	1SAM580000R1005	
22	36.0 ... 50.0	100	MS497-50	1SAM580000R1006	
30	45.0 ... 63.0	100	MS497-63	1SAM580000R1007	
37	57.0 ... 75.0	100	MS497-75	1SAM580000R1008	
45	70.0 ... 90.0	100	MS497-90	1SAM580000R1009	
55	80.0 ... 100.	100	MS497-100	1SAM580000R1010	

MO495, MO497 Manual motor starters



Description

Manual motor starters with short Circuit protection only

Rated Power 415V KW	Ie current setting Range Amp	S/C Icu Breaking Capacity kA	Type	Order code	L.P.(₹)
MO495 Manual motor starters with short Circuit protection only					
30	63	50	MO495-63	1SAM560000R1007	Upon request
37	75	50	MO495-75	1SAM560000R1008	
45	90	50	MO495-90	1SAM560000R1009	
55	100	50	MO495-100	1SAM560000R1010	
MO497 Manual motor starters with short Circuit protection only					
15	32	100	MO497-32	1SAM590000R1004	Upon request
18.5	40	100	MO497-40	1SAM590000R1005	
22	50	100	MO497-50	1SAM590000R1006	
30	63	100	MO497-63	1SAM590000R1007	
37	75	100	MO497-75	1SAM590000R1008	
45	90	100	MO497-90	1SAM590000R1009	
55	100	100	MO497-100	1SAM590000R1010	

Manual motor starter

Accessories for MS4xx



1

HK4-11

Auxiliary contacts – mountable on the front					Auxiliary contacts – mountable on the right			
Suitable for	Aux contacts	Type	Order code	L.P.(₹)	Rated voltage	Type	Order code	L.P.(₹)
MS49x, MO49x	1NO+1NC	HK4-11	1SAM401901R1001	790	1NO+1NC	HK4-11	1SAM401902R1001	790
					2 NO	HK4-20	1SAM401902R1002	790
					2 NC	HK4-02	1SAM401902R1003	790



SK4-11

Signaling contacts – mountable on the right*				
Suitable for	Aux contacts	Type	Order code	L.P.(₹)
MS49x, MO49x	1NO+1NC	SK4-11	1SAM401904R1001	1,440

*for tripped alarm, max 2 piece



AA4-24

Shunt trip units – mountable on the right					Undervoltage release mountable on the right			
Suitable for	Rated voltage	Type	Order code	L.P.(₹)	Rated voltage	Type	Order code	L.P.(₹)
MS49x, MO49x	20 ... 24	AA4-24	1SAM401907R1001	2,520	24	UA4-24	1SAM401905R1004	2,920
	110	AA4-110	1SAM401907R1002	2,920	110	UA4-110	1SAM401905R1001	2,920
	200-240	AA4-230	1SAM401907R1003	2,920	230	UA4-230	1SAM401905R1002	2,920
	350-415	AA4-400	1SAM401907R1004	2,920	415	UA4-415	1SAM401905R1002	2,920

Thermal overload relays



TA25, TA42 and TA75 relays

Relay range in Amps	Direct mounting on contactors	Type Code reference	Order Code	L.P.(₹)
0.1 ... 0.16	"A9...A40 AX9...AX32 AL9...AL40 TAL9...TAL40"	TA25DU 0.16M	1SAZ211201R2005	1,260
0.16 ... 0.25		TA25DU 0.25M	1SAZ211201R2009	1,260
0.25 ... 0.4		TA25DU 0.4M	1SAZ211201R2013	1,260
0.4 ... 0.63		TA25DU 0.63M	1SAZ211201R2017	1,260
0.63 ... 1.0		TA25DU 1.0M	1SAZ211201R2021	1,260
1.0 ... 1.4		TA25DU 1.4M	1SAZ211201R2023 ■	1,260
1.3 ... 1.8		TA25DU 1.8M	1SAZ211201R2025 ■	1,260
1.7 ... 2.4		TA25DU 2.4M	1SAZ211201R2028 ■	1,260
2.2 ... 3.1		TA25DU 3.1M	1SAZ211201R2031 ■	1,260
2.8 ... 4.0		TA25DU 4.0M	1SAZ211201R2033 ■	1,260
3.5 ... 5.0		TA25DU 5.0M	1SAZ211201R2035 ■	1,260
4.5 ... 6.5		TA25DU 6.5M	1SAZ211201R2038 ■	1,260
6.0 ... 8.5		TA25DU 8.5M	1SAZ211201R2040 ■	1,260
7.5 ... 11.0		TA25DU 11M	1SAZ211201R2043 ■	1,260
10.0 ... 14.0		TA25DU 14M	1SAZ211201R2045 ■	1,260
13.0 ... 19.0		TA25DU 19M	1SAZ211201R2047 ■	1,560
18.0 ... 25.0		TA25DU 25M	1SAZ211201R2051 ■	1,560
24.0 ... 32.0	TA25DU 32M	1SAZ211201R2053 ■	2,180	
TA42DU				
18.0 ... 25.0	"A30,A40, AX32...AX40 AL30,AL40, TAL30,TAL 40"	TA42DU 25	1SAZ311201R2001	2,590
22.0 ... 32.0		TA42DU 32	1SAZ311201R2002	2,830
29.0 ... 42.0		TA42DU 42	1SAZ311201R2003	2,860
TA75DU				
22 ... 32	A50...A75 AX50...AX80 AE50...AE75 TAE50...TAE75 AF50...AF75	TA75DU 32	1SAZ321201R2002	3,270
29 ... 42		TA75DU 42	1SAZ321201R2003 ■	3,840
36 ... 52		TA75DU 52	1SAZ321201R2004 ■	3,840
45 ... 63		TA75DU 63	1SAZ321201R2005 ■	3,840
60 ... 80		TA75DU 80	1SAZ321201R2006	4,120
TA80DU				
36 ... 52	A50...A75, AX50...AX80 AE50...AE75, TAE50... TAE75, AF50...AF75	TA80DU-52	1SAZ331201R1004	4,230
45 ... 63		TA80DU-63	1SAZ331201R1005	4,230
60 ... 80		TA80DU-80	1SAZ331201R1006	4,540

TA25/TA42/TA75/TA80/TA110/TA200 are direct operated relays with trip class 10A

TA110DU

66 ... 90	A95...A110, AX95...AX150	TA110DU-90	1SAZ411201R1001	7,730
80 ... 110	AF95...AF110	TA110DU-110	1SAZ411201R1002	8,450

TA200DU

66 ... 90	A145...A185 AX185...AX205 AF145...AF185 AF190, AF205	TA200DU-90	1SAZ421201R1001	8,890
80 ... 110		TA200DU-110	1SAZ421201R1002	9,630
100 ... 135		TA200DU-135	1SAZ421201R1003	10,280
110 ... 150		TA200DU-150	1SAZ421201R1004	11,190
130 ... 175		TA200DU-175	1SAZ421201R1005	11,650
150 ... 200		TA200DU-200	1SAZ421201R1006	12,170

Accessories

Independent Mounting Kit	TA25DU0.16..25A	DB25/25	1SAZ201108R0001 ■	300
	TA25DU32	DB25/32	1SAZ 201108R0002	630
	TA42DU, TA75DU, TA80DU	DB80	1SAZ301110R0001	Upon request
	TA110DU, TA200DU	DB200	1SAZ401110R0001	

■ Stock items

Thermal overload relays

1



TF42

T16 Relays

Relay range in Amps	Direct mounting on contactors	Type Code reference	Order Code	L.P.(₹)
0.10 ... 0.13	B6/BC6 B7/BC7 VB6/VBC6 VB7/VBC7 AS/ASL DOL Starter IP65	T16-0.13	1SAZ711201R1005	Upon Request
0.13 ... 0.17		T16-0.17	1SAZ711201R1008	
0.17 ... 0.23		T16-0.23	1SAZ711201R1009	
0.23 ... 0.31		T16-0.31	1SAZ711201R1013	
0.31 ... 0.41		T16-0.41	1SAZ711201R1014	
0.41 ... 0.55		T16-0.55	1SAZ711201R1017	
0.55 ... 0.74		T16-0.74	1SAZ711201R1021	
0.74 ... 1.00		T16-1.0	1SAZ711201R1023	
1.00 ... 1.30		T16-1.3	1SAZ711201R1025	
1.30 ... 1.70		T16-1.7	1SAZ711201R1028	
1.70 ... 2.30		T16-2.3	1SAZ711201R1031	
2.30 ... 3.10		T16-3.1	1SAZ711201R1033	
3.10 ... 4.20		T16-4.2	1SAZ711201R1035	
4.20 ... 5.70		T16-5.7	1SAZ711201R1038	
5.70 ... 7.60		T16-7.6	1SAZ711201R1040	
7.60 ... 10.0		T16-10	1SAZ711201R1043	
10.0 ... 13.0	T16-13	1SAZ711201R1045		
13.0 ... 16.0	T16-16	1SAZ711201R1047		

TF42 Relays

Relay range in Amps	Direct mounting on contactors	Type Code reference	Order Code	L.P.(₹)
0.10 ... 0.13	AF09...AF38	TF42-0.13	1SAZ721201R1005	Upon Request
0.13 ... 0.17		TF42-0.17	1SAZ721201R1008	
0.17 ... 0.23		TF42-0.23	1SAZ721201R1009	
0.23 ... 0.31		TF42-0.31	1SAZ721201R1013	
0.31 ... 0.41		TF42-0.41	1SAZ721201R1014	
0.41 ... 0.55		TF42-0.55	1SAZ721201R1017	
0.55 ... 0.74		TF42-0.74	1SAZ721201R1021	
0.74 ... 1.00		TF42-1.0	1SAZ721201R1023	
1.00 ... 1.30		TF42-1.3	1SAZ721201R1025	
1.30 ... 1.70		TF42-1.7	1SAZ721201R1028	
1.70 ... 2.30		TF42-2.3	1SAZ721201R1031	
2.30 ... 3.10		TF42-3.1	1SAZ721201R1033	
3.10 ... 4.20		TF42-4.2	1SAZ721201R1035	
4.20 ... 5.70		TF42-5.7	1SAZ721201R1038	
5.70 ... 7.60		TF42-7.6	1SAZ721201R1040	
7.60 ... 10.0		TF42-10	1SAZ721201R1043	
10.0 ... 13.0		TF42-13	1SAZ721201R1045	
13.0 ... 16.0		TF42-16	1SAZ721201R1047	
16.0 ... 20.0		TF42-20	1SAZ721201R1049	
20.0 ... 24.0		TF42-24	1SAZ721201R1051	
24.0 ... 29.0		TF42-29	1SAZ721201R1052	
29.0 ... 35.0		TF42-35	1SAZ721201R1053	
35.0 ... 38.0/40.0		TF42-38	1SAZ721201R1055	

Thermal overload relays



TF65/TF96/TF140 Relay

Relay range in Amps	Direct mounting on contactors	Type Code reference	Order Code	L.P.(₹)
22.0...28.0	AF40, AF52, AF65	TF65-28	1SAZ811201R1001	Upon Request
25.0...33.0		TF65-33	1SAZ811201R1002	
30.0...40.0		TF65-40	1SAZ811201R1003	
36.0...47.0		TF65-47	1SAZ811201R1004	
44.0...53.0		TF65-53	1SAZ811201R1005	
50.0...60.0		TF65-60	1SAZ811201R1006	
57.0...67.0		TF65-67	1SAZ811201R1007	
40.0...51.0	AF80, AF96	TF96-51	1SAZ911201R1001	
48.0...60.0		TF96-60	1SAZ911201R1002	
57.0...68.0		TF96-68	1SAZ911201R1003	
65.0...78.0		TF96-78	1SAZ911201R1004	
75.0...87.0		TF96-87	1SAZ911201R1005	
84.0...96.0		TF96-96	1SAZ911201R1006	
66...90	AF116, AF140	TF140DU-90	1SAZ431201R1001	
80...110		TF140DU-110	1SAZ431201R1002	
100...135		TF140DU-135	1SAZ431201R1003	
110...142		TF140DU-142	1SAZ431201R1004	

For AF190 and AF205 use TA200DU OLR

Description	Type	Order Code	L.P.(₹)
Separate mounting kit	DB16E	1SAX101110R0001	Upon Request
Separate mounting kit	DB42	1SAZ701902R0001	
Separate mounting kit for TF65	DB65	1SAZ801901R1001	
Separate mounting kit for TF96	DB96	1SAZ901901R1001	

Electronic overload relays and suitable contactors

Suitable for Contactor	A9 ... A16	A30 ... A40	A50 ... A75	A95, A110	A145, A185			
	AL9 ... AL40	AL30 ... AL40						
EOLR	E16DU	E45DU	E80DU	E140DU	EF205			
Suitable for Contactor	AF400, AF460	AF580, AF750	AF1350, AF1650		B6/BC6 B7/BC7			
EOLR	EF460	EF750	E1250DU		E16DU, T16			
Suitable for Contactor	AF09 ... AF16	AF26, AF38	AF40, AF52, AF65	AF80, AF96	AF116, AF140, AF146	AF265, AF305, AF370	AF400, AF460,	AF580, AF750, AF1250
EOLR	EF19	EF45	EF65	EF96	EF146	EF370	EF460	EF750

Electronic overload relays class 10, 20, 30



Electronic overload relays

Trip Class 10, 20, 30 selectable

Setting Range	Trip Class	Type	Order Code	L.P.(₹)
0.1... 0.32A	Selectable 10E, 20E and 30E	E16DU 0.32	1SAX111001R1101	Upon Request
0.3 ... 1.0A		E16DU 1.0	1SAX111001R1102	
0.8 ... 2.7A		E16DU 2.7	1SAX111001R1103	
1.9 ... 6.3A		E16DU 6.3	1SAX111001R1104	
5.7... 18.9A		E16DU 18.9	1SAX111001R1105	
9 ... 30A		E45DU 30	1SAX211001R1101	
15 ... 45A		E45DU 45	1SAX211001R1102	
27 ... 80A		E80DU 80	1SAX311001R1101	
50 ... 140A		E140DU 140	1SAX321001R1101	
63 ... 210A		EF205-210	1SAX531001R1101	
115 ... 380A		EF370-380	1SAX611001R1101	
150 ... 500A		EF460	1SAX721001R1101	
250 ... 800A		EF750	1SAX821001R1101	
375 ... 1250A		E1250DU 375 - 1250 A	1SFA739001R1000	
0.10...0.32A		Selectable 10E, 20E and 30E	EF19-0.32	
0.30...1.00A	EF19-1.0		1SAX121001R1102	
0.80...2.70A	EF19-2.7		1SAX121001R1103	
1.90...6.30A	EF19-6.3		1SAX121001R1104	
5.70...18.9A	EF19-18.9		1SAX121001R1105	
9.00...30.0A	EF45-30		1SAX221001R1101	
15.0...45.0A	EF45-45		1SAX221001R1102	
25...70A	EF65-70		1SAX331001R1101	
36...100A	EF96-100		1SAX341001R1101	
54...150A	EF146-150		1SAX351001R1101	
63 ... 210A	EF205-210		1SAX531001R1101	
115 ... 380A	EF370-380		1SAX611001R1101	
150 ... 500A	EF460		1SAX721001R1101	
250 ... 800A	EF750		1SAX821001R1101	

Accessories

Description	Type	Order Code	L.P.(₹)
Separate mounting kit	DB16E	1SAX101110R0001	Upon Request
Separate mounting kit - EF19	DB19EF	1SAX101910R1001	
Separate mounting kit - EF45	DB45EF	1SAX201910R0001	
Separate mounting kit	DB45E	1SAX201110R1001	
Separate mounting kit	DB80E	1SAX301110R1001	
Separate mounting kit	DB140E	1SAX301110R1002	

For suitable contactors refer page no. 69

Softstarters

ABB softstarters - The complete range

ABB offers four different ranges of softstarters to cover every customer need for solutions for motor sizes up to 1800 A. This page describes the main characteristics of the different softstarter ranges

PSR - The compact range

The PSR softstarter is the most compact of all the softstarter ranges, thereby making it possible to design compact starting equipments. The system concept with Manual Motor Starters and the PSR provides a far more compact starting solution than for instance a star delta starter.

Built-in by-pass reduces the energy loss and makes the connection easier and with only three potentiometers, the set-up couldn't be any easier. Still, the optimized ramping characteristics will ensure a very smooth start and stop for all applications.

PSE - The efficient range

The PSE softstarter is the world's first compact softstarter with both built-in electronic overload for motor protection and torque control for an excellent control of pumps. The compact design with the most important functionality integrated provides a very efficient starting solution.

The illuminated language neutral display and the four button keypad make it easy to take advantage of all the advanced functionality in the softstarter. The display will also provide all the necessary information both during

PSTX - The advanced range

The PSTX softstarter is the most advanced softstarter in the range with almost all imaginable functionality included. All the advanced protections for the motor, the softstarter and the load ensure a trouble free operation. Pre-warnings even allow problems to be detected before the motor needs to be stopped

The torque control function has been developed and tested together with well known pump manufacturers to ensure the absolutely best possible stop of pumps without water hammering and pressure surges. and there by avoiding unnecessary downtime.



The PSTX combines many years of research and product development with extensive knowledge of application specific requirements and needs.

It is our latest advancement in motor control and protection and adds new functionality and increased reliability.

- Three-phase controlled
- Operational voltage: 208 – 690 VAC
- Wide rated control supply voltage: 100 – 250 V, 50/60 Hz
- PSTX rated operational current: 30 to 1250 A (inside-delta: 2160 A)
- Both in-line and inside-delta connection
- Coated circuit boards protecting from dust, moist and corrosive atmosphere
- Detachable keypad rated IP66 (Type 1, 4X,12)
- Graphical display with 14 languages for easy setup and operation
- Built-in bypass for energy saving and easy installation
- Built-in Modbus RTU for monitoring and control
- Support for all major communication protocols
- Analog output for measurement of current, voltage, power factor etc.

PSR	PSE	PSTX	* Standard, O Optional, - Not available
*	*	*	Built-in by-pass 1) on PSTB
-	-	*	Inside delta connection
-	*	*	Coated PCBs
-	*	*	Display and keypad,
-	*	*	Torque control / Pump control
-	*	*	Settable current limit function
-	*	*	Electronic motor overload protection
-	-	*	PTC input for motor protection
-	-	*	Phase imbalance protection
-	-	*	Phase reversal protection
-	*	*	Locked rotor protection
-	*	*	Thyristor overtemperature protection
-	*	*	Underload protection
-	-	*	UV/OV protection
-	-	*	Programmable warning functions
-	*	*	Analog output
O	O	* 1)	FieldBus communication, 1) built in Modbus-RTU
-	O	*	Event log
-	O	* 1)	External keypad 1) detachable key pad
-	-	*	Motor heating
-	-	*	Pump cleaning
-	-	*	limp mode
-	-	*	Network Diagnostics

Quick guide for selection



Normal start Class 10

Heavy duty start class 30

Typical applications

- | | | | |
|----------------|-------------------------|-------------------|------------------------|
| • Bow thruster | • Centrifugal pump | • Centrifugal fan | • Conveyor belt (long) |
| • Compressor | • Conveyor belt (short) | • Crusher | • Mill |
| • Elevator | • Escalator | • Mixer | • Stirrer |

! If more than 10 starts/h
Select one size larger than the standard selection

PSR - The compact and cost effective solution integrated bypass

PSR3 ... PSR105

Rated operational voltage U_e, 208-600 V AC

Rated control supply voltage, U_s, 100 - 240 V AC



415V Pe kW"	IEC Max rated operational Ie A	Type	Order Code	L.P.(₹)
1.5	3.9	PSR3-600-70	1SFA896103R7000	8,460
3	6.8	PSR6-600-70	1SFA896104R7000	9,260
4	9	PSR9-600-70	1SFA896105R7000	11,050
5.5	12	PSR12-600-70	1SFA896106R7000	13,550
7.5	16	PSR16-600-70	1SFA896107R7000	15,270
11	25	PSR25-600-70	1SFA896108R7000	17,510
15	30	PSR30-600-70	1SFA896109R7000	24,100
18.5	37	PSR37-600-70	1SFA896110R7000	29,010
22	45	PSR45-600-70	1SFA896111R7000	31,400
30	60	PSR60-600-70	1SFA896112R7000	43,810
37	72	PSR72-600-70	1SFA896113R7000	54,350
45	85	PSR85-600-70	1SFA896114R7000	60,980
55	105	PSR105-600-70	1SFA896115R7000	66,850

For Rated control supply voltage, U_s, 24 V Dc replace R7000 by R8100

PSE - The efficient range with integrated bypass

Normal Starts , Class 10, In-Line



415V Pe kW	IEC Max rated operational Ie A	Type	Order Code	L.P.(₹)
7.5	18	PSE18-600-70	1SFA897101R7000	37,670
11	25	PSE25-600-70	1SFA897102R7000	37,870
15	30	PSE30-600-70	1SFA897103R7000	40,180
18.5	37	PSE37-600-70	1SFA897104R7000	46,100
22	45	PSE45-600-70	1SFA897105R7000	52,660
30	60	PSE60-600-70	1SFA897106R7000	58,500
37	72	PSE72-600-70	1SFA897107R7000	66,850
45	85	PSE85-600-70	1SFA897108R7000	75,200
55	106	PSE105-600-70	1SFA897109R7000	76,920
75	143	PSE142-600-70	1SFA897110R7000	108,120
90	171	PSE170-600-70	1SFA897111R7000	117,950
110	210	PSE210-600-70	1SFA897112R7000	127,780
132	250	PSE250-600-70	1SFA897113R7000	142,520
160	300	PSE300-600-70	1SFA897114R7000	155,310
200	370	PSE370-600-70	1SFA897115R7000	167,100

For accessories consult

Softstarters

PSTX30 ... PSTX370 – The advanced range Normal starts, class 10, in-line, ordering details

Three-phase controlled

- Operational voltage: 208 – 690 VAC
- Wide rated control supply voltage: 100 – 250 V, 50/60 Hz
- PSTX rated operational current: 30 to 370 A (inside-delta: 640 A)
- Both in-line and inside-delta connection
- Coated circuit boards protecting from dust, moist and corrosive atmosphere
- Detachable keypad rated IP66 (Type 1, 4X,12)
- Graphical display for easy setup and operation
- Built-in bypass for energy saving
- Built-in Modbus RTU for monitoring and control
- Support for all major communication protocols
- Analog output for measurement of current, voltage, power factor etc.

Application

- Bow thruster
- Centrifugal pump
- Compressor
- Conveyor belt (short)
- Elevator

1



PSTX142 ... PSTX170

Rated operational voltage U_e , 208-600 V
Rated control supply voltage U_s , 100-250 V AC, 50/60 Hz



415V Pe kW	IEC Max rated operational Ie A	Type*)	Order code**)	L.P.(₹)
15	30	PSTX30-600-70	1SFA898103R7000	Upon request
18.5	37	PSTX37-600-70	1SFA898104R7000	
22	45	PSTX45-600-70	1SFA898105R7000	
30	60	PSTX60-600-70	1SFA898106R7000	
37	72	PSTX72-600-70	1SFA898107R7000	
45	85	PSTX85-600-70	1SFA898108R7000	
55	106	PSTX105-600-70	1SFA898109R7000	
75	143	PSTX142-600-70	1SFA898110R7000	
90	171	PSTX170-600-70	1SFA898111R7000	
110	210	PSTX210-600-70	1SFA898112R7000	
132	250	PSTX250-600-70	1SFA898113R7000	
160	300	PSTX300-600-70	1SFA898114R7000	
200	370	PSTX370-600-70	1SFA898115R7000	
250	470	PSTX470-600-70	1SFA898116R7000	
315	570	PSTX570-600-70	1SFA898117R7000	
400	720	PSTX720-600-70	1SFA898118R7000	
450	840	PSTX840-600-70	1SFA898119R7000	
560	1050	PSTX1050-600-70	1SFA898120R7000	
710	1200	PSTX1250-600-70	1SFA898121R7000	

Rated operational voltage U_e , 208-690 V
 Rated control supply voltage U_s , 100-250 V AC, 50/60 Hz



1



PSTX142 ... PSTX170



PSTX210 ... PSTX370

1SFC132053M001

1SFC132058M001

690V P_e kW	IEC Max rated operational I _e A	Type*)	Order code**)	L.P.(₹)
25	30	PSTX30-690-70	1SFA898203R7000	Upon request
30	37	PSTX37-690-70	1SFA898204R7000	
37	44	PSTX45-690-70	1SFA898205R7000	
55	60	PSTX60-690-70	1SFA898206R7000	
59	72	PSTX72-690-70	1SFA898207R7000	
75	85	PSTX85-690-70	1SFA898208R7000	
90	106	PSTX105-690-70	1SFA898209R7000	
132	143	PSTX142-690-70	1SFA898210R7000	
160	171	PSTX170-690-70	1SFA898211R7000	
184	210	PSTX210-690-70	1SFA898212R7000	
220	250	PSTX250-690-70	1SFA898213R7000	
257	300	PSTX300-690-70	1SFA898214R7000	
355	370	PSTX370-690-70	1SFA898215R7000	
450	470	PSTX470-690-70	1SFA898216R7000	
560	570	PSTX570-690-70	1SFA898217R7000	
710	720	PSTX720-690-70	1SFA898218R7000	
800	840	PSTX840-690-70	1SFA898219R7000	
1000	1050	PSTX1050-690-70	1SFA898220R7000	
1200	1250	PSTX1250-690-70	1SFA898221R7000	

Soft Starter communication accessories



EtherNet/IP (2-port)
 Modbus TCP (2-port)
 Profinet (2-port)



EtherNet/IP (1-port)
 Modbus TCP (1-port)



Profibus
 Modbus-RTU

For communication protocol	Type	Order code	L.P.(₹)
Profibus	AB-PROFIBUS-1	1SFA899300R1001	Upon request
Devicenet	AB-DEVICENET-1	1SFA899300R1002	
Modbus-RTU	AB-MODBUS-RTU-1	1SFA899300R1003	
EtherNet/IP (1-port)	AB-ETHERNET-IP-1	1SFA899300R1005	
EtherNet/IP (2-port)	AB-ETHERNET-IP-2	1SFA899300R1006	
Modbus TCP (1-port)	AB-MODBUS-TCP-1	1SFA899300R1007	
Modbus TCP (2-port)	AB-MODBUS-TCP-2	1SFA899300R1008	
Profinet (2-port)	AB-PROFINET-2	1SFA899300R1010	

Intelligent motor management system - UMC100.3

Ordering details - Universal Motor Controller UMC100.3

Description

Intelligent motor management system for single and three-phase motors with $I_e = 0.24 - 63$ A in one single device. Compact housing with integrated current transformer for cable cross section up to 25 mm^2 (max. \varnothing with Insulation 11 mm). Higher currents with additional external current transformer. Thermal overload protection according to EN/IEC 60947-4-1, selectable trip classes 5E, 10E, 20E, 30E, 40E. Some functions require an additional expansion module.



UMC100.3 DC



UMC100.3 UC

- Motor protection functions:
 - Over-/underload, over-/undercurrent, over-/undervoltage, rotor blocking, phase failure / imbalance / sequence Earth fault detection integrated or with external sensor CEM11
 - Hot motor protection with thermistor or temperature measurement
- Motor control functions:
 - Easily configurable motor control functions: direct, reverse, star-delta starter, pole-changing, overload relay, actuator mode, softstarter mode. Additionally free programmable application specific logic with function blocks
- Service and diagnostic data:
 - Operating hours, number of motor starts and overload trips, energy, standstill and operation hours supervision, motor status, faults and warnings, fault history (16 events)
 - Motor current, phase voltages, thermal load, power factor (cos), active power, apparent power, energy, total harmonic distortion (THD).
- Integrated I/Os:
 - 6 digital inputs, 1 PTC input, 4 digital outputs. Maximum number of I/Os with expansion modules:
 - 14 digital inputs, 1 PTC input, 9 digital outputs, 6 analogue inputs, 1 analogue output
- Communication interfaces for fieldbuses and ethernet networks, Interface for operator panel UMC100-PAN, bus interface for connection of expansion modules
- Versions for supply voltage 24 V DC and 110 – 240 V AC/DC and with ATEX approval

Ordering details

Designation	Supply voltage	Type	Order code	L.P.(₹)
Universal Motor Controller	24 V DC	UMC100.3 DC	1SAJ530000R0100	Upon request
Universal Motor Controller	110-240 V AC/DC	UMC100.3 UC	1SAJ530000R1100	
Universal Motor Controller, ATEX	24 V DC	UMC100.3 DC EX	1SAJ530000R0200	
Universal Motor Controller, ATEX	110-240 V AC/DC	UMC100.3 UC EX	1SAJ530000R1200	

Operating panel UMC100-PAN

Operator panel for Universal Motor Controller UMC100. Backlit graphical and multilingual fulltext display, LEDs for status. Assembly directly on UMC100 or on the control cabinet door via extension cable and door mounting set.



UMC100-PAN

- Functions:
- Monitoring: Shows motor status and diagnostics
 - Operate: Start, stop, fault reset
 - Parametrize: Setting and changing of motor and fieldbus parameters (password protection possible)
 - Copy settings
 - USB port for up/download of parameters and logic

Supports 8 languages: English, French, German, Italian, Spanish, Polish, Portuguese, Russian
Replaces all former UMC100 operator panels

Ordering details

Designation	Type	Order code	L.P.(₹)
Operating panel	UMC100-PAN	1SAJ590000R0103	Upon request
0.7 m ext. cable with door mounting set	UMCPAN-CAB.070	1SAJ510003R0002	
1.5 m ext. cable with door mounting set	UMCPAN-CAB.150	1SAJ510004R0002	
3 m ext. cable with door mounting set	UMCPAN-CAB.300	1SAJ510002R0002	

Intelligent motor management system - UMC100.3

Ordering details - Expansion modules

1



DX111-FBP



DX122-FBP



VI150-FBP



VI155-FBP

Description

Up to 4 expansion-modules can be connected to one UMC100.3

- 1 digital expansion module DX111 or DX122
- 1 voltage expansion module VI150 or VI155
- 2 analog/temperature expansion modules AI111 (possible)

Supply voltage is 24 V DC; the 110-240 V AC/DC version of the UMC100.3 provides the 24 V DC supply for expansion modules

DX111

I/O-expansion module with 8 digital inputs 24 V DC, 4 relay outputs, 1 analog output 0/4-20 mA or 0...10 V

DX122

I/O-expansion module with 8 digital inputs 110 / 230 V AC, 4 relay outputs, 1 analog output 0/4-0 mA or 0-10 V

VI15x

Voltage modules for the determination of phase voltages, power factor ($\cos \varphi$), apparent power, energy, total harmonic distortion (THD).

For use in grounded networks (VI150) or in all networks (VI155), 150-690 V AC

AI111

Analog / temperature expansion module, 3 inputs PT100, PT1000, KTY83, KTY84, NTC, 0-10 V, 0/4-20 mA

1 or 2 modules AI111 can be connected to an UMC100.3.

Ordering details

Designation	Type	Order code	L.P.(₹)
I/O module for UMC100, 24 V DC digital input	DX111	1SAJ611000R0101	Upon request
I/O module for UMC100, 110 – 230 V AC digital input	DX122	1SAJ622000R0101	
3 phase voltage module for grounded networks	VI150	1SAJ650000R0100	
3 phase voltage module for all networks	VI155	1SAJ655000R0100	
Analog/temperature module 3 analogue inputs	AI111	1SAJ613000R0101	
Connection cable UMC100 - I/O module, length 0.30 m	UMCIO-CAB.030	1SAJ691000R0001	
Connection cable IO-module - IO-module, length 0,30 m	IOIO-CAB.030	1SAJ692000R0001	
Terminal set for UMC100.3 DC (spare parts)	UMCTB	1SAJ929160R0001	
Terminal set for UMC100.3 UC (spare parts)	UMCTB	1SAJ929160R0002	

Electronic products and relays

The product range



Time relays, CT range

Three ranges of electronic timers provide timing functions for all applications: the CT-D range with a width of just 17.5 mm; the CT-E range, the ideal solution for serial applications; and the CT-S range that has two different types of connection terminals and is ideally suited for universal use. The CT range has a wide variety of timing functions (from ON or OFF delay to star-delta changeover). The time relays are available with output relays, solid-state outputs and precise direct time adjustment.



Measuring and monitoring relays, CM range

State of the Art monitors for single and three-phase systems. Monitoring of: voltage, current, frequency, power factor (motor load), thermistors, temperature, liquid level, insulation resistance, and grid feeding. ABB has one of the world's widest product ranges of measuring and monitoring relays. The CM range is a key product line of the EPR range.



Power supplies, CP range

Modern power supply units are a vital component in most areas of energy management and automation technology. As your global partner in this area, ABB pays close attention to corresponding requirements. Innovation is the key to the substantial enlargement of our power supply product range. ABB offers four different product lines for single and three-phase supplies, output voltages 5/12/24, and 48 VDC in plastic and metal enclosure, as well as various accessories.



Signal converters, CC range and ILPH

The ABB serial data converters allow communication to be established between units with different communication standards. In order to assure process continuity, existing systems must be updated consistently or connected to new devices. Serial data enables communication to be established if the communication standard of the existing system and the connected device vary. As well as converting signals, analog signal converters and serial data converters can amplify, filter or separate signals.



Interface relays and optocouplers, CR range and R500 / 600

Interface relays and optocouplers are widely used in various industrial applications. As an interface, they link the controller, e.g. PLC (programmable logic controller), PC or field bus systems to the sensor/actuator level. Here, they have various functions: switching AC or DC loads with different resistive, inductive and capacitive parts, switching voltages from a few mV up to 250 V, switching currents from a few mA up to 16 A, amplification of weak control signals, electrical isolation of control and load circuits, and signal multiplying.



Logic relays, CL range

CL range logic relays are suitable for small and medium-sized control tasks and can substitute logic wiring quickly and easily. Three different ranges are available: stand alone, expandable and the display systems.

Electronic products and relays

Electronic timer



1

ON-delay timers

CT-ERE : 1 c/o contact, 2 LEDs

Type	"Rated control supply voltage"	Time Range	Order code	L.P.(₹)
CT-ERE	24 V AC / DC, 220-240 V AC	0.1-10 s	1SVR550107R1100 ■	1,050
		0.3-30 s	1SVR550107R4100 ■	
		3-300 s	1SVR550107R2100 ■	
		0.3-30 min	1SVR550107R5100	
	110-130 V AC	0.1-10 s	1SVR550100R1100	
		0.3-30 s	1SVR550100R4100	
		3-300 s	1SVR550100R2100	
		0.3-30 min	1SVR550100R5100	

OFF-delay timers

CT-AHE : 1 c/o contact, 2 LEDs

Type	"Rated control supply voltage"	Time Range	Order code	L.P.(₹)
CT-AHE	24 V AC/DC	0.1-10 s	1SVR550118R1100 ■	1,230
		0.3-30 s	1SVR550118R4100 ■	
		3-300 s	1SVR550118R2100 ■	
	110-130 V AC	0.1-10 s	1SVR550110R1100	
		0.3-30 s	1SVR550110R4100	
		3-300 s	1SVR550110R2100	
	220-240 V AC	0.1-10 s	1SVR550111R1100 ■	
		0.3-30 s	1SVR550111R4100 ■	
		3-300 s	1SVR550111R2100 ■	

CT-ARE : without auxiliary voltage, 1 c/o contact, 1 LED

Type	"Rated control supply voltage"	Time Range	Order code	L.P.(₹)
CT-ARE	"24 V AC/DC, 220-240 V AC"	0.1-10 s	1SVR550127R1100 ■	1,730
		0.3-30 s	1SVR550127R4100 ■	
	110-130 V AC	0.1-10 s	1SVR550120R1100	
		0.3-30 s	1SVR550120R4100	

Multifunction timer

CT-MFE : 6 functions, 8 time ranges (0.05 s - 100 h), 1 c/o contact, 2 LEDs

Type	"Rated control supply voltage"	Time Range	Order code	L.P.(₹)
CT-MFE	24-240 V AC/DC	0.05 s - 100 h	1SVR550029R8100 ■	1,640

Star Delta timers

CT-YDE : ON-delayed, OFF-delayed without auxiliary voltage, 1 c/o contact, 2 LEDs

Type	Rated control supply voltage	Time Range	Order code	L.P.(₹)
CT-YDE	24 V AC/DC, 220 -240V AC	0.1-10 s	1SVR550207R1100	Upon request
		0.3-30 s	1SVR550207R4100	
		3-300 s	1SVR550207R2100	
	110-130V AC	0.1-10 s	1SVR550200R1100	
		0.3-30 s	1SVR550200R4100	
		3-300 s	1SVR550200R2100	

■ Stock items

Electronic products and relays

Electronic timer



CT-SDE: ON-delayed with fixed transition time, 1 n/c contact, 1 n/o contact, internally wired, 2 LEDs

Type	Rated control supply voltage	Time Range	Order code	L.P.(₹)
CT-SDE	24 V AC/DC, 220-240V AC	0.3-30 s	1SVR550217R4100 ■	1,240
	110-130V AC		1SVR550210R4100	
	380-415V AC		1SVR550212R4100	

CT-VWE: Impulse-ON, 1 c/o contact

Type	Rated control supply voltage	Time Range	Order code	L.P.(₹)
CT-VWE	24 V AC/DC, 220-240 V AC	0.1-10 s	1SVR550137R1100 ■	1,140
		0.3-30 s	1SVR550137R4100 ■	
		3-300 s	1SVR550137R2100 ■	
	110-130 V AC	0.1-10 s	1SVR550130R1100 ■	
		0.3-30 s	1SVR550130R4100	
		3-300 s	1SVR550130R2100	

CT-AWE: Impulse-OFF, 1 c/o contact

Type	Rated control supply voltage	Time Range	Order code	L.P.(₹)
CT-AWE w/o Aux.	24 V AC/DC	0.05-1 s	1SVR550158R3100 ■	1,900
	110-130 V AC		1SVR550150R3100	
	220-240 V AC		1SVR550151R3100 ■	
CT-AWE with Aux.	24 V AC/DC	0.1-10 s	1SVR550148R1100 ■	
		0.3-30 s	1SVR550148R4100 ■	
		3-300 s	1SVR550148R2100 ■	
	110-130 V AC	0.1-10 s	1SVR550140R1100	
		0.3-30 s	1SVR550140R4100	
		3-300 s	1SVR550140R2100	
220-240 V AC	0.1-10 s	1SVR550141R1100 ■		
	0.3-30 s	1SVR550141R4100 ■		
	3-300 s	1SVR550141R2100 ■		

CT-EBE: Flasher starting with OFF, 1 c/o contact

Type	Rated control supply voltage	Time Range	Order code	L.P.(₹)
CT-EBE	24 V AC/DC, 220-240 V AC	0.1-10 s	1SVR550167R1100 ■	1,210
	110-130 V AC		1SVR550160R1100	

CT-MFS.21: ON-delay (accumulative), OFF-delay without aux., Symmetrical ON-delay and OFF-delay and Impulse-ON, ON/OFF function, pulse former, star-delta changeover with impulse, Flasher starting with OFF, Flasher starting with ON, impulse -OFF, 2 c/o



Type	Rated control supply voltage	Time Range	Order code	L.P.(₹)
CT-MFS.21	24-240 V AC/DC	10 (0.05 s- 300 h)	1SVR630010R0200 ■	3,170

CT-ERS.22: ON-delay (accumulative), 2 c/o

Type	Rated control supply voltage	Time Range	Order code	L.P.(₹)
CT-ERS.22	24-48 V DC, 24-240 V AC	10 (0.05 s- 300 h)	1SVR630100R3300 ■	2,110

Electronic products and relays

Measuring and monitoring relays



1

Single and three phase monitoring relays for phase failure detection

Type	Rated control supply voltage = measuring voltage	Order Code	L.P.(₹)
With neutral monitoring			
CM-PBE	3x380-440 V AC, 220-240 V AC	1SVR550881R9400	4,290
Without neutral monitoring			
CM-PBE	3x380-440 V AC	1SVR550882R9500	4,290

Single and three phase monitoring relays for over / undervoltage and phase failure detection

Type	Rated control supply voltage = measuring voltage	Order Code	L.P.(₹)
With neutral monitoring			
CM-PVE	3x320-460 V AC, 185-265 V AC	1SVR550870R9400	4,290
Without neutral monitoring			
CM-PVE	3x320-460 V AC	1SVR550871R9500	4,290

Three phase monitoring relays for phase sequence monitoring and phase failure detection

Type	Rated control supply voltage = measuring voltage	Order Code	L.P.(₹)
CM-PFS	3x200-500 V AC	1SVR430824R9300 ■	1,600

Three phase monitoring relays for over and undervoltage with adjustable threshold values



Type	Rated control supply voltage = measuring voltage	Order Code	L.P.(₹)
CM-PVS.31P	3x160-300 V AC	1SVR740794R1300	14480
CM-PVS.31S		1SVR730794R1300	11940
CM-PVS.41P		1SVR740794R3300	12890
CM-PVS.41S	3x300-500 V AC	1SVR730794R3300	12890

Three phase monitoring relays for phase unbalance

Type	Rated control supply voltage = measuring voltage	Order Code	L.P.(₹)
CM-PAS.31P	3x160-300 V AC	1SVR740774R1300	13,760
CM-PAS.31S		1SVR730774R1300	4,590
CM-PAS.41P	3x300-500 V AC	1SVR740774R3300	13,760
CM-PAS.41S		1SVR730774R3300	11,940

Multifunctional three phase monitoring relays (phase failure detection, Phase sequence monitoring, overvoltage, undervoltage, Phase unbalance)

Type	Rated control supply voltage = measuring voltage	Order Code	L.P.(₹)
With interrupted neutral monitoring			
CM-MPS.11P	3x90-170 V AC	1SVR740885R1300	14,330
CM-MPS.11S		1SVR730885R1300	13,370
CM-MPS.21P	3x180-280 V AC	1SVR740885R3300	13,850
CM-MPS.21S		1SVR730885R3300	13,850
Without interrupted neutral monitoring			
CM-MPS.31P	3x160-300 V AC	1SVR740884R1300	Upon request
CM-MPS.31S		1SVR730884R1300	
CM-MPS.41	3x300-500 V AC	1SVR630884R3300 ■	2,730

■ Stock items

Electronic products and relays

Measuring and monitoring relays

Three phase monitoring relays



Multifunctional three phase monitoring relays, automatic phase sequence correction and separate monitoring of over and undervoltage (window monitoring) configurable

Type	"Rated control supply voltage = measuring voltage"	Order Code	L.P.(₹)
With interrupted neutral monitoring			
CM-MPS.23P	3x180-280 V AC	1SVR740885R4300	18,230
CM-MPS.23S		1SVR730885R4300	16,050
Without interrupted neutral monitoring			
CM-MPS.43P	3x300-500 V AC	1SVR740884R4300	17,580
CM-MPS.43S		1SVR730884R4300	14,560

Multifunctional three phase monitoring relays, automatic phase sequence correction and separate monitoring of over and undervoltage (window monitoring) configurable

Type	"Rated control supply voltage = measuring voltage"	Order Code	L.P.(₹)
CM-MPN.52P	3x350-580 V AC	1SVR760487R8300	20,010
CM-MPN.52S		1SVR750487R8300	17,000
CM-MPN.62P	3x450-720 V AC	1SVR760488R8300	20,010
CM-MPN.62S		1SVR750488R8300	17,580
CM-MPN.72P	3x530-820 V AC	1SVR760489R8300	17,580
CM-MPN.72S		1SVR750489R8300	17,580

Insulation monitors for unearthed supply systems



Type	Nominal voltage Un of the distribution system to be monitored	Rated control supply voltage	Order Code	L.P.(₹)
CM-IWS.1P	0-250 V AC / 0-300 V DC	24-240 V AC/DC	1SVR740660R0100	22,930
CM-IWS.1S			1SVR730660R0100	22,930
CM-IWS.2P	0-400 V AC	24-240 V AC/DC	1SVR740670R0200	20,330
CM-IWS.2S			1SVR730670R0200	18,150
CM-IWN.1P	0-400 V AC / 0-600 V DC	24-240 V AC/DC	1SVR760660R0200	57,740
CM-IWN.1S			1SVR750660R0200	42,030
Coupling unit				
CM-IVN.S	Passive device, no control supply voltage needed	0-690 V AC / 0-1000 V DC	1SVR750669R9400	21,970
CM-IVN.P			1SVR760669R9400	26,750

Thermistor motor protection relays



Type	Rated control supply voltage	Order code	L.P.(₹)
CM-MSE	24 V AC	1SVR550805R9300	4,780
	110-130 V AC	1SVR550800R9300	3,630
	220-240 V AC	1SVR550801R9300	4,780
CM-MSS.12S	24 V AC/DC	1SVR730700R0100	6,080
CM-MSS.12P	24 V AC/DC	1SVR740700R0100	6,410
CM-MSS.13S	110-130 V AC/220-240 V AC	1SVR730700R2100	5,730
CM-MSS.13P	110-130 V AC/220-240 V AC	1SVR740700R2100	6,410
CM-MSS.22S	24 V AC/DC	1SVR730700R0200	6,110
CM-MSS.22P	24 V AC/DC	1SVR740700R0200	7,030
CM-MSS.23S	110-130 V AC/220-240 V AC	1SVR730700R2200	6,110
CM-MSS.23P	110-130 V AC/220-240 V AC	1SVR740700R2200	7,030

Electronic products and relays

Pluggable interface relays

1



CR-M

Ordering details - CR-M range without LED

Version	Outputs	Type	Order Code	L.P.(₹)	
12 V DC	2 c/o (SPDT)	CR-M012DC2	1SVR405611R4000	530	
24 V DC		CR-M024DC2	1SVR405611R1000	530	
48 V DC		CR-M048DC2	1SVR405611R6000	530	
60 V DC		CR-M060DC2	1SVR405611R4200	530	
110 V DC		CR-M110DC2	1SVR405611R8000	580	
125 V DC		CR-M125DC2	1SVR405611R8200	580	
220 V DC		CR-M220DC2	1SVR405611R9000	580	
24 V AC		CR-M024AC2	1SVR405611R0000	550	
48 V AC		CR-M048AC2	1SVR405611R5000	550	
110 V AC		CR-M110AC2	1SVR405611R7000	550	
120 V AC		CR-M120AC2	1SVR405611R2000	550	
230 V AC		CR-M230AC2	1SVR405611R3000	600	
12 V DC		4 c/o (SPDT)	CR-M012DC4	1SVR405613R4000	540
24 V DC			CR-M024DC4	1SVR405613R1000	540
48 V DC	CR-M048DC4		1SVR405613R6000	550	
60 V DC	CR-M060DC4		1SVR405613R4200	550	
110 V DC	CR-M110DC4		1SVR405613R8000	610	
125 V DC	CR-M125DC4		1SVR405613R8200	610	
220 V DC	CR-M220DC4		1SVR405613R9000	640	
24 V AC	CR-M024AC4		1SVR405613R0000	610	
48 V AC	CR-M048AC4		1SVR405613R5000	570	
110 V AC	CR-M110AC4		1SVR405613R7000	610	
120 V AC	CR-M120AC4		1SVR405613R2000	610	
230 V AC	CR-M230AC4		1SVR405613R3000	640	

Ordering details - CR-M range with LED

Version	Outputs	Type	Order Code	L.P.(₹)	
12 V DC	2 c/o (SPDT)	CR-M012DC2L	1SVR405611R4100	540	
24 V DC		CR-M024DC2L	1SVR405611R1100	540	
48 V DC		CR-M048DC2L	1SVR405611R6100	550	
60 V DC		CR-M060DC2L	1SVR405611R4300	550	
110 V DC		CR-M110DC2L	1SVR405611R8100	610	
125 V DC		CR-M125DC2L	1SVR405611R8300	610	
220 V DC		CR-M220DC2L	1SVR405611R9100	640	
24 V AC		CR-M024AC2L	1SVR405611R0100	610	
48 V AC		CR-M048AC2L	1SVR405611R5100	570	
110 V AC		CR-M110AC2L	1SVR405611R7100	610	
120 V AC		CR-M120AC2L	1SVR405611R2100	610	
230 V AC		CR-M230AC2L	1SVR405611R3100	640	
12 V DC		4 c/o (SPDT)	CR-M012DC4L	1SVR405613R4100	650
24 V DC			CR-M024DC4L	1SVR405613R1100	650
48 V DC	CR-M048DC4L		1SVR405613R6100	650	
60 V DC	CR-M060DC4L		1SVR405613R4300	570	
110 V DC	CR-M110DC4L		1SVR405613R8100	720	
125 V DC	CR-M125DC4L		1SVR405613R8300	720	
220 V DC	CR-M220DC4L		1SVR405613R9100	750	
24 V AC	CR-M024AC4L		1SVR405613R0100	720	
48 V AC	CR-M048AC4L		1SVR405613R5100	720	
110 V AC	CR-M110AC4L		1SVR405613R7100	720	
120 V AC	CR-M120AC4L		1SVR405613R2100	660	
230 V AC	CR-M230AC4L		1SVR405613R3100	750	



CR-M



CR-M4SS

Ordering details - CR-M range accessories

Version	Type	Order Code	L.P.(₹)
Standard socket for 2 c/o	CR-M2SS	1SVR405651R1000	330
Standard socket for 2/4 c/o	CR-M4SS	1SVR405651R3000	360
Plastic holder	CR-MH	1SVR405659R1000	45
Metal holder	CR-MH1	1SVR405659R1100	36

Electronic products and relays

Pluggable interface relays

1



CR-MX

Ordering details - CR-MX range without LED

Version	Outputs	Type	Order Code	L.P.(₹)
12 V DC	2 c/o (SPDT), 250 V, 7 A	CR-MX012DC2	1SVR405631R4000	Upon request
24 V DC		CR-MX024DC2	1SVR405631R1000	
48 V DC		CR-MX048DC2	1SVR405631R6000	
110 V DC		CR-MX110DC2	1SVR405631R8000	
24 V AC		CR-MX024AC2	1SVR405631R0000	
110 V AC		CR-MX110AC2	1SVR405631R7000	
230 V AC		CR-MX230AC2	1SVR405631R3000	
12 V DC	4 c/o (SPDT), 250 V, 5 A	CR-MX012DC4	1SVR405633R4000	Upon request
24 V DC		CR-MX024DC4	1SVR405633R1000	
48 V DC		CR-MX048DC4	1SVR405633R6000	
110 V DC		CR-MX110DC4	1SVR405633R8000	
24 V AC		CR-MX024AC4	1SVR405633R0000	
110 V AC		CR-MX110AC4	1SVR405633R7000	
230 V AC		CR-MX230AC4	1SVR405633R3000	

Ordering details - CR-M range with LED



CR-MX with Base and Holder

Version	Outputs	Type	Order Code	L.P.(₹)
12 V DC	2 c/o (SPDT), 250 V, 7 A	CR-MX012DC2L	1SVR405631R4100	Upon request
24 V DC		CR-MX024DC2L	1SVR405631R1100	
48 V DC		CR-MX048DC2L	1SVR405631R6100	
110 V DC		CR-MX110DC2L	1SVR405631R8100	
24 V AC		CR-MX024AC2L	1SVR405631R0100	
110 V AC		CR-MX110AC2L	1SVR405631R7100	
230 V AC		CR-MX230AC2L	1SVR405631R3100	
12 V DC	4 c/o (SPDT), 250 V, 5 A	CR-MX012DC4L	1SVR405633R4100	Upon request
24 V DC		CR-MX024DC4L	1SVR405633R1100	
48 V DC		CR-MX048DC4L	1SVR405633R6100	
110 V DC		CR-MX110DC4L	1SVR405633R8100	
24 V AC		CR-MX024AC4L	1SVR405633R0100	
110 V AC		CR-MX110AC4L	1SVR405633R7100	
230 V AC		CR-MX230AC4L	1SVR405633R3100	

Accessories* - CR-MX range

Version	Type	Order Code	L.P.(₹)
For 2 c/o (SPDT) contacts, black	CR-M2SFB	1SVR405651R1400	Upon request
For 2 or 4 c/o (SPDT) contacts, black	CR-M4SFB	1SVR405651R3400	
Metal holder	CR-MH1	1SVR405659R1100	

Electronic products and relays

Power supplies

Overview

Modern power supply units are a vital component in most areas of energy management and automation technology. ABB as your global partner in these areas pays the utmost attention to the resulting requirements. Innovation is the key to a substantial enlargement of our power supply product program:

1

CP-D

The CP-D range of power supply units in MDRC design (modular DIN rail components) fits into all domestic installation and distribution panels.

CP-E

The CP-E range offers enhanced functionality while the number of different types has been considerably reduced. Now all power supply units can be operated at an ambient temperature of up to +70 °C.

CP-T

The CP-T range of three-phase power supply units is ABB's youngest member of the power supply family.

CP-S

The CP-S range is ABB's standard range, a high-end power supply unit optimised for serial applications.

CP-C

The CP-C range's pluggable function modules adapt these power supply units exactly to your application's needs. Of course, all ABB power supply units feature primary switch mode technology – environmentally sound and cost-efficiency. This represents the highest level of innovative industrial electronics.



CP-E range

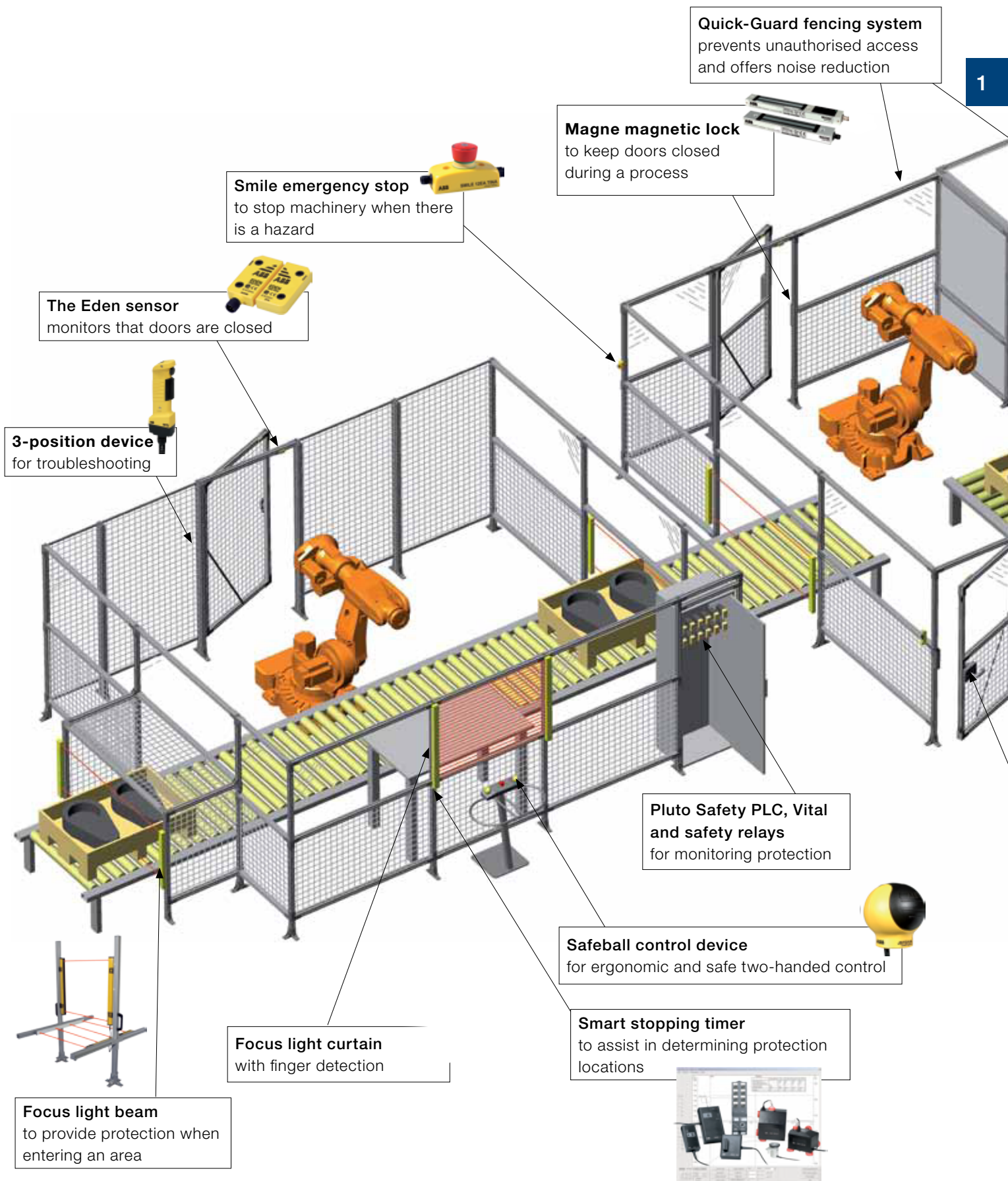
Rated I/P voltage	Rated O/P Voltage/Current	Type	Order Code	L.P.(₹)
100-240 V AC	5 V DC / 3 A	CP-E 5/3.0	1SVR427033R3000	4,010
100-240 V AC	12 V DC / 2.5 A	CP-E 12/2.5	1SVR 427032R1000	4,160
115 / 230 V AC auto select	12 V DC / 10 A	CP-E 12/10.0	1SVR427035R1000	7,640
100-240 V AC	24 V DC / 0.75 A	CP-E 24/0.75	1SVR427030R0000	3,060
100-240 V AC	24 V DC / 1.25 A	CP-E 24/1.25	1SVR427031R0000 ■	3,340
100-240 V AC	24 V DC / 2.5 A	CP-E 24/2.5	1SVR427032R0000 ■	3,440
115 / 230 V AC auto select	24 V DC / 5 A	CP-E 24/5.0	1SVR427034R0000 ■	6,200
115 / 230 V AC auto select	24 V DC / 10 A	CP-E 24/10.0	1SVR427035R0000 ■	9,070
115 / 230 V AC	24 V DC / 20 A	CP-E 24/20.0	1SVR427036R0000 ■	16,240
100-240 V AC	48 V DC / 0.625 A	CP-E 48/0.62	1SVR427030R2000	4,290
100-240 V AC	48 V DC / 1.25 A	CP-E 48/1.25	1SVR427031R2000	5,460
115 / 230 V AC auto select	48 V DC / 5 A	CP-E 48/5.0	1SVR427034R2000	11,070
115 / 230 V AC	48 V DC / 10 A	CP-E 48/10.0	1SVR427035R2000	15,760

Note: Refer technical Data sheet for DC Voltage input range

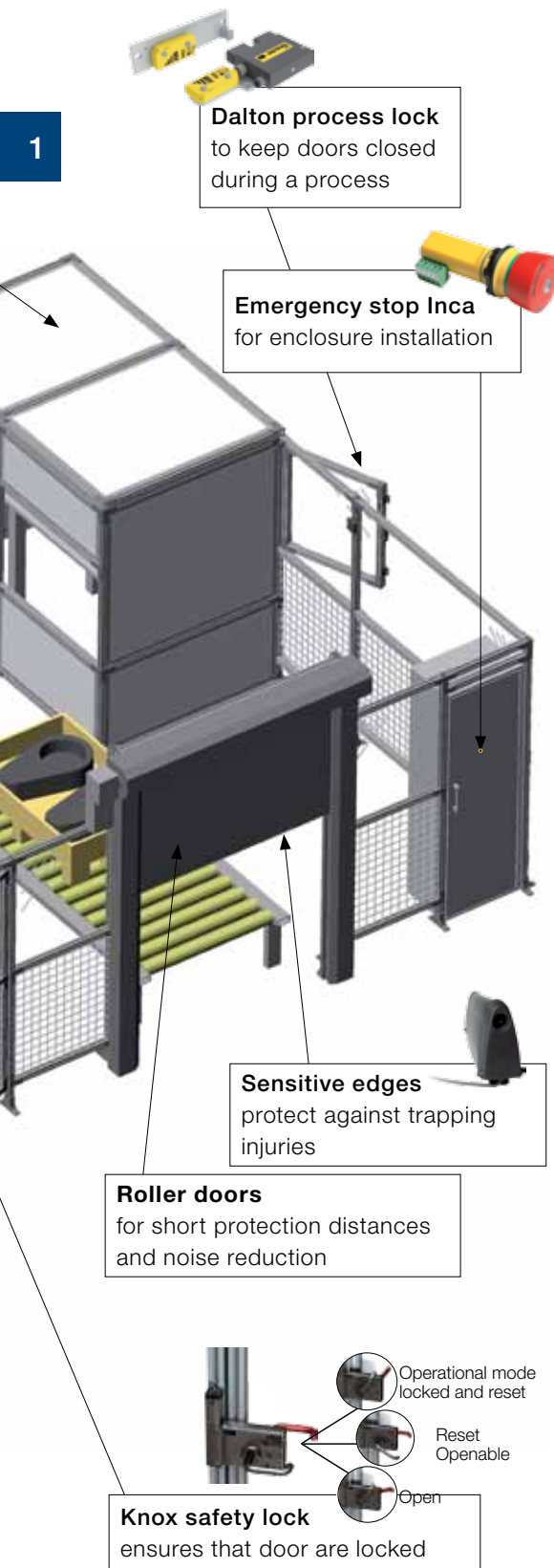
CP-T range

"Rated I/P voltage"	"Rated O/P Voltage/Current"	Type	Order Code	L.P.(₹)w
340-575 V AC/ 480-820 V DC	24 V DC / 5 A	CP-T 24/5.0	1SVR427054R0000	11,040
340-575 V AC/ 480-820 V DC	24 V DC / 10 A	CP-T 24/10.0	1SVR427055R0000	14,060
340-575 V AC/ 480-820 V DC	24 V DC / 20 A	CP-T 24/20.0	1SVR427056R0000	17,430
340-575 V AC/ 480-820 V DC	24 V DC / 40 A	CP-T 24/40.0	1SVR427057R0000	25,790
340-575 V AC/ 480-820 V DC	48 V DC / 5 A	CP-T 48/5.0	1SVR427054R2000	15,280
340-575 V AC/ 480-820 V DC	48 V DC / 10 A	CP-T 48/10.0	1SVR427055R2000	20,880
340-575 V AC/ 480-820 V DC	48 V DC / 20 A	CP-T 48/20.0	1SVR427056R2000	30,570

Production-friendly safety systems from ABB Jokab Safety



1



Dalton process lock
to keep doors closed during a process

Emergency stop Inca
for enclosure installation

Sensitive edges
protect against trapping injuries

Roller doors
for short protection distances and noise reduction

Knox safety lock
ensures that door are locked

Operational mode locked and reset
Reset Openable
Open

Price on request

Product groups

	<p>Training & Advice Practical application of standards and regulations, along with CE-labelling.</p>
	<p>Pluto Safety PLC A unique All-Master safety PLC for dynamic and static safety circuits.</p>
	<p>Pluto AS-i Programmable safety system AS-i where all units are connected to the same bus cable and the function of the unit is determined in the PLC program.</p>
	<p>Vital safety controller Dynamic safety circuit for multiple protection according to the highest safety category</p>
	<p>Tina adapter units Transformation of static signals to dynamic safety signals, etc.</p>
	<p>Safety relays The market's most flexible safety relays for different protection purposes and categories.</p>
	<p>Stopping time & machinery diagnosis Used for stopping time measurement, annual maintenance and for trouble - shooting machinery.</p>
	<p>Light curtain/light beam/scanner Complete range of light beams, light curtains and scanners.</p>
	<p>Sensors/switches/locks Dynamic non-contact sensors, safety switches, magnetic switches and locks.</p>
	<p>Control devices Ergonomic three-position control units, two-hand control units and foot pedals.</p>
	<p>Emergency stop devices Emergency stop devices for dynamic and static safety circuits.</p>
	<p>Contact strips/Bumpers/Safety mats Sensitive edges, bumpers and safety mats.</p>
	<p>Fencing systems/SafeCAD/Roller doors A stable and flexible fencing system that is easy to install.</p>

Pilot devices

Pilot Devices Offering

ABB Pilot Devices offers both a Modular and Compact Range of Pushbuttons. Both feature the same front-of-panel design and appear consistent when combined.

Modular Range, features a wide range of operators that can be combined with high flexibility. The unique snap-on design promotes simple and fast assembly.

Compact Range features an all-in-one construction and rugged design for added simplicity and ease of installation.



Modular Range

Modular Range

Technical data compact range

Standard and approvals	
IEC / EN 60947-1	Low-voltage switchgear and controlgear - Part 1: General rules
IEC / EN 60947-5-1	Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electro-mechanical control circuit devices
IEC / EN 60947-5-5	Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function
IEC / EN 60073	Basic and safety principles for man-machine
IEC / EN 60529	Degrees of protection provided by enclosures (IP Code)
EN 50013	Low-voltage switchgear and controlgear for industrial use - Terminal marking and distinctive number for particular control switches
DIN 40050-9	Road vehicles; degrees of protection (IP-code); protection against foreign objects; water and contact; electrical equipment
UL 508	Industrial Control Equipment
CSA C22.2 No 14	Industrial Control Equipment

Environmental data		
Degrees of protection		
Pilot device:	IEC/EN DIN	UL/CSA
Pushbutton	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Selector switch	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Pilot light	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Emergency stops	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Terminals	IP20	

Temperature	
Ambient temperature during operation	-25 to +70 °C
Storage temperature	-40 to +85 °C

Technical data	
Cable connections	
Operator	Cable terminal
Pushbutton Selector switch Emergency stop	Plus-minus Pozidriv No. 2 Connectable area: min. 1 x 0.5 mm ² /1 x AWG22 max. 2 x 1.5 mm ² /2 x AWG14

Tightening torque	
Operators, M22	Min. 2 Nm / Max. 2.3 Nm
Pushbutton and selector switch	Cable terminals M3, 0.8 Nm
Pilot light	Cable terminals M3.5, 0.9 Nm
Emergency stop	Cable terminals M3, 0.8 Nm

Electrical data			
Electrical ratings			
Contacts			
Ratings as per IEC 60947-5-1			
Rated insulation voltage, U _i		300 V	
Rated thermal current, I _{th}		5 A	
Rated operational current, I _o utilisation category AC-15	at: 240 V	1 A	
Rated operational current, I _o utilization category DC-13,	at: 24 V at: 125 V	0.3 A 0.2 A	
Ratings as per UL, CSA, NEMA		C300 AC	R300 DC
Rated insulation voltage		250 V	250 V
Rated thermal current		2.5 A	1 A
Rated operational current	at: 120 V at: 125 V at: 240 V at: 250 V	1.5 A 0.75 A	0.22 A 0.11 A

Short circuit protection	
Max. fuse at 1 kA	gG 10A

Make-and-break contacts	
Pushbutton	Emergency stop pushbutton
■ = Closed contact	■ = Closed contact

LED's (for both compact and modular)	
Service life for LED's means number of service hours until the brightness has been reduced down 50 %. Service life 50 000 h	
White LED's	x=0.31 Y=3.2 means the position of color in the ICI Chromaticity Diagram
Over voltage on LED's	10 % overvoltage is acceptable without affecting the service life
Voltage peaks on LED's	Voltage peaks up to 1000 V Current peaks up to 500 mA during a few msec
Gloaming light	All integrated LEDs have a function built in to cut leakage currents

Mechanical data	
Mechanical life	
Pushbuttons, selector switches	500 000 operations
Emergency stop pushbutton	50 000 operations

Pilot devices

Compact range

1

Order example:

Ex 1: Type CP1-10■-10, to order color red replace ■ with R: CP1-10 R-10

Ex 2: Order code 1SFA619100R101□ To order color red replace □ with 1: 1SFA619100R1011

Color codes

	Red ●	Green ●	Yellow ●	Blue ●	White ○	Black ●	Grey ●
Type ■	R	G	Y	L	W	B	U
Order Code □	1	2	3	4	5	6	7



Non-illuminated Flush Pushbutton with Black Plastic Bezel

Non-illuminated Flush pushbutton

	Type	Pack Size	Order Code	L.P.(₹)
Momentary				
1 NO	CP1-10 □-10	1 X 10	1SFA619100R101 □	82
2 NO	CP1-10 □-20	1 X 10	1SFA619100R102 □	120
1 NC	CP1-10 □-01	1 X 10	1SFA619100R104 □	82
2 NC	CP1-10 □-02	1 X 10	1SFA619100R105 □	120
1 NO+1 NC	CP1-10 □-11	1 X 10	1SFA619100R107 □	120
Maintained				
1 NO	CP2-10 □-10	1 X 10	1SFA619101R101 □	110
2 NO	CP2-10 □-20	1 X 10	1SFA619101R102 □	155
1 NC	CP2-10 □-01	1 X 10	1SFA619101R104 □	110
2 NC	CP2-10 □-02	1 X 10	1SFA619101R105 □	155
1 NO+1 NC	CP2-10 □-11	1 X 10	1SFA619101R107 □	155



Non-illuminated Extended Pushbutton with Black Plastic Bezel

Non-illuminated Extended pushbutton

	Type	Pack Size	Order Code	L.P.(₹)
Momentary				
1 NO	CP3-10 ■-10	1 X 10	1SFA619102R101 □	110
2 NO	CP3-10 ■-20	1 X 10	1SFA619102R102 □	146
1 NC	CP3-10 ■-01	1 X 10	1SFA619102R104 □	110
2 NC	CP3-10 ■-02	1 X 10	1SFA619102R105 □	146
1 NO+1 NC	CP3-10 ■-11	1 X 10	1SFA619102R107 □	146
Maintained				
1 NO	CP4-10 ■-10	1 X 10	1SFA619103R101 □	120
2 NO	CP4-10 ■-20	1 X 10	1SFA619103R102 □	146
1 NC	CP4-10 ■-01	1 X 10	1SFA619103R104 □	120
2 NC	CP4-10 ■-02	1 X 10	1SFA619103R105 □	146
1 NO+1 NC	CP4-10 ■-11	1 X 10	1SFA619103R107 □	146

Pilot devices

Compact range



Pilot Light with intergrated LED,
with leakage current protection



Pilot Light with intergrated LED,
with leakage current protection



Pilot Light with intergrated LED,
with leakage current protection

Color codes

	Red ●	Green ●	Yellow ●	Blue ●	White ○	Amber ●
Type ■	R	G	Y	L	W	A
Order Code □	1	2	3	4	5	9

Pilot light with integrated LED

Type	Pack Size	Order Code	L.P.(₹)
24 V, AC/DC			
CL-502R	1 X 10	1SFA619402R5021	130
CL-502G	1 X 10	1SFA619402R5022	130
CL-502Y	1 X 10	1SFA619402R5023	130
CL-502L	1 X 10	1SFA619402R5024	250
CL-502W	1 X 10	1SFA619402R5025	130
CL-502A	1 X 10	1SFA619402R5029	130
110-130 V, AC			
CL-513R	1 X 10	1SFA619402R5131	130
CL-513G	1 X 10	1SFA619402R5132	130
CL-513Y	1 X 10	1SFA619402R5133	130
CL-513L	1 X 10	1SFA619402R5134	250
CL-513W	1 X 10	1SFA619402R5135	130
CL-513A	1 X 10	1SFA619402R5139	130
110-130 V, DC			
CL-515R	1 X 10	1SFA619402R5151	130
CL-515G	1 X 10	1SFA619402R5152	130
CL-515Y	1 X 10	1SFA619402R5153	130
CL-515L	1 X 10	1SFA619402R5154	250
CL-515W	1 X 10	1SFA619402R5155	130
CL-515A	1 X 10	1SFA619402R5159	130
220 V, DC			
CL-520R	1 X 10	1SFA619402R5201	130
CL-520G	1 X 10	1SFA619402R5202	130
CL-520Y	1 X 10	1SFA619402R5203	130
CL-520L	1 X 10	1SFA619402R5204	250
CL-520W	1 X 10	1SFA619402R5205	130
CL-520A	1 X 10	1SFA619402R5209	130
230 V, AC			
CL-523R	1 X 10	1SFA619402R5231	130
CL-523G	1 X 10	1SFA619402R5232	130
CL-523Y	1 X 10	1SFA619402R5233	130
CL-523L	1 X 10	1SFA619402R5234	250
CL-523W	1 X 10	1SFA619402R5235	130
CL-523A	1 X 10	1SFA619402R5239	130

Note:

48 V AC/DC, 60 V AC/DC, 380 V AC and 415 V AC Pilot devices are available with ABB range of Pilot lamps L.P.(.)s will be available upon request

Pilot devices

Compact range

1



Non-illuminated Black Selector Switch with Plastic Bezel

Selector switch				
	Type	Pack Size	Order Code	L.P.(₹)
Maintained / Two-positions				
1 NO	C2SS1-10B-10	1 X 10	1SFA619200R1016	220
2 NO	C2SS1-10B-20	1 X 10	1SFA619200R1026	240
1 NC	C2SS1-10B-01	1 X 10	1SFA619200R1046	220
2 NC	C2SS1-10B-02	1 X 10	1SFA619200R1056	240
1 NO+1 NC	C2SS1-10B-11	1 X 10	1SFA619200R1076	240
Maintained / Two-positions				
1 NO	C2SS2-10B-10	1 X 10	1SFA619201R1016	220
2 NO	C2SS2-10B-20	1 X 10	1SFA619201R1026	240
1 NC	C2SS2-10B-01	1 X 10	1SFA619201R1046	220
2 NC	C2SS2-10B-02	1 X 10	1SFA619201R1056	240
1 NO+1 NC	C2SS2-10B-11	1 X 10	1SFA619201R1076	240
Momentary / Two-positions				
1 NO	C2SS3-10B-10	1 X 10	1SFA619202R1016	210
2 NO	C2SS3-10B-20	1 X 10	1SFA619202R1026	240
1 NC	C2SS3-10B-01	1 X 10	1SFA619202R1046	210
2 NC	C2SS3-10B-02	1 X 10	1SFA619202R1056	240
1 NO+1 NC	C2SS3-10B-11	1 X 10	1SFA619202R1076	240
Maintained / Three-positions				
2 NO	C3SS1-10B-20	1 X 10	1SFA619210R1026	240
2 NC	C3SS1-10B-02	1 X 10	1SFA619210R1056	240
1 NO+1 NC	C3SS1-10B-11	1 X 10	1SFA619210R1076	240
Momentary / Three-positions				
2 NO	C3SS2-10B-20	1 X 10	1SFA619211R1026	240
2 NC	C3SS2-10B-02	1 X 10	1SFA619211R1056	240
1 NO+1 NC	C3SS2-10B-11	1 X 10	1SFA619211R1076	240
Momentary / Three-positions				
2 NO	C3SS3-10B-20	1 X 10	1SFA619212R1026	240
2 NC	C3SS3-10B-02	1 X 10	1SFA619212R1056	240
1 NO+1 NC	C3SS3-10B-11		1SFA619212R1076	240

Pilot devices

Compact range



Non-illuminated Emergency Stop Pushbutton, 30 mm



Non-illuminated Emergency Stop Pushbutton, 40 mm



Non-illuminated Machine Stop Pushbutton, Pull Release, 30 mm



Non-illuminated Machine Stop Pushbutton, Push Release, 30 mm

Emergency Stop Pushbutton

Description	Type	Pack Size	Order Code	L.P.()
●	Twist release			
1 NC Ø 30 mm	CE3T-10R-01	1	1SFA619500R1041	155
2 NC Ø 30 mm	CE3T-10R-02	1	1SFA619500R1051	210
1NO+1NC Ø 30 mm	CE3T-10R-11	1	1SFA619500R1071	210
	Pull release			
2 NC Ø 30 mm	CE3P-10R-02	1	1SFA619501R1051	210
1NO+1NC Ø 30 mm	CE3P-10R-11	1	1SFA619501R1071	210
	Key release: Ronis 455, key code 71			
2 NC Ø 30 mm	CE3K1-10R-02	1	1SFA619502R1051	600
1NO+1NC Ø 30 mm	CE3K1-10R-11	1	1SFA619502R1071	600
	Twist release			
1 NC Ø 40 mm	CE4T-10R-01	1	1SFA619550R1041	164
2 NC Ø 40 mm	CE4T-10R-02	1	1SFA619550R1051	210
1NO+1NC Ø 40 mm	CE4T-10R-11	1	1SFA619550R1071	210
	Pull release			
2 NC Ø 40 mm	CE4P-10R-02	1	1SFA619551R1051	210
1NO+1NC Ø 40 mm	CE4P-10R-11	1	1SFA619551R1071	210
	Key release: Ronis 455, key code 71			
2 NC Ø 40 mm	CE4K1-10R-02	1	1SFA619552R1051	660
1NO+1NC Ø 40 mm	CE4K1-10R-11	1	1SFA619552R1071	660

Machine stop

Description	Type	Pack Size	Order Code	L.P.()
■	Twist release			
1NO+1NC Ø 30 mm	CE3T-10B-11	1	1SFA619500R1076	210
	Pull release			
1NO+1NC Ø 30 mm	CE3P-10B-11	1	1SFA619501R1076	210
	Key release: Ronis 455, Key code 71			
1NO+1NC Ø 30 mm	CE3K1-10B-11	1	1SFA619502R1076	600
	Twist release			
1NO+1NC Ø 40 mm	CE4T-10B-11	1	1SFA619550R1076	210
	Pull release			
1NO+1NC Ø 40 mm	CE4P-10B-11	1	1SFA619551R1076	210
	Key release: Ronis 455, Key code 71			
1NO+1NC Ø 40 mm	CE4K1-10B-11	1	1SFA619552R1076	660

Pilot devices

Compact range

1



Buzzer						
Description	sound output	Rated current mA	Type	Pack Size	Order Code	L.P.(₹)
Rated voltage 24 V, AC/DC						
● Black	Continuous	40	CB1-620B	1	1SFA619600R6206	1,000
● Black	Pulsation	48	CB1-630B	1	1SFA619600R6306	1,000
Rated voltage 230 V, AC						
● Black	Continuous	40	CB1-623B	1	1SFA619600R6236	1,000
● Black	Pulsation	40	CB1-633B	1	1SFA619600R6336	1,000
Rated voltage 110-130 V, DC						
● Black	Continuous	15	CB1-622B	1	1SFA619600R6226	1,000
● Black	Pulsation	15	CB1-632B	1	1SFA619600R6326	1,000
Rated voltage 110-130 V, AC						
● Black	Continuous	40	CB1-621B	1	1SFA619600R6216	1,000
● Black	Pulsation	45	CB1-631B	1	1SFA619600R6316	1,000



Assembled compact emergency stop enclosures					
Description	Type	Pack Size	Order Code	L.P.(₹)	
1-seat plastic enclosure (yellow)					
<input type="checkbox"/> Twist release. Red button 2 NC	CEPY1-1001	1	1SFA619821R1001	1,200	
<input type="checkbox"/> Pull release. Red button 2 NC	CEPY1-1002	1	1SFA619821R1002	1,200	
Emergency stop enclosure with shroud					
<input type="checkbox"/> Twist release. Red button 2 NC	CEPY1-2002	1	1SFA619821R2002	1,440	
<input type="checkbox"/> Pull release. Red button 2 NC	CEPY1-2001	1	1SFA619821R2001	1,440	



Assembled compact machine stop enclosures					
Description	Type	Pack Size	Order Code	L.P.(₹)	
1-seat plastic enclosure with black mushroom pushbutton (dark grey)					
<input type="checkbox"/> Twist release. Black button 1 NO + 1 NC	CEP1-1001	1	1SFA619811R1001	1,200	
<input type="checkbox"/> Pull release. Black button 1 NO + 1 NC	CEP1-1002	1	1SFA619811R1002	1,200	
Machine stop enclosure with shroud					
<input type="checkbox"/> Twist release. Black button 1 NO + 1 NC	CEP1-2001	1	1SFA619811R2001	1,440	
<input type="checkbox"/> Pull release. Black button 1 NO + 1 NC	CEP1-2002	1	1SFA619811R2002	1,440	

Pilot Devices

Technical data modular range

Standard and approvals		
IEC / EN 60947-1	Low-voltage switchgear and controlgear - Part 1: General rules	
IEC / EN 60947-5-1	Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices	
IEC / EN 60947-5-5	Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function	
IEC / EN 60073	Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators	
IEC / EN 60529	Degrees of protection provided by enclosures (IP Code)	
EN 50013	Low-voltage switchgear and controlgear for industrial use - Terminal marking and distinctive number for particular control switches	
UL 508	Industrial Control Equipment	
CSA C22.2 No 14	Industrial Control Equipment	
Environmental data		
Degrees of protection		
Operators	IEC/EN	UL/CSA
Pushbutton	IP 66	Type 1, 3R, 4, 4X, 12, 13
Double pushbutton	IP 66	Type 1, 3R, 4, 4X, 12, 13
Mushroom	IP 66	Type 1, 3R, 4, 4X, 12, 13
Emergency stop	IP 66	Type 1, 3R, 4, 4X, 12, 13
Selector switch	IP 66	Type 1, 3R, 4, 4X, 12, 13
Key operated selector switch	IP 66	Type 1, 3R, 4, 4X, 12
Toggle switch	IP 66	Type 1, 3R, 4, 4X, 12, 13
Extreme duty pushbutton	-	Type 1, 3R, 4, 4X
Reset button	IP 66	Type 1, 3R, 4, 4X, 12, 13
Joystick	IP 66, 67, 69K	Type 1, 4X (indoor), 12, 13
Pilot lights	IP 66	Type 1, 3R, 4, 4X, 12, 13
Buzzer	IP 65	Type 4X
Potentiometer	IP 66	Type 1, 3R, 4, 4X, 12, 13
Contact block and transformer block	IP 20	-
Plastic enclosures	IP 66	Type 1, 3R, 4, 4X, 12, 13
Metallic enclosures	IP 66, 67, 69K	-
Temperature		
Ambient temperature during operation	-25 to +70 °C	
Storage temperature	-40 to +85 °C	
Technical data		
Terminals		
Plus-minus Pozidriv No.2 screw with DIN-washer.		
Connectable area	min. 1 x 0.5 mm ² AWG 20 max. 2 x 2.5 mm ² /2 x AWG14	
Tightening torque		
Operators, M22	Min. 2 Nm / Max. 2.3 Nm	
Cable terminals	0.9 Nm	
Recommended maximum number of blocks: 6		

Electrical data			
Standards contact blocks			
Mechanical endurance	10 million operations		
Self cleaning contacts of silver, NC contact with positive opening. At voltages and currents below 24 V and 5.6 mA we recommended our micro switch blocks or as an alternative, gold plated contacts.			
Ratings as per IEC 60947-5-1			
Rated insulation voltage, U _i	690 V		
Rated thermal current, I _{th}	10 A		
Rated operational current, I _e utilisation category AC 15,	at: 120 V	8 A	
	at: 230 V	6 A	
	at: 400 V	4 A	
	at: 690 V	2 A	
Rated operational current, I _e utilisation category DC 13,	at: 24 V	5 A	
	at: 125 V	1.1 A	
	at: 250 V	0.55 A	
Ratings as per UL, CSA, NEMA			
		A600 AC	Q600 DC
Rated insulation voltage	600 V		600 V
Rated thermal current	10 A		2.5 A
Rated operational current	at: 120 V	6 A	at: 125 V
	at: 240 V	3 A	at: 250 V
	at: 480 V	1.5 A	at: 480 V
	at: 600 V	1.2 A	at: 600 V
			0.55 A
			0.27 A
			0.10 A
			0.10 A
Contact resistance			
	< 25 mΩ		
Compulsory function test			
	at: 5V, 16 mA		
Micro switch block / Ratings as per IEC 60947-5-1			
Rated insulation voltage, U _i	125 V		
Rated thermal current, I _{th}	3 A		
Rated operational current, I _e utilisation category AC 14,	at: 125 V	0.5 A	
Rated operational current, I _e utilisation category DC 13,	at: 24 V	0.3 A	
Rated operational current, I _e utilisation category DC 12,	at: 24 V	0.1 A	
Minimum switching capacity	3 V DC	1 mA	
Ratings as per UL 508			
	125 V AC	3 A	
	60 V DC	0.2 A	
	48 V DC	0.1 A	
Short circuit protection			
Max. fuse at 1 kA	gG 16A		
Note: LEDs see technical data compact range			
Mechanical data			
Mechanical life			
Pushbuttons, momentary mushroom	2 million operations		
Selector switches. Present standard (no operation of center contact)	500 000 operations		
With operation of center contact	250 000 operations		
	150 000 operations		
Maintained mushroom, pushbutton, key operated selector switch and double pushbutton	500 000 operations		
Emergency stop	100 000 operations		
Toggle switch	1 million operations		

Pilot devices Modular range



1

Modular product features

- Widest range of integrated LED:s on the market.
- Parts of Range IP 66, 67, 69K. All range & UL Type 1, 3R, 4, 4X, 12, 13.
- Snap-on feature reduces installation time.
- Quick release contact holder.
- Several bezel colors.
- Unique low energy solutions, including wiping action.

How to order standard operators:

- Non- illuminated operator + holder + contact block(s)
 - Illuminated operator + holder + contact block(s) + lamp block
- *Only for illuminated operator*
-

How to order Bezel:

Bezel options	Type	Order code
Black plastic	MPX-10X	1SFA611 10X R1XXX

Color codes

	Red ●	Green ●	Yellow ●	Blue ●	White ○	Black ●	Grey ●
Type ■	R	G	Y	L	W	B	U
Order Code □	1	2	3	4	5	6	7

Ordering example:

Ex 1: Type MP1-10■, to order color red replace ■ with R: MP1-10R

Ex 2: Order code 1SFA611100R1001, to order color red replace □ with 1: 1SFA619100R1001



Operator : Flush button Non-illuminated push button

	Type	Pack Size	Order Code	L.P.(₹)
Momentary	MP1-10 ■	1 X 10	1SFA611100R100 □	40
Maintained	MP2-10 ■	1 X 10	1SFA611101R100 □	60

Operator : Extended button Non-illuminated push button

Momentary	MP3-10 ■	1 X 10	1SFA611102R100 □	60
Maintained	MP4-10 ■	1 X 10	1SFA611103R100 □	60

Color codes

	Red ●	Green ●	Yellow ●	Blue ●	White ○	Black ●	Grey ●	Amber ●
Type ■	R	G	Y	L	W	B	U	AN
Order Code □	1	2	3	4	5	6	7	9



Operator : Flush button illuminated push button

	Type	Pack Size	Order Code	L.P.(₹)
Momentary	MP1-11 ■	1 X 10	1SFA611100R110 □	56
	MP1-11AN	1 X 10	1SIN611100R1109	55
Maintained	MP2-11 ■	1 X 10	1SFA611101R110 □	75
	MP2-11AN	1 X 10	1SIN611101R1109	75

Operator : Extended button illuminated push button

Momentary	MP3-11 ■	1 X 10	1SFA611102R110 □	75
	MP3-11AN	1 X 10	1SIN611102R1109	75
Maintained	MP4-11 ■	1 X 10	1SFA611103R110 □	75
	MP4-11AN	1 X 10	1SIN611103R1109	75

Note:

1. Integrated LED block to be considered from MLBL range of suitable voltage from page no. 109

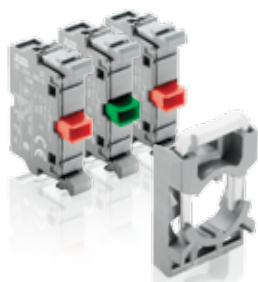
Separate holder

Holders for three blocks	MCBH-00	1 X 10	1SFA611605R1100	12
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Contact blocks only (without holder)

1 NO	MCB-10	1 X 10	1SFA611610R1001	50
1 NC	MCB-01	1 X 10	1SFA611610R1010	50

Blocks and holder



Pilot devices

Modular range



LED lamp block with built in leakage currage protection

Operator : Pilot lights				
	Type	Pack Size	Order Code	L.P.(₹)
● Red	ML1-100R	1 X 10	1SFA611400R1001	42
● Green	ML1-100G	1 X 10	1SFA611400R1002	42
● Yellow	ML1-100Y	1 X 10	1SFA611400R1003	42
● Blue	ML1-100L	1 X 10	1SFA611400R1004	42
○ White	ML1-100W	1 X 10	1SFA611400R1005	42
● Amber	ML1-100AN	1 X 10	1SIN611400R1009	42

Separate holder				
	Type	Pack Size	Order Code	L.P.(₹)
Holder for three blocks	MCBH-00	1 X 10	1SFA611605R1100	12

Lamp blocks with integrated LED				
Rated voltage 24 V, AC/DC				
	Type	Pack Size	Order Code	L.P.(₹)
● Red	MLBL-01R	1 X 10	1SFA611621R1011	110
● Green	MLBL-01G	1 X 10	1SFA611621R1012	110
● Yellow	MLBL-01YN	1 X 10	1SIN611621R1013	110
● Blue	MLBL-01L	1 X 10	1SFA611621R1014	250
○ White	MLBL-01W	1 X 10	1SFA611621R1015	110
● Amber	MLBL-01A	1 X 10	1SFA611621R1016	110

Rated voltage 110-130 V, AC				
	Type	Pack Size	Order Code	L.P.(₹)
● Red	MLBL-04R	1 X 10	1SFA611621R1041	110
● Green	MLBL-04G	1 X 10	1SFA611621R1042	110
● Yellow	MLBL-04YN	1 X 10	1SIN611621R1043	110
● Blue	MLBL-04L	1 X 10	1SFA611621R1044	250
○ White	MLBL-04W	1 X 10	1SFA611621R1045	110
● Amber	MLBL-04A	1 X 10	1SFA611621R1046	110

Rated voltage 110-130 V, DC				
	Type	Pack Size	Order Code	L.P.(₹)
● Red	MLBL-05R	1 X 10	1SFA611621R1051	110
● Green	MLBL-05G	1 X 10	1SFA611621R1052	110
● Yellow	MLBL-05YN	1 X 10	1SIN611621R1053	110
● Blue	MLBL-05L	1 X 10	1SFA611621R1054	250
○ White	MLBL-05W	1 X 10	1SFA611621R1055	110
● Amber	MLBL-05A	1 X 10	1SFA611621R1056	110

Rated voltage 220 V, DC				
	Type	Pack Size	Order Code	L.P.(₹)
● Red	MLBL-06R	1 X 10	1SFA611621R1061	110
● Green	MLBL-06G	1 X 10	1SFA611621R1062	110
● Yellow	MLBL-06YN	1 X 10	1SIN611621R1063	110
● Blue	MLBL-06L	1 X 10	1SFA611621R1064	250
○ White	MLBL-06W	1 X 10	1SFA611621R1065	110
● Amber	MLBL-06A	1 X 10	1SFA611621R1066	110

Rated voltage 230 V, AC				
	Type	Pack Size	Order Code	L.P.(₹)
● Red	MLBL-07R	1 X 10	1SFA611621R1071	150
● Green	MLBL-07G	1 X 10	1SFA611621R1072	110
● Yellow	MLBL-07YN	1 X 10	1SIN611621R1073	110
● Blue	MLBL-07L	1 X 10	1SFA611621R1074	250
○ White	MLBL-07W	1 X 10	1SFA611621R1075	110
● Amber	MLBL-07A	1 X 10	1SFA611621R1076	110

Note: 48 V AC/DC, 60 V AC/DC, 380 V AC and 415 V AC L.P.(₹) will be available upon request

Pilot devices

Modular range

1



Operator : Emergency stop pushbutton

●	Type	Pack Size	Order Code	L.P.(₹)
Ø 30 mm / Non-illuminated				
Twist release	MPET3-10R	1	1SFA611520R1001	310
Pull release	MPEP3-10R	1	1SFA611521R1001	310
Key release code 71/Ronis 455	MPEK3-11R	1	1SFA611522R1101	650
Key release code 72/ Ronis 421	MPEK3-12R	1	1SFA611522R1201	650
Key release code 73/ Ronis 3433-E	MPEK3-13R	1	1SFA611522R1301	650
Ø 40 mm / Non-illuminated				
Twist release	MPET4-10R	1	1SFA611523R1001	270
Pull release	MPEP4-10R	1	1SFA611524R1001	310
Key release code 71/Ronis 455	MPEK4-11R	1	1SFA611525R1101	610
Key release code 72/ Ronis 421	MPEK4-12R	1	1SFA611525R1201	610
Key release code 73/ Ronis 3433-E	MPEK4-13R	1	1SFA611525R1301	610
Ø 60 mm / Non-illuminated				
Twist release	MPMT4-10R	1	1SFA611513R1001	520
Pull release	MPMP4-10R	1	1SFA611514R1001	430
Ø 40 mm / Illuminated				
Twist release	MPMT3-11R	1	1SFA611510R1101	500
Pull release	MPMP3-11R	1	1SFA611511R1101	400
Ø 60 mm / Illuminated				
Twist release	MPMT4-11R	1	1SFA611513R1101	680
Pull release	MPMP4-11R	1	1SFA611514R1101	550

Refer holder and contact block configuration for standard operator from page no. 108



Operator : Machine stop pushbutton

●	Type	Pack Size	Order Code	L.P.(₹)
Ø 30 mm				
Twist release	MPET3-10B	1	1SFA611520R1006	310
Pull release	MPEP3-10B	1	1SFA611521R1006	310
Key release	MPEK3-10B	1	1SFA611522R1106	650
Ø 40 mm				
Twist release	MPET4-10B	1	1SFA611523R1006	310
Pull release	MPEP4-10B	1	1SFA611524R1006	310
Key release	MPEK4-10B	1	1SFA611525 R1061	650

Refer holder and contact block configuration for standard operator from page no. 108



Operator : Double pushbutton

	Type	Pack Size	Order Code	L.P.(₹)
● Upper ● Lower	Extended lower button / Non-illuminated			
I / O	MPD13-11B	1	1SFA611142R1106	310
START / STOP	MPD15-11B	1	1SFA611144R1106	310
● Upper ● Lower	Extended lower button / Illuminated			
I / O	MPD13-11C	1	1SFA611142R1108	460
START / STOP	MPD15-11C	1	1SFA611144R1108	460
● Upper ● Lower	○ Upper Extended lower button / ● Lower Non-illuminated			
I / O	MPD17-11B	1	1SFA611146R1106	310

Refer holder and contact block configuration for standard operator



Operator: non-illuminated black two-position selector switch

Type	Pack Size	Order Code	L.P.(₹)
Maintained / Short handle			
M2SS1-10B	1	1SFA611200R1006	210
Maintained / Short handle			
M2SS2-10B	1	1SFA611201R1006	210
Momentary / Short handle, spring return from C to B			
M2SS3-10B	1	1SFA611202R1006	220
Maintained / Long handle			
M2SS4-10B	1	1SFA611203R1006	640
Maintained / Long handle			
M2SS5-10B	1	1SFA611204R1006	640
Momentary / Long handle, spring return from C to B			
M2SS6-10B	1	1SFA611205R1006	660

Refer holder and contact block configuration for standard operator

Operator: non-illuminated black three-position selector switch

Type	Pack Size	Order Code	L.P.(₹)
Maintained / Short handle			
M3SS1-10B	1	1SFA611210R1006	210
Momentary / Short handle, spring return from A to B and C to B			
M3SS2-10B	1	1SFA611211R1006	220
Momentary / Short handle, spring return from C to B			
M3SS3-10B	1	1SFA611212R1006	220
Momentary / Short handle, spring return from A to B			
M2SS7-10B	1	1SFA611216R1006	220
Maintained / Long handle			
M3SS4-10B	1	1SFA611213R1006	640
Momentary / Long handle, spring return from A to B and C to B			
M3SS5-10B	1	1SFA611214R1006	660
Momentary / Long handle, spring return from C to B			
M3SS6-10B	1	1SFA611215R1006	830
Momentary / Long handle, spring return from A to B			
M2SS8-10B	1	1SFA611217R1006	590

Refer holder and contact block configuration for standard operator

Operator: non-illuminated black three-position selector switch with operation of center position

Type	Pack Size	Order Code	L.P.(₹)
Short handle			
M3SSC1-10B	1	1SFA611250R1006	230
M3SSC2-10B	1	1SFA611251R1006	230
M3SSC3-10B	1	1SFA611252R1006	230
M3SSC7-10B	1	1SFA611256R1006	230
Long handle			
M3SSC4-10B	1	1SFA611253R1006	680
M3SSC5-10B	1	1SFA611254R1006	680
M3SSC6-10B	1	1SFA611255R1006	680
M3SSC8-10B	1	1SFA611258R1006	680

Refer holder and contact block configuration for standard operator

Pilot devices

Modular range

1



Operator : Key operated selector switch					
	Type		Pack Size	Order Code	L.P.(₹)
●	Maintained / Two positions (The key can be removed in both position)				
71/Ronis 455	M2SSK1-101		1	1SFA611280R1001	500
72/Ronis 421	M2SSK1-102		1	1SFA611280R1002	500
73/Ronis 3433-E	M2SSK1-103		1	1SFA611280R1003	500
Random selection*)	M2SSK1-104		1	1SFA611280R1004	500
●	Maintained / Two positions (The key can be removed in position B only)				
71/Ronis 455	M2SSK2-101		1	1SFA611281R1001	500
72/Ronis 421	M2SSK2-102		1	1SFA611281R1002	500
73/Ronis 3433-E	M2SSK2-103		1	1SFA611281R1003	500
Random selection*)	M2SSK2-104		1	1SFA611281R1004	500
●	Momentary / Two positions, spring return from C to B (The key can be removed in position B only)				
71/Ronis 455	M2SSK3-101		1	1SFA611282R1001	550
72/Ronis 421	M2SSK3-102		1	1SFA611282R1002	550
73/Ronis 3433-E	M2SSK3-103		1	1SFA611282R1003	550
Random selection*)	M2SSK3-104		1	1SFA611282R1004	550

Refer holder and contact block configuration for standard operator

Operator : Key operated selector switch					
	Type		Pack Size	Order Code	L.P.(₹)
●	Maintained / Three positions (The key can be removed in both position)				
71/Ronis 455	M3SSK1-101		1	1SFA611283R1001	500
72/Ronis 421	M3SSK1-102		1	1SFA611283R1002	500
73/Ronis 3433-E	M3SSK1-103		1	1SFA611283R1003	500
Random selection*)	M3SSK1-104		1	1SFA611280R1004	500
●	Maintained / Three positions (The key can be removed in position B only)				
71/Ronis 455	M3SSK2-101		1	1SFA611284R1001	500
72/Ronis 421	M3SSK2-102		1	1SFA611284R1002	500
73/Ronis 3433-E	M3SSK2-103		1	1SFA611284R1003	500
Random selection*)	M3SSK2-104		1	1SFA611284R1004	500
●	Momentary / Three positions, spring return from C to B (The key can be removed in position B only)				
71/Ronis 455	M3SSK3-101		1	1SFA611285R1001	550
72/Ronis 421	M3SSK3-102		1	1SFA611285R1002	550
73/Ronis 3433-E	M3SSK3-103		1	1SFA611285R1003	550
Random selection*)	M3SSK3-104		1	1SFA611285R1004	550

Refer holder and contact block configuration for standard operator

Potentiometer					
	Type		Pack Size	Order Code	L.P.(₹)
●	with resistor 5 kohm				
Black plastic	MT-105B		1	1SFA611410R1056	2,860
Legend plates	1) SK615562-87		1		65
●	with resistor 10 kohm				
Black plastic	MT-110B		1	1SFA611410R1106	2,860
Legend plates	2) SK615562-88		1		65
●	with resistor 50 kohm				
Black plastic	MT-150B		1	1SFA611410R1506	3,000
Legend plates	3) 1SFA611930R1252		1		Upon request

1)



2)



3)



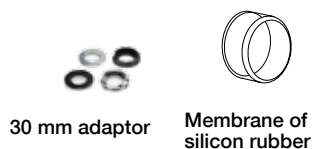
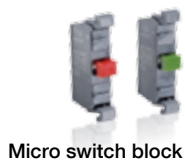
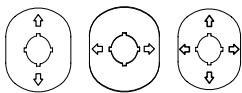
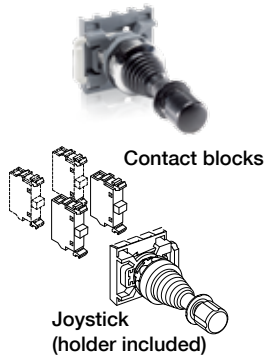
Toggle switch*					
	Type		Pack Size	Order Code	L.P.(₹)
●	Maintained / Two-positions				
Black plastic	MTS1-10B		1	1SFA611300R1006	480
●	Momentary / Three-positions				
Black plastic	MTS2-10B		1	1SFA611301R1006	620
●	Maintained / Three-positions				
Black plastic	MTS3-10B		1	1SFA611302R1006	480



Pilot devices

Modular range

- Joystick (holder included)
+ contact blocks



Joystick				
	Type	Pack Size	Order Code	L.P.(₹)
Maintained				
2 - position	MJS1-60B	1	1SFA611701R6006	2,740
4 - position	MJS5-60B	1	1SFA611705R6006	3,010
Spring return				
2 - position	MJS2-60B	1	1SFA611702R6006	2,740
4 - position	MJS6-60B	1	1SFA611706R6006	3,010
Maintained / Latching function				
2 - position	MJS7-60B	1	1SFA611707R6006	3,010
4 - position	MJS11-60B	1	1SFA611711R6006	3,480
Spring return / Latching function				
2 - position	MJS8-60B	1	1SFA611708R6006	3,010
4 - position	MJS12-60B	1	1SFA611712R6006	3,480

Legend plates for joystick

2 - position	MA6-1240	1	1SFA611930R1240	230
2 - position	MA6-1241	1	1SFA611930R1241	230
4 - position	MA6-1242	1	1SFA611930R1242	230

Refer holder and contact block configuration for standard operator

Micro switch blocks

Description	Type	Pack Size	Order Code	L.P.(₹)
1 NO	MCBL-10	1	1SFA611612R1010	400
1 NC	MCBL-01	1	1SFA611612R1001	400

Extreme duty pushbutton

	Type	Pack Size	Order Code	L.P.(₹)
● ● ●	For Ø 30 mm mounting hole			
	KP6-40 ■	1	1SFA616105R400 □	1,160

Refer contact block configuration for standard operator

Reset pushbutton

	Type	Pack Size	Order Code	L.P.(₹)
With shaft				
● ○				
No text	KPR3-100 ■	1	1SFA616162R100 □	360
Without shaft				
● ○				
No text	KPR1-100 ■	1	1SFA616160R100 □	270
Accessories: Shaft (black)				
● ○				
No text	KA1-8046	1	1SFA616920R8046	115

Accessories

	Type	Pack Size	Order Code	L.P.(₹)
Mounting tool	MA1-8015	1	1SFA611920R8015	250
Membrane of silicone flush button	KA1-8052	1	1SFA611920R8052	155
Membrane of silicone extended button	KA1-8002	1	1SFA611920R8002	290
Locking nut	MA1-8019	1	1SFA611920R8019	190

*Spacer is needed when legendplates are not used in plastic enclosures

Pilot devices Enclosures

1



Empty enclosures



Shroud



DIN-rail adaptor

Empty plastic enclosures for modular and compact range

Description	Type	Pack Size	Order Code	L.P.(₹)
□ 1-seat	MEPY1-0	1	1SFA611821R1000	1,420
■ 1-seat	MEP1-0	1	1SFA611811R1000	1,400
□ 2-seat	MEP2-0	1	1SFA611812R1000	1,290
■ 3-seat	MEP3-0	1	1SFA611813R1000	1,830
■ 4-seat	MEP4-0	1	1SFA611814R1000	2,480
■ 6-seat	MEP6-0	1	1SFA611816R1000	3,780

Shroud for modular range push button operator

■ Yellow	MA1-8053	1	1SFA611920R8053	400
■ Grey	MA1-8128	1	1SFA611920R8128	1,210

Empty enclosures for compact range

□ Yellow/Light grey	CEPY1-0	1	1SFA619821R1000	1,220
■ Dark grey/Light grey	CEP1-0	1	1SFA619811R1000	990

Shroud for compact range push buttons

■ Yellow	CA1-8053	1	1SFA619920R8053	250
■ Grey	CA1-8054	1	1SFA619920R8054	250

DIN-rail adaptor

DIN-rail adaptor	MA1-8131	1	1SFA 611 920 R8131	670
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Signal towers and signal beacons*



* Price on request

Distribution block



Ordering Details

Current rating Amps	Type	Order Code	L.P.(₹)
80	DBL80	1SNL308010R0000	205
125	DBL125	1SNL312510R0000	295
160	DBL160	1SNL316010R0000	545
175	DBL175	1SNL317510R0000	730
250	DBL250	1SNL325010R0000	1,365
400	DBL400	1SNL340010R0000	1,455

R contactors

Get the right product

Conventional applications

AC circuit switching

Up to 500 V AC
IOR contactors

From 500 up to 1000 V AC
IOR..MT contactors



AC-1 Rated operational current up to 5000 A
AC-3 Rated power up to 1500 kW (1520 A - 440 V)

DC circuit switching

Up to 1500 V DC with poles in series
IOR..CC contactors



DC-1 Rated operational current up to 5000 A
DC-3 / DC-5 operational current up to 2000 A

Advanced applications

N.O./N.C. main poles combination Power circuit coupling Slip-ring motor control

AC circuit switching
NOR..MT contactors

DC circuit switching
NOR..CC contactors

Up to 1000 V AC / 1500 V DC
LOR couplers

Uer up to 5000 V AC
FOR contactors



Energy saving and safety requirements Alternator field discharge

Equipped with latching
..AMA, ..AME contactor types

Umax 2250 V DC
AM-CC-JORE contactors



Note: Price available on request

Other offerings



Arc Guard System TVOC-2

Most short circuit faults in LV and MV switchgears are accompanied by an electric arc. An arc fault always leads to considerable damage to equipment and personnel unless it is distinguished very fast. The fault should be disconnected as fast as possible and in less than 0.1 s to avoid serious damages and give involved person a fair chance to survive the accident without severe damages. This is a demand found in the electrical safety rules in all CE countries, ref. IEC364-4-42.

The Arc Guard System TVOC-2 is an aid to quickly detect an arc fault and trip the incoming circuit-breaker. The main advantage with the Arc Guard System is that it can trip instantaneously, i.e. override other tripping functions.



Terminal Blocks

ABB offers the most comprehensive product range of terminal blocks which include a variety of functions like feed-through, double deck, triple deck, ground, disconnect, fuse, sensor actuator, disconnect neutral adapted to all market connection technologies.

- Screw Clamp technology remains the most popular in connection devices.
- Spring Clamp technology is a fast growing standard in screwless connection.
- IDC (insulation displacement connection) technology is the fastest and most innovative of screwless connections.

In addition to general purpose terminal blocks, ABB offers dedicated products such as Power blocks, Distribution blocks, Railway terminal blocks, Pluggable blocks, a ATEX range and other specific technologies to satisfy our specialty needs.

Our offering

- Distribution Terminal Blocks
- PI-Spring Terminal Blocks
- Power Terminal Blocks
- Screw Clamp Terminal Blocks
- Spring Terminal Blocks
- IDCTerminal Blocks
- Pluggable Terminal Blocks
- Railway Terminal Blocks

Electrification products

Building products

Building Products

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The System pro M compact® – DIN rail products

System Pro M

System Pro M is a modular system developed by ABB which, is capable of meeting the requirements of the most modern and up-to-date installations for low voltage applications.

MCBs

Miniature circuit-breakers.

RCDs

- Residual current circuit-breakers (RCCBs);
- RCD-blocks;
- Residual current circuit-breakers with overcurrent protection (RCBOs);
- Residual current relays (modular and front panel) with external toroid.

Auxiliary elements

A whole range of accessories and auxiliary elements.

SPDs

Surge protective devices.

Protection devices

In addition to MCBs and RCDs, ABB supplies other modular devices for protection such as fuse holders, fuses, switch disconnectors, insulation monitoring devices etc.

Command devices

This category includes devices that are operated manually to command the electric system: contactors, latching relays, switch-isolators, switches, pushbuttons etc. Typically they are installed to control lights from several points of the same circuit or to pilot user devices with a high number of operations.

Load management devices

Overload relays, load management switches, anti black-out lamps, time switches and the other modular devices in this category react automatically to variations of parameters and other events in the system to allow for plant optimisation.

Measurement devices

The range of devices in this category is very wide, including a great number of auxiliary components and accessories that make installation in switchboards and consumer units practical and economic.

Other devices

The System pro M compact® range also includes bells, transformers, modular sockets etc.



Miniature circuit breaker (MCB) SH200M series

25 mm² cage terminals, a well proven and reliable technology.

IP20 - finger safety.

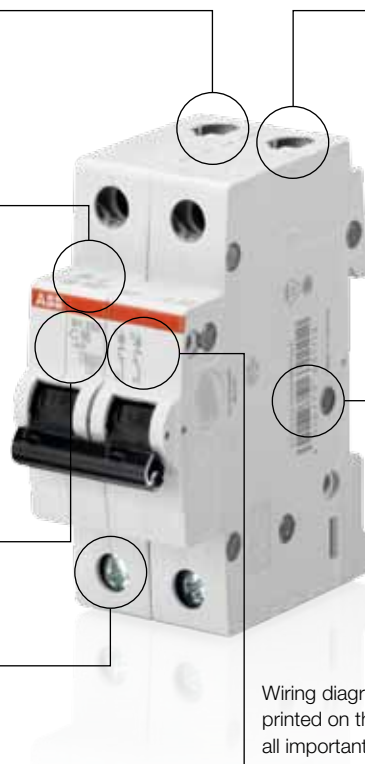
Scratch and solvent resistant marking due to laser printing. Easy identification of the products in case of maintenance or replacements.

Laser printed EAN code. Easy integration into merchandise management systems and quick identification of devices.

Easy product coding - easy identification - easy life. Basic technical information already integrated into the name.

Don't lose what's important for you - captive screws.

Wiring diagram and basic technical specification printed on the front of the MCB. Save your time - all important data available right away.



Technical Features

Electrical Data	SH200 M
Standards	IS/IEC 60898-1
Poles	1P, 2P, 3P, 4P, 1P +N, 3P +N
Tripping Characteristics	B, C, D
Rated Current	0.5A - 63 A
Rated Voltage	1P : 230/400/415 V AC 1P + N : 230 V AC 2...4P : 400/415 V AC 3P + N : 400/415 V AC
Insulation Voltage	250 V AC (Phase to Ground) 440 V AC (Phase to Phase)
Max Operating Voltage	1P: 253 V AC 2...4P : 440 V AC
Min Operating Voltage	12 V AC
Rated Frequency	50/60 Hz
Rated Short Circuit Capacity	10kA
Energy Limiting Class	3
Over Voltage Category (B,C upto 40A)	III
Pollution Degree	2
Rated Impulse withstand Voltage	4kV (Test Voltage 6.2kV at Sea Level, 5kV at 2,000 m)
Dielectric Test Voltage	2kV (50/60 Hz, 1 min)
Accessories mountable	No

SH200 M - MCBs, C characteristics - 10 kA

2



Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Single pole				
SH201M-C 0.5	0.5	12	1SYS271011R0984	244
SH201M-C 1	1	12	1SYS271011R0014	244
SH201M-C 1.6	1.6	12	1SYS271011R0974	244
SH201M-C 2	2	12	1SYS271011R0024	244
SH201M-C 3	3	12	1SYS271011R0034	244
SH201M-C 4	4	12	1SYS271011R0044	244
SH201M-C 6	6	12	1SYS271011R0064 ■	175
SH201M-C 10	10	12	1SYS271011R0104 ■	175
SH201M-C 16	16	12	1SYS271011R0164 ■	175
SH201M-C 20	20	12	1SYS271011R0204 ■	175
SH201M-C 25	25	12	1SYS271011R0254 ■	175
SH201M-C 32	32	12	1SYS271011R0324 ■	175
SH201M-C 40	40	12	1SYS271011R0404 ■	348
SH201M-C 50	50	12	1SYS271011R0504 ■	348
SH201M-C 63	63	12	1SYS271011R0634 ■	348



Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Single Pole & Neutral				
SH201M-C 0.5 NA	0.5	6	1SYS271113R0984	612
SH201M-C 1 NA	1	6	1SYS271113R0014	612
SH201M-C 1.6 NA	1.6	6	1SYS271113R0974	612
SH201M-C 2 NA	2	6	1SYS271113R0024	612
SH201M-C 3 NA	3	6	1SYS271113R0034	612
SH201M-C 4 NA	4	6	1SYS271113R0044	612
SH201M-C 6 NA	6	6	1SYS271113R0064	506
SH201M-C 10 NA	10	6	1SYS271113R0104	506
SH201M-C 16 NA	16	6	1SYS271113R0164	506
SH201M-C 20 NA	20	6	1SYS271113R0204	506
SH201M-C 25 NA	25	6	1SYS271113R0254	506
SH201M-C 32 NA	32	6	1SYS271113R0324	506
SH201M-C 40 NA	40	6	1SYS271113R0404	820
SH201M-C 50 NA	50	6	1SYS271113R0504	820
SH201M-C 63 NA	63	6	1SYS271113R0634	820



Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Double Pole				
SH202M-C 0.5	0.5	6	1SYS272011R0984	651
SH202M-C 1	1	6	1SYS272011R0014	651
SH202M-C 1.6	1.6	6	1SYS272011R0974	651
SH202M-C 2	2	6	1SYS272011R0024	651
SH202M-C 3	3	6	1SYS272011R0034	651
SH202M-C 4	4	6	1SYS272011R0044	651
SH202M-C 6	6	6	1SYS272011R0064 ■	475
SH202M-C 10	10	6	1SYS272011R0104 ■	475
SH202M-C 16	16	6	1SYS272011R0164 ■	475
SH202M-C 20	20	6	1SYS272011R0204 ■	475
SH202M-C 25	25	6	1SYS272011R0254 ■	475
SH202M-C 32	32	6	1SYS272011R0324 ■	475
SH202M-C 40	40	6	1SYS272011R0404 ■	779
SH202M-C 50	50	6	1SYS272011R0504 ■	779
SH202M-C 63	63	6	1SYS272011R0634 ■	779

■ Stock items

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

SH200 M - MCBs, C characteristics - 10 kA



Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Triple Pole				
SH203M-C 0.5	0.5	4	1SYS273011R0984	968
SH203M-C 1	1	4	1SYS273011R0014	968
SH203M-C 1.6	1.6	4	1SYS273011R0974	968
SH203M-C 2	2	4	1SYS273011R0024	968
SH203M-C 3	3	4	1SYS273011R0034	968
SH203M-C 4	4	4	1SYS273011R0044	968
SH203M-C 6	6	4	1SYS273011R0064	728
SH203M-C 10	10	4	1SYS273011R0104	728
SH203M-C 16	16	4	1SYS273011R0164	728
SH203M-C 20	20	4	1SYS273011R0204	728
SH203M-C 25	25	4	1SYS273011R0254	728
SH203M-C 32	32	4	1SYS273011R0324	728
SH203M-C 40	40	4	1SYS273011R0404	1,122
SH203M-C 50	50	4	1SYS273011R0504	1,122
SH203M-C 63	63	4	1SYS273011R0634	1,122

Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Triple Pole & Neutral				
SH203M-C 0.5 NA	0.5	3	1SYS273113R0984	1,257
SH203M-C 1 NA	1	3	1SYS273113R0014	1,257
SH203M-C 1.6 NA	1.6	3	1SYS273113R0974	1,257
SH203M-C 2 NA	2	3	1SYS273113R0024	1,257
SH203M-C 3 NA	3	3	1SYS273113R0034	1,257
SH203M-C 4 NA	4	3	1SYS273113R0044	1,257
SH203M-C 6 NA	6	3	1SYS273113R0064	1,022
SH203M-C 10 NA	10	3	1SYS273113R0104	1,022
SH203M-C 16 NA	16	3	1SYS273113R0164	1,022
SH203M-C 20 NA	20	3	1SYS273113R0204	1,022
SH203M-C 25 NA	25	3	1SYS273113R0254	1,022
SH203M-C 32 NA	32	3	1SYS273113R0324	1,022
SH203M-C 40 NA	40	3	1SYS273113R0404	1,484
SH203M-C 50 NA	50	3	1SYS273113R0504	1,484
SH203M-C 63 NA	63	3	1SYS273113R0634	1,484

Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Four Pole				
SH204M-C 0.5	0.5	3	1SYS274011R0984	1,373
SH204M-C 1	1	3	1SYS274011R0014	1,373
SH204M-C 1.6	1.6	3	1SYS274011R0974	1,373
SH204M-C 2	2	3	1SYS274011R0024	1,373
SH204M-C 3	3	3	1SYS274011R0034	1,373
SH204M-C 4	4	3	1SYS274011R0044	1,373
SH204M-C 6	6	3	1SYS274011R0064	984
SH204M-C 10	10	3	1SYS274011R0104	984
SH204M-C 16	16	3	1SYS274011R0164	984
SH204M-C 20	20	3	1SYS274011R0204	984
SH204M-C 25	25	3	1SYS274011R0254	984
SH204M-C 32	32	3	1SYS274011R0324	984
SH204M-C 40	40	3	1SYS274011R0404	1,424
SH204M-C 50	50	3	1SYS274011R0504	1,424
SH204M-C 63	63	3	1SYS274011R0634	1,424

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

SH200 M - MCBs, D characteristics - 10 kA

2



Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Single pole				
SH201M-D 0.5	0.5	12	1SYS271011R0981	294
SH201M-D 1	1	12	1SYS271011R0011	294
SH201M-D 1.6	1.6	12	1SYS271011R0971	294
SH201M-D 2	2	12	1SYS271011R0021	294
SH201M-D 3	3	12	1SYS271011R0031	294
SH201M-D 4	4	12	1SYS271011R0041	294
SH201M-D 6	6	12	1SYS271011R0061	201
SH201M-D 10	10	12	1SYS271011R0101	201
SH201M-D 16	16	12	1SYS271011R0161	201
SH201M-D 20	20	12	1SYS271011R0201	201
SH201M-D 25	25	12	1SYS271011R0251	201
SH201M-D 32	32	12	1SYS271011R0321	201
SH201M-D 40	40	12	1SYS271011R0401	370
SH201M-D 50	50	12	1SYS271011R0501	370
SH201M-D 63	63	12	1SYS271011R0631	370



Double pole				
SH202M-D 0.5	0.5	6	1SYS272011R0981	698
SH202M-D 1	1	6	1SYS272011R0011	698
SH202M-D 1.6	1.6	6	1SYS272011R0971	698
SH202M-D 2	2	6	1SYS272011R0021	698
SH202M-D 3	3	6	1SYS272011R0031	698
SH202M-D 4	4	6	1SYS272011R0041	698
SH202M-D 6	6	6	1SYS272011R0061	570
SH202M-D 10	10	6	1SYS272011R0101	570
SH202M-D 16	16	6	1SYS272011R0161	570
SH202M-D 20	20	6	1SYS272011R0201	570
SH202M-D 25	25	6	1SYS272011R0251	570
SH202M-D 32	32	6	1SYS272011R0321	570
SH202M-D 40	40	6	1SYS272011R0401	815
SH202M-D 50	50	6	1SYS272011R0501	815
SH202M-D 63	63	6	1SYS272011R0631	815

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.



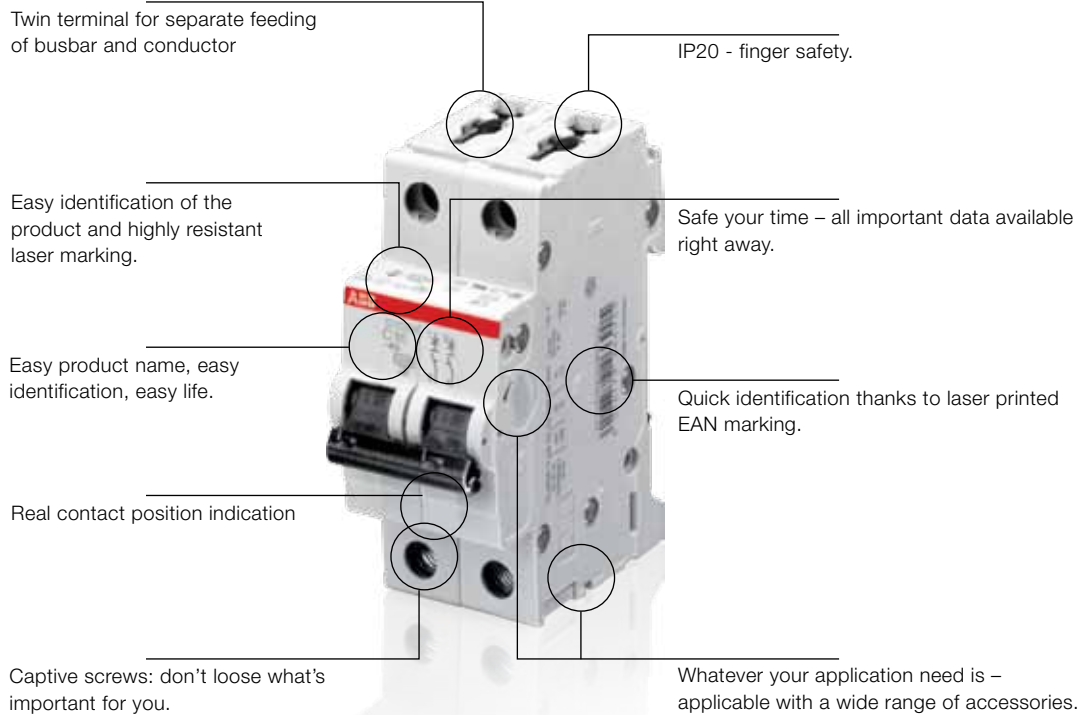
Product Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Triple pole				
SH203M-D 0.5	0.5	4	1SYS273011R0981	1,191
SH203M-D 1	1	4	1SYS273011R0011	1,191
SH203M-D 1.6	1.6	4	1SYS273011R0971	1,191
SH203M-D 2	2	4	1SYS273011R0021	1,191
SH203M-D 3	3	4	1SYS273011R0031	1,191
SH203M-D 4	4	4	1SYS273011R0041	1,191
SH203M-D 6	6	4	1SYS273011R0061	910
SH203M-D 10	10	4	1SYS273011R0101	910
SH203M-D 16	16	4	1SYS273011R0161	910
SH203M-D 20	20	4	1SYS273011R0201	910
SH203M-D 25	25	4	1SYS273011R0251	910
SH203M-D 32	32	4	1SYS273011R0321	910
SH203M-D 40	40	4	1SYS273011R0401	1,254
SH203M-D 50	50	4	1SYS273011R0501	1,254
SH203M-D 63	63	4	1SYS273011R0631	1,254



Four pole				
SH204M-D 0.5	0.5	3	1SYS274011R0981	1,536
SH204M-D 1	1	3	1SYS274011R0011	1,536
SH204M-D 1.6	1.6	3	1SYS274011R0971	1,536
SH204M-D 2	2	3	1SYS274011R0021	1,536
SH204M-D 3	3	3	1SYS274011R0031	1,536
SH204M-D 4	4	3	1SYS274011R0041	1,536
SH204M-D 6	6	3	1SYS274011R0061	1,252
SH204M-D 10	10	3	1SYS274011R0101	1,252
SH204M-D 16	16	3	1SYS274011R0161	1,252
SH204M-D 20	20	3	1SYS274011R0201	1,252
SH204M-D 25	25	3	1SYS274011R0251	1,252
SH204M-D 32	32	3	1SYS274011R0321	1,252
SH204M-D 40	40	3	1SYS274011R0401	1,634
SH204M-D 50	50	3	1SYS274011R0501	1,634
SH204M-D 63	63	3	1SYS274011R0631	1,634

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

Miniature circuit breaker (MCB) S200M series



Technical Features

Electrical Data	S200 M	
Standards	IEC 60947-2, IS/IEC-60898-1	
Poles	1P, 2P, 3P, 4P, 1P +N, 3P +N	
Tripping Characteristics	B, C, D	
Rated Current	0.5A - 63 A	
Rated Voltage	1P : 230 / 400 V AC 1P + N : 230 V AC 2...4P : 400 V AC 3P + N : 400 V AC	1P : 60 V DC 2P : 120 V DC
Insulation Voltage	250 V AC (Phase to Ground) 500 V AC (Phase to Phase)	
Max Operating Voltage	1P: 253 V AC 2...4P : 440 V AC	
Min Operating Voltage	12 V AC	
Rated Frequency	50/60 Hz	
Rated Short Circuit Capacity	10kA	
Energy Limiting Class (B, C upto 40 A)	3	
Over Voltage Category	III	
Pollution Degree	2	
Rated Impulse withstand Voltage	4kV (Test Voltage 6.2kV at Sea Level, 5kV at 2,000 m)	
Dielectric Test Voltage	2kV (50/60 Hz, 1 min)	
Accessories mountable	Yes	
Cross-section of conductor (top / bottom)	35 mm ²	
Terminal	Fail safe bi-directional cylinder - lift terminal	
Contact position indication	Marking on toggle (1 ON / 0 OFF), Real CPI (red ON / green OFF)	
Real Contact position indication	Red ON / green OFF	

S200M - MCBs, C characteristics - 10 kA



Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Single pole				
S201M-C 0.5	0.5	12	2CDS271001R0984	330
S201M-C 1	1	12	2CDS271001R0014	330
S201M-C 1.6	1.6	12	2CDS271001R0974	330
S201M-C 2	2	12	2CDS271001R0024	330
S201M-C 3	3	12	2CDS271001R0034	330
S201M-C 4	4	12	2CDS271001R0044	330
S201M-C 6	6	12	2CDS271001R0064	204
S201M-C 10	10	12	2CDS271001R0104	204
S201M-C 16	16	12	2CDS271001R0164	204
S201M-C 20	20	12	2CDS271001R0204	204
S201M-C 25	25	12	2CDS271001R0254	204
S201M-C 32	32	12	2CDS271001R0324	204
S201M-C 40	40	12	2CDS271001R0404	413
S201M-C 50	50	12	2CDS271001R0504	413
S201M-C 63	63	12	2CDS271001R0634	413



Single pole & neutral				
S201M-C 0.5 NA	0.5	6	2CDS271103R0984	850
S201M-C 1 NA	1	6	2CDS271103R0014	850
S201M-C 1.6 NA	1.6	6	2CDS271103R0974	850
S201M-C 2 NA	2	6	2CDS271103R0024	850
S201M-C 3 NA	3	6	2CDS271103R0034	850
S201M-C 4 NA	4	6	2CDS271103R0044	850
S201M-C 6 NA	6	6	2CDS271103R0064	615
S201M-C 10 NA	10	6	2CDS271103R0104	615
S201M-C 16 NA	16	6	2CDS271103R0164	615
S201M-C 20 NA	20	6	2CDS271103R0204	615
S201M-C 25 NA	25	6	2CDS271103R0254	615
S201M-C 32 NA	32	6	2CDS271103R0324	615
S201M-C 40 NA	40	6	2CDS271103R0404	1,045
S201M-C 50 NA	50	6	2CDS271103R0504	1,045
S201M-C 63 NA	63	6	2CDS271103R0634	1,045



Double pole				
S202M-C 0.5	0.5	6	2CDS272001R0984	856
S202M-C 1	1	6	2CDS272001R0014	856
S202M-C 1.6	1.6	6	2CDS272001R0974	856
S202M-C 2	2	6	2CDS272001R0024	856
S202M-C 3	3	6	2CDS272001R0034	856
S202M-C 4	4	6	2CDS272001R0044	856
S202M-C 6	6	6	2CDS272001R0064	626
S202M-C 10	10	6	2CDS272001R0104	626
S202M-C 16	16	6	2CDS272001R0164	626
S202M-C 20	20	6	2CDS272001R0204	626
S202M-C 25	25	6	2CDS272001R0254	626
S202M-C 32	32	6	2CDS272001R0324	626
S202M-C 40	40	6	2CDS272001R0404	972
S202M-C 50	50	6	2CDS272001R0504	972
S202M-C 63	63	6	2CDS272001R0634	972

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

S200M - MCBs, C characteristics - 10 kA



2

Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Triple Pole				
S203M-C 0.5	0.5	4	2CDS273001R0984	1,300
S203M-C 1	1	4	2CDS273001R0014	1,300
S203M-C 1.6	1.6	4	2CDS273001R0974	1,300
S203M-C 2	2	4	2CDS273001R0024	1,300
S203M-C 3	3	4	2CDS273001R0034	1,300
S203M-C 4	4	4	2CDS273001R0044	1,300
S203M-C 6	6	4	2CDS273001R0064	971
S203M-C 10	10	4	2CDS273001R0104	971
S203M-C 16	16	4	2CDS273001R0164	971
S203M-C 20	20	4	2CDS273001R0204	971
S203M-C 25	25	4	2CDS273001R0254	971
S203M-C 32	32	4	2CDS273001R0324	971
S203M-C 40	40	4	2CDS273001R0404	1,487
S203M-C 50	50	4	2CDS273001R0504	1,487
S203M-C 63	63	4	2CDS273001R0634	1,487

Triple Pole & Neutral

S203M-C 0.5 NA	0.5	3	2CDS273103R0984	1,730
S203M-C 1 NA	1	3	2CDS273103R0014	1,730
S203M-C 1.6 NA	1.6	3	2CDS273103R0974	1,730
S203M-C 2 NA	2	3	2CDS273103R0024	1,730
S203M-C 3 NA	3	3	2CDS273103R0034	1,730
S203M-C 4 NA	4	3	2CDS273103R0044	1,730
S203M-C 6 NA	6	3	2CDS273103R0064	1,258
S203M-C 10 NA	10	3	2CDS273103R0104	1,258
S203M-C 16 NA	16	3	2CDS273103R0164	1,258
S203M-C 20 NA	20	3	2CDS273103R0204	1,258
S203M-C 25 NA	25	3	2CDS273103R0254	1,258
S203M-C 32 NA	32	3	2CDS273103R0324	1,258
S203M-C 40 NA	40	3	2CDS273103R0404	1,900
S203M-C 50 NA	50	3	2CDS273103R0504	1,900
S203M-C 63 NA	63	3	2CDS273103R0634	1,900

Four Pole

S204M-C 0.5	0.5	3	2CDS274001R0984	1,655
S204M-C 1	1	3	2CDS274001R0014	1,655
S204M-C 1.6	1.6	3	2CDS274001R0974	1,655
S204M-C 2	2	3	2CDS274001R0024	1,655
S204M-C 3	3	3	2CDS274001R0034	1,655
S204M-C 4	4	3	2CDS274001R0044	1,655
S204M-C 6	6	3	2CDS274001R0064	1,250
S204M-C 10	10	3	2CDS274001R0104	1,250
S204M-C 16	16	3	2CDS274001R0164	1,250
S204M-C 20	20	3	2CDS274001R0204	1,250
S204M-C 25	25	3	2CDS274001R0254	1,250
S204M-C 32	32	3	2CDS274001R0324	1,250
S204M-C 40	40	3	2CDS274001R0404	1,875
S204M-C 50	50	3	2CDS274001R0504	1,875
S204M-C 63	63	3	2CDS274001R0634	1,875

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

S200M - MCBs, D characteristics - 10 kA



Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Single pole				
S201M-D 0.5	0.5	12	2CDS271001R0981	336
S201M-D 1	1	12	2CDS271001R0011	336
S201M-D 1.6	1.6	12	2CDS271001R0971	336
S201M-D 2	2	12	2CDS271001R0021	336
S201M-D 3	3	12	2CDS271001R0031	336
S201M-D 4	4	12	2CDS271001R0041	336
S201M-D 6	6	12	2CDS271001R0061	283
S201M-D 10	10	12	2CDS271001R0101	283
S201M-D 16	16	12	2CDS271001R0161	283
S201M-D 20	20	12	2CDS271001R0201	283
S201M-D 25	25	12	2CDS271001R0251	283
S201M-D 32	32	12	2CDS271001R0321	283
S201M-D 40	40	12	2CDS271001R0401	528
S201M-D 50	50	12	2CDS271001R0501	528
S201M-D 63	63	12	2CDS271001R0631	528

Double pole				
S202M-D 0.5	0.5	6	2CDS272001R0981	994
S202M-D 1	1	6	2CDS272001R0011	994
S202M-D 1.6	1.6	6	2CDS272001R0971	994
S202M-D 2	2	6	2CDS272001R0021	994
S202M-D 3	3	6	2CDS272001R0031	994
S202M-D 4	4	6	2CDS272001R0041	994
S202M-D 6	6	6	2CDS272001R0061	652
S202M-D 10	10	6	2CDS272001R0101	652
S202M-D 16	16	6	2CDS272001R0161	652
S202M-D 20	20	6	2CDS272001R0201	652
S202M-D 25	25	6	2CDS272001R0251	652
S202M-D 32	32	6	2CDS272001R0321	652
S202M-D 40	40	6	2CDS272001R0401	1,130
S202M-D 50	50	6	2CDS272001R0501	1,130
S202M-D 63	63	6	2CDS272001R0631	1,130

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

S200M - MCBs, D characteristics - 10 kA



Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Triple pole				
S203M-D 0.5	0.5	4	2CDS273001R0981	1,409
S203M-D 1	1	4	2CDS273001R0011	1,409
S203M-D 1.6	1.6	4	2CDS273001R0971	1,409
S203M-D 2	2	4	2CDS273001R0021	1,409
S203M-D 3	3	4	2CDS273001R0031	1,409
S203M-D 4	4	4	2CDS273001R0041	1,409
S203M-D 6	6	4	2CDS273001R0061	1,145
S203M-D 10	10	4	2CDS273001R0101	1,145
S203M-D 16	16	4	2CDS273001R0161	1,145
S203M-D 20	20	4	2CDS273001R0201	1,145
S203M-D 25	25	4	2CDS273001R0251	1,145
S203M-D 32	32	4	2CDS273001R0321	1,145
S203M-D 40	40	4	2CDS273001R0401	1,707
S203M-D 50	50	4	2CDS273001R0501	1,707
S203M-D 63	63	4	2CDS273001R0631	1,707

Four pole				
S204M-D 0.5	0.5	3	2CDS274001R0981	1,894
S204M-D 1	1	3	2CDS274001R0011	1,894
S204M-D 1.6	1.6	3	2CDS274001R0971	1,894
S204M-D 2	2	3	2CDS274001R0021	1,894
S204M-D 3	3	3	2CDS274001R0031	1,894
S204M-D 4	4	3	2CDS274001R0041	1,894
S204M-D 6	6	3	2CDS274001R0061	1,434
S204M-D 10	10	3	2CDS274001R0101	1,434
S204M-D 16	16	3	2CDS274001R0161	1,434
S204M-D 20	20	3	2CDS274001R0201	1,434
S204M-D 25	25	3	2CDS274001R0251	1,434
S204M-D 32	32	3	2CDS274001R0321	1,434
S204M-D 40	40	3	2CDS274001R0401	2,137
S204M-D 50	50	3	2CDS274001R0501	2,137
S204M-D 63	63	3	2CDS274001R0631	2,137

Note: Standard packing quantity for MCBs: SP - 12 Nos, SPN/DP - 6 Nos, TP - 4 Nos, TPN/FP - 3 Nos.

Miniature circuit-breaker (MCB)

S200M DC - MCB for DC applications

NEW



2

S200 M DC MCB in System pro M compact range impresses with its performance range, approvals and high inbuilt short circuit breaking capacity in DC applications. **S200 M DC MCBs can be used in 1-pole version at 220V DC and**

in 2-pole version up to 440V DC. During the installation process it is necessary to take into account, the polarity marked on the device.

Technical Features

Electrical Data	S200 M DC	
Standards	IEC / EN 60947-2	
Poles	1P, 2P	
Tripping Characteristics Curve	C	
Rated Current	1.6A - 63 A	
Rated Voltage	1P : 220 V DC	2P : 440V DC
Maximum Power frequency recovery Voltage, U _{max}	1P : 250V DC	2P : 500V DC
Min Operating Voltage	12 V DC	
Rated Ultimate short-circuit breaking Capacity, I _{cu}	10kA	
Rated Service short-circuit breaking Capacity, I _{cs}	10kA	
Cross-section of conductor (top / bottom)	35 mm ²	
Terminal	Fail safe bi-directional cylinder - lift terminal	
Contact position indication	Marking on toggle (1 ON / 0 OFF), Real CPI (red ON / green OFF)	
Real Contact position indication	Red ON / green OFF	
Accessories mountable	Yes (All System ProM Compact accessories)	
Housing	Insulation group I, RAL 7035	
Toggle	Insulation group II, black ,sealable	
Ambient temperature	-25.....+55 C	
Storage temperature	-40+70 C	
Torque	2.8 Nm	
Screwdriver	No. 2 Pozidrive	
Mounting	On DIN rail 35 mm acc. to EN 60715 by fast clip	
Mounting position	any	
Mounting dimensions acc. To DIN 43880	1	
Pole dimensions (H X D X W)	85 X 69 X 17.5	
Pole weight	approx. 125g	

S200M - DC , C characteristics - 10 kA



Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	L.P.(₹)
Single pole				
S201M-C1,6DC	1.6	12	2CDS271064R0974	562
S201M-C2DC	2	12	2CDS271064R0024	548
S201M-C3DC	3	12	2CDS271064R0034	548
S201M-C4DC	4	12	2CDS271064R0044	548
S201M-C6DC	6	12	2CDS271064R0064	461
S201M-C10DC	10	12	2CDS271064R0104	461
S201M-C16DC	16	12	2CDS271064R0164	461
S201M-C20DC	20	12	2CDS271064R0204	461
S201M-C25DC	25	12	2CDS271064R0254	461
S201M-C32DC	32	12	2CDS271064R0324	461
S201M-C40DC	40	12	2CDS271064R0404	570
S201M-C50DC	50	12	2CDS271064R0504	579
S201M-C63DC	63	12	2CDS271064R0634	579

Double Pole				
S202M-C1,6DC	1.6	6	2CDS272064R0974	1,192
S202M-C2DC	2	6	2CDS272064R0024	1,101
S202M-C3DC	3	6	2CDS272064R0034	1,101
S202M-C4DC	4	6	2CDS272064R0044	1,101
S202M-C6DC	6	6	2CDS272064R0064	961
S202M-C10DC	10	6	2CDS272064R0104	961
S202M-C16DC	16	6	2CDS272064R0164	961
S202M-C20DC	20	6	2CDS272064R0204	961
S202M-C25DC	25	6	2CDS272064R0254	961
S202M-C32DC	32	6	2CDS272064R0324	961
S202M-C40DC	40	6	2CDS272064R0404	1,297
S202M-C50DC	50	6	2CDS272064R0504	1,314
S202M-C63DC	63	6	2CDS272064R0634	1,314

Note: Standard packing quantity for MCBs: SP - 12 Nos, DP - 6 Nos

Miniature circuit breaker (MCB)

S200 series - 80,100A



Features

- Breaking capacity - 6kA
- Tripping characteristics - C curve
- Suitable for -25^o C to +55^o C ambient temperatures
- Standards : Conforms to IEC60898, IEC60947-2

S200

Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	L.P.(₹)
Single pole				
S201-C80	80	1	2CDS251001R0804	1,751
S201-C100	100	1	2CDS251001R0824	2,048
Single pole & Neutral				
S201-C80NA	80	1	2CDS251103R0804	3,573
S201-C100NA	100	1	2CDS251103R0824	4,373
Double Pole				
S202-C80	80	1	2CDS252001R0804	3,328
S202-C100	100	1	2CDS252001R0824	3,672
Triple Pole				
S203-C80	80	1	2CDS253001R0804	4,997
S203-C100	100	1	2CDS253001R0824	6,047
Triple Pole & Neutral				
S203-C80NA	80	1	2CDS253103R0804	7,517
S203-C100NA	100	1	2CDS253103R0824	8,961
Four Pole				
S204-C80	80	1	2CDS254001R0804	6,877
S204-C100	100	1	2CDS254001R0824	6,824

High performance MCB

S800 series 80 to 125A



2

Features

- Complies to standards IEC 60947-2 & EN 60898-1
- Compact size : One size up to 125A
- Compact performance : Selective and back-up characteristics
- Does not let go: The interchangeable terminal adapter. Cage terminals or ring lugs
- On the safe side: Operating status display.
- Simple and flexible: Accessories fitted by the customer
- Identical accessories for a broad range of applications

The S800 range

- S800S (50kA) upto 125A
- S800N (36kA) upto 125A
- S800C (25kA) upto 125A
- S800B (16kA) upto 125A
- S800PV-S (upto 1200V DC & upto 125A)
- S800PV-M (upto 1200V DC & upto 125A)

S800B - 'C' Curve 16 kA as per IEC 60947-2

Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	L.P.(₹)
Single pole				
S801B-C32	32	1	2CCS811001R0324	1,774
S801B-C40	40	1	2CCS811001R0404	1,774
S801B-C50	50	1	2CCS811001R0504	1,865
S801B-C63	63	1	2CCS811001R0634	1,865
S801B-C80	80	1	2CCS811001R0804	1,961
S801B-C100	100	1	2CCS811001R0824	2,101
S801B-C125	125	1	2CCS811001R0844	2,138
Double Pole				
S802B-C32	32	1	2CCS812001R0324	3,566
S802B-C40	40	1	2CCS812001R0404	3,566
S802B-C50	50	1	2CCS812001R0504	3,775
S802B-C63	63	1	2CCS812001R0634	3,775
S802B-C80	80	1	2CCS812001R0804	3,909
S802B-C100	100	1	2CCS812001R0824	4,044
S802B-C125	125	1	2CCS812001R0844	4,160
Triple Pole				
S803B-C32	32	1	2CCS813001R0324	5,321
S803B-C40	40	1	2CCS813001R0404	5,321
S803B-C50	50	1	2CCS813001R0504	5,800
S803B-C63	63	1	2CCS813001R0634	5,800
S803B-C80	80	1	2CCS813001R0804	6,193
S803B-C100	100	1	2CCS813001R0824	6,410
S803B-C125	125	1	2CCS813001R0844	6,356
Four Pole				
S804B-C32	32	1	2CCS814001R0324	6,686
S804B-C40	40	1	2CCS814001R0404	6,693
S804B-C50	50	1	2CCS814001R0504	7,362
S804B-C63	63	1	2CCS814001R0634	7,362
S804B-C80	80	1	2CCS814001R0804	8,147
S804B-C100	100	1	2CCS814001R0824	7,785
S804B-C125	125	1	2CCS814001R0844	8,232

Isolators

SHD Series

Isolator for panel installation onto DIN rail acc. to DIN EN 60715

Mounting depth : 70mm

Mounting width : per pole = 17.5mm = 1 module

Colour : grey, RAL 7035

Colour of switch lever : red RAL 3000®

Captive screws with recessed/slotted head, Pozidrive size 2

Compatibility for Locking device (unauthorized ON/OFF)



Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
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Single pole

SHD201/16	16	12	1SYD271111R0016 ■	205
SHD201/25	25	12	1SYD271111R0025 ■	205
SHD201/32	32	12	1SYD271111R0032 ■	205
SHD201/40	40	12	1SYD271111R0040 ■	325
SHD201/63	63	12	1SYD271111R0063 ■	362

Double Pole

SHD202/16	16	6	1SYD272111R0016 ■	337
SHD202/25	25	6	1SYD272111R0025 ■	358
SHD202/32	32	6	1SYD272111R0032 ■	365
SHD202/40	40	6	1SYD272111R0040 ■	385
SHD202/63	63	6	1SYD272111R0063 ■	509

Triple Pole

SHD203/16	16	4	1SYD273111R0016 ■	597
SHD203/25	25	4	1SYD273111R0025 ■	604
SHD203/32	32	4	1SYD273111R0032 ■	604
SHD203/40	40	4	1SYD273111R0040 ■	661
SHD203/63	63	4	1SYD273111R0063 ■	771

Four Pole

SHD204/16	16	3	1SYD274111R0016 ■	609
SHD204/25	25	3	1SYD274111R0025 ■	673
SHD204/32	32	3	1SYD274111R0032 ■	675
SHD204/40	40	3	1SYD274111R0040 ■	819
SHD204/63	63	3	1SYD274111R0063 ■	904

Note: Standard packing quantity for SHD Isolators: SP - 12 Nos, DP - 6 Nos, TP - 4 Nos, FP - 3 Nos.

E200 Series

Description	Current Rating (A)	Pack Unit (Pc)	Ordering Code	L.P.(₹)
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Single pole

E201/80	80	1	2CDE281001R0080	396
E201/100	100	1	2CDE281001R0100	398
E201/125	125	1	2CDE281001R0125	418

Double Pole

E202/80	80	1	2CDE282001R0080	642
E202/100	100	1	2CDE282001R0100	965
E202/125	125	1	2CDE282001R0125	1007

Triple Pole

E203/80	80	1	2CDE283001R0080	897
E203/100	100	1	2CDE283001R0100	1,016
E203/125	125	1	2CDE283001R0125	1,026

Four Pole

E204/80	80	1	2CDE284001R0080	1,174
E204/100	100	1	2CDE284001R0100	1,200
E204/125	125	1	2CDE284001R0125	1,240



■ Stock items

Residual current circuit breaker (RCCB) FH 200 Series

2

Test pushbutton to verify the correct functioning of the device.

Bi-directional cylindrical terminal ensure higher safety of connecting operations, making them easier.

Information on the device are laser printed to make them clearly visible and long lasting.

Laser-marked order code on the front to make easier future orders.



Technical Data	FH200
Standards	IEC/EN 61008; IS 12640-1: 2008
Type (wave form of the earth leakage sensed)	AC
Poles	2P, 4P
Rated current I_n	25, 40, 63 A
Rated sensitivity $I_{\Delta n}$	30, 100, 300 mA
Rated voltage U_e	230/400 - 240/415 V
Insulation voltage U_i	500 V
Max. operating voltage of circuit test	254 V
Min. operating voltage of circuit test	110 V
Rated frequency	50..60 Hz
Dielectric test voltage at ind. freq. for 1 min.	2.5 kV
Mechanical features	
Toggle	BLACK sealable in ON-OFF position
Contact position indicator (CPI)	not available
Ambient temperature (with daily average $\leq +35$ °C)	-5..+40 °C
Storage temperature	-40...+70 °C
Installation	
Terminal type	Failsafe bi-directional cylinder-lift terminal at top and bottom (shock protected)
Terminal size top/bottom for cable	25/25 mm ²
Terminal size top/bottom for busbar	10/10 mm ²
Tightening torque	2.8 N*m
Connection	from top and bottom
Accessories mountability	No

Residual current circuit breaker (RCCB) FH 200 series



Product Description	Current Rating (A)	Residual rated current (mA)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Two pole					
FH202 AC-25/0.03	25	30	1	1SYF202006R1250	1,775
FH202 AC-25/0.1	25	100	1	1SYF202006R2250	1,878
FH202 AC-25/0.3	25	300	1	1SYF202006R3250	1,894
FH202 AC-40/0.03	40	30	1	1SYF202006R1400	1,958
FH202 AC-40/0.1	40	100	1	1SYF202006R2400	2,046
FH202 AC-40/0.3	40	300	1	1SYF202006R3400	2,054
FH202 AC-63/0.03	63	30	1	1SYF202006R1630	2,326
FH202 AC-63/0.1	63	100	1	1SYF202006R2630	2,519
FH202 AC-63/0.3	63	300	1	1SYF202006R3630	2,559
Four pole					
FH204 AC-25/0.03	25	30	1	1SYF204006R1250	2,323
FH204 AC-25/0.1	25	100	1	1SYF204006R2250	2,418
FH204 AC-25/0.3	25	300	1	1SYF204006R3250	2,434
FH204 AC-40/0.03	40	30	1	1SYF204006R1400	2,381
FH204 AC-40/0.1	40	100	1	1SYF204006R2400	2,452
FH204 AC-40/0.3	40	300	1	1SYF204006R3400	2,523
FH204 AC-63/0.03	63	30	1	1SYF204006R1630	2,638
FH204 AC-63/0.1	63	100	1	1SYF204006R2630	2,766
FH204 AC-63/0.3	63	300	1	1SYF204006R3630	2,852

Residual current circuit breaker (RCCB)

F 200 series

2

Test pushbutton to verify the correct functioning of the device.

Bi-directional cylindrical terminal ensure higher safety of connecting operations, making them easier.



Contact position indicator (CPI): to always know the status of the contacts (red: closed contacts; green: open contacts) independently on the toggle position

Information on the device are laser printed to make them clearly visible and long lasting.

Laser-marked order code on the front to make easier future orders.

Technical Data	F200
Standards	IEC/EN 61008; IS 12640-1: 2008
Type (wave form of the earth leakage sensed)	AC A
Poles	2P, 4P
Rated current I_n	25, 40, 63, 80, 100 & 125 A
Rated sensitivity $I_{\Delta n}$	30, 100, 300 mA
Rated voltage U_e	230/400 - 240/415 V
Insulation voltage U_i	500 V
Max. operating voltage of circuit test	254 V
Min. operating voltage of circuit test	110 V
Rated frequency	50..60 Hz
Dielectric test voltage at ind. freq. for 1 min.	2.5 kV
Mechanical features	
Toggle	BLUE sealable in ON-OFF position
Contact position indicator (CPI)	yes
Ambient temperature (with daily average $\leq +35$ °C)	-25..+55 °C
Storage temperature	-40...+70 °C
Installation	
Terminal type	Failsafe bi-directional cylinder-lift terminal at top and bottom (shock protected)
Terminal size top/bottom for cable	25/25 mm ²
Terminal size top/bottom for busbar	10/10 mm ²
Tightening torque	2.8 N*m
Connection	from top and bottom
Accessories mountability	Yes

Residual current circuit breaker (RCCB)

F 200 series



Product Description	Current Rating (A)	Residual rated current (mA)	Pack Unit (Pc)	Ordering Code	M.R.P.(₹)
Two pole					
F202 AC-25/0,03	25	30	1	1SYF202005R1250	2,016
F202 AC-25/0,1	25	100	1	1SYF202005R2250	2,078
F202 AC-25/0,3	25	300	1	1SYF202005R3250	2,212
F202 AC-40/0,03	40	30	1	1SYF202005R1400	2,183
F202 AC-40/0,1	40	100	1	1SYF202005R2400	2,515
F202 AC-40/0,3	40	300	1	1SYF202005R3400	2,530
F202 AC-63/0,03	63	30	1	1SYF202005R1630	2,544
F202 AC-63/0,1	63	100	1	1SYF202005R2630	2,723
F202 AC-63/0,3	63	300	1	1SYF202005R3630	2,900
F202 AC-80/0,03	80	30	1	2CSF202005R1800	6,531
F202 AC-80/0,1	80	100	1	2CSF202005R2800	6,476
F202 AC-80/0,3	80	300	1	2CSF202005R3800	6,476
F202 AC-100/0,03	100	30	1	2CSF202005R1900	5,846
F202 AC-100/0,1	100	100	1	2CSF202005R2900	6,119
F202 AC-100/0,3	100	300	1	2CSF202005R3900	6,632
Four pole					
F204 AC-25/0,03	25	30	1	1SYF204005R1250	2,892
F204 AC-25/0,1	25	100	1	1SYF204005R2250	2,953
F204 AC-25/0,3	25	300	1	1SYF204005R3250	3,116
F204 AC-40/0,03	40	30	1	1SYF204005R1400	2,740
F204 AC-40/0,1	40	100	1	1SYF204005R2400	2,846
F204 AC-40/0,3	40	300	1	1SYF204005R3400	3,086
F204 AC-63/0,03	63	30	1	1SYF204005R1630	3,176
F204 AC-63/0,1	63	100	1	1SYF204005R2630	3,327
F204 AC-63/0,3	63	300	1	1SYF204005R3630	3,423
F204 AC-80/0,03	80	30	1	2CSF204005R1800	6,923
F204 AC-80/0,1	80	100	1	2CSF204005R2800	7,235
F204 AC-80/0,3	80	300	1	2CSF204005R3800	7,309
F204 AC-100/0,03	100	30	1	2CSF204005R1900	7,040
F204 AC-100/0,1	100	100	1	2CSF204005R2900	7,828
F204 AC-100/0,3	100	300	1	2CSF204005R3900	7,634
F204 AC-125/0,03	125	30	1	2CSF204001R1950	9,986
F204 AC-125/0,1	125	100	1	2CSF204001R2950	11,761
F204 AC-125/0,3	125	300	1	2CSF204001R3950	23,499

Residual current circuit breaker with overcurrent protection

RCBO - DS200M series

2



Features

- Complies to standard to IEC/EN 61009
- DS201 available in 4.5kA, 6kA & 10kA breaking capacity.
- Available in AC, A and APR types to meet all protection needs
- B and C characteristics with rated current up to 40 A available on all the versions
- Contact Position Indicator (CPI) to indicate the exact information of the circuit-breaker status
- Equipped with an Rfid tag accor. to standard ISO/IEC FCD 15693-3 to authenticate the product.
- Bidirectional cylinder-lift terminals for easier the parallel feed
- Flag indicators - Differential trip indicator - blue
 - Contact position indicator - green / red

Description	Current Rating (A)	Residual rated current (mA)	Pack Unit (Pc)	Ordering Code	LP (₹)
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RCBO 10kA AC Type - DS200M

DS201 M C6 AC30	6	30	1	2CSR275040R1064	2,479
DS201 M C6 AC100	6	100	1	2CSR275040R2064	2,491
DS201 M C6 AC300	6	300	1	2CSR275040R3064	2,586
DS201 M C10 AC30	10	30	1	2CSR275040R1104	2,479
DS201 M C10 AC100	10	100	1	2CSR275040R2104	2,586
DS201 M C10 AC300	10	300	1	2CSR275040R3104	2,724
DS201 M C16 AC30	16	30	1	2CSR275040R1164	2,479
DS201 M C16 AC100	16	100	1	2CSR275040R2164	2,586
DS201 M C16 AC300	16	300	1	2CSR275040R3164	2,724
DS201 M C20 AC30	20	30	1	2CSR275040R1204	2,479
DS201 M C20 AC100	20	100	1	2CSR275040R2204	2,586
DS201 M C20 AC300	20	300	1	2CSR275040R3204	2,724
DS201 M C25 AC30	25	30	1	2CSR275040R1254	2,479
DS201 M C25 AC100	25	100	1	2CSR275040R2254	2,586
DS201 M C25 AC300	25	300	1	2CSR275040R3254	2,724
DS201 M C32 AC30	32	30	1	2CSR275040R1324	2,694
DS201 M C32 AC100	32	100	1	2CSR275040R2324	2,769
DS201 M C32 AC300	32	300	1	2CSR275040R3324	2,861
DS201 M C40 AC30	40	30	1	2CSR275040R1404	3,033
DS201 M C40 AC100	40	100	1	2CSR275040R2404	3,092
DS201 M C40 AC300	40	300	1	2CSR275040R3404	3,153

Residual current circuit breaker with overcurrent protection blocks

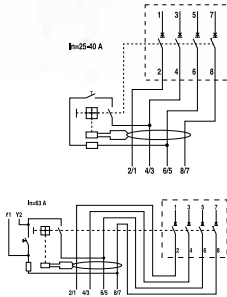
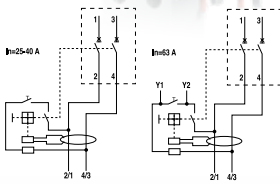
RCD Blocks - DDA200 series



DDA - 200 AC type

Function: RCD-block for assembly on site with MCBs S 200M series. Protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct (with $I\Delta n=30\text{ mA}$) contacts.

Standard: IEC/EN 61009 Ann. G

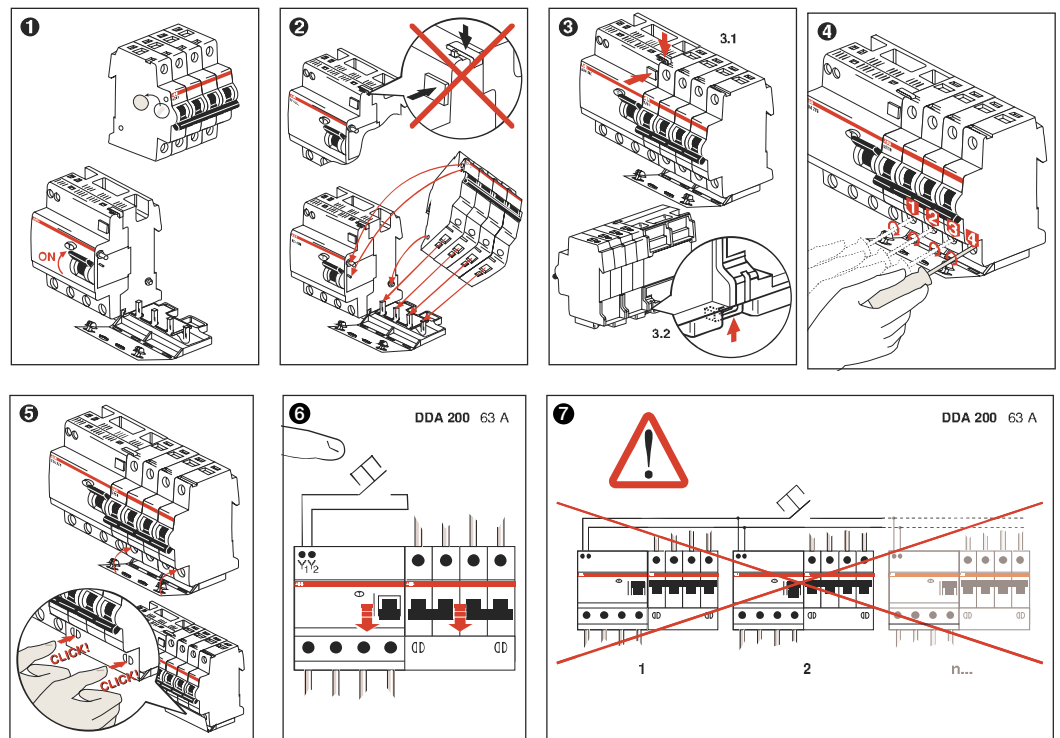


DDA 200 AC

Description	Current Rating (A)	Residual rated current (mA)	Pack Unit (Pc)	Ordering Code	LP (₹)
Two pole					
DDA202 AC-63/0.03	63	30	1	2CSB202001R1630	2,316
DDA202 AC-63/0.1	63	100	1	2CSB202001R2630	2,821
DDA202 AC-63/0.3	63	300	1	2CSB202001R3630	2,833

Four pole

DDA204 AC-25/0.03	25	30	1	2CSB204001R1250	2,176
DDA204 AC-40/0.03	40	30	1	2CSB204001R1400	2,254
DDA204 AC-63/0.03	63	30	1	2CSB204001R1630	2,387
DDA204 AC-25/0.1	25	100	1	2CSB204001R2250	2,419
DDA204 AC-40/0.1	40	100	1	2CSB204001R2400	2,570
DDA204 AC-63/0.1	63	100	1	2CSB204001R2630	3,073
DDA204 AC-25/0.3	25	300	1	2CSB204001R3250	2,480
DDA204 AC-40/0.3	40	300	1	2CSB204001R3400	2,669
DDA204 AC-63/0.3	63	300	1	2CSB204001R3630	2,963



Solution for unwanted tripping - AP-R type (high immunity) RCCB / RCBO

The ABB range of AP-R anti-disturbance residual current circuit-breakers and blocks was designed to overcome the problem of unwanted tripping due to overvoltages of atmospheric or operation origin.

The electronic circuit in these devices can distinguish between temporary leakage caused by disturbances on the mains and permanent leakage due to actual faults, only breaking the circuit in the latter case.

AP-R residual current circuit-breakers and blocks have a slight delay into the tripping time, but this does not compromise the safety limits set by the Standards in force (release time at $2 I_{\Delta n} = 150$ ms).

Compared with standard type breakers, AP-R residual current breakers are therefore characterised, for any given sensibility, by:

- Higher residual trip current
- Tripping time delay
- Better resistance to overvoltages, harmonics and impulse disturbances.

Guaranteeing conventional residual current protection, their installation in the electrical circuit therefore allows any unwanted tripping to be avoided in domestic and industrial systems in which service continuity is essential.

This delay makes the AP-R residual current devices especially

suited for installations involving motor starters/variable speed drives, fluorescent lamps or IT/electronic equipment.

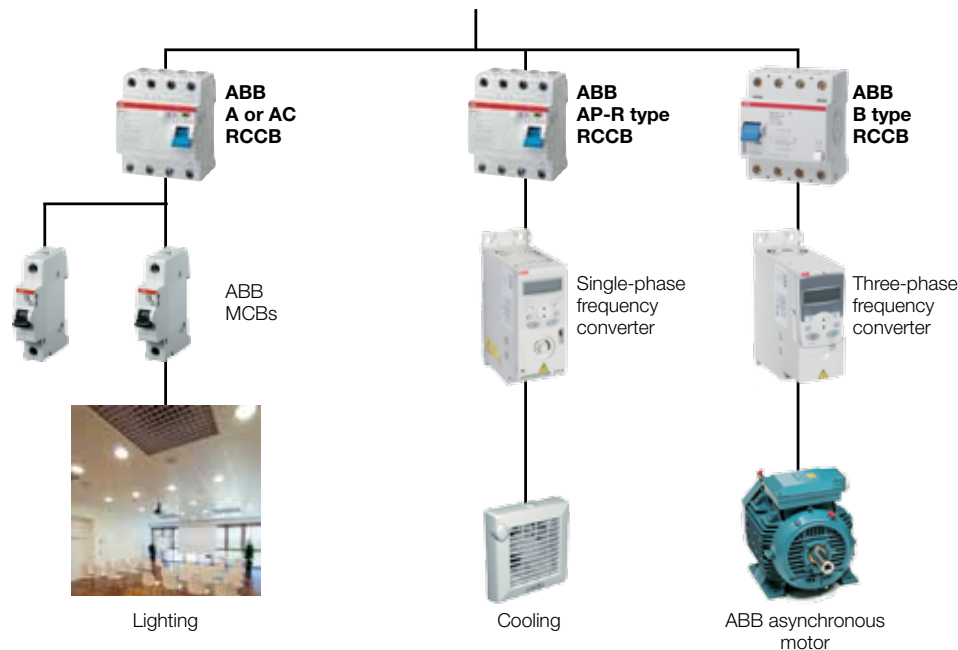
The use of multiple electronic reactors for the supply of fluorescent lamps instead generates permanent leakage currents and inrush currents that can cause nuisance tripping of a standard residual current breaker.

IT system loads and other electronic equipment (e.g. dimmers, computers, inverters) with capacitive input filters connected between the phases and ground can also generate permanent earth leakage currents whose sum may provoke the nuisance tripping of a standard residual current circuit breaker. For these situations, the AP-R breakers allow a greater number of devices to be connected to the installation.

Frequency converters include a rectifier section and an inverter section.

In case of fault within a single-phase frequency converter AP-R type RCDs provide complete protection, because an earth fault occurring downstream the inverter, produces an earth fault current with multi-frequency shape with high amount of harmonics.

While, in case of fault within a three-phase frequency converter, B type RCDs ensure complete protection because in case of insulation fault between the rectifier and the inverter or downstream the inverter we can have a smooth DC earth fault current.



RCCB - F 200 series: AP-R (high immunity)



Function: protection against the effects of sinusoidal alternating and direct pulsating earth fault currents, providing the best compromise between safety and continuity in the service thanks to the resistance to unwanted trippings; protection against indirect contacts and additional protection against direct ($I_{\Delta n}=30$ mA) contacts.

Application: residential, commercial, industrial. Standard: IEC/EN 61008

Surge current resistance (wave 8/20)=3000 A Marking: according to EN 61008

RCCB - F 200 series

Description	Current Rating (A)	Residual rated current (mA)	Packing	Ordering Code	LP (₹)
Two pole					
F202 A-25/0.03 AP-R	25	30	1	2CSF202401R1250	4,339
F202 A-40/0.03 AP-R	40	30	1	2CSF202401R1400	4,568
F202 A-63/0.03 AP-R	63	30	1	2CSF202401R1630	5,516
Four pole					
F204 A-25/0.03 AP-R	25	30	1	2CSF204401R1250	5,334
F204 A-40/0.03 AP-R	40	30	1	2CSF204401R1400	5,483
F204 A-63/0.03 AP-R	63	30	1	2CSF204401R1630	6,225

RCBO - DS200 series APR type (high immunity)

Function: protection against the effects of sinusoidal alternating and direct pulsating earth fault currents, providing an optimal compromise between safety and continuity of service, thanks to the resistance to unwanted tripping; protection against indirect contact and additional protection against direct ($I_{\Delta n}=30$ mA) contact; protection and isolation of resistive and inductive loads.

Application: residential, commercial, industrial. Standard: IEC/EN 61009

$I_{cn}=10$ kA

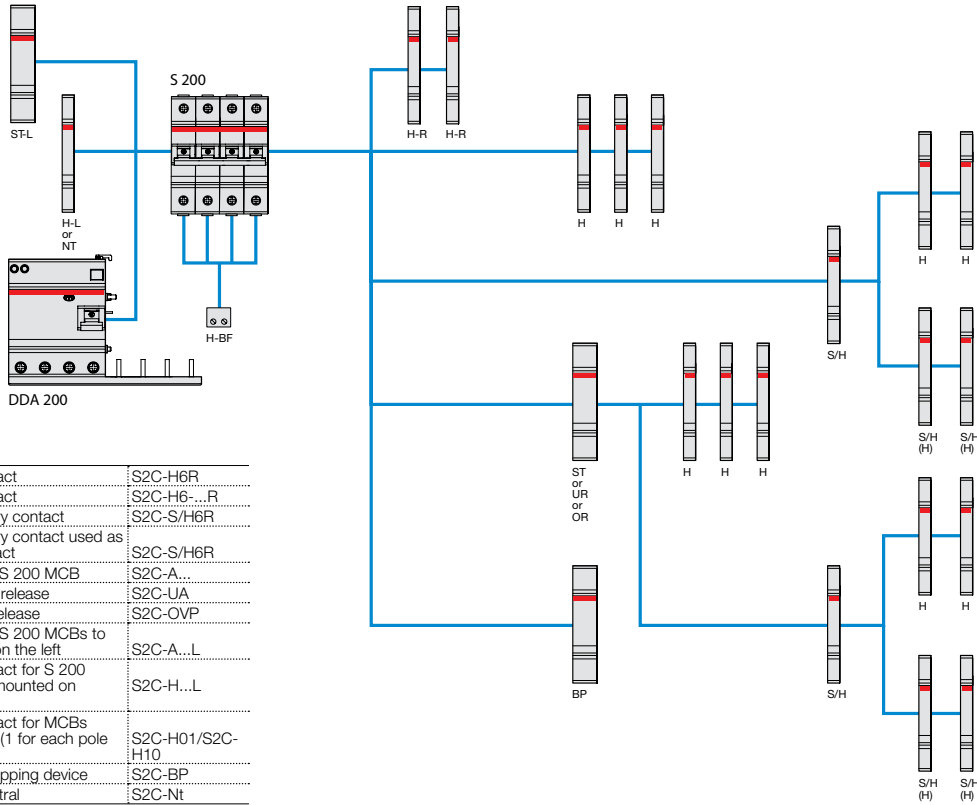
RCBO - DS200 series APR type

Description	Current Rating (A)	Residual rated current (mA)	Packing	Ordering Code	MRP.(₹)
DS201 M C6 APR30	6	30	1	2CSR275440R1064	4,609
DS201 M C10 APR30	10	30	1	2CSR275440R1104	4,609
DS201 M C16 APR30	16	30	1	2CSR275440R1164	4,609
DS201 M C20 APR30	20	30	1	2CSR275440R1204	4,609
DS201 M C25 APR30	25	30	1	2CSR275440R1254	4,609
DS201 M C32 APR30	32	30	1	2CSR275440R1324	4,763
DS201 M C40 APR30	40	30	1	2CSR275440R1404	4,787
DS201 M C6 APR100	6	100	1	2CSR275440R2064	5,398
DS201 M C10 APR100	10	100	1	2CSR275440R2104	5,398
DS201 M C16 APR100	16	100	1	2CSR275440R2164	5,398
DS201 M C20 APR100	20	100	1	2CSR275440R2204	5,398
DS201 M C25 APR100	25	100	1	2CSR275440R2254	5,398
DS201 M C32 APR100	32	100	1	2CSR275440R2324	5,500
DS201 M C40 APR100	40	100	1	2CSR275440R2404	5,602
DS201 M C6 APR300	6	300	1	2CSR275440R3064	5,704
DS201 M C10 APR300	10	300	1	2CSR275440R3104	5,704
DS201 M C16 APR300	16	300	1	2CSR275440R3164	5,704
DS201 M C20 APR300	20	300	1	2CSR275440R3204	5,704
DS201 M C25 APR300	25	300	1	2CSR275440R3254	6,437
DS201 M C32 APR300	32	300	1	2CSR275440R3324	6,437
DS201 M C40 APR300	40	300	1	2CSR275440R3404	6,437

Auxiliary elements and accessories for MCBs S 200 and RCDs F 200 and DS 200 series

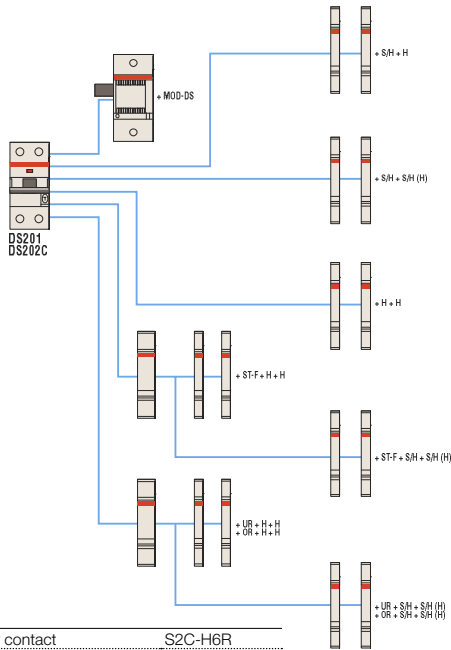
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Combination of auxiliary elements with S 200, DDA 200 + S 200 or DS 200



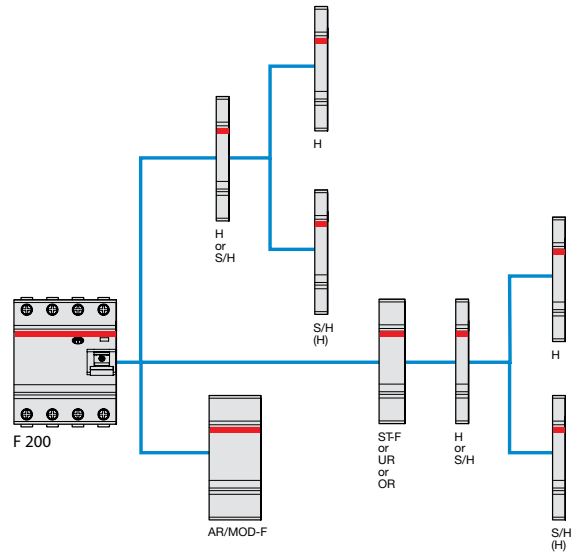
H	Auxiliary contact	S2C-H6R
H-R	Auxiliary contact	S2C-H6-...R
S/H	Signal/Auxiliary contact	S2C-S/H6R
S/H (H)	Signal/Auxiliary contact used as auxiliary contact	S2C-S/H6R
ST	Shunt trip for S 200 MCB	S2C-A...
UR	Undervoltage release	S2C-UA
OR	Overvoltage release	S2C-OVP
ST-L	Shunt trip for S 200 MCBs to be mounted on the left	S2C-A...L
H-L	Auxiliary contact for S 200 MCBs to be mounted on the left	S2C-H...L
H-BF	Auxiliary contact for MCBs bottom fitting (1 for each pole of MCB)	S2C-H01/S2C-H10
BP	Mechanical tripping device	S2C-BP
NT	Switched neutral	S2C-Nt

Combination of auxiliary elements with DS201, DS202C



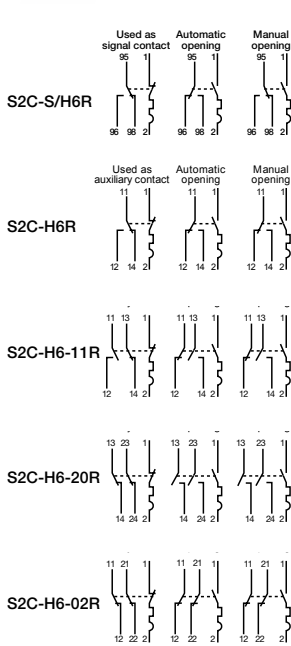
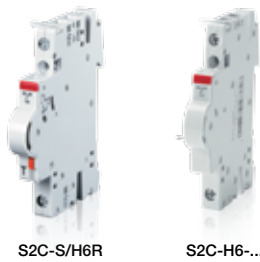
H	Auxiliary contact	S2C-H6R
S/H	Signal/Auxiliary contact	S2C-S/H6R
S/H (H)	Signal/Auxiliary contact used as auxiliary contact	S2C-S/H6R
ST-F	Shunt trip for F 200 RCCB	F2C-A
UR	Undervoltage release	S2C-UA
OR	Overvoltage release	S2C-OVP
MOD-DS	Motor operating device	DS2C-CM

Combination of auxiliary elements with F 200



H	Auxiliary contact	S2C-H6R
S/H	Signal/Auxiliary contact	S2C-S/H6R
S/H (H)	Signal/Auxiliary contact used as auxiliary contact	S2C-S/H6R
UR	Undervoltage release	S2C-UA
OR	Overvoltage release	S2C-OVP
AR	Auto reclosing unit	F2C-ARI
MOD-F	Motor operating device	F2C-CM
ST-F	Shunt trip for F 200 RCCB	F2C-A

Selection tables



Signal/auxiliary contacts

Function S2C-S/H6R: choice through a selector between indication of the position of the device's contacts and signalling of the fault (overcurrent/short-circuit for MCBs and RCBOs; earth fault for RCCBs and RCBOs). Suitable for MCBs S 200 series, RCCBs F 200 series, RCBOs DS201, DS202C, DS 200 series.

Function S2C-H6R: indication of the position of the device's contacts. Suitable for MCBs S200 series. To be mounted on the left side of the MCBs thanks to the special pin. They are not suitable to be mounted together with RCD-block DDA200.

Function S2C-H6-xxR: indication of the position of the MCB contact. Mounted on the right side. They are not suitable to be mounted together with other right side mounted auxiliary contacts.

Description	Order details	Packing	Ordering Code	L.P.(₹)
Auxiliary Contact, 1CO (Right side)	S2C-H6R	1	2CDS200912R0001	594
Auxiliary Contact, 1NO / 1NC (Right side)	S2C-H6-11R	1	2CDS200946R0001	598
Auxiliary Contact, 2NO (Right side)	S2C-H6-20R	1	2CDS200946R0002	606
Auxiliary Contact, 2NC (Right side)	S2C-H6-02R	1	2CDS200946R0003	556
Signal contact / Auxiliary switch, 1CO (Right side)	S2C-S/H6R	1	2CDS200922R0001	1,058

Auxiliary contacts mounting on the left side

Description	Order details	Packing	Ordering Code	L.P.(₹)
Auxiliary Contact, 1NO / 1NC (Left side)	S2C-H11L	1	2CDS200936R0001	686
Auxiliary Contact, 2NO (Left side)	S2C-H20L	1	2CDS200936R0002	717
Auxiliary Contact, 2NC (Left side)	S2C-H02L	1	2CDS200936R0003	569

Bottom-fitting auxiliary contacts for S 200, S 200 M, S 200 P, S 200 S

Description	Order details	Packing	Ordering Code	L.P.(₹)
Bottom fitting Aux contact, 1NC	S2C-H01	1	2CDS200970R0001	936
Bottom fitting Aux contact, 1NO	S2C-H10	1	2CDS200970R0002	919



Shunt trips

Function: remote opening of the device when a voltage is applied. Suitable for MCBs S 200 series and RCBOs DS 200 series.

Description	Order details	Packing	Ordering Code	L.P.(₹)
Shunt Trip, 12...60V AC/DC	S2C-A1	1	2CDS200909R0001	2,647
Shunt Trip, 110...415V AC, 110...250 DC	S2C-A2	1	2CDS200909R0002	2,649

Function: remote opening of the device when a voltage is applied. Suitable for RCCBs F 200 series and RCBOs DS201 and DS202C.

It can be used with MCBs SN201 series by means of SN201-IH interface module.

Description	Order details	Packing	Ordering Code	L.P.(₹)
Shunt Trip, 12...60V AC/DC	F2C-A1	1	2CSS200933R0011	3,227
Shunt Trip, 110...415V AC/ 110...250V DC	F2C-A2	1	2CSS200933R0012	3,227

Auxiliary elements for MCBs S 200, RCDs F 200 and DS 200

Selection tables

2



Undervoltage releases

Function: protection of the load in the event of a voltage drop (between 70% and 35% of its rated value); positive safety (device's tripping when the voltage is disconnected) emergency stop by means of a button. Suitable for MCBs S 200 series, RCCBs F200 series and RCBOs DS201, DS202C, DS 200 series It can be used with MCBs SN201 series by means of SN201-IH interface module.

Description	Order details	Packing	Ordering Code	L.P.(₹)
Undervoltage Release, 12V DC	S2C-UA 12 DC	1	2CSS200911R0001	3,227
Undervoltage Release, 24V AC	S2C-UA 24 AC	1	2CSS200911R0002	3,227
Undervoltage Release, 24V DC	S2C-UA 24 DC	1	2CSS200911R0007	3,227
Undervoltage Release, 48V AC	S2C-UA 48 AC	1	2CSS200911R0003	3,227
Undervoltage Release, 48V DC	S2C-UA 48 DC	1	2CSS200911R0008	3,227
Undervoltage Release, 110V AC	S2C-UA 110 AC	1	2CSS200911R0004	3,101
Undervoltage Release, 110V DC	S2C-UA 110 DC	1	2CSS200911R0009	3,227
Undervoltage Release, 230V AC	S2C-UA 230 AC	1	2CSS200911R0005	3,402
Undervoltage Release, 230V DC	S2C-UA 230 DC	1	2CSS200911R0010	3,227
Undervoltage Release, 400V AC	S2C-UA 400 AC	1	2CSS200911R0006	3,227



Overvoltage releases

Function: monitoring voltage between the neutral and phase; when an overvoltage reaches the threshold value, the OVP device causes the tripping of the associated MCB or RCCB.

Suitable for MCBs of the S200 series up to 63 A, and RCCBs of the F200 series up to 100 A and RCBOs DS201 and DS202C series.

Description	Order details	Packing	Ordering Code	L.P.(₹)
Over Voltage Release (Max tripping : 275 V AC)	S2C-OVP1	1	2CSS200910R0005	4,054
Over Voltage Release (Max tripping : 290 V AC)	S2C-OVP2	1	2CSS200993R0005	4,034



Hand operated neutral

The hand operated neutral has to be mounted to the left side of the MCB and be snapped on the DIN rail. It is used for measuring duties where the neutral conductor must be in the open position. Due to the special design of the handle - when switching ON the MCB – the neutral will make before the MCB is closed.

The S2C - Nt is not to switch with a tool (screw driver).

Description	Order details	Packing	Ordering Code	L.P.(₹)
Hand operated Neutral (Right side)	S2C-NT	1	2CDS200918R0001	608



Auxiliary elements for MCBs S800 series

Auxiliary contact

Description	Order details	Packing	Ordering Code	L.P.(₹)
Auxiliary contact	S800-AUX	1	2CCS800900R0011	2,075

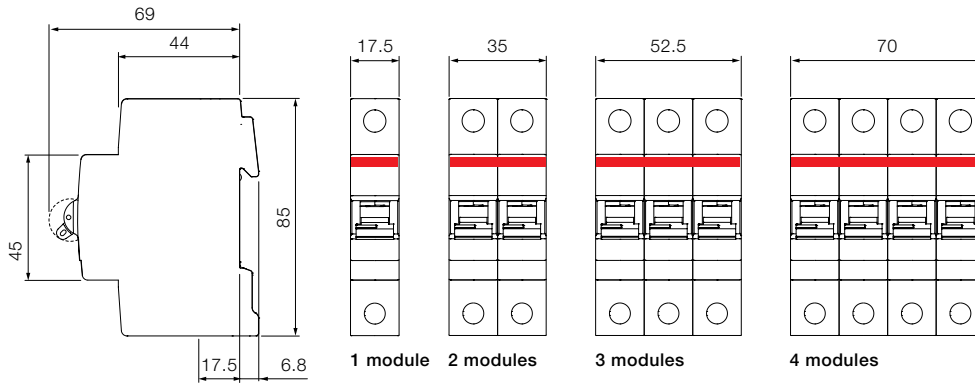


Combined auxiliary and signal contact

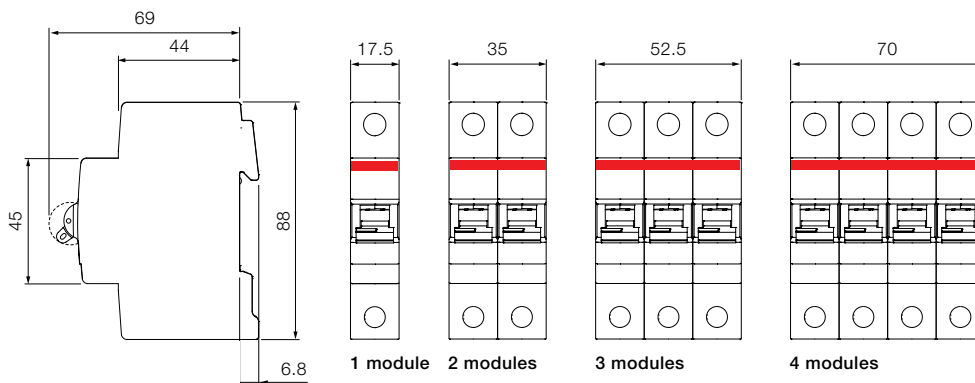
Description	Order details	Packing	Ordering Code	L.P.(₹)
Auxiliary/signal contact	S800-AUX/ALT	1	2CCS800900R0021	2,477

Overall dimensions

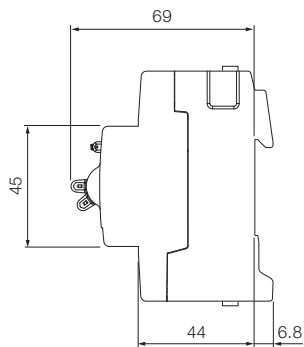
MCB - (SH200) and Isolator (SHD)



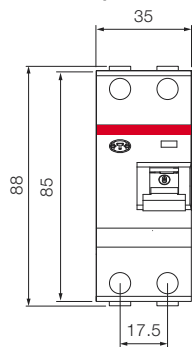
MCB - (S200)



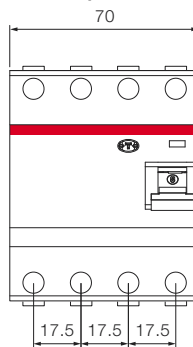
RCCB - (F200)



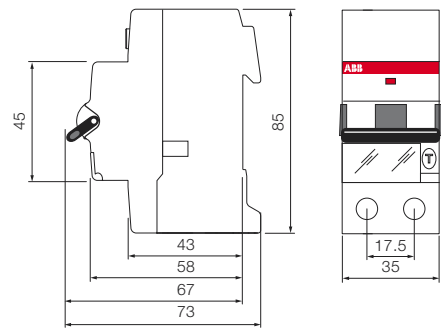
Two pole



Four pole



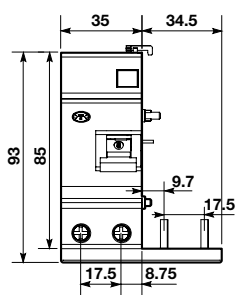
RCBO (DS200)



DDA 200

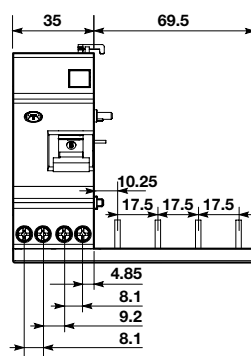
Two pole

In=25-63 A



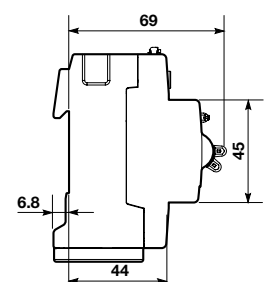
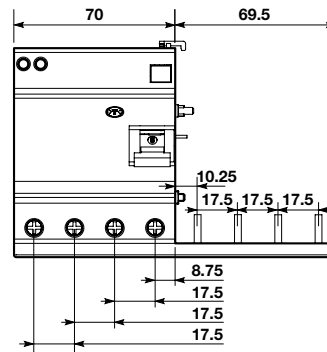
Four pole

In=25-40 A

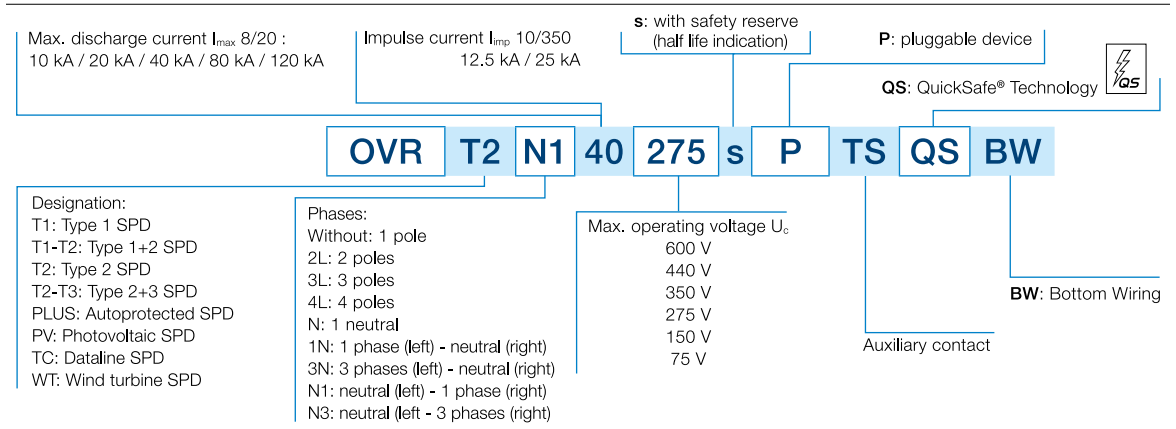


Four pole

In=63 A



Surge protection devices - The new OVR QuickSafe®



Type 1 - Spark Gap Type

Type 1 SPDs can be installed at the entrance in the main switch board for protection of electrical installation and equipments against direct lightning surges.



Description	Max. Continuous Operating Voltage U_c (V)	I_{imp} in kA (10/350us wave)	I_{max} in kA (8/20us wave)	No of Modules	Ordering Code	L.P.(₹)
OVR SO 100 400	255	25	-	4	2CTB815101R9600	14,043
OVR T1 3N 25 255-7	255	25	60	5	2CTB815101R8800	24,138
OVR T1-T2 3N 12.5-275s P QS	275	12.5	80	4	2CTB815710R1900	15,570
OVR T1-T2 3N 12.5-275s P TS QS	275	12.5	80	4	2CTB815710R0700	17,906
OVR T1-T2 3N 12.5-440s P QS	440	12.5	80	4	2CTB815710R4800	18,684
OVR T1-T2 3N 12.5-440s P TS QS	440	12.5	80	4	2CTB815710R3600	21,486

Type 2 - Metal Oxide Varistor

Type 2 SPDs can be installed at the sub-distribution switch board for protection of electrical installation and equipments against indirect lightning and switching surges.



Description	Max. Continuous Operating Voltage U_c (V)	I_{max} in kA (8/20us wave)	No of Modules	Ordering Code	L.P.(₹)
Single pole					
OVR T2 40-275 P QS	275	40	1	2CTB803871R2300	2,638
OVR T2 40-275s P QS	275	40	1	2CTB815704R1200	3,897
OVR T2 40-275 P TS QS	275	40	1	2CTB803871R1700	3,359
OVR T2 40-440 P QS	440	40	1	2CTB803871R1200	2,689
OVR T2 40-440s P QS	440	40	1	2CTB815704R4100	3,703
OVR T2 80-275s P QS	275	80	1	2CTB815708R1200	4,031
OVR T2 80-275s P TS QS	275	80	1	2CTB815708R0000	4,964
OVR T2 80-440s P QS	440	80	1	2CTB815708R4100	3,643
OVR T2 80-440s P TS QS	440	80	1	2CTB815708R2900	4,574

Single pole + Neutral

OVR T2 1N 40-275 P QS	275	40	2	2CTB803972R1100	5,613
OVR T2 1N 40-275s P QS	275	40	2	2CTB815704R1400	7,074
OVR T2 1N 40-275 P TS QS	275	40	2	2CTB803972R0500	6,372
OVR T2 1N 40-275s P TS QS	275	40	2	2CTB815704R0200	7,743
OVR T2 1N 40-350 P QS	350	40	2	2CTB803982R1100	6,063
OVR T2 1N 40-350 P TS QS	350	40	2	2CTB803982R0500	6,880
OVR T2 1N 80-275s P QS	275	80	2	2CTB815708R1400	7,448
OVR T2 1N 80-275s P TS QS	275	80	2	2CTB815708R0200	8,223

Surge protection devices (OVR)

Three pole + Neutral



Description	Max. Continuous Operating Voltage U _c (V)	I max in kA (8/20us wave)	No of Modules	Ordering Code	L.P.(₹)
OVR T2 3N 40-275 P QS	275	40	4	2CTB803973R1100	9,590
OVR T2 3N 40-275s P QS	275	40	4	2CTB815704R2000	13,664
OVR T2 3N 40-275 P TS QS	275	40	4	2CTB803973R0500	12,209
OVR T2 3N 40-275s P TS QS	275	40	4	2CTB815704R0800	16,018
OVR T2 3N 40-350 P QS	350	40	4	2CTB803983R1100	10,356
OVR T2 3N 40-350 P TS QS	350	40	4	2CTB803983R0500	15,547
OVR T2 3N 40-440 P QS	440	40	4	2CTB803973R1400	9,877
OVR T2 3N 40-440 P TS QS	440	40	4	2CTB803973R1500	12,360
OVR T2 3N 40-440s P TS QS	440	40	4	2CTB815704R3700	28,831
OVR T2 3N 80-275s P QS	275	80	4	2CTB815708R2000	14,287
OVR T2 3N 80-275s P TS QS	275	80	4	2CTB815708R0800	17,020
OVR T2 3N 80-440s P QS	440	80	4	2CTB815708R4900	12,469
OVR T2 3N 80-440s P TS QS	440	80	4	2CTB815708R3700	15,047

Surge arrester for Data line protection



Description	Max. Continuous Operating Voltage U _c (V)	I max in kA (8/20us wave)	No of Modules	Ordering Code	L.P.(₹)
OVR TC 06V P	7	10	1/2	2CTB804820R0000	7,006
OVR TC 12V P	14	10	1/2	2CTB804820R0100	5,875
OVR TC 24V P	27	10	1/2	2CTB804820R0200	6,160
OVR TC 48V P	53	10	1/2	2CTB804820R0300	6,028
OVR TC 200V P	220	10	1/2	2CTB804820R0400	4,763
OVR TC 200 FR P	220	10	1/2	2CTB804820R0500	4,907

Surge arrester for Photovoltaic applications

Description	Max. Continuous Operating Voltage U _c (V)	I max in kA (8/20us wave)	No of Modules	Ordering Code	L.P.(₹)
OVR PV T2 40-1000 P QS	1100	40	3	2CTB804153R2400	3,514
OVR PV T2 40-1000 P TS QS	1100	40	3	2CTB804153R2500	4,443

Modular DIN Rail components



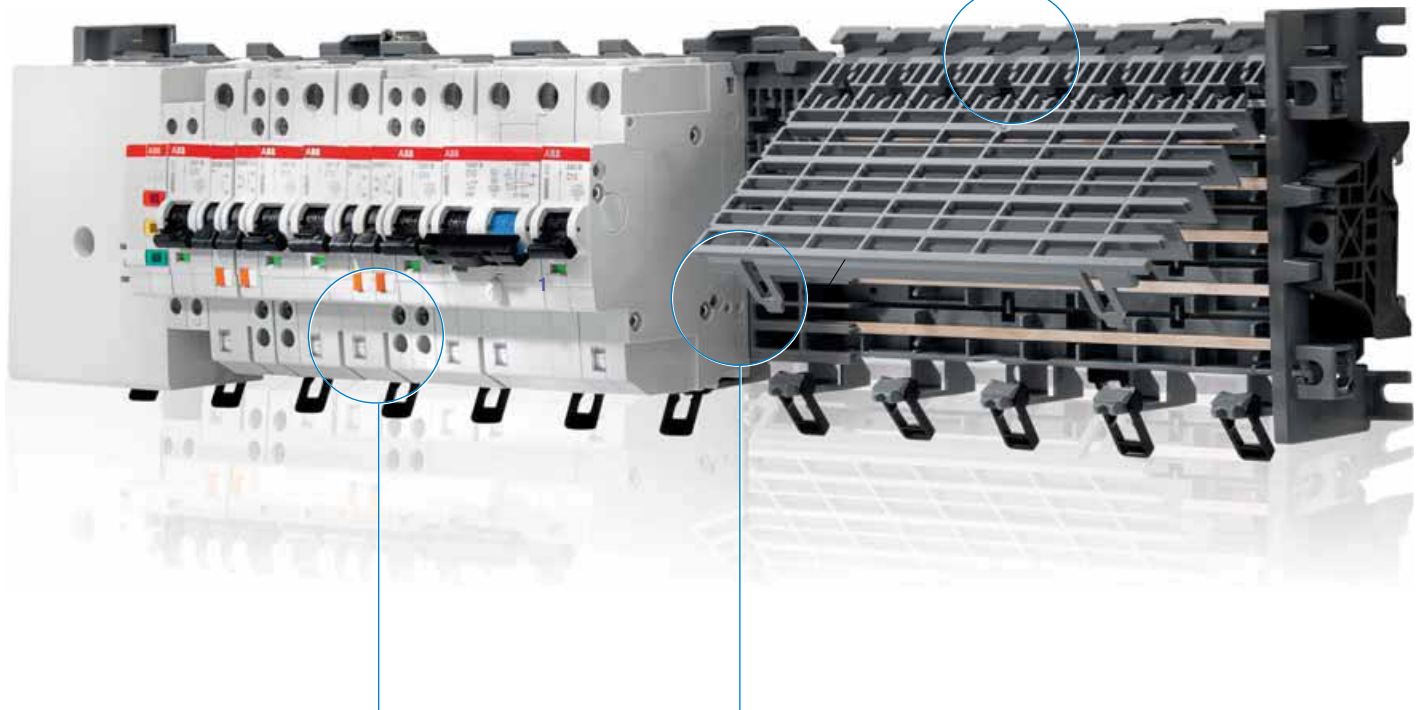
Description	Ordering Code	L.P.(₹)
AT3-R, Electro mechanical, 3 module time switch with reserve	2CSM204235R0601	2,822
D1, Digital time switch, 1 channel	2CSM258763R0621	6,434
D2, Digital time switch, 2 channel	2CSM256313R0621	10,054
T1	2CSM295563R1341	5,736
T1 PLUS	2CSM295793R1341	6,130
T1 POLE	2CSM295753R1341	5,340
LS-D	2CSM295723R1341	1,938
TWA-1	2CSM204365R1341	13,942
TWA-2	2CSM204375R1341	17,403
E232-230, Stair case time switch (1-7 mins, with 15 secs incremental adjustable)	2CDE11000R0501	3,989
E232-230N, Stair case time switch (0.5-20 mins adjustable)	2CDE110003R0511	5,178
E213-16-002, double pole change over switch, 16 A	2CCA703045R0001	1,618
E213-25-002, double pole change over switch, 25 A	2CCA703046R0001	1,434
E214-16-202, group switch, 16 A (I-O-II)	2CCA703030R0001	1,827
E214-25-202, group switch, 16 A (I-O-II)	2CCA703031R0001	2,044

SMISLINE TP plug-in system

Changes are never been easier

SMISLINE TP ensures that load-free devices and components can be snapped on and off under voltage without the need for additional personal protective equipment to guard against electrical hazards.

2



It opens up to a completely new prospects for you when it comes to installation, operation and flexibility.

The world's first pluggable socket system.

SMISSLINE TP plug-in system

Changes are never been easier



Even safer: Protection against electrical hazards

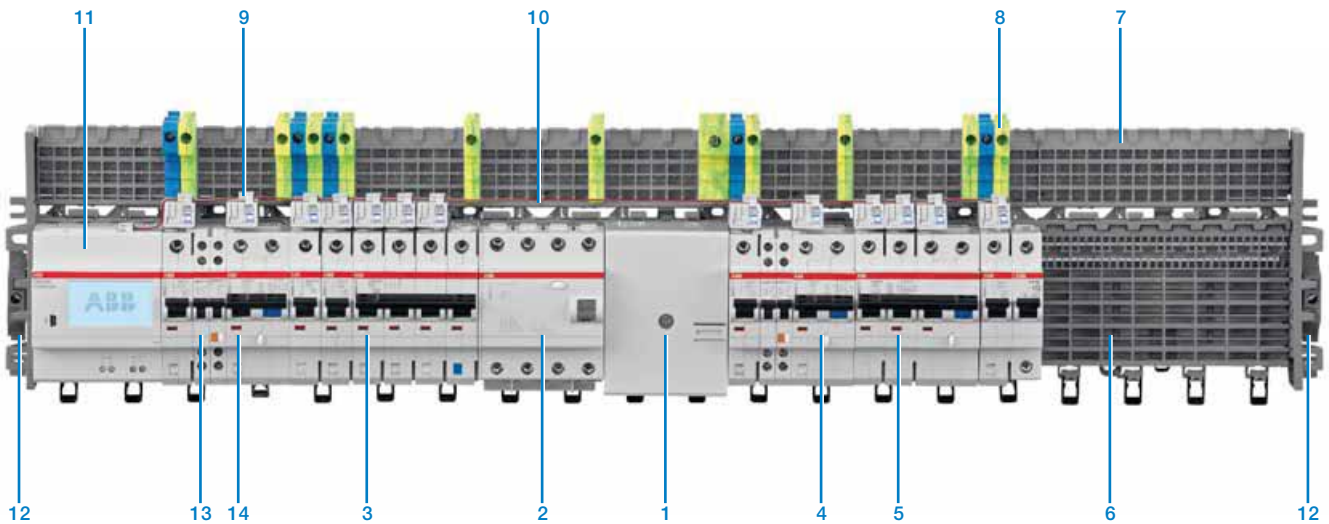
We have upgraded our unique SMISSLINE socket system even further through the addition of a pioneering innovation. With the new SMISSLINE TP system, components can now be plugged in or unplugged load-free without any risk from electrical current running through the body.

The SMISSLINE TP pluggable socket system is completely fingersafe (IP2XB) – when devices are plugged in and unplugged, the system is always touch-proof. This means that SMISSLINE TP prevents any danger to personnel from switching arcs or accidental arcing.

Even more flexible: make additions and changes during ongoing operation

Pluggable devices can be added and changed quickly, safely and simply during ongoing operation. And this can be done without any need for personal protective equipment.

This means that you benefit from more flexibility, savings on installation and maintenance – and improved safety. SMISSLINE TP provides greater availability and operating safety than conventional systems.



- | | | |
|------------------------------------|---|----------------------|
| 1 Supply terminal | 6 Socket IP20 | 11 Control unit CMS |
| 2 Surge arrester OVR404 | 7 Additional socket IP20 | 12 Socket end piece |
| 3 Miniature circuit breaker S403NP | 8 Terminals | 13 Auxiliary contact |
| 4 RCBO FS401 | 9 Sensor for current measurement system | 14 Signal contact |
| 5 RCBO FS403 | 10 Cable Bus system CMS | |

ELR, Earth leakage relay - (Front panel mountable)

2



Front panel residual current relays are electronic devices used in combination with an external toroidal transformer. They are according to the protection standard IEC/EN 60947-2 Annex-M.

The sensitivity can be set from 0.03 A to 30 A, while the tripping time from 0 to 5 seconds.

Residual current relays are available in versions 48x48 mm, 72x72 mm, and 96x96 mm.

The Fail Safe function is available for versions ELR48P, ELR72P and ELR96P: the contacts switch when there is no auxiliary power.

The ELR96PF version is equipped with Fail Safe function, fault memory LED, and a frequency filter, that ensure continuity of service in the presence of harmonics.

ELR96PD has (in addition to these functions) a digital display for an instantaneous view of the residual current Δn .

Description	Operating Voltage	Pack	Ordering Code	L.P.(₹)
ELR48P	110 V a.c./d.c. - 230 V a.c.	1	2CSG252211R1202	Upon request
ELR48V24P	24-48 V a.c./d.c.	1	2CSG452211R1202	
ELR72	110 V a.c./d.c. - 230 V a.c.	1	2CSG252120R1202	
ELR72V24	24-48 V a.c./d.c.	1	2CSG452120R1202	
ELR72P	110-230-400 V a.c.	1	2CSG152424R1202	
ELR72V24P	24-48 V a.c./d.c.	1	2CSG452424R1202	
ELR96	110-230-400 V a.c.	1	2CSG152130R1202	
ELR96V24	24-48 V a.c./d.c.	1	2CSG452130R1202	
ELR96P	110-230-400 V a.c.	1	2CSG152434R1202	
ELR96V24P	24-48 V a.c./d.c.	1	2CSG452434R1202	
ELR96PF	110-230-400 V a.c.	1	2CSG152435R1202	
ELR96PD	110-230-400 V a.c.	1	2CSG152436R1202	

RD3, Residual current relays - (DIN rail mountable)



The RD3 family of electronic residual current relays provides residual current protection and monitoring functions according to IEC/EN 60947-2:2006 annex M and can be used in conjunction with all S 200 automatic devices and Tmax range moulded case devices up to T5, for industrial installations.

The RD3 residual current relays can provide status indications through two output contacts.

Description	Operating Voltage	Pack	Ordering Code	L.P.(₹)
RD3-48	12-48 a.c./d.c.	1	2CSJ201001R0001	Upon request
RD3	230-400 a.c.	1	2CSJ201001R0002	
RD3M-48	12-48 a.c./d.c.	1	2CSJ202001R0001	
RD3M	230-400 a.c.	1	2CSJ202001R0002	
RD3P-48	12-48 a.c./d.c.	1	2CSJ203001R0001	
RD3P	230-400 a.c.	1	2CSJ203001R0002	

Toroidal transformers



Description	Toroid useful diameter (mm)	Min measurable current (mA)	Max rated current ¹ (A)	Max capacity ² (A)	Pack	Ordering Code	L.P.(₹)
TRM	29 (modular version)	30	65	160	1	2CSM029000R1211	Upon request
TR1	35	30	75	250	1	2CSG035100R1211	
TR2	60	30	85	400	1	2CSG060100R1211	
TR3	80	100	160	800	1	2CSG080100R1211	
TR4	110	100	250	1,250	1	2CSG110100R1211	
TR4/A	110 (openable version)	300	250	1,250	1	2CSG110200R1211	
TR160	160	300	400	2,000	1	2CSG160100R1211	
TR160A	160 (openable version)	500	400	2,000	1	2CSG160200R1211	
TR5	210	300	630	3,200	1	2CSG210100R1211	
TR5/A	210 (openable version)	500	630	3,200	1	2CSG210200R1211	

¹ Shows toroidal transformers selection for use with ELR according to IEC/EN 60947-2 Annex M in combination with MCBs S200 range and MCCBs Tmax range upto T5

² Shows the technical features of the toroidal transformers

Measurement devices – DMTME multimeters



DMTME multimeters

The instruments DMTME are digital multimeters that allow the measurement, in TRMS mode, of the principal electrical parameters in three-phase and single-phase 230/400 Vac networks, including the max/min/average detection of the main electrical parameters and the active and reactive energy count. The multiple measured variables are displayed locally on four red 7-segment LED displays providing easy readability and simultaneous display of the measures of the electrical parameters of the phases individually and of the whole network.

The instruments DMTME combine, in a single instrument, the functions of multiple devices: voltmeter, ammeter, power factor meter, wattmeter, varmeter, frequency meter, active and reactive energy meters; it allows remarkable financial savings thanks to the reduction of space taken up in the panel and also of time required for cabling, along with the advantage of providing clear readings on a single device.

The DMTME-I-485, DMTME-I-485-96 and DMTME-I-485-72 models are additionally equipped with two digital relays, fully programmable as either pulse outputs for remote metering of energy consumption, or as alarm outputs. The output relay can be set as NO or NC.

There is also an RS485 port for communicating the measured parameters and alarms over a Modbus network; used in addition to a converter of the CUS series, it allows direct connection to a central PC for remote supervision and control of the electrical network.

All versions come complete with Mini CD containing the instruction manual, technical documentation, Modbus communication protocol and the DMTME-SW tool, intended to be a first-hand PC-based application for the remote visualization of the measures.

DMTME modular multimeters

TRMS measure of VL-L, VL-N, A, W, Var, VA, kWh, kVar, PF in 230/400 V a.c. lines. Indirect connection through CT .../5 A. Auxiliary supply at 110 V a.c. and 230 V a.c.

Product Description	RS485	Program.	Pack	Ordering Code	L.P.(₹)
DMTME	-	-	1	2CSM170040R1021	Upon request
DMTME-I-485	✓	2	1	2CSM180050R1021	Upon request

DMTME-96 panel multimeters

Auxiliary supply 230 V a.c. and 110 V a.c.

Product Description	RS485	Program.	Dimension	Pack	Ordering Code	L.P.(₹)
DMTME-96	-	-	96x96	1	2CSG133030R4022	Upon request
DMTME-I-485-96	✓	2	96x96	1	2CSG163030R4022	Upon request

DMTME-72 panel multimeters

Auxiliary supply 230 V a.c. and 400 V a.c.

Product Description	RS485	Program.	Dimension	Pack	Ordering Code	L.P.(₹)
DMTME-72	-	-	72x72	1	2CSG132030R4022	Upon request
DMTME-I-485-72	✓	2	96x96	1	2CSG162030R4022	Upon request

M2M - Network analyser

The measure of efficiency



2

The new M2M network analyser has advanced analysis functions which allow effective measurement of the main single-phase or three-phase electrical parameters: voltage, current, frequency, power factor, active and reactive power, active and reactive energy.

Fitted to low- and medium-voltage electrical panels, the new analyser allows the measurement and analysis in real time of electrical parameters, also verifying the quality of the energy thanks to THD measurement.

M2M also keeps the system's consumption under control, giving figures in CO₂ kg and Euros to ensure more efficient and rational use of energy. Bidirectional metering of energy and power on the 4 quadrants allows both production and consumption of energy to be monitored with a single device. Aside from optimising the use of loads, real time measurement contributes to containing both environmental and budgetary impact.

All information gathered by the analyser can be transmitted quickly to remote locations through specific communication interfaces – RS485, RJ45 or RS232, with the support of numerous protocols including Modbus RTU, Modbus TCP/IP and Profibus DP.

Interaction with the control and supervision systems is possible via different inputs and outputs, all programmable.

Features

- The importance of control
Measurement and advanced analysis of electrical parameters
- The value of flexibility
Versatility in its different applications and completeness of functions
- The advantages of communication
Intuitive analyser with multiple integrated functions, which communicates also via digital and analogue I/O
- Easy to install
- Ease of use

Type	Description	Protocol	Serial port	Ordering Code	L.P.(₹)
M2M	2 digital outputs programmable as threshold alarms or pulses	-	-	2CSG299883R4052	Upon request
M2M MODBUS	2 digital outputs programmable as threshold alarms or pulses	Modbus RTU	RS485	2CSG299893R4052	
M2M ETHERNET	2 digital outputs programmable as threshold alarms or pulses	Modbus TCP/IP	RJ45	2CSG299903R4052	
M2M PROFIBUS	2 digital outputs programmable as threshold alarms or pulses	Profibus	RS232	2CSG299913R4052	
M2M ALARM	2 digital outputs programmable as threshold alarms or pulses, 2 programmable relay outputs	Modbus RTU	RS485	2CSG299923R4052	
M2M I/O	2 digital outputs programmable as threshold alarms or pulses, 3 digital inputs and 2 analogue outputs	Modbus RTU	RS485	2CSG299933R4052	

Distribution boards

Elegance series

Elegance series (E-series) Distribution Boards are available in texture grey (Color code - RAL7035).

Construction

Blending aesthetics, functionality and safety, the E-series of ABB Distribution Boards are manufactured with high precision, and high quality CRCA steel sheets. These Distribution Boards undergo a seven-tank phosphating process to ensure anti-rust conditioning, superior finish and lasting strength. Premier quality powder coating is applied using the latest techniques

Colour

ABB's E-series of Distribution Boards is available in Texture Grey (RAL 7035)

Installation

The E-Series of ABB Distribution Boards are universal Mounting Type, hence can be flush or wall Mounted. These Distribution Boards are provided with top and bottom removable gland plates with adequate no of Knock outs, which enable easy installation and connection of conduits of sizes up to 32mm dia Knock out

Protection

E-series Distribution Boards offer three types of protection-IP43 & IP54 degree with a metal door and IP30 degree without a door. The highest degree of attention has been paid to the safety aspect of the Distribution Boards, considering that they are installed in close proximity to people. An intermediate plate ensures total safety, as no live parts are exposed when the door is opened.

2



Distribution boards

Elegance series

SPN DB -E-SHC

Horizontal single phase consumer unit with provision for incoming 2 pole (MCB / Isolator / RCD) and single phase outgoing. Suitable for surface and flush mounting

IP 30

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SHC WD 4	4 way	4+2	NSYN8690SPNWD04	812
E-SHC WD 6	6 way	6+2	NSYN8690SPNWD06	875
E-SHC WD 8	8 way	8+2	NSYN8690SPNWD08	934
E-SHC WD 10	10 way	10+2	NSYN8690SPNWD10	1,101
E-SHC WD 12	12 way	12+2	NSYN8690SPNWD12	1,266
E-SHC WD 14	14 way	14+2	NSYN8690SPNWD14	1,291
E-SHC WD 16	16 way	16+2	NSYN8690SPNWD16	1,634
E-SHC WD 20	20 way	20+2	NSYN8690SPNWD20	1,839

IP 43 with metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SHC M 4	4 way	4+2	NSYN8690SPN0M04	1,226
E-SHC M 6	6 way	6+2	NSYN8690SPN0M06	1,281
E-SHC M 8	8 way	8+2	NSYN8690SPN0M08	1,504
E-SHC M 10	10 way	10+2	NSYN8690SPN0M10	1,548
E-SHC M 12	12 way	12+2	NSYN8690SPN0M12	1,715
E-SHC M 14	14 way	14+2	NSYN8690SPN0M14	1,848
E-SHC M 16	16 way	16+2	NSYN8690SPN0M16	2,260
E-SHC M 20	20 way	20+2	NSYN8690SPN0M20	2,523

IP 43 Metal Door with Acrylic

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SHC P 4	4 way	4+2	NSYN8690SPN0P04	1,249
E-SHC P 6	6 way	6+2	NSYN8690SPN0P06	1,530
E-SHC P 8	8 way	8+2	NSYN8690SPN0P08	1,552
E-SHC P 10	10 way	10+2	NSYN8690SPN0P10	1,922
E-SHC P 12	12 way	12+2	NSYN8690SPN0P12	1,940
E-SHC P 14	14 way	14+2	NSYN8690SPN0P14	2,134
E-SHC P 16	16 way	16+2	NSYN8690SPN0P16	2,508
E-SHC P 20	20 way	20+2	NSYN8690SPN0P20	3,196

IP 54

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SHC M WP 4	4 way	4+2	NSYN8690SPNWP04	3,456
E-SHC M WP 6	6 way	6+2	NSYN8690SPNWP06	3,748
E-SHC M WP 8	8 way	8+2	NSYN8690SPNWP08	4,089
E-SHC M WP 10	10 way	10+2	NSYN8690SPNWP10	4,307
E-SHC M WP 12	12 way	12+2	NSYN8690SPNWP12	4,703
E-SHC M WP 14	14 way	14+2	NSYN8690SPNWP14	4,791
E-SHC M WP 16	16 way	16+2	NSYN8690SPNWP16	5,212
E-SHC M WP 20	20 way	20+2	NSYN8690SPNWP20	5,577

Distribution boards

Elegance series

TPN DB - E-SHDB

Horizontal three phase distribution board provision for incomer 8 pole (MCB / Isolator / RCD) and single phase outgoing suitable for both surface & flush mounting.

IP 30

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SHDB WD 4	4 way	8+12	NSYN8690TPNWD04	1,938
E-SHDB WD 6	6 way	8+18	NSYN8690TPNWD06	2,390
E-SHDB WD 8	8 way	8+24	NSYN8690TPNWD08	2,813
E-SHDB WD 12	12 way	8+36	NSYN8690TPNWD12	4,128
E-SHDB WD 16	16 way	8+48	NSYN8690TPNWD16	5,089

IP 43 with Metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SHDB M 4	4 way	8+12	NSYN8690TPN0M04	2,604
E-SHDB M 6	6 way	8+18	NSYN8690TPN0M06	3,091
E-SHDB M 8	8 way	8+24	NSYN8690TPN0M08	3,786
E-SHDB M 12	12 way	8+36	NSYN8690TPN0M12	5,358
E-SHDB M 16	16 way	8+48	NSYN8690TPN0M16	6,548

IP 43 with Metal Door with Acrylic

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SHDB P 4	4 way	8+12	NSYN8690TPN0P04	3,055
E-SHDB P 6	6 way	8+18	NSYN8690TPN0P06	3,772
E-SHDB P 8	8 way	8+24	NSYN8690TPN0P08	4,481
E-SHDB P 12	12 way	8+36	NSYN8690TPN0P12	6,872
E-SHDB P 16	16 way	8+48	NSYN8690TPN0P16	8,247

IP 54

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SHDB M WP 4	4 way	8+12	NSYN8690TPNWP04	7,601
E-SHDB M WP 6	6 way	8+18	NSYN8690TPNWP06	9,148
E-SHDB M WP 8	8 way	8+24	NSYN8690TPNWP08	10,003
E-SHDB M WP 12	12 way	8+36	NSYN8690TPNWP12	14,099
E-SHDB M WP 16	16 way	8+48	NSYN8690TPNWP16	16,921

Plug & Socket DB - E-SGK

Plug socket boards for single phase and three phase applications up to 63A (supplied completely with plug and socket).

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SGK 10 SP	10A SP	1	NSYN8690SGKSP10 ■	969
E-SGK 20 SP	20A SP	1	NSYN8690SGKSP20 ■	1,109
E-SGK 20 TP	20A TP	3	NSYN8690SGKTP20 ■	2,087
E-SGK 30 TP	30A TP	3	NSYN8690SGKTP30 ■	2,375
E-SGK 20 DPR	20A DP RCBO	4	NSYN8690SGKDP20 ■	1,098
E-SGK 25 FPR	25A FP RCBO	6	NSYN8690SGKFP25 ■	1,914
E-SGK 60 FP	60A FP	4	NSYN8690SGKFP60 ■	8,937

■ Stock items

Distribution boards

Elegance series

2



8 Segment DB - E-S8SEG -MCB I/C

Eight segment Distribution Board with phase segregation and separation between incoming and outgoing with provision for 8P (MCB / Isolator / RCD) + 4P(ACCL Provision) as incomer with single phase outgoing with complete wire sets.

I/P43 with Metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-S8SEG M 4	4 way	8+12+12	NSYN8690S7S0M04	6,107
E-S8SEG M 6	6 way	8+12+18	NSYN8690S7S0M06	6,881
E-S8SEG M 8	8 way	8+12+24	NSYN8690S7S0M08	7,683
E-S8SEG M 12	12 way	8+12+36	NSYN8690S7S0M12	9,808

7 Segment DB - E-S7SEG T1 -MCCB I/C

Seven segment Distribution Board with phase segregation and separation between incoming and outgoing with provision for 4P MCCB up to 160A incomer and 4P as sub-incomers (MCB / Isolator / RCD) with single phase outgoing with complete wire sets & bus bars.

I/P43 with Metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-S7SEG M 4 T1	4 way	T-max+12+12	NSYN8690S7S0MT14	8,937
E-S7SEG M 6 T1	6 way	T-max+12+18	NSYN8690S7S0MT16	10,234
E-S7SEG M 8 T1	8 way	T-max+12+24	NSYN8690S7S0MT18	11,700
E-S7SEG M 12 T1	12 way	T-max+12+36	NSYN8690S7S0MT112	13,465

Blanking Plate

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
Blank PL		1	NSYN8690BLPLP00	12



Distribution boards

Elegance series

Per Phase Isolation DB -E-SHPPI

Horizontal per-phase Isolation Distribution Board with provision for 8 pole (MCB / Isolator / RCD) as incomer and Single phase as outgoings with separate neutral and earth bars for per phase Isolation.



IP 43 with Metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SHPPI M 6	6 way	8+18	NSYN8690PPIOM06	4,810
E-SHPPI M 8	8 way	8+24	NSYN8690PPIOM08	5,715
E-SHPPI M 12	12 way	8+36	NSYN8690PPIOM12	7,740
E-SHPPI M 16	16 way	8+48	NSYN8690PPIOM16	9,154

IP 43 Metal Door with Acrylic

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SHPPI P 6	6 way	8+18	NSYN8690PPIOP06	5,311
E-SHPPI P 8	8 way	8+24	NSYN8690PPIOP08	6,282
E-SHPPI P 12	12 way	8+36	NSYN8690PPIOP12	7,282
E-SHPPI P 16	16 way	8+48	NSYN8690PPIOP16	8,696

Per Phase Isolation DB -E-SVDB

Tier type per-phase Isolation Distribution Board with provision for 8 pole (MCB / Isolator / RCD) incomer and provision for 2 pole (MCB / Isolator / RCD) as sub-incomers with single phase outgoings with separate neutral and earth bars for per phase Isolation.

IP 43 with Metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVDB M 6	6 way	8+6+18	NSYN8690SVD0M06	5,332
E-SVDB M 8	8 way	8+6+24	NSYN8690SVD0M08	6,794
E-SVDB M 12	12 way	8+6+36	NSYN8690SVD0M12	7,954

IP 43 Metal Door with Acrylic

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVDB P 6	6 way	8+6+18	NSYN8690SVD0P06	5,928
E-SVDB P 8	8 way	8+6+24	NSYN8690SVD0P08	7,543
E-SVDB P 12	12 way	8+6+36	NSYN8690SVD0P12	8,779



Distribution boards

Elegance series

2

Enclosure-E-SEN

Metal enclosures, universal mounting suitable for SP, DP, FP, 6 pole & 8 pole arrangement.

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SEN 1P	1P Enclosure	1	NSYN8690SENSPP1 ■	277
E-SEN 2P	2P Enclosure	2	NSYN8690SENSPP2 ■	432
E-SEN 4P	4P Enclosure	4	NSYN8690SENSPP4 ■	434
E-SEN 6P	6P Enclosure	6	NSYN8690SENSPP6 ■	596
E-SEN 8P	8P Enclosure	8	NSYN8690SENSPP8 ■	706

Busbar SP I/C & SP O/G

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
13Mod Insulated Busbars	13	13	NSYN8690BUSSP13	244
14Mod Insulated Busbars	14	14	NSYN8690BUSSP14	288

Vertical DB 8P I/C & SP/TP O/G -E-SVTDB

Vertical three phase Distribution Board with provision for 8 pole (MCB / Isolator / RCD) incoming with three phase and single phase (TP/SP) outgoing, complete with insulated busbar arrangement.

IP 30

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVTDB WD 4	4 way	8+12	NSYN8690VTPWD04	5,458
E-SVTDB WD 6	6 way	8+18	NSYN8690VTPWD06	6,093
E-SVTDB WD 8	8 way	8+24	NSYN8690VTPWD08	6,728
E-SVTDB WD 12	12 way	8+36	NSYN8690VTPWD12	9,624

IP 43 with Metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVTDB M 4	4 way	8+12	NSYN8690VTP0M04	6,354
E-SVTDB M 6	6 way	8+18	NSYN8690VTP0M06	7,198
E-SVTDB M 8	8 way	8+24	NSYN8690VTP0M08	7,975
E-SVTDB M 12	12 way	8+36	NSYN8690VTP0M12	10,059

IP 54

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVTDB M WP 4	4 way	8+12	NSYN8690VTPWP04	12,193
E-SVTDB M WP 6	6 way	8+18	NSYN8690VTPWP06	13,430
E-SVTDB M WP 8	8 way	8+24	NSYN8690VTPWP08	14,668
E-SVTDB M WP 12	12 way	8+36	NSYN8690VTPWP12	19,544



■ Stock items

Distribution boards

Elegance series

Vertical DB 160A MCCB I/C & SP/TP MCB O/G -E-SVTDB T1

Vertical three phase Distribution Board with provision for 4 pole MCCB (T-max/T1) upto 160A as incomer with three phase and single

IP 30

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVTDB WD 4 T1	4 way	T-max+12	NSYN8690VTPWDT14	6,124
E-SVTDB WD 6 T1	6 way	T-max+18	NSYN8690VTPWDT16	7,132
E-SVTDB WD 8 T1	8 way	T-max+24	NSYN8690VTPWDT18	7,750
E-SVTDB WD 12 T1	12 way	T-max+36	NSYN8690VTPWDT112	10,964

IP43 with Metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVTDB M 4 T1	4 way	T-max+12	NSYN8690VTPOMT14	7,082
E-SVTDB M 6 T1	6 way	T-max+18	NSYN8690VTPOMT16	8,375
E-SVTDB M 8 T1	8 way	T-max+24	NSYN8690VTPOMT18	9,360
E-SVTDB M 12 T1	12 way	T-max+36	NSYN8690VTPOMT112	12,454

IP54

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVTDB M WP 4T1	4 way	T-max+12	NSYN8690VTPWPT14	14,031
E-SVTDB M WP 6T1	6 way	T-max+18	NSYN8690VTPWPT16	15,450
E-SVTDB M WP 8T1	8 way	T-max+24	NSYN8690VTPWPT18	16,868
E-SVTDB M WP 12T1	12 way	T-max+36	NSYN8690VTPWPT112	22,651

Vertical DB 250A MCCB I/C & SP/TP MCB O/G -E-SVTDB T3

Vertical three phase Distribution Board with provision for 4 pole MCCB (T-max/T3) upto 250A as incomer with three phase and single phase (TP/SP) outgoings, complete with insulated busbar arrangement.

IP 30

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVTDB WD 4 T3	4 way	250A T-max+12	NSYN8690VTPWDT34	11,322
E-SVTDB WD 6 T3	6 way	250A T-max+18	NSYN8690VTPWDT36	12,428
E-SVTDB WD 8 T3	8 way	250A T-max+24	NSYN8690VTPWDT38	12,596
E-SVTDB WD 12 T3	12 way	250A T-max+36	NSYN8690VTPWDT312	13,915

IP 43 with Metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVTDB M 4 T3	4 way	250A T-max+12	NSYN8690VTPOMT34	13,607
E-SVTDB M 6 T3	6 way	250A T-max+18	NSYN8690VTPOMT36	14,653
E-SVTDB M 8 T3	8 way	250A T-max+24	NSYN8690VTPOMT38	15,463
E-SVTDB M 12 T3	12 way	250A T-max+36	NSYN8690VTPOMT312	16,373

IP 54

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVTDB M WP 4 T3	4 way	250A T-max+12	NSYN8690VTPWPT34	19,976
E-SVTDB M WP 6 T3	6 way	250A T-max+18	NSYN8690VTPWPT36	21,267
E-SVTDB M WP 8 T3	8 way	250A T-max+24	NSYN8690VTPWPT38	22,558
E-SVTDB M WP 12 T3	12 way	250A T-max+36	NSYN8690VTPWPT312	26,933



Distribution boards

Elegance series

2



Phase Selector DB -E- SPVS

Phase selector DBs-SPVS with inbuilt 3nos piano switches and 3nos phase selector switch of 63A

1P 43 with Metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SPVS M 4(63A)	4 way	8+12	NSYN8690SPV4M63	8,567
E-SPVS M 6(63A)	6 way	8+18	NSYN8690SPV6M63	9,622
E-SPVS M 8(63A)	8 way	8+24	NSYN8690SPV8M63	10,360
E-SPVS M 12(63A)	12 way	8+36	NSYN8690SPV12M63	10,449
E-SPVS M 4(40A)	4 way	8+12	NSYN8690SPV4M40	7,810
E-SPVS M 6(40A)	6 way	8+18	NSYN8690SPV6M40	8,524
E-SPVS M 8(40A)	8 way	8+24	NSYN8690SPV8M40	8,748
E-SPVS M 12(40A)	12 way	8+36	NSYN8690SPV12M40	9,551

Flexy Tier DB - E-SVFL

Total flexibility as per site needs - configuration as per your choice of incomer & outgoing. Supply bus bars needs to be selected.

1P 43 with Metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVFL M 132	2 row of 13mod	26	NSYN8690SVFM213	3,056
E-SVFL M 133	3 row of 13mod	39	NSYN8690SVFM313	3,591
E-SVFL M 134	4 row of 13mod	52	NSYN8690SVFM413	3,932
E-SVFL M 142	2 row of 14mod	28	NSYN8690SVFM214	4,149
E-SVFL M 143	3 row of 14mod	42	NSYN8690SVFM314	4,641
E-SVFL M 144	4 row of 14mod	56	NSYN8690SVFM414	4,875

1P43 Metal Door with Acrylic

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
E-SVFL P 132	2 row of 13mod	26	NSYN8690SVFP213	3,106
E-SVFL P 133	3 row of 13mod	39	NSYN8690SVFP313	3,657
E-SVFL P 134	4 row of 13mod	52	NSYN8690SVFP413	4,121
E-SVFL P 142	2 row of 14mod	28	NSYN8690SVFP214	4,679
E-SVFL P 143	3 row of 14mod	42	NSYN8690SVFP314	5,199
E-SVFL P 144	4 row of 14mod	56	NSYN8690SVFP414	5,472



Distribution boards

Elegance series

Cable End Box

Product Description	No of Ways	Ordering Code	M.R.P.(₹)
E-SHC WD 4/CEB	For 4 way SPN IP30 DB	NSYN8690SPNMCE4	379
E-SHC WD 6/CEB	For 6 way SPN IP30 DB	NSYN8690SPNMCE6	359
E-SHC WD 8/CEB	For 8 way SPN IP30 DB	NSYN8690SPNMCE8	438
E-SHC WD 10/CEB	For 10 way SPN IP30 DB	NSYN8690SPNMCE10	420
E-SHC WD 12/CEB	For 12 way SPN IP30 DB	NSYN8690SPNMCE12	519
E-SHC WD 14/CEB	For 14 way SPN IP30 DB	NSYN8690SPNMCE14	512
E-SHC WD 16/CEB	For 16 way SPN IP30 DB	NSYN8690SPNMCE16	585
E-SHC WD 20/CEB	For 20 way SPN IP30 DB	NSYN8690SPNMCE20	649
E-SHC M 4/CEB	For 4 way SPN IP 43 DB	NSYN8690SPNWCE4	379
E-SHC M 6/CEB	For 6 way SPN IP43 DB	NSYN8690SPNWCE6	359
E-SHC M 8/CEB	For 8 way SPN IP43 DB	NSYN8690SPNWCE8	438
E-SHC M 10/CEB	For 10 way SPN IP43 DB	NSYN8690SPNWCE10	420
E-SHC M 12/CEB	For 12 way SPN IP43 DB	NSYN8690SPNWCE12	519
E-SHC M 14/CEB	For 14 way SPN IP43 DB	NSYN8690SPNWCE14	512
E-SHC M 16/CEB	For 16 way SPN IP43 DB	NSYN8690SPNWCE16	585
E-SHC M 20/CEB	For 20 way TPN IP43 DB	NSYN8690SPNWCE20	649
E-SHDB WD 4/CEB	For 4 way TPN IP30 DB	NSYN8690TPNWCE4	560
E-SHDB WD 6/CEB	For 6 way TPN IP30 DB	NSYN8690TPNWCE6	585
E-SHDB WD 8/CEB	For 8 way TPN IP30 DB	NSYN8690TPNWCE8	718
E-SHDB WD 12/CEB	For 12 way TPN IP30 DB	NSYN8690TPNWCE12	1,076
E-SHDB WD 16/CEB	For 16 way TPN IP30 DB	NSYN8690TPNWCE16	1,402
E-SHDB M 4/CEB	For 4 way TPN IP43 DB	NSYN8690TPNMCE4	651
E-SHDB M 6/CEB	For 6 way TPN IP43 DB	NSYN8690TPNMCE6	686
E-SHDB M 8/CEB	For 8 way TPN IP43 DB	NSYN8690TPNMCE8	856
E-SHDB M 12/CEB	For 12 way TPN IP43 DB	NSYN8690TPNMCE12	1,076
E-SHDB M 16/CEB	For 16 way TPN IP43 DB	NSYN8690TPNMCE16	1,425
E-SHPPI M 6/CEB	For 6way PPI IP43 DB	NSYN8690PPIMCE6	746
E-SHPPI M 8/CEB	For 8way PPI IP43 DB	NSYN8690PPIMCE8	1,031
E-SHPPI M 12/CEB	For 12way PPI IP43 DB	NSYN8690PPIMCE12	1,480
E-SHPPI M 16/CEB	For 16way PPI IP43 DB	NSYN8690PPIMCE16	1,605
E-SVDB M 6/CEB	For 6way SVDB IP43 DB	NSYN8690SVDMCE6	684
E-SVDB M 8/CEB	For 8way SVDB IP43 DB	NSYN8690SVDMCE8	810
E-SVDB M 12/CEB	For 12way SVDB IP43 DB	NSYN8690SVDMCE12	933
E-SVFL 13M/CEB	For all SVFL 13Mod DBs	NSYN8690SVFCE13	852
E-SVFL 14M/CEB	For all SVFL 14Mod DBs	NSYN8690SVFCE14	1,031
E-SVTDB WD /CEB	For all SVTDBs(IP30DBs)	NSYN8690VTPWCE1	1,390
E-SVTDB M/CEB	For all SVTDBs(IP43DBs)	NSYN8690VTPMCE1	1,568
E-SVTDB WD T1/CEB	For all SVTDB T1(IP30 DBs)	NSYN8690VTPWCET1	1,954
E-SVTDB WD T3/CEB	For all SVTDB T3 DBs(IP30 DBs)	NSYN8690VTPWCET3	2,242
E-SVTDB M T1/CEB	For all SVTDB T1 DBs(IP43DBs)	NSYN8690VTPMCET1	2,037
E-SVTDB MT3/CEB	For all SVTDB T3 DBs(IP43DBs)	NSYN8690VTPMCET3	2,408

Distribution boards

Classic series

2



SPN DB - SHC

IP 30

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SHC WD 4	4 way	4+2	1SYN869006R0001	740
SHC WD 6	6 way	6+2	1SYN869007R0001	762
SHC WD 8	8 way	8+2	1SYN869008R0001	874
SHC WD 10	10 way	10+2	1SYN869006R0010	952
SHC WD 12	12 way	12+2	1SYN869009R0001	1,135
SHC WD 14	14 way	14+2	1SYN869010R0001	1,161
SHC WD 16	16 way	16+2	1SYN869006R0016	1,438
SHC WD 20	20 way	20+2	1SYN869006R0020	1,636

IP 43 with metal Door

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SHC M 4	4 way	4+2	1SYN869001R0001	994
SHC M 6	6 way	6+2	1SYN869002R0001	1,093
SHC M 8	8 way	8+2	1SYN869003R0001	1,293
SHC M 10	10 way	10+2	1SYN869004R0101	1,315
SHC M 12	12 way	12+2	1SYN869004R0001	1,483
SHC M 14	14 way	14+2	1SYN869005R0001	1,551
SHC M 16	16 way	16+2	1SYN869001R0016	1,962
SHC M 20	20 way	20+2	1SYN869001R0020	2,231

Classic Series Distribution Boards are available in Ivory colors (Color code - RAL9010)

Distribution boards

Classic series

SPN DB - SHC

IP 43 Metal Door with Acrylic

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SHC P 4	4 way	4+2	1SYN869011R0041	1,011
SHC P 6	6 way	6+2	1SYN869011R0042	1,263
SHC P 8	8 way	8+2	1SYN869013R0001	1,388
SHC P 10	10 way	10+2	1SYN869013R0002	1,408
SHC P 12	12 way	12+2	1SYN869015R0012	1,593
SHC P 14	14 way	14+2	1SYN869015R0001	1,895
SHC P 16	16 way	16+2	1SYN869011R0161	2,240
SHC P 20	20 way	20+2	1SYN869011R0201	2,546

IP 54

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SHC M WP 4	4 way	4+2	1SYN869002R0004	3,014
SHC M WP 6	6 way	6+2	1SYN869004R0020	3,250
SHC M WP 8	8 way	8+2	1SYN869002R0008	3,993
SHC M WP 10	10 way	10+2	1SYN869004R0021	4,393
SHC M WP 12	12 way	12+2	1SYN869002R0012	4,105
SHC M WP 14	14 way	14+2	1SYN869004R0022	4,155
SHC M WP 16	16 way	16+2	1SYN869004R0023	5,078
SHC M WP 20	20 way	20+2	1SYN869002R0013	4,868

TPN DB - SHDB

IP 30

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SHDB WD 4	4 way	8+12	1SYN869020R0001	1,686
SHDB WD 6	6 way	8+18	1SYN869021R0001	2,205
SHDB WD 8	8 way	8+24	1SYN869022R0001	2,620
SHDB WD 12	12 way	8+36	1SYN869023R0001	4,035
SHDB WD 16	16 way	8+48	1SYN869004R0024	4,575

IP 43 WITH METAL DOOR

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SHDB M 4	4 way	8+12	1SYN869016R0001	2,209
SHDB M 6	6 way	8+18	1SYN869017R0001	2,645
SHDB M 8	8 way	8+24	1SYN869018R0001	3,252
SHDB M 12	12 way	8+36	1SYN869019R0001	4,899
SHDB M 16	16 way	8+48	1SYN869004R0025	6,212

IP 43 METAL DOOR WITH ACRYLIC

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SHDB P 4	4 way	8+12	1SYN869024R0001	2,680
SHDB P 6	6 way	8+18	1SYN869025R0001	3,495
SHDB P 8	8 way	8+24	1SYN869026R0001	3,967
SHDB P 12	12 way	8+36	1SYN869027R0006	5,533
SHDB P 16	16 way	8+48	1SYN869004R0026	7,351

IP 54

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SHDB M WP 4	4 way	8+12	1SYN869001R0004	6,652
SHDB M WP 6	6 way	8+18	1SYN869001R0006	8,008
SHDB M WP 8	8 way	8+24	1SYN869001R0008	8,765
SHDB M WP 12	12 way	8+36	1SYN869004R0027	12,426
SHDB M WP 16	16 way	8+48	1SYN869004R0028	14,836

Distribution boards

Classic series

BUSBAR SP I/C & SP O/G, BLANKING PLATE

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
13 Module Pin type Busbars	13	13	1SYN360025P0001	232
14 Module Pin type Busbars	14	14	1SYN869103R0013	373
Blank PL		1	1SYN869004R0059	11

2

Plug & Socket DB - SGK

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SGK 10 SP	10A SP	1	1SYN869048R0001 ■	932
SGK 20 SP	20A SP	1	1SYN869043R0001 ■	932
SGK 20 TP	20A TP	3	1SYN869049R0001 ■	1,923
SGK 30 TP	30A TP	3	1SYN869044R0001 ■	2,247
SGK 20 DPR	20A DP RCBO	4	1SYN869051R0001 ■	1,068
SGK 25 FPR	25A FP RCBO	6	1SYN869052R0001 ■	1,781
SGK 60 FP	60A FP	4	1SYN869053R0001 ■	8,552

ENCLOSURE-SEN

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SEN 1P	1P Enclosure	1	1SYN869054R0001 ■	255
SEN 2P	2P Enclosure	2	1SYN869055R0001 ■	375
SEN 4P	4P Enclosure	4	1SYN869056R0001 ■	379
SEN 6P	6P Enclosure	6	1SYN869057R0001 ■	532
SEN 8P	8P Enclosure	8	1SYN869004R0029 ■	613

7 SEGMENT DB - S7SEG

IP43 WITH METAL DOOR

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
S7SEG M 4	4 way	8+12+12	1SYN869058R0001	5,687
S7SEG M 6	6 way	8+12+18	1SYN869059R0001	6,389
S7SEG M 8	8 way	8+12+24	1SYN869060R0001	6,884
S7SEG M 12	12 way	8+12+36	1SYN869061R0001	8,817

7 SEGMENT DB MCCB I/C DB - S7SEG T1

IP43 WITH METAL DOOR

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
S7SEG M 4 T1	4 way	T-max+12+12	1SYN869004R0037	7,911
S7SEG M 6 T1	6 way	T-max+12+18	1SYN869004R0038	9,060
S7SEG M 8 T1	8 way	T-max+12+24	1SYN869004R0039	10,356
S7SEG M 12 T1	12 way	T-max+12+36	1SYN869004R0040	11,969

■ Stock items

Distribution boards

Classic series

PER PHASE ISOLATION DB - SHPPI

IP 43 WITH METAL DOOR

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SHPPI M 6	6 way	8+18	1SYN8690100R0061	4,241
SHPPI M 8	8 way	8+24	1SYN8690100R0081	4,828
SHPPI M 12	12 way	8+36	1SYN8690100R0121	6,774
SHPPI M 16	16 way	8+48	1SYN8690100R0161	7,898

IP 43 METAL DOOR WITH ACRYLIC

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SHPPI P 6	6 way	8+18	1SYN8690101R0061	4,724
SHPPI P 8	8 way	8+24	1SYN8690101R0081	5,587
SHPPI P 12	12 way	8+36	1SYN8690101R0121	7,829
SHPPI P 16	16 way	8+48	1SYN8690101R0161	9,237

PER PHASE ISOLATION DB -SVDB

IP 43 WITH METAL DOOR

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVDB M 6	6 way	8+6+18	1SYN869028R0001	4,671
SVDB M 8	8 way	8+6+24	1SYN869029R0001	5,981
SVDB M 12	12 way	8+6+36	1SYN869030R0001	6,910

IP 43 METAL DOOR WITH ACRYLIC

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVDB P 6	6 way	8+6+18	1SYN869004R0030	5,272
SVDB P 8	8 way	8+6+24	1SYN869004R0031	6,708
SVDB P 12	12 way	8+6+36	1SYN869004R0032	7,808

VERTICAL DB 8P I/C &SP/TP O/G -SVTDB

IP 30

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVTDB WD 4	4 way	8+12	1SYN869035R0001	5,179
SVTDB WD 6	6 way	8+18	1SYN869036R0001	5,156
SVTDB WD 8	8 way	8+24	1SYN869037R0001	6,020
SVTDB WD 12	12 way	8+36	1SYN869038R0001	8,689

IP 43 WITH METAL DOOR

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVTDB M 4	4 way	8+12	1SYN869031R0001	5,719
SVTDB M 6	6 way	8+18	1SYN869032R0001	6,728
SVTDB M 8	8 way	8+24	1SYN869033R0001	7,046
SVTDB M 12	12 way	8+36	1SYN869034R0001	9,216

Distribution boards

Classic series

IP 54

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVTDB M WP 4	4 way	8+12	1SYN869004R0041	10,810
SVTDB M WP 6	6 way	8+18	1SYN869004R0015	12,464
SVTDB M WP 8	8 way	8+24	1SYN869004R0043	13,005
SVTDB M WP 12	12 way	8+36	1SYN869004R0044	17,327

2

VERTICAL DB 160A MCCB I/C & SP/TP MCB O/G -SVTDB T1 IP30

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVTDB WD 4 T1	4 way	T-max+12	1SYN869070R0001	5,469
SVTDB WD 6 T1	6 way	T-max+18	1SYN869071R0001	6,127
SVTDB WD 8 T1	8 way	T-max+24	1SYN869072R0001	6,454
SVTDB WD 12 T1	12 way	T-max+36	1SYN869073R0001	9,941

IP43 WITH METAL DOOR

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVTDB M 4 T1	4 way	T-max+12	1SYN869066R0001	6,342
SVTDB M 6 T1	6 way	T-max+18	1SYN869067R0001	7,531
SVTDB M 8 T1	8 way	T-max+24	1SYN869068R0001	7,918
SVTDB M 12 T1	12 way	T-max+36	1SYN869069R0001	10,928

IP54

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVTDB M WP 4T1	4 way	T-max+12	1SYN869004R0060	12,319
SVTDB M WP 6T1	6 way	T-max+18	1SYN869004R0061	14,038
SVTDB M WP 8T1	8 way	T-max+24	1SYN869004R0062	16,533
SVTDB M WP 12T1	12 way	T-max+36	1SYN869004R0063	20,532

VERTICAL DB 250A MCCB I/C & SP/TP MCB O/G -SVTDB T3

IP 30

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVTDB WD 4 T3	4 way	250A T-max+12	1SYN869070R1004	9,975
SVTDB WD 6 T3	6 way	250A T-max+18	1SYN869070R0003	10,949
SVTDB WD 8 T3	8 way	250A T-max+24	1SYN869070R0004	11,097
SVTDB WD 12 T3	12 way	250A T-max+36	1SYN869070R0002	12,259

IP 43 WITH METAL DOOR

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVTDB M 4 T3	4 way	250A T-max+12	1SYN869081R0003	12,887
SVTDB M 6 T3	6 way	250A T-max+18	1SYN869081R0004	14,167
SVTDB M 8 T3	8 way	250A T-max+24	1SYN869081R0005	15,352
SVTDB M 12 T3	12 way	250A T-max+36	1SYN869081R0012	15,056

IP 54

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVTDB M WP 4 T3	4 way	250A T-max+12	1SYN869005R0060	17,058
SVTDB M WP 6 T3	6 way	250A T-max+18	1SYN869005R0061	18,760
SVTDB M WP 8 T3	8 way	250A T-max+24	1SYN869005R0062	19,624
SVTDB M WP 12 T3	12 way	250A T-max+36	1SYN869005R0063	22,559

Distribution boards

Classic series

PHASE SELECTOR DB - SPVS

1P43 WITH METAL DOOR

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SPVS M 4(63A)	4 way	8+12	1SYN869100R0001	8,692
SPVS M 6(63A)	6 way	8+18	1SYN869100R0002	8,810
SPVS M 8(63A)	8 way	8+24	1SYN869100R0003	9,384
SPVS M 12(63A)	12 way	8+36	1SYN869100R0004	10,164
SPVS M 4(40A)	4 way	8+12	1SYN869100SP004	7,801
SPVS M 6(40A)	6 way	8+18	1SYN869100SP002	8,044
SPVS M 8(40A)	8 way	8+24	1SYN869100SP003	8,228
SPVS M 12(40A)	12 way	8+36	1SYN869100SP012	8,742

FLEXY TIER DB - SVFL

1P43 WITH METAL DOOR

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVFL M 132	2 row of 13mod	26	1SYN869004R0051	2,781
SVFL M 133	3 row of 13mod	39	1SYN869103R0001	3,388
SVFL M 134	4 row of 13mod	52	1SYN869103R0002	3,415
SVFL M 142	2 row of 14mod	28	1SYN869004R0052	3,511
SVFL M 143	3 row of 14mod	42	1SYN869004R0053	4,308
SVFL M 144	4 row of 14mod	56	1SYN869103R0012	4,146

1P43 METAL DOOR WITH ACRYLIC

Product Description	No of Ways	No of Modules	Ordering Code	M.R.P.(₹)
SVFL P 132	2 row of 13mod	26	1SYN869004R0054	2,816
SVFL P 133	3 row of 13mod	39	1SYN869105R0001	3,315
SVFL P 134	4 row of 13mod	52	1SYN869105R0002	3,735
SVFL P 142	2 row of 14mod	28	1SYN869004R0055	4,241
SVFL P 143	3 row of 14mod	42	1SYN869004R0056	4,712
SVFL P 144	4 row of 14mod	56	1SYN869004R0057	4,960

Distribution boards

Classic series

Cable End Box

Product Description	No of Ways	Ordering Code	M.R.P.(₹)
SHC WD 4/CEB	For 4 way SPN IP30 DB	1SYN869004R0064	291
SHC WD 6/CEB	For 6 way SPN IP30 DB	1SYN869004R0065	322
SHC WD 8/CEB	For 8 way SPN IP30 DB	1SYN869004R0066	339
SHC WD 10/CEB	For 10 way SPN IP30 DB	1SYN869004R0067	377
SHC WD 12/CEB	For 12 way SPN IP30 DB	1SYN869004R0068	413
SHC WD 14/CEB	For 14 way SPN IP30 DB	1SYN869004RCE71	459
SHC WD 16/CEB	For 16 way SPN IP30 DB	1SYN869004R0070	525
SHC WD 20/CEB	For 20 way SPN IP30 DB	1SYN869004R0071	583
SHC M 4/CEB	For 4 way SPN IP 43 DB	1SYN869103R0014	342
SHC M 6/CEB	For 6 way SPN IP43 DB	1SYN869103R0015	359
SHC M 8/CEB	For 8 way SPN IP43 DB	1SYN869004R0082	390
SHC M 10/CEB	For 10 way SPN IP43 DB	1SYN869004R0083	413
SHC M 12/CEB	For 12 way SPN IP43 DB	1SYN869004R0084	444
SHC M 14/CEB	For 14 way SPN IP43 DB	1SYN869004R0085	510
SHC M 16/CEB	For 16 way SPN IP43 DB	1SYN869004R0086	622
SHC M 20/CEB	For 20 way TPN IP43 DB	1SYN869004R0087	771
SHDB WD 4/CEB	For 4 way TPN IP30 DB	1SYN869004R0072	503
SHDB WD 6/CEB	For 6 way TPN IP30 DB	1SYN869004R0073	525
SHDB WD 8/CEB	For 8 way TPN IP30 DB	1SYN869004R0074	644
SHDB WD 12/CEB	For 12 way TPN IP30 DB	1SYN869004R0075	966
SHDB WD 16/CEB	For 16 way TPN IP30 DB	1SYN869004R0076	1,258
SHDB M 4/CEB	For 4 way TPN IP43 DB	1SYN869004R0088	581
SHDB M 6/CEB	For 6 way TPN IP43 DB	1SYN869004R0089	569
SHDB M 8/CEB	For 8 way TPN IP43 DB	1SYN869004R0090	690
SHDB M 12/CEB	For 12 way TPN IP43 DB	1SYN869004R0091	919
SHDB M 16/CEB	For 16 way TPN IP43 DB	1SYN869004R0092	1,212
SHPP I WD 6/CEB	For 6way PPI IP30 DB	1SYN869004R0077	598
SHPP I WD 8/CEB	For 8way PPI IP30 DB	1SYN869004R0078	765
SHPP I WD 12/CEB	For 12way PPI IP30 DB	1SYN869004R0079	1,047
SHPP I WD 16/CEB	For 16way PPI IP30 DB	1SYN869004R0080	1,258
SHPP I M 6/CEB	For 6way PPI IP43 DB	1SYN869004R0093	670
SHPP I M 8/CEB	For 8way PPI IP43 DB	1SYN869004R0094	926
SHPP I M 12/CEB	For 12way PPI IP43 DB	1SYN869004R0095	1,329
SHPP I M 16/CEB	For 16way PPI IP43 DB	1SYN869004R0096	1,441
SVDB M 6/CEB	For 6way SVDB IP43 DB	1SYN869004R0097	719
SVDB M 8/CEB	For 8way SVDB IP43 DB	1SYN869004R0098	727
SVDB M 12/CEB	For 12way SVDB IP43 DB	1SYN869004R0099	838
SVFL 13M/CEB	For all SVFL 13Mod DBs	1SYN869004R0103	765
SVFL 14M/CEB	For all SVFL 14Mod DBs	1SYN869004R0104	930
SVTDB WD /CEB	For all SVTDBs(IP30DBs)	1SYN86900WD0104	1,248
SVTDB M/CEB	For all SVTDBs(IP43DBs)	1SYN869004R0100	1,422
SVTDB WD T1/CEB	For all SVTDB T1(IP30 DBs)	1SYN869004R0081	1,754
SVTDB WD T3/CEB	For all SVTDB T3 DBs(IP30 DBs)	1SYN86900WD0304	2,013
SVTDB M T1/CEB	For all SVTDB T1 DBs(IP43DBs)	1SYN869004R0102	1,738
SVTDB MT3/CEB	For all SVTDB T3 DBs(IP43DBs)	1SYN869004R1001	2,118

Distribution boards

Gemini switchboard

ABB SACE's Gemini range is revolutionizing the market of low voltage electric insulating switchboards. The reason for this is that it is the first switchboard made in thermoplastic material, to which the co-injection molding technique gives the same mechanical characteristics as polyester. This means that it is extremely sturdy, with its rigid covering and expanded

internal core. Moreover, it contains no fiber glass, a material that with time rises to the surface, jeopardizing the functioning and safety of switchboards made in polyester with which it is usually mixed. Available in 6 different sizes with transparent or opaque door, the Gemini switchboards are suitable for installation in any application context.



Compliance with Standard	:	IEC60670, EN 50298, 60439-1, 62208, 61439 – 1 & 2
Rated Service Voltage	:	1000V AC
Degree of Protection	:	IP 30 open door / IP66 closed door

* Details available on request

Distribution boards

Mirage

The Mirage type tested Sub-Main Distribution Boards have been designed for easy handling and quick, simple installation. These boards guarantees the highest level of

safety and functionality combined with quality of production. Removable top and bottom gland plates are provided for ease of installation and cabling.

2



Standard	:	IEC BS EN 61439 – 1 & 2
Max. Load	:	250 / 400 / 630 / 800 Amp
Type	:	Tmax & Formula
Max. Voltage	:	415V AC , 50 / 60 Hz
Degree of Protection	:	IP 42 (IP 20 for PAN assembly)
Range	:	4, 6, 8, 12 & 16 ways

Distribution boards

Mirage DB with Tmax MCCB

Mirage 250

Incoming Tmax T3 250A & outgoing Tmax T1 160A

No of Ways	No. of Poles	Ordering Code	M.R.P.(₹)
2 way	TP / SP	1SKS202242C3310	Upon request
4 way	TP / SP	1SKS204242C3310	
6 way	TP / SP	1SKS206242C3310	
8 way	TP / SP	1SKS208242C3310	
12 way	TP / SP	1SKS212242C3310	
16 way	TP / SP	1SKS216242C3310	

Mirage 400

Incoming Tmax T5 400A & outgoing Tmax T1 160A

No of Ways	No. of Poles	Ordering Code	M.R.P.(₹)
4 way	TP / SP	1SKS404242C3319	Upon request
6 way	TP / SP	1SKS406242C3319	
8 way	TP / SP	1SKS408242C3319	
12 way	TP / SP	1SKS412242C3319	
16 way	TP / SP	1SKS416242C3319	

Mirage 630

Incoming Tmax T5 630A & outgoing Tmax T1 160A

No of Ways	No. of Poles	Ordering Code	M.R.P.(₹)
4 way	TP / SP	1SKS604242C3319	Upon request
6 way	TP / SP	1SKS606242C3319	
8 way	TP / SP	1SKS608242C3319	
12 way	TP / SP	1SKS612242C3319	
16 way	TP / SP	1SKS616242C3319	

Mirage 800

Incoming Tmax T6 800A & outgoing Tmax T1 160A

No of Ways	No. of Poles	Ordering Code	M.R.P.(₹)
4 way	TP / SP	1SKS804242C3311	Upon request
6 way	TP / SP	1SKS806242C3311	
8 way	TP / SP	1SKS808242C3311	
12 way	TP / SP	1SKS812242C3311	
16 way	TP / SP	1SKS816242C3311	

For other ranges refer detailed catalogue (Mirage Panel Boards)

Common Neutral link is fixed in each panel board

Distribution boards

Mirage DB with Formula MCCB

Mirage 250

Incoming Tmax T3 250A & outgoing Formula A1 125A

No of Ways	No. of Poles	Ordering Code	M.R.P.(₹)
2 way	TP / SP	1SKS202294C3310	Upon request
4 way	TP / SP	1SKS204294C3310	
6 way	TP / SP	1SKS206294C3310	
8 way	TP / SP	1SKS208294C3310	
12 way	TP / SP	1SKS212294C3310	
16 way	TP / SP	1SKS216294C3310	

Mirage 400

Incoming Tmax T5 400A & outgoing Formula A1 125A

No of Ways	No. of Poles	Ordering Code	M.R.P.(₹)
4 way	TP / SP	1SKS404294C3310	Upon request
6 way	TP / SP	1SKS406294C3310	
8 way	TP / SP	1SKS408294C3310	
12 way	TP / SP	1SKS412294C3310	
16 way	TP / SP	1SKS416294C3310	

Mirage 630

Incoming Tmax T5 630A & outgoing Formula A1 125A

No of Ways	No. of Poles	Ordering Code	M.R.P.(₹)
4 way	TP / SP	1SKS604294C3310	Upon request
6 way	TP / SP	1SKS606294C3310	
8 way	TP / SP	1SKS608294C3310	
12 way	TP / SP	1SKS612294C3310	
16 way	TP / SP	1SKS616294C3310	

For other ranges refer detailed catalogue (Mirage Panel Boards)

Common Neutral link is fixed in each panel board

Wiring accessories

Cheiron

Switch modules

Description	Module size	Qty/Pack	Ordering Code	M.R.P.(₹)
6A 1 way switch - CHSW0610	1M	20	1SYN880501R0001	135
6A 2 way switch - CHSW0620	1M	20	1SYN880501R0002	164
6A Bell push - CHSW06B0	1M	20	1SYN880501R0003	184
6A 1 way switch with LED - CHSW061L	1M	20	1SYN880501R0004	177
6A Bell push with LED - CHSW06BL	1M	20	1SYN880501R0006	234
16A 1 way switch - CHSW1610	1M	20	1SYN880501R0007	204
16A 2 way switch - CHSW1620	1M	20	1SYN880501R0008	236
16A 1 way switch with LED - CHSW161L	1M	20	1SYN880501R0009	223
6A 1 way Mega switch with LED - CHSW061M	2M	10	1SYN880501R0011	275
6A 2 way Mega switch with LED - CHSW062M	2M	10	1SYN880501R0012	298
6A Mega Bell push with LED - CHSW06BM	2M	10	1SYN880501R0013	303
16A 1 way Mega switch with LED - CHSW161M	2M	10	1SYN880501R0014	316
16A 2 way Mega switch with LED - CHSW162M	2M	10	1SYN880501R0015	305
32A 1 way DP switch with LED - CHSW321M	2M	10	1SYN880507R0001	514
32A 2 way DP switch with LED - CHSW322M	2M	10	1SYN880507R0002	474

Socket modules

Description	Module size	Qty/Pack	Ordering Code	M.R.P.(₹)
6A, 2+3 pin socket + FLAT - CHSK0652	2M	15	1SYN880511R0001	225
16A, 3 pin socket - CHSK1633	3M	10	1SYN880510R0003	314
6/16A socket - CHSK1662	2M	15	1SYN880510R0002	312
20A socket - CHSK2062	2M	15	1SYN880510R0004	302
6/16A socket - CHSK1663	3M	10	1SYN880510R0001	281
25A, 3 pin socket - CHSK2533	3m	10	1SYN880510R0005	338
6A, 2 pin socket - CHSK0621	1m	20	1SYN880767R0001	188
13A Universal socket - CHSK13U2	2M	15	1SYN880557R0001	274

Support modules

Description	Module size	Qty/Pack	Ordering Code	M.R.P.(₹)
Step fan regulator - CHSMSFR1	1M	20	1SYN880546R0001	481
Step fan regulator - CHSMSFR2	2M	10	1SYN880550R0001	628
Dimmer 100 W - CHSMD100	1M	20	1SYN880546R0002	433
Dimmer 400 W - CHSMD400	2M	10	1SYN880554R0001	697
Dimmer 650 W - CHSMD650	2M	10	1SYN880554R0002	839
Buzzer - CHSMBUZ1	1M	20	1SYN880546R0003	298
Buzzer - CHSMBUZ2	2M	10	1SYN880556R0001	318
Blank plate - CHSMBLNK	1M	40	1SYN880515R0001	37
TV co-axial socket - CHSMTVSK	1M	20	1SYN880530R0001	146
RJ11 Tel. jack 2 pin - CHSMRJ11	1M	20	1SYN880478R0001	144
RJ45 Jack cat 6 - CHSMRJ45	1M	20	1SYN880565R0001	655
Indicator - CHSMINDI	1M	20	1SYN880540R0001	283

Hospitality products

Description	Module size	Qty/Pack	Ordering Code	M.R.P.(₹)
Electronic key tag - CHSMEKT3	3M	5	1SYN880567R0001	2,396
Shaver socket - CHSKSVR2	2M	10	1SYN880545R0001	706
Room occupancy indicator - CHSMROCI	1M	10	1SYN880540R0004	332
"DND set 2 Switch, Bell, DND & MMR" - CHSMDNDS		2	1SYN880675R0001	1,033

Wiring accessories

Cheiron

Mounting plates

Oval	Qty/Pack	Ordering Code	M.R.P.(₹)
1M Plate - CHPL01P	20	1SYN880580R0002	100
2M Plate - CHPL02P	20	1SYN880581R0002	99
3M Plate - CHPL03P	20	1SYN880583R0002	114
3M Power Plate - CHPL03SP	20	1SYN880585R0002	107
4M Plate - CHPL04P	10	1SYN880587R0002	137
6M Plate - CHPL06P	10	1SYN880589R0002	212
8M Plate - CHPL08P	10	1SYN880591R0002	248
9M Plate - CHPL09P	10	1SYN880593R0001	290
8MV Plate - CHPL08VP	5	1SYN880595R0002	323
12M Plate - CHPL12P	5	1SYN880597R0002	353
16M Plate - CHPL16P	5	1SYN880599R0002	438
18M Plate - CHPL18P	5	1SYN880617R0001	480

Contour	Qty/Pack	Ordering Code	M.R.P.(₹)
1M Plate - CHPL01C	20	1SYN880580R0003	110
2M Plate - CHPL02C	20	1SYN880581R0003	116
3M Plate - CHPL03C	20	1SYN880583R0003	129
3M Power Plate - CHPL03SC	20	1SYN880585R0003	122
4M Plate - CHPL04C	10	1SYN880587R0003	150
6M Plate - CHPL06C	10	1SYN880589R0003	229
8M Plate - CHPL08C	10	1SYN880591R0003	266
9M Plate - CHPL09C	10	1SYN880593R0003	304
8MV Plate - CHPL08VC	5	1SYN880595R0003	351
12M Plate - CHPL12C	5	1SYN880597R0003	401
16M Plate - CHPL16C	5	1SYN880599R0003	454
18M Plate - CHPL18C	5	1SYN880617R0003	512

Metal box

Description	Qty/Pack	Ordering Code	M.R.P.(₹)
Metal Box 1-2M - CMBZ3302	108	1SYN880452R0001	84
Metal Box 3M - CMBZ4303	82	1SYN880453R0001	92
Metal Box 4M - CMBZ5305	60	1SYN880454R0001	112
Metal Box 6-8MH - CMBZ8308	40	1SYN880455R0001	196
Metal Box 9M - CMBZ9310	39	1SYN880457R0001	271
Metal Box 8MV - CMBZ5508V	26	1SYN880456R0001	253
Metal Box 12-16M - CMBZ8616	16	1SYN880458R0001	290
Metal Box 24M - CMBZ8824	10	1SYN880462R0001	453

Special products

Description	Qty/Pack	Ordering Code	M.R.P.(₹)
Down Lighter - 3M - CHSMDNL3	5	1SYN880566R0001	550
Single Phase Starter 20 - 2M - CHSMST20	10	1SYN880620R0002	530
Single Phase Starter 25 - 2M - CHSMST25	10	1SYN880620R0003	550
Surge Protector - 1M - CHSMSURG	5	1SYN880549R0002	1,050
Ceiling Rose - CHSMCERO	25	1SYN880491R0001	90
Call Bell Indicator - 1M - CHSMCLBI	10	1SYN880569R0001	450

Oval



Contour



Wiring accessories

Snieo

Switch modules

Description	Module size	Qty/Pack	Ordering Code	M.R.P.(₹)
6A 1 way switch - CPW10610	1	25	1SYN880676R0001	100
6A 2 way switch - CPW10620	1	25	1SYN880677R0001	132
6A Bell Push - CPW106B0	1	25	1SYN880676R0002	139
6A 1 way switch LED - CPW1061L	1	25	1SYN880676R0003	143
6A Bell Push LED - CPW106BL	1	25	1SYN880676R0004	198
16A 1 way switch - CPW11610	1	25	1SYN880676R0005	146
16A 2 way switch - CPW11620	1	25	1SYN880677R0002	204
16A 1 way switch with LED - CPW1161L	1	25	1SYN880676R0006	186
20A DP Switch 1 way with LED - CPW1201L	1	20	1SYN880670R0001	261
6A 1 way Mega switch with LED - CPW2061L	2	10	1SYN880652R0001	213
6A 2 way Mega switch with LED - CPW2062L	2	10	1SYN880652R0002	256
6A Mega Bell Push with LED - CPW206BL	2	10	1SYN880652R0003	229
16A 1 way Mega switch with LED - CPW2161L	2	10	1SYN880653R0001	263
16A 2 way Mega switch with LED - CPW2162L	2	10	1SYN880653R0002	280
32A 1 way DP Switch with LED - CPW2321DPL	2	10	1SYN880655R0001	355

Socket modules

Description	Module size	Qty/Pack	Ordering Code	M.R.P.(₹)
6A 2+3 Pin Socket - 2 Module - CPWS2065	2	20	1SYN880690R0001	157
6/16A Socket - 2 Module - CPWS2166	2	10	1SYN880393R0001	219
20A Socket - CPWS2020	2	10	1SYN880394R0001	224
13A Intel Socket - 2 Module - CPWS213U	2	10	1SYN880381R0001	224
6A 5 Pin Socket - CPWS3065	3	10	1SYN880154R0001	196
6/16A Socket - CPWS3166	3	5	1SYN880122R0001	230
16A 3 Pin Socket - CPWS3163	3	10	1SYN880138R0001	276
25A 3 Pin Socket - CPWS3253	3	10	1SYN880138R0002	231
13A Flat Pin Socket - CPWS313F	3	10	1SYN880073R0001	305
6A 2 Pin Socket - CPWS1062	1	20	1SYN880089R0001	148

Support modules

Description	Module size	Qty/Pack	Ordering Code	M.R.P.(₹)
Fan Regulator - 1 Module - CPW1SFR4	1	20	1SYN880373R0001	340
Fan Regulator - CPW2SFR5	2	10	1SYN880284R0001	498
Dimmer 100W - 1 Module - CPW1D0400	1	20	1SYN880373R0011	413
Dimmer 400W - CPW2D0400	2	10	1SYN880400R0001	618
Dimmer 1000W - CPW1D1000	2	20	1SYN880500R0001	720
Blank Plate - CPW1BLNK	1	80	1SYN880182R0001	30
TV Socket - CPW1TVSK	1	20	1SYN880175R0001	108
RJ 11TEL 2 Pin - CPW1RJ11	1	20	1SYN880192R0001	102
RJ 45 Jack CAT 6 - CPW1RJ45	1	20	1SYN880201R0001	495
Flex Outlet - CPW1FLEX	1	20	1SYN880165R0001	126
Foot Lamp Grid - CPW4FLGD	4	10	1SYN880671R0001	232
Buzzer - CPW2BZR	2	10	1SYN880490R0001	207
Indicator - CPW1IND	1	20	1SYN880412R0004	190
Buzzer 1 Module - CPW1BZR	1	20	1SYN880490R0002	234
Mount Screw 3" Long - MSCREW3			1SYN480205P0003	10

Wiring accessories

Snieo

Snieo mounting plates

Description	Metal Box Size	Qty/Pack	Ordering Code	M.R.P.(₹)
1 M Plate - SNWP3301	3"x3"	25	1SYN880421R0001	72
2 M Plate - SNWP3302	3"x3"	25	1SYN880422R0001	75
3 M Plate - SNWP4303	4"x3"	20	1SYN880423R0001	93
3 M Power Plate - SNWP4303S	4"x3"	20	1SYN880424R0001	85
4 M Plate - SNWP5304	5"x3"	15	1SYN880425R0001	105
5 M Plate - SNWP5305	5"x3"	15	1SYN880426R0001	117
6 M Plate - SNWP8306	8"x3"	10	1SYN880427R0001	139
8 M Plate - SNWP8308	8"x3"	10	1SYN880428R0001	198
10 M Plate - SNWP9310	9"x3"	15	1SYN880429R0001	210
8 M Plate Square - SNWP5508	5"x5"	6	1SYN880430R0001	197
12 M Plate - SNWP8612	8"x6"	6	1SYN880431R0001	251
16 M Plate - SNWP8616	8"x6"	6	1SYN880432R0001	310

Hospitality products

Description	Ordering Code	M.R.P.(₹)
Mechanical Keytag fitted with Lumina Plate & 20A DP Switch (3M) - CPW320MKT	1SYN880669R0001	687
Call Bell Indicator - CPW1CBL	1SYN880372R0001	410
DND/MMR Set - External - CPWDNDSET	1SYN880412R0005	590
Switch Ste DND/MMR - Internal - CPW2SET	1SYN880414R0001	384
Room Occupied - Internal - CPW1OQP	1SYN880412R0003	260
Shaver Socket (110V - 230V set) - CPW1SVR	1SYN880416R0001	510

Metal box

Description	Metal Box Size	Qty/Pack	Ordering Code	M.R.P.(₹)
Metal Box 1-2M - CMBZ3302	3"x3"	108	1SYN880452R0001	84
Metal Box 3M - CMBZ4303	4"x3"	82	1SYN880453R0001	92
Metal Box 4-5M - CMBZ5305	5"x3"	60	1SYN880454R0001	112
Metal Box 6-8MH - CMBZ8308	8"x3"	40	1SYN880455R0001	196
Metal Box 9-10M - CMBZ9310	9"x3"	39	1SYN880457R0001	271
Metal Box 8MV - CMBZ5508V	5"x5"	26	1SYN880456R0001	253
Metal Box 12-16M - CMBZ8616	8"x6"	16	1SYN880458R0001	290
Metal Box 24M - CMBZ8824	8"x8"	10	1SYN880462R0001	453

Snieo



Wiring accessories

Industrial plugs and sockets

Plugs



Terminals / Pole	Current rating (A)	Protection	Type	Order code	L.P.(₹)
3 (2P+E)	16	IP44	216-P6-I	2CMA100202R1000	302
	32	IP44	232-P6-I	2CMA100204R1000	432
	63	IP44	263P6	2CMA166742R1000	1,948
	16	IP67	216P6W	2CMA166460R1000	955
	32	IP67	232P6W	2CMA166722R1000	1,180
	63	IP67	263P6W	2CMA166776R1000	2,728
	125	IP67	2125P6W	2CMA166810R1000	8,391
4 (3P+E)	16	IP44	316-P6	2CMA193506R1000	388
	32	IP44	332-P6	2CMA193515R1000	542
	63	IP44	363P6	2CMA166752R1000	2,012
	16	IP67	316P6W	2CMA166476R1000	929
	32	IP67	332P6W	2CMA166738R1000	1,218
	63	IP67	363P6W	2CMA166786R1000	2,677
	125	IP67	3125P6W	2CMA166816R1000	7,803
5 (4P+E)	16	IP44	416-P6-I	2CMA100203R1000	468
	32	IP44	432-P6-I	2CMA100205R1000	499
	63	IP44	463P6	2CMA166764R1000	2,165
	16	IP67	416P6W	2CMA166494R1000	1,000
	32	IP67	432P6W	2CMA166524R1000	1,486
	63	IP67	463P6W	2CMA166798R1000	2,728
	125	IP67	4125P6W	2CMA166828R1000	7,925

Surface socket outlets



Terminals / Pole	Current rating (A)	Protection	Type	Order code	L.P.(₹)
3 (2P+E)	16	IP44	216RS6	2CMA193098R1000	510
	32	IP44	232RS6	2CMA193122R1000	671
	63	IP44	263RS6	2CMA167476R1000	2,650
	16	IP67	216RS6W	2CMA167149R1000	1,079
	32	IP67	232RS6W	2CMA167172R1000	1,536
	63	IP67	263RS6W	2CMA167306R1000	3,492
	125	IP67	2125RS6W	2CMA167246R1000	11,412
4 (3P+E)	16	IP44	316RS6	2CMA193106R1000	526
	32	IP44	332RS6	2CMA193130R1000	736
	63	IP44	363RS6	2CMA167498R1000	2,576
	16	IP67	316RS6W	2CMA167157R1000	1,393
	32	IP67	332RS6W	2CMA167180R1000	1,561
	63	IP67	363RS6W	2CMA167316R1000	3,382
	125	IP67	3125RS6W	2CMA167252R1000	11,099
5 (4P+E)	16	IP44	416RS6	2CMA193115R1000	566
	32	IP44	432RS6	2CMA193139R1000	746
	63	IP44	463RS6	2CMA167484R1000	2,771
	16	IP67	416RS6W	2CMA167166R1000	1,398
	32	IP67	432RS6W	2CMA167189R1000	1,819
	63	IP67	463RS6W	2CMA167328R1000	3,393
	125	IP67	4125RS6W	2CMA167264R1000	10,442

Wiring accessories

Industrial plugs and sockets

2



Panel mounted socket - Unified straight flange

Terminals / Pole	Current rating (A)	Protection	Type	Order code	L.P.(₹)
3 (2P+E)	16	IP44	216RU6-I	2CMA100210R1000	445
	32		232RU6-I	2CMA100212R1000	504
	63		263RU6	2CMA167510R1000	2,182
4 (3P+E)	16		316RU6	2CMA193178R1000	488
	32		332RU6	2CMA193250R1000	607
	63		363RU6	2CMA167520R1000	2,255
5 (4P+E)	16		416RU6-I	2CMA100211R1000	499
	32		432RU6-I	2CMA100213R1000	588
	63		463RU6	2CMA167532R1000	2,425

Terminals / Pole	Current rating (A)	Protection	Type	Order code	L.P.(₹)
3 (2P+E)	63	IP67	263RU6W	2CMA167374R1000	2,862
	125		2125RU6W	2CMA167133R1000	8,811
	16		216RAU6W	2CMA166996R1000	944
	32		232RAU6W	2CMA166948R1000	1,101
	63		263RAU6W	2CMA167442R1000	2,290
4 (3P+E)	63		363RU6W	2CMA167384R1000	2,565
	125		3125RU6W	2CMA167136R1000	8,496
	16		316RAU6W	2CMA167012R1000	975
	32		332RAU6W	2CMA166964R1000	1,252
	63		363RAU6W	2CMA167452R1000	2,368
5 (4P+E)	63		463RU6W	2CMA167396R1000	2,757
	125		4125RU6W	2CMA167142R1000	8,484
	16		416RAU6W	2CMA167030R1000	1,136
	32		432RAU6W	2CMA166982R1000	1,346
	63		463RAU6W	2CMA167464R1000	2,545

Panel mounted socket - Unified angled flange

Terminals / Pole	Current rating (A)	Protection	Type	Order code	L.P.(₹)
3 (2P+E)	16	IP44	216RAU6-I	2CMA100218R1000	468
	32		232RAU6-I	2CMA100220R1000	528
	63		263RAU6	2CMA167408R1000	2,182
4 (3P+E)	16		316RAU6	2CMA193226R1000	486
	32		332RAU6	2CMA193274R1000	683
	63		363RAU6	2CMA167418R1000	2,396
5 (4P+E)	16		416RAU6-I	2CMA100219R1000	520
	32		432RAU6-I	2CMA100221R1000	614
	63		463RAU6	2CMA167430R1000	2,425

Wiring accessories

Industrial plugs and sockets



Connectors

Terminals / Pole	Current rating (A)	Protection	Type	Order code	L.P.(₹)
3 (2P+E)	16	IP44	216-C6-I	2CMA100206R1000	497
	32		232-C6-I	2CMA100208R1000	608
	63		263C6	2CMA166840R1000	2,629
	16	IP67	216C6W	2CMA166538R1000	1,212
	32		232C6W	2CMA166584R1000	1,487
	63		263C6W	2CMA166874R1000	3,130
125	2125C6W		2CMA166918R1000	9,062	
4 (3P+E)	16	IP44	316-C6	2CMA193523R1000	522
	32		332-C6	2CMA193529R1000	732
	63		363C6	2CMA166850R1000	2,717
	16	IP67	316C6W	2CMA166554R1000	1,332
	32		332C6W	2CMA166604R1000	1,537
	63		363C6W	2CMA166894R1000	3,347
125	3125C6W		2CMA166924R1000	9,364	
5 (4P+E)	16	IP44	416-C6-I	2CMA100207R1000	572
	32		432-C6-I	2CMA100209R1000	671
	63		463C6	2CMA166862R1000	2,629
	16	IP67	416C6W	2CMA166572R1000	1,349
	32		432C6W	2CMA166618R1000	1,769
	63		463C6W	2CMA166906R1000	3,681
	125		4125C6W	2CMA166936R1000	11,328

Surface socket outlet with protection

Terminals / Pole	Current rating (A)	Protection	Type	Order code	L.P.(₹)
3 (2P+E)	16	IP67	216RP6WP	2CMA164572R1000	4,975
	32		232RP6WP	2CMA164602R1000	5,721
5 (4P+E)	16		416RP6WP	2CMA164589R1000	5,528
	32		432RP6WP	2CMA164619R1000	6,356

Wiring accessories

Industrial plugs and sockets



Switched interlocked socket outlet - Horizontal thermoplastic

Terminals / Pole	Current rating (A)	Protection	Type	Order code	L.P.(₹)
3 (2P+E)	16	IP44	216MHS4	2CMA167622R1000	5,320
	32		232MHS6	2CMA167669R1000	6,118
	63		263MHS6	2CMA167715R1000	10,641
	16	IP67	216MHS6W	2CMA167801R1000	5,016
	32		232MHS6W	2CMA167848R1000	6,730
	63		263MHS6W	2CMA167894R1000	12,236
4 (3P+E)	16	IP44	316MHS6	2CMA167631R1000	5,499
	32		332MHS6	2CMA167677R1000	6,323
	63		363MHS6	2CMA167721R1000	13,350
	16	IP67	316MHS6W	2CMA167809R1000	6,047
	32		332MHS6W	2CMA167856R1000	7,450
	63		363MHS6W	2CMA167899R1000	14,450
5 (4P+E)	16	IP44	416MHS6	2CMA167640R1000	5,911
	32		432MHS6	2CMA167686R1000	6,798
	63		463MHS6	2CMA167727R1000	13,512
	16	IP67	416MHS6W	2CMA167818R1000	6,502
	32		432MHS6W	2CMA167865R1000	7,479
	63		463MHS6W	2CMA167905R1000	14,568

Plug and sockets in metal enclosure with MCB / RCB provision

Terminals / Pole	Current rating (A)	Protection	Type	Order code	L.P.(₹)
3 (2P+E)	16	IP30	216RAU6SPNE	1SYN880110R0001	1,593
	32		232RAU6SPNE	1SYN880113R0001	1,737
	63		263RAU6SPNE	1SYN880116R0001	6,664
4 (3P+E)	16		316RAU6TPE	1SYN880111R0001	1,975
	32		332RAU6TPE	1SYN880114R0001	2,458
	63		363RAU6TPE	1SYN880117R0001	7,029
5 (4P+E)	16		416RAU6TPNE	1SYN880112R0001	1,777
	32		432RAU6TPNE	1SYN880115R0001	1,915
	63		463RAU6TPNE	1SYN880118R0001	7,311

Electrification products

Installation products

Installation products

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Installation products

Product brands overview

The acquisition of Thomas & Betts advances ABB's strategy of expanding its Electrification Products division into new geographies, sectors and products. The combination of Thomas & Betts' electrical components and ABB's low voltage protection, control and measurement products offer more of the components you need every day than any other single manufacturer in the world.

















Our focus is on improving your business performance by providing practical, reliable electrical products and services that solve everyday problems in:

- Wire & cable management - cable ties, wiring ducts, accessories
- Connectivity & grounding - connectors, terminals, earthing, lightning protection
- Cable protection systems - rigid and flexible conduit & fittings
- Lighting & systems - emergency lighting, lighting & battery systems
- Explosion protection - IECex, UL, CSA lighting, boxes and conduit systems
- Cable accessories and apparatus - MV and HV switches, Cable accessories

Markets we protect & connect together.

- 1 Renewables
Wind, solar, water & bio
- 2 Utilities
Power generation, transmission & distribution, telecom & datacentre, water & waste
3. Extraction
Oil, gas, mining
4. Transportation & Infrastructure
Rail, road, marine, aerospace, rail track, motorways, waterways
- 5 Commercial & Institutional
Office & storage, retail & leisure, healthcare & education government
- 6 Residential
Residential towers & apartment blocks, housing development projects, HMO's & university accommodation
- 7 Industry Processing Chemical, pharma, minerals, metals, materials, food & beverage, agriculture
- 8 Industry Assembling & OEM
OEM equipment & devices, machinery, automation, robotics

3

Wire & cable management - Energy & data connection	Cable protection systems - Energy & data protection	Connectivity & grounding - Critical process protection	Lighting - Safety & explosion proof
 <p>Ty-Rap®</p> <p>Premium cable ties</p>	 <p>Adaptaflex</p> <p>Flexible conduit systems for critical power & data protection</p>	 <p>furse</p> <p>Earthing & lightning protection</p>	 <p>EMERGI-LITE</p> <p>Emergency lighting systems</p>
 <p>Ty-Met™</p> <p>Stainless steel cable ties</p>	 <p>KOPEX-EX</p> <p>Flexible conduit systems for hazardous areas</p>	 <p>elastimold</p> <p>Underground cable protection accessories</p>	 <p>EMERGI-LITE</p> <p>Emergency safety systems</p>
 <p>T&B Cable Tray</p> <p>Cable tray, ladder, support systems & wire duct</p>	 <p>PMA</p> <p>Cable protection systems</p>	 <p>JOSLYN</p> <p>Overhead products for electrical power systems</p>	 <p>ETS</p> <p>Explosion-proof lighting & emergency lighting</p>
 <p>E-Klips®</p> <p>Electrical & mechanical steel spring fasteners</p>	 <p>Harnessflex</p> <p>Automotive wiring harness protection</p>	 <p>Spec-Kon®</p> <p>Solderless crimp connectors</p>	 <p>ETS</p> <p>Custom built control panels for hazardous areas</p>

Wire and cable management

Fastening products

Thomas & Betts (today a Member of the ABB Group) invented the Ty-Rap® cable tie to solve the problem of harnessing the hundreds of wires used in manufacturing aircraft and revolutionised the world of fastening. Today, the Ty-Rap® brand remains the benchmark for excellence and innovation in wire management.

ABB's broad offering of cable ties is designed to make the task of fastening, bundling, clamping and managing wires easier and quicker for industrial applications, construction, communications, utility and OEM professionals as well as home improvement specialists and do-it-yourself enthusiasts. When strength, aesthetics, reliability and performance are required, knowledgeable professionals turn to the original and the best source for cable ties and accessories. The corrosion-proof, non-magnetic stainless steel locking device inside the tie head

guarantees the strongest and most durable locking you will ever find on the market. Ty-Rap® can be used in the most adverse conditions: humidity, heat, cold,... Engineered for labour savings and high performance, Ty-Rap® cable ties are commonly used in a variety of applications. When you choose a Ty-Rap® cable tie, you can count on quality, performance and innovation to make your work easier.



Spec-Kon® general purpose

cable ties. The right cable tie for the right application
Characteristics

A complete range of cable ties for indoor and outdoor

Available in two different packaging quantities

Available in different lengths and tensile strengths

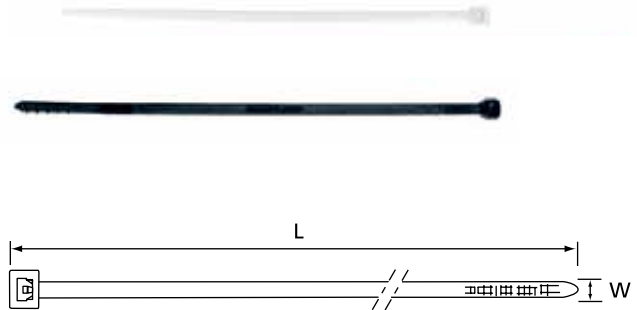
Technical Information

Material Polyamide 6.6 ; Halogen free, Silicone free

Temperature range -40°C to +85°C

Colour Natural and Black (Type code with 'X' is black colour and UV resistant)

Flammability rating UL 94 V-2



Natural colour - indoor use

Type Code	Description	UOM	SPQ	MRP
SKT100-80	100 mm length 2.5 mm width large pack	pc	1000	0.58
SKT100-80-100	100 mm length 2.5 mm width small pack	pc	100	0.65
SKT160-80	160 mm length 2.5 mm width large pack	pc	1000	0.96
SKT160-80-100	160 mm length 2.5 mm width small pack	pc	100	1.05
SKT200-80	200 mm length 2.5 mm width large pack	pc	1000	1.50
SKT200-80-100	200 mm length 2.5 mm width small pack	pc	100	1.60
SKT300-180	300 mm length 3.6 mm width large pack	pc	1000	2.25
SKT300-180-100	300 mm length 3.6 mm width small pack	pc	100	2.40
SKT370-180	370 mm length 3.6 mm width large pack	pc	1000	3.85
SKT370-180-100	370 mm length 3.6 mm width small pack	pc	100	4.00
SKT450-540-50	450 mm length 7.6 mm width small pack	pc	50	10.20
SKT750-540-50	750 mm length 7.6 mm width small pack	pc	50	17.00
SKT912-780-50	912 mm length 9 mm width small pack	pc	50	25.00

Black colour - indoor & outdoor use

Type Code	Description	UOM	SPQ	MRP
SKT100-80X	100 mm length 2.5 mm width large pack	pc	1000	0.69
SKT100-80X-100	100 mm length 2.5 mm width small pack	pc	100	0.76
SKT160-80X	160 mm length 2.5 mm width large pack	pc	1000	1.10
SKT160-80X-100	160 mm length 2.5 mm width small pack	pc	100	1.15
SKT200-80X	200 mm length 2.5 mm width large pack	pc	1000	1.60
SKT200-80X-100	200 mm length 2.5 mm width small pack	pc	100	1.70
SKT300-180X	300 mm length 3.6 mm width large pack	pc	1000	2.45
SKT300-180X-100	300 mm length 3.6 mm width small pack	pc	100	2.65
SKT370-180X	370 mm length 3.6 mm width large pack	pc	1000	4.20
SKT370-180X-100	370 mm length 3.6 mm width small pack	pc	100	4.40
SKT450-540X-50	450 mm length 7.6 mm width small pack	pc	50	11.30
SKT750-540X-50	750 mm length 7.6 mm width small pack	pc	50	19.00
SKT912-780X-50	912 mm length 9 mm width small pack	pc	50	27.00

Wire and cable management

Termination solution

Experience the Spec-Kon® advantage!

Thomas & Betts (today a Member of the ABB Group) developed the first tool-applied solderless terminals and connectors more than 60 years ago in response to industry awareness of the need for better performance of electrical systems.

Since then, the crimping technology, in which a permanent joining of wires / cables to connectors is achieved by the insertion of a conductor into the barrel of the connector, which is then compressed to form a solid joint, has proven its many advantages year after year. Reliability of connection, low installed cost, low level of skill required to produce repeatable and quality crimps, environmental compliance (versus soldering for instance) are examples of benefits that have given this technology its natural superiority.

3 Easy entry design

This feature makes wire insertion faster and easier. Chamfering eliminates wire strand “hang up” and departure upon insertion into the terminal’s barrel. The loss of even a couple of wire strands can have negative results on electrical efficiency and resistance to mechanical strain.

Brazed seam / tubular construction

Spec-Kon® brazed seam connectors have a barrel with brazed seam (or a tubular construction), which provides increased mechanical properties (no barrel separation during the crimp process, higher wire pullout force) and electrical properties (reduced chances of wirestrand loss and electrical failure) compared to butted seam connectors.

Spec-Kon® Insulated Tinned copper Easy-entry Terminal

Type Code	Description	UOM	SPQ	MRP
VT1E-RRΔ	0.5 - 1.5sq mm Ring Terminal	pc	100	Upon request
VT2E-BRΔ	1.5 - 2.5sq mm Ring Terminal	pc	100	Upon request
VT6E-YRΔ	4 - 6sq mm Ring Terminal	pc	100	Upon request
VT1E-RFΔ	0.5 - 1.5sq mm Fork Terminal	pc	100	Upon request
VT2E-BFΔ	1.5 - 2.5sq mm Fork Terminal	pc	100	Upon request
VT6E-YFΔ	4 - 6sq mm Fork Terminal	pc	100	Upon request
VT1E-RBΔ	0.5 - 1.5sq mm Blade Terminal	pc	100	Upon request
VT2E-BBΔ	1.5 - 2.5sq mm Blade Terminal	pc	100	Upon request
VT6E-YBΔ	4 - 6sq mm Blade Terminal	pc	100	Upon request

Color-Keyed®

Solderless compression connectors for power cables

The better method to install solderless compression connectors on power cables. Designed to provide a tight degree of reliability in electrical wiring, this method allows electrical workers to make installations with little effort and considerable savings in time.

A simple installation method in just three steps:

- First, the appropriate connector is chosen for the conductor size
- Next, the proper installing die is selected by matching the die colour to the connector colour
- Last, the die is installed in the tool, and the connector is compressed

Color-Keyed® Electro-tin plated copper Lug

Type Code	Description	UOM	SPQ	MRP
□MΔ-A	Straight Lug	pc	10	Upon request
□MΔ-A-2	Double hole Straight Lug	pc	10	Upon request
□MΔ-A-45	45° bend Lug	pc	10	Upon request
□MΔ-A-90	90° bend Lug	pc	10	Upon request

Double crimp

The double crimp feature has an extra copper sleeve within the barrel to ensure additional solid conductivity and pull-out-streight. Ideal for high vibration or heavy industrial applications.

Wide range of styles, materials and application tools

Extensive range of styles to suit the various applications: rings, forks, blades, pins, bootlace ferrules, disconnects, splices.... Non-insulated or insulated with various types of material (Polycarbonate, Vinyl, Nylon, Heat Shrink) according to the specific requirements (moisture protection, short circuits, dust, and solid crimping against vibration). Complete range of tooling, from ergonomic hand tool to pneumatic and hydraulic power tools.



Type Code	Description	UOM	SPQ	MRP
NC05ΔCD	0.5sq mm Cord end Terminal	pc	1000	Upon request
NC01ΔCD	1sq mm Cord end Terminal	pc	1000	Upon request
NC15ΔCD	1.5sq mm Cord end Terminal	pc	1000	Upon request
NC25ΔCD	2.5sq mm Cord end Terminal	pc	1000	Upon request
NC40ΔCD	4 sq mm Cord end Terminal	pc	1000	Upon request
NC60ΔCD	6 sq mm Cord end Terminal	pc	1000	Upon request
NC100ΔCD	10sq mm Cord end Terminal	pc	1000	Upon request
NC160ΔCD	16sq mm Cord end Terminal	pc	1000	Upon request

Δ Complete with stud hole size

Color-Keyed®: special lugs for special applications

ABB can solve your difficult wire bending and terminating problems in power distribution panels, switchgear and motor control enclosures.

- In addition to straight lugs, 45° and 90° angle lugs let you run the cable directly to a bus bar with no bending.
- One hole or two-hole configurations.
- Cross-sections from 10-400mm²
- All lugs meet the stringent requirements of IEC61238-1 Class A to deliver a high-level of performance and safety.



- Complete with cable size
- Δ Complete with stud hole size

Wire and cable management

Flexible conduit system

Adaptaflex flexible conduit system

Adaptaflex is one of the market leading flexible conduit system brands that can be found all over the world. Combining innovative design with dedicated manufacture it offers customers one of the world's broadest ranges of cable protection products and solutions. With a choice of over 6000 products the range covers metallic and non-metallic flexible conduit systems for the protection of critical power and data cable.

The system solutions from Adaptaflex need to perform in a wide variety of environments from high temperature to freezing subzero conditions. The products are designed and tested to withstand constant vibrations, water ingress, offer corrosion resistance and are available in halogen free, low smoke and low toxicity materials. An extensive range of engineered solutions are designed to withstand the rigours of some of the most technically demanding markets. So whatever your project involves our experience will provide the answer helping you to specify the correct flexible conduit system.

Type PA - Polyamide (Nylon) 6 conduit

Type Code	Description	UOM	SPQ	MRP
PAFL13/BL	13mm nominal dia Nylon conduit, black	mtr	50	98
PAFL16/BL	16mm nominal dia Nylon conduit, black	mtr	50	133
PAFL21/BL	21mm nominal dia Nylon conduit, black	mtr	50	212
PAFL28/BL	28mm nominal dia Nylon conduit, black	mtr	50	392
PAFL34/BL	34mm nominal dia Nylon conduit, black	mtr	50	462
PAFL42/BL	42mm nominal dia Nylon conduit, black	mtr	25	481
PAFL54/BL	54mm nominal dia Nylon conduit, black	mtr	25	763
PACS80/BL	80mm nominal dia Nylon conduit, black	mtr	10	3,563
PACS106/BL	106mm nominal dia Nylon conduit, black	mtr	10	4,576

Type S - Galvanised steel general purpose conduit

Type Code	Description	UOM	SPQ	MRP
S16	16mm nominal dia steel conduit	mtr	50	481
S20	20mm nominal dia steel conduit	mtr	50	462
S25	25mm nominal dia steel conduit	mtr	50	537
S32	32mm nominal dia steel conduit	mtr	25	886
S40	40mm nominal dia steel conduit	mtr	25	1,225
S50	50mm nominal dia steel conduit	mtr	25	1,734
S63	63mm nominal dia steel conduit	mtr	10	4,524
S75	75mm nominal dia steel conduit	mtr	10	6,947

Type SP - Covered steel general purpose conduit

Type Code	Description	UOM	SPQ	MRP
SP16/BL	16mm nom. dia covered steel conduit, black	mtr	50	528
SP20/BL	20mm nom. dia covered steel conduit, black	mtr	50	594
SP25/BL	25mm nom. dia covered steel conduit, black	mtr	50	679
SP32/BL	32mm nom. dia covered steel conduit, black	mtr	25	1,169
SP40/BL	40mm nom. dia covered steel conduit, black	mtr	25	1,527
SP50/BL	50mm nom. dia covered steel conduit, black	mtr	25	1,998
SP63/BL	63mm nom. dia covered steel conduit, black	mtr	10	4,784
SP75/BL	75mm nom. dia covered steel conduit, black	mtr	10	7,167

For any other specification / requirement of conduits and accessories kindly contact local ABB sales office

Markets and industries

Adaptaflex flexible conduit systems are used to protect critical power and data cabling are available throughout a wide range of markets including:

- Commercial contracting
- Machinery
- Rail / Infrastructure
- Marine
- Mechanical
- Security / CCTV
- Data cabling
- Critical power

Many components are designed specifically for a market solution. These products uniquely meet an industry's needs - solving a specific application requirement, providing product innovation, saving installation and component costs, improving the quality and the integrity of the end product. Wherever you need mechanical and electrical protection for your cables you can be confident in specifying Adaptaflex products



Approvals



Temperature Range

Static Applications: -40°C to +120°C
Moving Applications: -5°C to +120°C

Flexibility & Fatigue Life

High Flexibility - High Fatigue Life

Fire Performance & EMI Screen

Self Extinguishing Halogen Free

UV Resistance

Very High



Approvals



Temperature Range

Static Applications: -50°C to +300°C
Moving Applications: -45°C to +250°C

Flexibility & Fatigue Life

High Flexibility - High Fatigue Life

Fire Performance & EMI Screen

Self Extinguishing Halogen Free

UV Resistance

Very High



Approvals



Temperature Range

Static Applications: -25°C to +70°C
Moving Applications: -5°C to +90°C

Flexibility & Fatigue Life

High Flexibility - Medium Fatigue Life

Fire Performance & EMI Screen

Self Extinguishing

UV Resistance

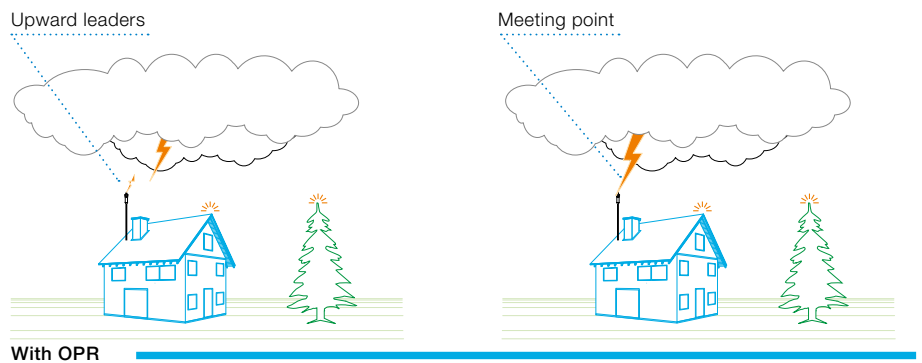
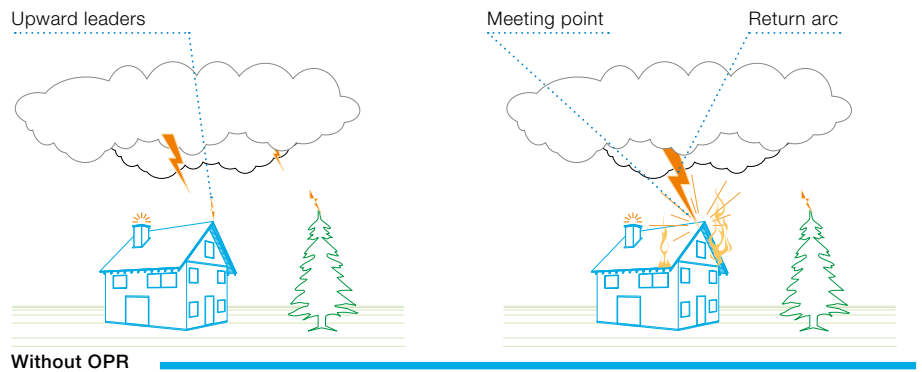
Very High

External lightning protection

OPR - Optimized Pulse Rod

The OPR efficiency (ΔT)

Lightning is one of the most spectacular meteorological phenomena. Generated by the interaction of clouds elements (water and ice), it can kill, injure and damage. The unique efficiency of the OPR Early streamer emission is based on the difference (ΔT), measured in a laboratory, in between the emission time of the OPR and the one from a simple rod. The OPR ESE air terminal is composed of a striking point connected to a down conductor to conduct the lightning to the ground.



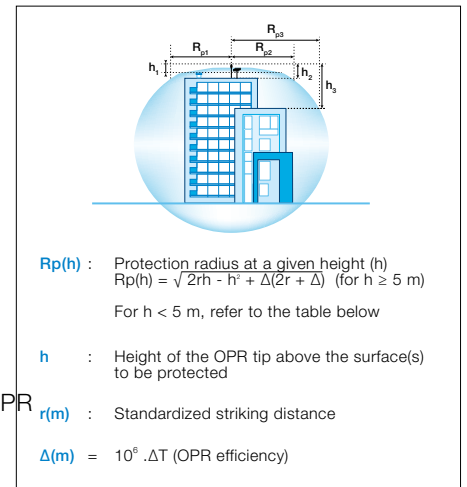
Complete autonomy

During a storm the ambient electric field may rise from 600 V to 10-20 kV/m. When the electric field reach this level representing a minimum risk for a lightning, the OPR begins to get activated and generates high voltage pulses, helping to create and propagating an upward leader. After a strike on the OPR, the lightning current is driven to ground by the down conductor to the earth termination system.

Radius of protection

The radius of protection (R_p) of the OPR is calculated according to the NF C 17-102 (edition 2011). It depends on the OPR efficiency (ΔT) expressed in micro-seconds. The maximum value for ΔT is 60 μs .

The risk assessment shall be calculated according to the NF C 17-102 Annex A / IEC 62305-2 and will define the protection level (LPL I, II, III or IV) which will be used in the determination of the OPR radius of protection.



Installing / testing

The installation and verification of lightning protection systems using one or more OPR units must be performed in accordance with the manufacturer's recommendations and to the NF C 17-102 standard.

OPR radius of protection

Protection level	I ($r = 20$ m)			II ($r = 30$ m)			III ($r = 45$ m)			IV ($r = 60$ m)		
	OPR 30	OPR 45	OPR 60	OPR 30	OPR 45	OPR 60	OPR 30	OPR 45	OPR 60	OPR 30	OPR 45	OPR 60
h (m)	Radius of protection R_p (m)											
2	19	25	31	22	28	35	25	32	39	28	36	43
3	29	38	47	33	42	52	38	48	58	43	57	64
4	38	51	63	44	57	69	51	65	78	57	72	85
5	48	63	79	55	71	86	63	81	97	71	89	107
6	48	63	79	55	71	87	64	81	97	72	90	107
8	49	64	79	56	72	87	65	82	98	73	91	108
10	49	64	79	57	72	88	66	83	99	75	92	109
15	50	65	80	58	73	89	69	85	101	78	95	111
20	50	65	80	59	74	89	71	86	102	81	97	113
45	43	65	76	58	75	89	75	90	105	89	104	119
50	40	65	74	57	75	88	75	90	105	89	104	120
55	36	65	72	55	75	86	74	90	105	90	105	120
60	30	65	69	52	75	85	73	90	104	90	105	120

External lightning protection OPR - Optimized Pulse Rod

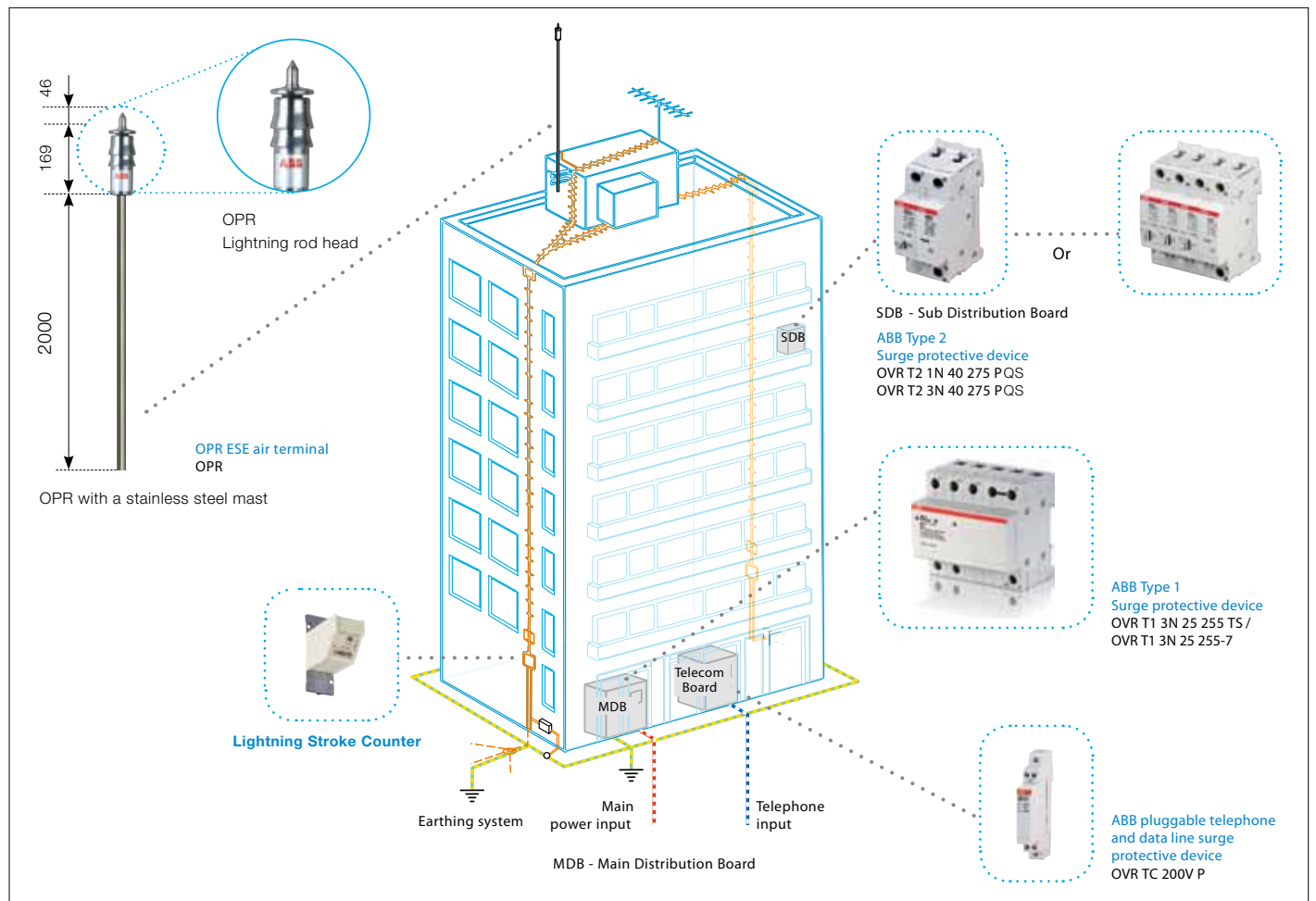
OPR Range

Type Code	Description	Length (m)	Weight (kg)	Time gain (μs)	Ordering Code	M.R.P.(₹)
OPR 30	ESE Air terminal without mast	0.215	2.40	30	2CTB899800R7000	98,850
OPR 45	ESE Air terminal without mast	0.215	2.40	45	2CTB899800R7500	1,17,200
OPR 60	ESE Air terminal without mast	0.215	2.40	60	2CTB899800R7100	1,27,700

Accessories

Type Code	Description	Length (m)	Weight (kg)	Ordering Code	M.R.P.(₹)
LS COUNTER	Lightning stroke counter	-	0.56	2CTHOCCF2004	32,000
MAST 2M30	Mounting Mast, 2m, 30mm dia	2	4.4	H00003002L	6,200
MAST 3M	Mounting Mast, 3m with guywire and base plate	3	6.5	H00003003LGB	10,500
CM015	Bentonite Moisture retainer - Powder	-	25	-	Uppon enquiry
CM020	Bentonite Moisture retainer - Granules	-	25	-	Uppon enquiry
CM025	FurseCEM conductive aggregate	-	25	-	Uppon enquiry
RB Δ □	Copperbond earth rod	-	-	-	Uppon enquiry
CR Δ □	Rod to tape clamp	-	-	-	Uppon enquiry
PT205	Light weight inspection pit with grey polymer lid	-	-	-	Uppon enquiry

3



External lightning protection

Furse - Earthing and lightning protection

Furse provides world leading Earthing, Lightning and Electronic Systems Protection from our own designed and manufactured products through to risk assessment and systems design advice.

Our renowned Furse range of Earthing & Lightning Protection design services provide a unique total solution.

Expertise

Specialist advice from our fully qualified technical engineers - focusing on your earthing & lightning protection issues and concerns.

3

Experience

Experience to provide the optimum design - one that doesn't use more material than is necessary, saving you money.

Knowledge

Our knowledge of the latest products ensures a tailored design that can be installed using the most appropriate and up-to-date products.



Structural lightning protection

From Furse air termination systems including air rods and strike plates to capture lightning strikes, through to our comprehensive range of down conductors and lightning protection components which channel lightning energy safely to a Furse earth termination network.

- Air termination systems
- Lightning protection conductors
- Conductor clips, clamps and holdfasts
- Bimetallic connection components



Electronic systems protection

Our exhaustive range of equipotential bonding and transient overvoltage SPDs providing fully coordinated protection against transient overvoltages on all incoming and outgoing metallic service lines including power, data, signal & telecoms.

- Lightning Equipotential Bonding SPDs
- Mains power transient overvoltage SPDs
- Data, signal & telecommunication lines SPDs
- DC power & photovoltaic SPDs

Compliance, now & in the future

Furse designs comply with all recognised standards - national and international. Our engineers actively contribute to national and harmonised European / international standards, ensuring we remain at the forefront of new developments.

- BS EN/IEC 62305 Protection against lightning
- NFPA 780 Standard for the installation of lightning protection systems
- IEEE Std 80:2000 IEEE Guide for safety in AC substation grounding
- ENA TS 41-24 Guidelines for the design, installation, testing & maintenance of main earthing systems in substations
- BS EN 50522:2010 - Earthing of power installations exceeding 1.k Vac
- IS/IEC 62305 - Protection against lightning



Earthing

A combination of Furse earth electrodes, soil conditioning, conductors and equipotential bonding bars provide an effective, low resistance dissipation from the lightning protection system to earth.

- Earth rods and conductor systems
- Mechanical earth clamps and bonds
- Soil conditioning agents
- Earth bars and equipotential bonding



FurseWELD - Exothermic welding

FurseWELD exothermic welding is a cost efficient, self-contained system that uses the high temperature reaction of powdered copper oxide and aluminium, within a mould, to form permanent electrical connections.

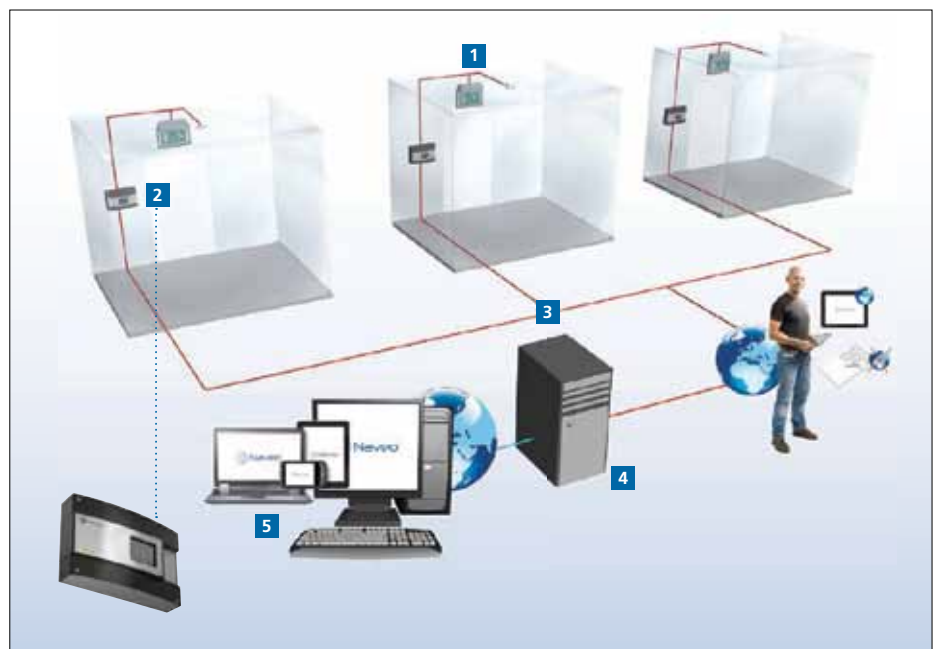
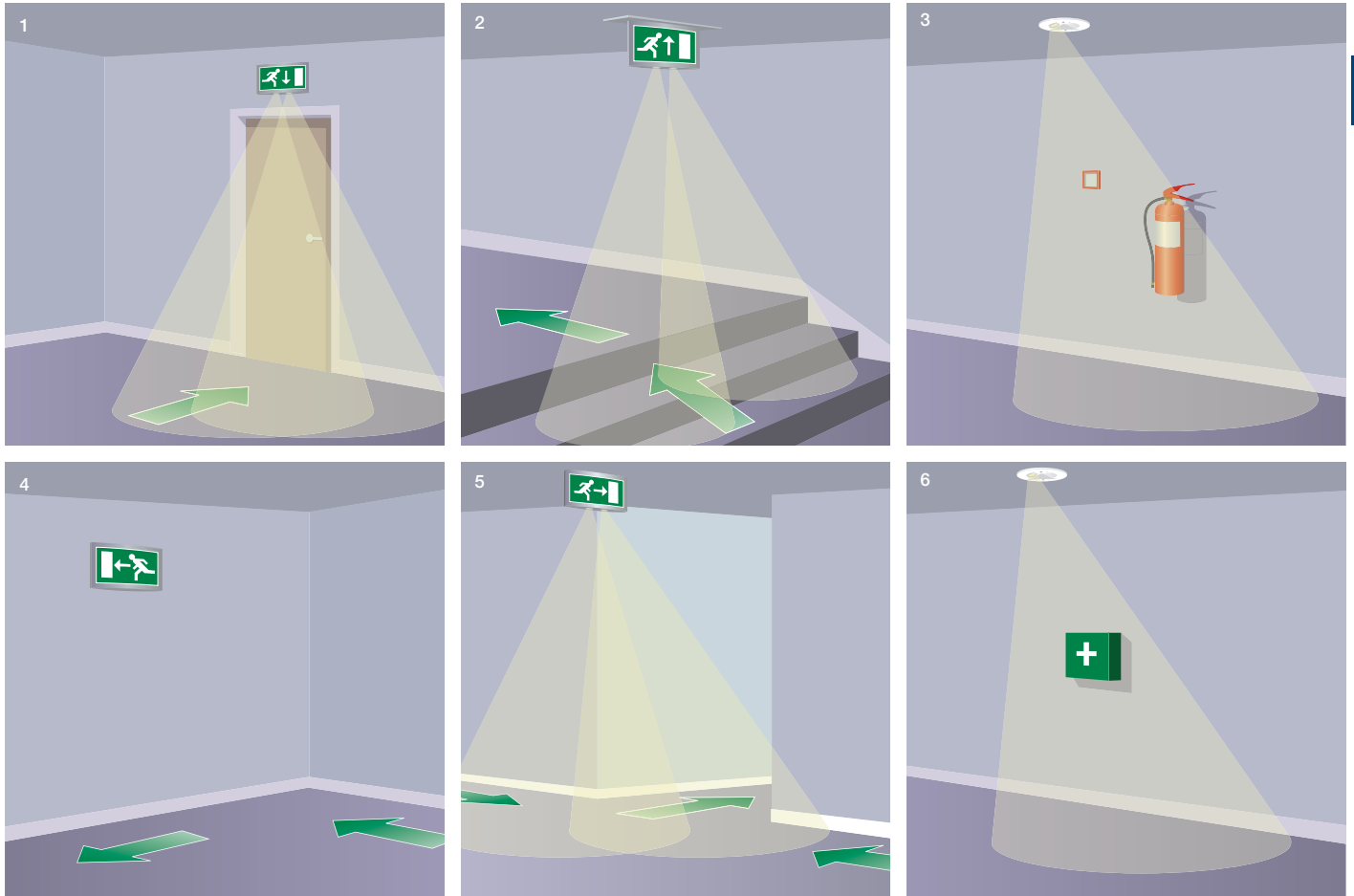
- Moulds
- Powder
- Handle clamps
- Accessories

Emergency lighting systems

Exit sign, light and battery system

The requirement for emergency lighting originates from the Fire Precautions Act 1971 and was further enforced by the Fire Precautions (Workplace) Regulations 1997 (Amended 1999).

The Emergi-Lite concept is clear and simple. Emergi-Lite offers you reliable total solutions for safe evacuation. The way in which we do this is what makes the difference. Emergi-Lite offers advantages to everybody involved in the construction process. That way, you know that Emergi-Lite is always the right choice, for both you and your customers.



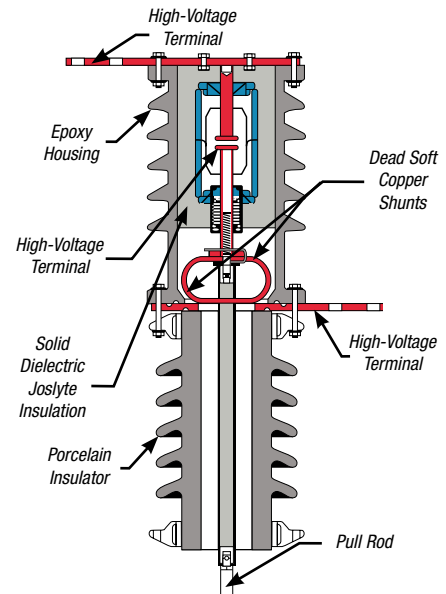
MV and HV apparatus

Capacitor and furnace switches

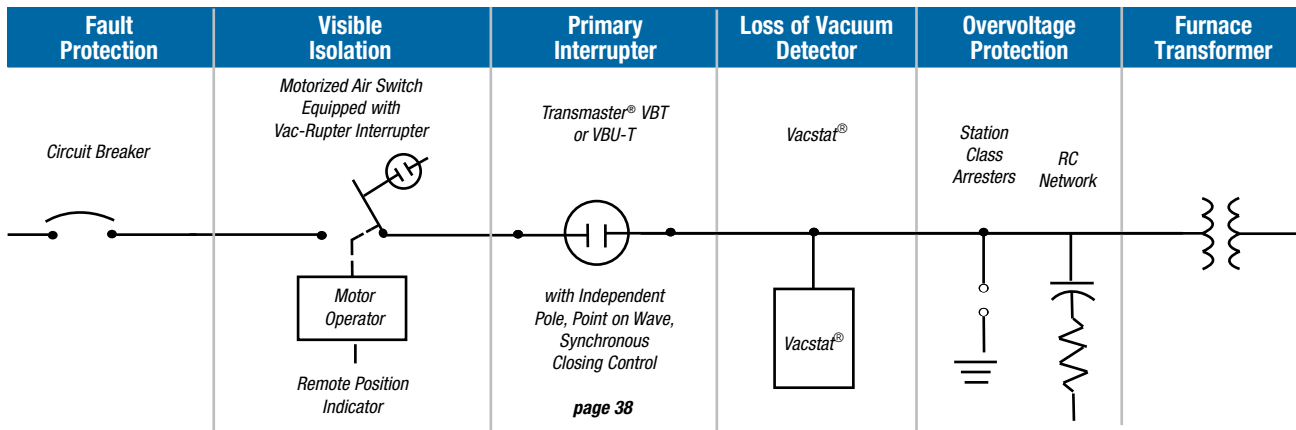
Transmaster® VBT Electric Furnace Switches

Longest life product for electric furnaces!
 Joslyn Hi-Voltage® Transmaster®
 Electric Furnace Switch

- Long, maintenance-free life under demanding conditions, designed for 100,000 operations
- No oil or gas used for interruption or insulation
- Safe — no visible or hazardous arcing and no hot exhaust or ionized gas dissemination
- Vacuum interrupter condition can be determined by a high-potential withstand test quickly
- Lightweight modular design — no special foundations or costly support required
- Removable fuses provide protection
- Vacuum contacts withstand excessive overloads and system short circuits at any power factor
- Eight heavy-duty auxiliary contacts are provided for remote indications, control and interlocking of other furnace functions or equipment
- Capacitor discharge circuit trips switch open upon loss of control voltage
- Circuit trips switch open if one mechanism does not close within the specified time



Ideal Furnace System



DESCRIPTION	15.5kV						38kV					
	Radius of protection Rp (m)											
h (m)	600	1000	1500	2000	3000	4000	600	1000	1500	2000	2500	3000
Continuous Current (Amps)	600	1000	1500	2000	3000	4000	600	1000	1500	2000	2500	3000
Momentary Current (RMS Amps, Asymmetrical) (kA)	20	35	50	65	65	65	20	35	50	65	65	65
Impulse Withstand Open-Gap (kV BIL)	110	110	110	110	110	110	200	200	200	200	200	200
Impulse Withstand Line-to-Ground (kV BIL)	150	150	150	150	150	150	200	200	200	200	200	200
Maximum 60 Cycle Withstand Line-to-Ground Dry (One Minute) (kV)	112	112	112	112	112	112	112	112	112	112	112	112
Maximum 60 Cycle Withstand Line-to-Ground Wet (Ten Seconds) (kV)	55	55	55	55	55	55	55	55	55	55	55	55
Fault Interrupting Rating (Amps, Symmetric) (kA)	4	4	4	4	4	4	4	4	4	4	4	4

Power Grid - HV Capacitors and filter modules

Capacitors and Filter modules

ABB's comprehensive range of Low Voltage Capacitors and Filter modules	215
Q Cap - L capacitors	217
CLMD series capacitor for Heavy duty applications	221
De tuned harmonic filter module	222

ABB's comprehensive range of low voltage capacitors and filter modules

The range of ABB Low Voltage Capacitors and Filter modules ranks amongst the most extensive on the market with a full range of innovative solutions for various applications, helping to optimise resources, reduce energy costs, boost productivity.

- Q Cap - L (normal duty and heavy duty) capacitors
 - Cylindrical type
 - Box type
- CLMD heavy duty capacitors
- APP Type Oil Filled capacitors
- Harmonic De Tuned Filter modules
- APFC relays

4



Q Cap - L Capacitors

440 Volts, 3 Phase, 50 Hz Cylindrical Type - Normal Duty



Description	kvar	Delivery batch (units)	Unit	Ordering code	M.R.P.(₹)
LV Capacitor CYL ND F5 V440	1 kvar	12	PC	1HYC414005-101	186
LV Capacitor CYL ND F5 V440	2.1 kvar	12	PC	1HYC414005-102	447
LV Capacitor CYL ND F5 V440	3 kvar	12	PC	1HYC414005-103	663
LV Capacitor CYL ND F5 V440	4.2 kvar	12	PC	1HYC414005-104	947
LV Capacitor CYL ND F5 V440	5 kvar	12	PC	1HYC414005-105	929
LV Capacitor CYL ND F5 V440	6 kvar	12	PC	1HYC414005-106	1,115
LV Capacitor CYL ND F5 V440	7.5 kvar	12	PC	1HYC414005-107	1,393
LV Capacitor CYL ND F5 V440	10 kvar	12	PC	1HYC414005-108	1,858
LV Capacitor CYL ND F5 V440	12.5 kvar	12	PC	1HYC414005-109	2,322
LV Capacitor CYL ND F5 V440	15 kvar	12	PC	1HYC414005-110	2,787
LV Capacitor CYL ND F5 V440	20 kvar	12	PC	1HYC414005-111	3,715
LV Capacitor CYL ND F5 V440	25 kvar	12	PC	1HYC414005-112	4,644

480 Volts, 3 Phase, 50 Hz Cylindrical Type - Normal Duty



Description	kvar	Delivery batch (units)	Unit	Ordering code	M.R.P.(₹)
LV Capacitor CYL ND F5 V480	5.5 kvar	12	PC	1HYC414014-101	1,053
LV Capacitor CYL ND F5 V480	8.3 kvar	12	PC	1HYC414014-102	1,626
LV Capacitor CYL ND F5 V480	11.1 kvar	12	PC	1HYC414014-104	2,155
LV Capacitor CYL ND F5 V480	12.5 kvar	12	PC	1HYC414014-105	2,440
LV Capacitor CYL ND F5 V480	15 kvar	12	PC	1HYC414014-107	2,934
LV Capacitor CYL ND F5 V480	16.6 kvar	12	PC	1HYC414014-108	3,245
LV Capacitor CYL ND F5 V480	20.8 kvar	12	PC	1HYC414014-109	4,066
LV Capacitor CYL ND F5 V480	22.1 kvar	12	PC	1HYC414014-110	4,318
LV Capacitor CYL ND F5 V480	25 kvar	12	PC	1HYC414014-111	4,899
LV Capacitor CYL ND F5 V480	27.7 kvar	12	PC	1HYC414014-112	5,433
LV Capacitor CYL ND F5 V480	30 kvar	12	PC	1HYC414014-113	5,888

525 Volts, 3 Phase, 50 Hz Cylindrical Type - Normal Duty



Description	kvar	Delivery batch (units)	Unit	Ordering code	M.R.P.(₹)
LV Capacitor CYL ND F5 V525	6.6 kvar	12	PC	1HYC414016-102	1,323
LV Capacitor CYL ND F5 V525	10.4 kvar	12	PC	1HYC414016-105	2,079
LV Capacitor CYL ND F5 V525	13.2 kvar	12	PC	1HYC414016-107	2,649
LV Capacitor CYL ND F5 V525	16.6 kvar	12	PC	1HYC414016-108	3,335
LV Capacitor CYL ND F5 V525	20.8 kvar	12	PC	1HYC414016-111	4,183
LV Capacitor CYL ND F5 V525	26.5 kvar	12	PC	1HYC414016-112	5,339
LV Capacitor CYL ND F5 V525	33.1 kvar	12	PC	1HYC414016-113	6,679

Q Cap - L Capacitors

4



440 Volts, 3 Phase, 50 Hz Cylindrical Type - Heavy Duty

Description	kvar	Delivery batch (units)	Unit	Ordering code	M.R.P.(₹)
LV Capacitor CYL HD F5 V440	1 kvar	12	PC	1HYC414007-101	352
LV Capacitor CYL HD F5 V440	2 kvar	12	PC	1HYC414007-102	709
LV Capacitor CYL HD F5 V440	3 kvar	4	PC	1HYC414007-103	983
LV Capacitor CYL HD F5 V440	4 kvar	4	PC	1HYC414007-104	1,344
LV Capacitor CYL HD F5 V440	5 kvar	4	PC	1HYC414007-105	1,418
LV Capacitor CYL HD F5 V440	6 kvar	2	PC	1HYC414007-106	1,703
LV Capacitor CYL HD F5 V440	7.5 kvar	2	PC	1HYC414007-107	2,160
LV Capacitor CYL HD F5 V440	10 kvar	2	PC	1HYC414007-108	2,901
LV Capacitor CYL HD F5 V440	12.5 kvar	2	PC	1HYC414007-109	3,652
LV Capacitor CYL HD F5 V440	15 kvar	2	PC	1HYC414007-110	4,383
LV Capacitor CYL HD F5 V440	20 kvar	4	PC	1HYC414007-111	5,886
LV Capacitor CYL HD F5 V440	25 kvar	4	PC	1HYC414007-112	7,410

480 Volts, 3 Phase, 50 Hz Cylindrical Type - Heavy Duty



Description	kvar	Delivery batch (units)	Unit	Ordering code	M.R.P.(₹)
LV Capacitor CYL HD F5 V480	5.5 kvar	4	PC	1HYC414015-102	1,644
LV Capacitor CYL HD F5 V480	8.3 kvar	4	PC	1HYC414015-103	2,525
LV Capacitor CYL HD F5 V480	11.1 kvar	4	PC	1HYC414015-105	3,406
LV Capacitor CYL HD F5 V480	12.5 kvar	4	PC	1HYC414015-106	3,857
LV Capacitor CYL HD F5 V480	13.8 kvar	4	PC	1HYC414015-107	4,256
LV Capacitor CYL HD F5 V480	16.6 kvar	4	PC	1HYC414015-109	5,137
LV Capacitor CYL HD F5 V480	20 kvar	4	PC	1HYC414015-110	6,217
LV Capacitor CYL HD F5 V480	22.1 kvar	4	PC	1HYC414015-111	6,869
LV Capacitor CYL HD F5 V480	25 kvar	4	PC	1HYC414015-112	7,358
LV Capacitor CYL HD F5 V480	27.7 kvar	4	PC	1HYC414015-113	8,631
LV Capacitor CYL HD F5 V480	31.5 kvar	4	PC	1HYC414015-114	10,060

525 Volts, 3 Phase, 50 Hz Cylindrical Type - Heavy Duty



Description	kvar	Delivery batch (units)	Unit	Ordering code	M.R.P.(₹)
LV Capacitor CYL HD F5 V525	10 kvar	4	PC	1HYC414017-100	4,404
LV Capacitor CYL HD F5 V525	15.4 kvar	4	PC	1HYC414017-101	5,336
LV Capacitor CYL HD F5 V525	16.6 kvar	4	PC	1HYC414017-102	5,752
LV Capacitor CYL HD F5 V525	20 kvar	4	PC	1HYC414017-103	6,387
LV Capacitor CYL HD F5 V525	25 kvar	4	PC	1HYC414017-104	7,880
LV Capacitor CYL HD F5 V525	33.1 kvar	4	PC	1HYC414017-105	10,433

Q Cap - L Capacitors

440 Volts, 3 Phase, 50 Hz Box Type - Normal Duty



Description	kvar	Delivery batch (units)	Unit	Ordering code	M.R.P.(₹)
LV Capacitor BOX NDW F5 V440	1 kvar	1	PC	1HYC414009-001	283
LV Capacitor BOX NDW F5 V440	2 kvar	1	PC	1HYC414009-002	563
LV Capacitor BOX NDW F5 V440	3 kvar	1	PC	1HYC414009-003	845
LV Capacitor BOX NDW F5 V440	4 kvar	1	PC	1HYC414009-004	1,127
LV Capacitor BOX ND F5 V440	5 kvar	1	PC	1HYC414009-005	1,252
LV Capacitor BOX ND F5 V440	6 kvar	1	PC	1HYC414009-006	1,502
LV Capacitor BOX ND F5 V440	7.5 kvar	1	PC	1HYC414009-007	1,909
LV Capacitor BOX ND F5 V440	10 kvar	1	PC	1HYC414009-008	2,421
LV Capacitor BOX ND F5 V440	12.5 kvar	1	PC	1HYC414009-009	3,052
LV Capacitor BOX ND F5 V440	15 kvar	1	PC	1HYC414009-010	3,694
LV Capacitor BOX ND F5 V440	20 kvar	1	PC	1HYC414009-012	4,296
LV Capacitor BOX ND F5 V440	25 kvar	1	PC	1HYC414009-014	6,106
LV Capacitor BOX ND F5 V440	50 kvar	1	PC	1HYC414009-120	12,316

Note : 1-4 Kvar will be available in wire type only

440 Volts, 3 Phase, 50 Hz Box Type - Heavy Duty



Description	kvar	Delivery batch (units)	Unit	Ordering code	M.R.P.(₹)
LV Capacitor BOX HD F5 V440	1 kvar	1	PC	1HYC414012-101	344
LV Capacitor BOX HD F5 V440	2 kvar	1	PC	1HYC414012-102	755
LV Capacitor BOX HD F5 V440	3 kvar	1	PC	1HYC414012-103	1,146
LV Capacitor BOX HD F5 V440	4 kvar	1	PC	1HYC414012-104	1,561
LV Capacitor BOX HD F5 V440	5 kvar	1	PC	1HYC414012-105	1,659
LV Capacitor BOX HD F5 V440	6 kvar	1	PC	1HYC414012-106	2,003
LV Capacitor BOX HD F5 V440	7.5 kvar	1	PC	1HYC414012-107	2,505
LV Capacitor BOX HD F5 V440	10 kvar	1	PC	1HYC414012-108	3,381
LV Capacitor BOX HD F5 V440	12.5 kvar	1	PC	1HYC414012-109	4,252
LV Capacitor BOX HD F5 V440	15 kvar	1	PC	1HYC414012-110	5,103
LV Capacitor BOX HD F5 V440	20 kvar	1	PC	1HYC414012-112	6,804
LV Capacitor BOX HD F5 V440	25 kvar	1	PC	1HYC414012-114	8,506
LV Capacitor BOX HD F5 V440	50 kvar	1	PC	1HYC414012-120	17,116

480 Volts, 3 Phase, 50 Hz Box Type - Heavy Duty



Description	kvar	Delivery batch (units)	Unit	Ordering code	M.R.P.(₹)
LV Capacitor BOX HD F5 V480	5.5 kvar	1	PC	1HYC414013-103	1,926
LV Capacitor BOX HD F5 V480	8.3 kvar	1	PC	1HYC414013-104	2,939
LV Capacitor BOX HD F5 V480	11.1 kvar	1	PC	1HYC414013-113	3,962
LV Capacitor BOX HD F5 V480	13.8 kvar	1	PC	1HYC414013-116	4,947
LV Capacitor BOX HD F5 V480	16.6 kvar	1	PC	1HYC414013-118	5,968
LV Capacitor BOX HD F5 V480	22.1 kvar	1	PC	1HYC414013-121	7,942
LV Capacitor BOX HD F5 V480	25 kvar	1	PC	1HYC414013-125	8,955
LV Capacitor BOX HD F5 V480	27.7 kvar	1	PC	1HYC414013-122	9,919

Q Cap - L Capacitors

525 Volts, 3 Phase, 50 Hz Box Type - Heavy Duty



Description	kvar	Delivery batch (units)	Unit	Ordering code	M.R.P.(₹)
LV Capacitor BOX HD F5 V525	6.6 kvar	1	PC	1HYC414013-127	2,386
LV Capacitor BOX HD F5 V525	13.2 kvar	1	PC	1HYC414013-132	4,867
LV Capacitor BOX HD F5 V525	15 kvar	1	PC	1HYC414013-133	5,548
LV Capacitor BOX HD F5 V525	20 kvar	1	PC	1HYC414013-136	7,395
LV Capacitor BOX HD F5 V525	25 kvar	1	PC	1HYC414013-137	9,210
LV Capacitor BOX HD F5 V525	33.1 kvar	1	PC	1HYC414013-140	12,230

4 CLMD series for Heavy duty applications

415 Volts, 3 Phase, 50 Hz



Voltage	Description	Rating in kvar	Ordering code	M.R.P.(₹)
415 V	CLMD 13	15	1HYC414000-172	6,492
	CLMD 43	20	1HYC414000-143	11,180
	CLMD 43	25	1HYC414000-009	11,875
	CLMD 43	30	1HYC414000-069	12,024
	CLMD 53	40	1HYC414000-003	19,267
	CLMD 53	50	1HYC414000-013	24,006
	CLMD 63	60	1HYC414000-142	29,454
	CLMD 63	75	1HYC414000-029	36,286
	CLMD 83	100	1HYC414000-086	49,420

440 Volts, 3 Phase 50 Hz



Voltage	Description	Rating in kvar	Ordering code	M.R.P.(₹)
440 V	CLMD 13	15	1HYC414000-005	6,463
	CLMD 43	20	1HYC414000-007	11,930
	CLMD 43	25	1HYC414000-008	11,156
	CLMD 43	30	1HYC414000-021	11,978
	CLMD 53	40	1HYC414000-012	19,265
	CLMD 53	50	1HYC414000-001	22,565
	CLMD 63	60	1HYC414000-011	26,960
	CLMD 63	75	1HYC414000-042	31,642
	CLMD 83	100	1HYC414000-067	44,531

480 Volts, 3 Phase 50 Hz



Voltage	Description	Rating in kvar	Ordering code	M.R.P.(₹)
480 V	CLMD 13	12.5	1HYC414000-099	7,172
	CLMD 13	14	1HYC414000-047	12,652
	CLMD 43	20	1HYC414000-157	11,773
	CLMD 33	25	1HYC414000-098	12,063
	CLMD 53	33.5	1HYC414000-206	20,248
	CLMD 53	50	1HYC414000-108	25,415
	CLMD 63	62.5	1HYC414000-254	33,833
	CLMD 63	75	1HYC414000-258	37,509

CLMD series for Heavy duty applications

525 Volts, 3 Phase 50 Hz



Voltage	Description	Rating in kvar	Ordering code	M.R.P.(₹)
525 V	CLMD 13	10	1HYC414000-230	6,691
	CLMD 33C	15	1HYC414000-101	6,494
	CLMD 43	20	1HYC414000-124	12,391
	CLMD 33	25	1HYC414000-109	12,467
	CLMD 53	34	1HYC414000-044	19,071
	CLMD 53	50	1HYC414000-095	25,818
	CLMD 63	69	1HYC414000-045	32,516
	CLMD 63	75	1HYC414000-080	33,362

CLMD 33 – Slim design Capacitors for panel mounting

415 Volts, 3 phase 50 Hz



Voltage	Description	Rating in kvar	Ordering code	M.R.P.(₹)
415 V	CLMD 33C	10	1HYC414000-065	6,485
	CLMD 33C	12.5	1HYC414000-088	6,127
	CLMD 33C	15	1HYC414000-097	6,172
	CLMD 33	25	1HYC414000-053	11,358
	CLMD 33	30	1HYC414000-147	11,428

440 Volts, 3 Phase 50 Hz



Voltage	Description	Rating in kvar	Ordering code	M.R.P.(₹)
440 V	CLMD 33C	10	1HYC414000-066	5,635
	CLMD 33C	12.5	1HYC414000-096	5,494
	CLMD 33C	15	1HYC414000-119	6,137
	CLMD 33	25	1HYC414000-010	10,634
	CLMD 33	30	1HYC414000-146	11,450

APP type for heavy duty applications

Voltage	Rating in Kvar	Ordering code	M.R.P.(₹)
440 V	5	1HYC420000-020-V	2,150
	10	1HYC420000-019-V	4,300
	15	1HYC420000-018-V	6,450
	20	1HYC420000-017-V	8,600
	25	1HYC420000-015-V	10,750
	50	1HYC420000-016-V	21,500

Voltage	Rating in Kvar	Ordering code	M.R.P.(₹)
480 V	5.5	1HYC420000-030-V	2,365
	11.1	1HYC420000-012-V	4,773
	15	1HYC420000-006-V	6,450
	20	1HYC420000-032-V	8,600
	25	1HYC420000-014-V	10,750
	28	1HYC420000-001-V	12,040

Voltage	Rating in Kvar	Ordering code	M.R.P.(₹)
525 V	6.6	1HYC420000-010-V	2,838
	13.8	1HYC420000-009-V	5,934
	20	1HYC420000-008-V	8,600
	25	1HYC420000-028-V	10,750
	33.5	1HYC420000-007-V	14,405
	67	1HYC420000-035-V	28,810
	75	1HYC420000-022-V	32,250



De Tuned Harmonic Filter Module (Box Heavy Duty Capacitor + 7% De tuned Reactor)

4



Type	BUS Voltage	Effective KVAR at Bus Voltage	Heavy Duty Capacitor		7% Aluminium Reactor	
			Cap Voltage (Volts)	Cap Output (KVAR)	Reactor Current rating (Amps)	M.R.P.(₹)
BOX	440V	5	480	5.5	7.28	5,120
		10	480	11.1	14.56	8,640
		15	480	16.6	21.84	12,107
		20	480	22.1	30.4	14,809
		25	480	27.7	36.4	17,724
		50	480	55.4	72.8	30,738
		75	480	83.1	109.2	43,787
		100	480	110.8	145.6	56,089



7% Copper Reactor						
Type	BUS Voltage	Effective KVAR at Bus Voltage	Cap Voltage (Volts)	Cap Output (KVAR)	Reactor Current rating (Amps)	M.R.P.(₹)
BOX	440V	5	480	5.5	7.28	8,320
		10	480	11.1	14.56	11,289
		15	480	16.6	21.84	14,631
		20	480	22.1	30.4	17,715
		25	480	27.7	36.4	20,835
		50	480	55.4	72.8	36,604
		75	480	83.1	109.2	53,707
		100	480	110.8	145.6	70,809



Type	BUS Voltage	Effective KVAR at Bus Voltage	Heavy Duty Capacitor		7% Aluminium Reactor	
			Cap Voltage (Volts)	Cap Output (KVAR)	Reactor Current rating (Amps)	M.R.P.(₹)
BOX	440V	5	525	6.6	7.28	5,867
		10	525	13.2	14.56	10,115
		15	525	20	21.84	14,382
		20	525	26.5	30.4	17,742
		25	525	33.1	36.4	21,369
		50	525	66.2	72.8	38,009
		75	525	99.3	109.2	54,702
		100	525	132.4	145.6	70,640



7% Copper Reactor						
Type	BUS Voltage	Effective KVAR at Bus Voltage	Cap Voltage (Volts)	Cap Output (KVAR)	Reactor Current rating (Amps)	M.R.P.(₹)
BOX	440V	5	525	6.6	7.28	9,058
		10	525	13.2	14.56	12,764
		15	525	20	21.84	16,924
		20	525	26.5	30.4	20,640
		25	525	33.1	36.4	24,462
		50	525	66.2	72.8	43,875
		75	525	99.3	109.2	64,622
		100	525	132.4	145.6	85,369

De Tuned Harmonic Filter Module (Cylindrical Heavy Duty Capacitor + 7% De tuned Reactor)



7% Aluminium Reactor						
Type	BUS Voltage	Effective KVAR at Bus Voltage	Cap Voltage (Volts)	Cap Output (kvar)	Reactor Current rating (Amps)	M.R.P.(₹)
CYL	440V	5	480	5.5	7.28	5,120
		10	480	11.1	14.56	8,640
		15	480	16.6	21.84	12,106
		20	480	22.1	30.4	14,809
		25	480	27.7	36.4	17,724
		50	480	55.4	72.8	30,738
		75	480	83.1	109.2	43,787
		100	480	110.8	145.6	56,089

7% Copper Reactor						
CYL	440V	5	480	5.5	7.28	8,320
		10	480	11.1	14.56	11,289
		15	480	16.6	21.84	14,631
		20	480	22.1	30.4	17,724
		25	480	27.7	36.4	20,835
		50	480	55.4	72.8	36,604
		75	480	83.1	109.2	53,707
		100	480	110.8	145.6	70,809

7% Aluminium Reactor						
Type	BUS Voltage	Effective Kvar at Bus Voltage	Cap Voltage (Volts)	Cap Output (kvar)	Reactor Current rating (Amps)	M.R.P.(₹)
CYL	440V	5	525	10	13.01	6,450
		10	525	15	14.56	11,396
		15	525	20	21.84	14,542
		20	525	25	30.4	17,333
		25	525	33.1	36.4	21,582
		50	525	66.2	72.8	38,435
		75	525	99.3	109.2	55,342
		100	525	132.4	145.6	71,502

7% Copper Reactor						
CYL	440V	5	525	10	13.01	9,145
		10	525	15	14.56	14,035
		15	525	20	21.84	17,067
		20	525	25	30.4	20,231
		25	525	33.1	36.4	24,675
		50	525	66.2	72.8	44,302
		75	525	99.3	109.2	65,262
		100	525	132.4	145.6	86,222

Note : The reactor shall be manufactured through authorized ABB System House as per ABB Design & specifications.

De Tuned Harmonic Filter Module (CLMD Heavy Duty Capacitor + 7% De tuned Reactor)



Type	BUS Voltage	Effective KVAR at Bus Voltage	Cap Voltage (Volts)	Cap Output (KVAR)	7% Aluminium Reactor	
					Reactor Current rating (Amps)	M.R.P.(₹)
CLMD	440V	5	480	6	7.28	10,204
		10	480	12.5	14.56	13,084
		15	480	16.6	21.84	17,955
		20	480	22.1	30.4	20,782
		25	480	28	36.4	22,844
		50	480	56	72.8	40,267
		75	480	84	109.2	50,133
		100	480	112	145.6	74,099



Type	BUS Voltage	Effective KVAR at Bus Voltage	Cap Voltage (Volts)	Cap Output (KVAR)	7% Copper Reactor	
					Reactor Current rating (Amps)	M.R.P.(₹)
CLMD	440V	5	480	6	7.28	14,089
		10	480	12.5	14.56	16,293
		15	480	16.6	21.84	20,853
		20	480	22.1	30.4	24,320
		25	480	28	36.4	26,613
		50	480	56	72.8	47,413
		75	480	84	109.2	62,187
		100	480	112	145.6	91,893



Type	BUS Voltage	Effective KVAR at Bus Voltage	Cap Voltage (Volts)	Cap Output (KVAR)	7% Aluminium Reactor	
					Reactor Current rating (Amps)	M.R.P.(₹)
CLMD	440V	5	525	6.6	7.28	10,507
		10	525	15	14.56	13,387
		15	525	20	21.84	18,018
		20	525	27.5	30.4	23,253
		25	525	34	36.4	29,227
		50	525	66	72.8	52,729
		75	525	100	109.2	78,418
		100	525	132	145.6	98,933



Type	BUS Voltage	Effective KVAR at Bus Voltage	Cap Voltage (Volts)	Cap Output (KVAR)	7% Copper Reactor	
					Reactor Current rating (Amps)	M.R.P.(₹)
CLMD	440V	5	525	6.6	7.28	14,382
		10	525	15	14.56	16,604
		15	525	20	21.84	21,093
		20	525	27.5	30.4	26,773
		25	525	34	36.4	33,013
		50	525	66	72.8	59,875
		75	525	100	109.2	90,471
		100	525	132	145.6	1,16,818

RVC Relay

Type	No of steps	Ordering code	M.R.P.(₹)
RVC 6 (100 - 440V)	6	1HYC418006-014	23,459
RVC 8 (100 - 440V)	8	1HYC418006-015	21,367
RVC 10 (100 - 440V)	10	1HYC418006-016	24,156
RVC 12 (100 - 440V)	12	1HYC418006-017	25,851



RVT Relay

Type	No of steps	Ordering code	M.R.P.(₹)
RVT 6	6	2GCA291720A0050	64,988
RVT 12	12	2GCA291721A0050	87,062
RVT 6 with Modbus Adapter Kit	6	1HYC418006-049	93,573
RVT 12 with Modbus Adapter Kit	12	1HYC418006-048	1,05,973
RVT 12 3P	12	2GCA291722A0050	98,105



Distribution Automation



ABB offers innovative technology for complete protection of your distribution systems. With a wide range of products and systems based on electromechanical, static and numerical micro-processor based platforms, ABB offers complete protection solutions for utility and industry power distribution networks for improved performance, reliability and safety.

ABB solutions include application engineering, testing & commissioning, after sales service, troubleshooting and training. The products manufactured are approved by leading consultants in the electrical engineering field and are widely used by major utilities, industries and OEMs.

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Notes:

- 5
- a) Price indicated in the price list are Ex-works, Maneja, Vadodara, Gujarat, India, inclusive of packing and forwarding. Freight & insurance charges are extra as applicable. The prices are exclusive of any taxes and duties, including GST.
 - b) Refer standard delivery time document from factory for PO total lot quantity. New delivery times shall be communicated, if PO total quantity exceeds lot sizes. The delivery times indicated are Ex-works and excluding transportation time.
 - c) We may also be able to offer priority deliveries. Check with your local ABB office.
 - d) Delivery time quoted are applicable from the date of receipt of a technically and commercially clear order.
 - e) Prices "upon request" for numerical relays shall be provided as per the configuration requirement. Contact with your local ABB office.
 - f) Combiflex accessories like sockets, crimping tool etc. need to be ordered separately for all the combiflex mounted electromechanical relays. Check with your local ABB office for necessary price offers.
 - g) The Price List is subject to "ABB General Terms and Conditions" of sale. The prices are subject to revision without prior notice.
 - h) ABB reserve the right to make technical changes or modify the contents of this document without prior notice.
 - i) ABB assumes no responsibility for any potential errors or possible lack of information in this document.
 - j) Visit "<http://new.abb.com/medium-voltage/distribution-automation>" for catalogues.
 - k) All postal/couriers should be addressed to :
ABB India Limited
Distribution Automation
Maneja works, Vadodara-390013
Gujarat, India
 - l) All e-mails related to marketing & sales queries should be sent to in-da.sales@abb.com

Section I: Auxiliary relays, tripping relays and timers

Type	Technical description	Auxiliary voltage	Type of mounting	Contact configurations	Typical applications	L.P.(₹)
Auxiliary relays						
CV2DJ	Single element auxiliary relay, self reset contacts without operation indicator	24/30/48/110/220/250 V DC	Flush mounting	2NO+0NC/ 1NO+1NC	Contact multiplication, signalling	1,856
CV2AJ	Single element auxiliary relay, self reset contacts with operation indicator	110/240 V AC	Flush mounting	2NO+0NC/ 1NO+1NC	Contact multiplication, signalling	2,264
CV2D2J	Two element auxiliary relay, self reset contacts with operation indicator	24/30/48/110/220/250 V DC	Flush mounting	4NO+0NC/ 2NO+2NC/ 3NO+1NC	Contact multiplication, signalling	2,570
CV2A2J	Two element auxiliary relay, self reset contacts with operation indicator	110/240 V AC	Flush mounting	4NO+0NC/ 2NO+2NC/ 3NO+1NC	Contact multiplication, signalling	2,978
P8nCH2J	Single element auxiliary relay, self reset contacts with operation indicator	24/30/48/110/125//220/250 V DC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Contact multiplication, signalling and tripping	3,437
P8nCH2J	Single element auxiliary relay, self reset contacts without operation indicator	110/240 V AC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Contact multiplication, signalling and tripping	3,845
P8nAHX	Single element auxiliary relay, self reset contacts without operation indicator	24/30/48/110/125//220/250 V DC	Plug-in base mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Contact multiplication, signalling and tripping	3,800
RXP8n	Single element auxiliary relay, self reset contacts with operation indicator	24/30/48/110/220/250 V DC	Combiflex mounting*	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Contact multiplication, signalling and tripping	3,111
Supervision relays						
PN8nCH2J	No volt relay with reverse flag, self reset contacts	24/30/48/110/220 V DC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	DC supply supervision	3,417
PN8nCH2J	No volt relay with reverse flag, self reset contacts	110/240 V AC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	AC supply supervision	3,723
TCS	Trip circuit supervision relay	24/30/48 V DC 110-125/220-250 V DC/AC	Flush mounting	1NO+1NC+2C/O	Trip circuit supervision	4,080
RXTCS	Trip circuit supervision relay	24/30/48 V DC 110-125/220-250 V DC/AC	Combiflex mounting*	1NO+1NC+2C/O	Trip circuit supervision	4,157
UVT92M	Fuse failure relay	110V AC, 50 Hz, 30/110/220 V DC	Flush mounting		Fuse failure supervision	8,415
NT10	Universal time relay	18-80 V DC 80-265 V DC/AC	Flush mounting	1NO+2C/O	ON delay timer, OFF delay timer, Interval, flasher	6,324

*Combiflex accessories need to be ordered separately. Check with your local ABB office.

Section II: Electro-mechanical high speed tripping relays, bi-stable relays and static relays

Type	Technical description	Auxiliary voltage	Type of mounting	Contact configurations	Typical applications	L.P.(₹)
High speed tripping relays						
PQ5nCH2J	High speed tripping relay, hand reset contacts with operation indicator	24/30/48/110/125//220/250 V DC	Flush mounting	4NO+0NC/ 3NO+1NC	Low burden tripping	3,121
PQ5nCH2J	High speed tripping relay, hand reset contacts with operation indicator	110/240 V AC	Flush mounting	4NO+0NC/ 3NO+1NC	Low burden tripping	3,529
PQ8nCH2J	High speed tripping relay, hand reset contacts with operation indicator	24/30/48/110/125//220/250 V DC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Low burden tripping	3,733
PQ8nCH2J	High speed tripping relay, hand reset contacts with operation indicator	110/240 V AC	Flush mounting	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Low burden tripping	4,039
PQ8nC2JW	High speed high burden tripping relay, hand reset contacts with operation indicator	24-30/48/110-125//220-250 V DC	Flush mounting	6NO+0NC/ 5NO+1NC/ 4NO+2NC	High burden tripping	3,733
RXPQ8n	High speed tripping relay, hand reset contacts with operation indicator	24/30/48/110/220/250 V DC	Combiflex mounting*	7NO+0NC/ 6NO+1NC/ 5NO+2NC/ 4NO+3NC	Low burden tripping	3,162
PSU14n-2X	High speed tripping relay, electrically reset contacts, with operation indicator	110/220 V DC	Plug-in base mounting	14NO+0NC/ 13NO+1NC/ 12NO+2NC/ 11NO+3NC/ 10NO+4NC/ 9NO+5NC/ 8NO+6NC/ 7NO+7NC	High burden tripping	11,108
RXPSU14n	High speed tripping relay, electrically reset contacts with operation indicator	110/220 V DC	Combiflex mounting*	14NO+0NC/ 13NO+1NC/ 12NO+2NC/ 11NO+3NC/ 10NO+4NC/ 9NO+5NC/ 8NO+6NC/ 7NO+7NC	High burden tripping	11,108
PSU6n-X	High speed trip relay without operation indicator	110/220 V DC	Plug-in base mounting	6NO+0NC 5NO+1NC 4NO+2NC 3NO+3NC	High burden tripping	6,732
RXPSU6nX	High speed trip relay without operation indicator	110/220 V DC	Combiflex mounting*	6NO+0NC 5NO+1NC 4NO+2NC 3NO+3NC	High burden tripping	6,732

Type	Technical description	Auxiliary voltage	Type of mounting	Contact configurations	Typical applications	L.P.(₹)
Bi-stable relays						
PSU6n-X	Bistable relay, electrically reset contacts without operation indicator	24/30/48/110/125//220/250 V DC	Plug-in base mounting	6NO+0NC/ 5NO+1NC/ 4NO+2NC/ 3NO+3NC	CB/ Isolation/ Earth switch/ Contact multiplication/ Voltage selection/ CT switching	6,120
PSU14n-2X	Bistable relay, electrically reset contacts with operation indicator	24/30/48/110/125//220/250 V DC	Plug-in base mounting	14NO+0NC/ 13NO+1NC/ 12NO+2NC/ 11NO+3NC/ 10NO+4NC/ 9NO+5NC/ 8NO+6NC/ 7NO+7NC	CB/ Isolation/ Earth switch/ Contact multiplication/ Voltage selection/ CT switching	10,098
RXPSU6n	Bistable relay, electrically reset contacts without operation indicator	24/30/48/110/125//220/250 V DC	Combiflex mounting*	6NO+0NC/ 5NO+1NC/ 4NO+2NC/ 3NO+3NC	CB/ Isolation/ Earth switch/ Contact multiplication/ Voltage selection/ CT switching	6,120
RXPSU14n	Bistable relay, electrically reset contacts, with operation Indicator	24/30/48/110/125//220/250 V DC	Combiflex mounting*	14NO+0NC/ 13NO+1NC/ 12NO+2NC/ 11NO+3NC/ 10NO+4NC/ 9NO+5NC/ 8NO+6NC/ 7NO+7NC	CB/ Isolation/ Earth switch/ Contact multiplication/ Voltage selection/ CT switching	11,360
Static protection relay						
IRXm	Circulating current relay	24/30/48 V DC 110-125/220-250 V DC	Flush mounting	2NO+1NC	Restricted earth fault protection for generators and transformers, high impedance differential protection for motors, generators	6,630
VHXM22A	Under relay without time delay	63.5/110/240 V AC, 40-80%, 24/30/48/110/220 V DC	Flush mounting	6NO+0NC/ 3NO+3NC/	Under voltage protection/ Residual (dead bus) monitoring	7,344
VHXM22B	Under voltage relay with variable time delay	63.5/110/240 V AC, 40-80%, 0.1-1.0 sec/0.5-5.0 sec/1-10 sec, 24/30/48/110/220 V DC	Flush mounting	6NO+0NC/ 3NO+3NC/	Under voltage protection	10,710
VHXM23A	Over voltage relay without time delay	63.5/110/240 V AC, 80-140%, 24/30/48/110/220 V DC	Flush mounting	6NO+0NC/ 3NO+3NC/	Over voltage relay	8,262
VHXM23B	Over voltage relay with variable time delay	63.5/110/240 V AC, 80-140%, 0.1-1.0 sec/0.5-5.0 sec/1-10 sec, 24/30/48/110/220 V DC	Flush mounting	6NO+0NC/ 3NO+3NC/	Over voltage relay	10,710

*Combiflex accessories need to be ordered separately. Check with your local ABB office.

Section III: Numerical protection and control relays

Type	Product description	L.P.(₹)
SPACOM series		
SPAJ140C	Numerical communicable non-directional and earth relay	50,400
SPAM150C	Numerical communicable comprehensive motor protection relay	60,480
Relion® 605 series		
REF601	Numerical feeder protection and control relay	Upon Request
REJ601	Numerical feeder protection relay	Upon Request
REM601	Numerical motor protection and control / Motor protection relay	Upon Request
REJ603	Numerical self-powered feeder protection relay	Upon Request
Relion® 610 series		
REF610	Numerical feeder protection relay	Upon Request
REM610	Numerical motor protection relay	Upon Request
REU610	Numerical voltage protection relay	Upon Request
Relion® 611 series		
REF611	Numerical feeder protection and control relay	Upon Request
REM611	Numerical motor protection and control relay	Upon Request
REB611	Numerical busbar and multipurpose differential protection and control relay	Upon Request
Relion® 615 series		
REF615	Numerical feeder protection and control relay	Upon Request
REM615	Numerical motor protection and control relay	Upon Request
RED615	Numerical line differential protection and control relay	Upon Request
RET615	Numerical transformer protection and control relay	Upon Request
REV615	Numerical capacitor bank protection and control relay	Upon Request
REU615	Numerical voltage protection and control relay	Upon Request
REC615	Grid automation, numerical remote monitoring and control relay	Upon Request
RER615	Grid automation, numerical recloser protection and control relay	Upon Request
Relion® 620 series		
REF620	Numerical feeder protection and control relay	Upon Request
RET620	Numerical transformer protection and control relay	Upon Request
REM620	Numerical motor protection and control relay	Upon Request
Relion® 630 series		
REF630	Numerical feeder protection and control relay	Upon Request
RET630	Numerical transformer protection and control relay	Upon Request
REG630	Numerical generator protection and control	Upon Request
REM630	Numerical motor protection and control	Upon Request

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Prices "Upon Request" for Numerical relays shall be provided as per the configuration requirement.

Section IV: Grid automation, FBT, Arc protection, load shedding, engineering tools and miscellaneous items

Type	Product Description	L.P.(₹)
RIO600	Remote I/O unit	
	Power supply module	Upon Request
	Communication module	Upon Request
	Digital input module with 8 inputs	Upon Request
	Digital output module with 4 outputs	Upon Request
	RTD/mA input module with 4 inputs	Upon Request
	Analog output module with 4 outputs	Upon Request
COM600	Grid automation controller	Upon Request
PML630	Power management/ Compact load-shedding solution	Upon Request
REC601/603	Wireless controller for RMU / Feeder automation	Upon Request
RER601/603	Wireless gateway for connection over GPRS	Upon Request
REK510	Current injection device for rotor earth fault protection	Upon Request
PCM600	Protection and control IED manager	Upon Request
REA10_	Arc fault protection system	Upon Request
SUE3000	High speed transfer device (Fast bus transfer)	Upon Request
RTU	RTU560 / RTU511	Upon Request

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Prices "Upon Request" for numerical relays shall be provided as per the configuration requirement.

Electrification products

Others details

Capacitors and Filter modules

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Type 2 coordination

MS132/MS165 DOL-NS-IE1/ IE2

SCPD type : MMS Rated voltage : 400/415 V
 Short circuit current : 50 kA Starting type : DOL-NS
 Coordination type : IEC Type 2 Overload relay : Embedded
 Frequency : 50-60 Hz

Motor		Manual Motor Starter			Contactor
Rated Power	Rated Current	Type	Instantaneous Tripping Current	Current setting range	Type
[kW]	[A]		[A]	[A]	
0.06	0.2	MS132-0,25	2.44	0.16 - 0.25	A9
0.09	0.3	MS132-0,40	3.9	0.25 - 0.40	A9
0.12	0.44	MS132-0,63	6.14	0.40 - 0.63	A9
0.18	0.6	MS132-0,63	6.14	0.40 - 0.63	A9
0.25	0.85	MS132-1,0	11.5	0.63 - 1.00	A9
0.37	1.1	MS132-1,6	18.4	1.00 - 1.60	A9
0.55	1.5	MS132-1,6	18.4	1.00 - 1.60	A9
0.75	1.9	MS132-2,5	28.75	1.60 - 2.50	A9
1.1	2.7	MS132-4,0	50	2.50 - 4.00	A16
1.5	3.6	MS132-4,0	50	2.50 - 4.00	A16
2.2	4.9	MS132-6,3	78.75	4.00 - 6.30	A26
3	6.5	MS132-10	150	6.30 - 10.00	A26
4	8.5	MS132-10	150	6.30 - 10.00	A26
5.5	11.5	MS132-12	180	8.00 - 12.00	A26
7.5	15.5	MS132-16	240	10.00 - 16.00	A30
11	22	MS132-25	375	20.00 - 25.00	A30
15	29	MS132-32	480	25.00 - 32.00	A30
18.5	35	MS165-42	630	30.00 - 42.00	A63
22	41	MS165-54	810	40.00 - 54.00	A63
25	46.6	MS165-54	810	40.00-54.00	A75
30	45.5	MS165-65	975	52.00-65.00	A75

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MS132 / MS165 SD - NS -IE3

Coordination type : IEC Type 2
 SCPD type : MMS Rated voltage : 400/415 V
 Short circuit current : 50 kA Starting type : SD-NS
 Overload relay : Embedded Frequency : 50-60 Hz

Rated Power	Rated Current	Type	Instantaneous Tripping Current	Current setting range	Line	Delta	Star
[kW]	[A]		[A]	[A]			
0.06	0.20	MS132-0,25	3.13	0.16 - 0.25	A9	A9	A9
0.09	0.30	MS132-0,40	5.0	0.25 - 0.40	A9	A9	A9
0.12	0.44	MS132-0,63	7.88	0.40 - 0.63	A9	A9	A9
0.18	0.60	MS132-0,63	7.88	0.40 - 0.63	A9	A9	A9
0.25	0.85	MS132-1,00	12.5	0.63 - 1.00	A9	A9	A9
0.37	1.10	MS132-1,60	20.0	1.00 - 1.60	A9	A9	A9
0.55	1.50	MS132-1,60	20.0	1.00 - 1.60	A9	A9	A9
0.75	1.90	MS132-2,50	31.25	1.60 - 2.50	A9	A9	A9
1.1	2.70	MS132-4,00	50	2.50 - 4.00	A26	A26	A26
1.5	3.60	MS132-4,00	50	2.50 - 4.00	A26	A26	A26
2.2	4.90	MS132-6,30	78.75	4.00 - 6.30	A26	A26	A26
3.0	6.5	MS132-10.00	150	6.30-10.00	A26	A26	A26
4.0	8.5	MS132-10.00	150	6.30-10.00	A26	A26	A26
5.5	11.5	MS132-16.00	240	10.00-16.00	A26	A26	A26
7.5	18.5	MS132-20.00	300	16.00-20.00	A30	A26	A26
11.0	22.0	MS132- 25.00	375	20.00-25.00	A30	A26	A26
15.0	29.0	MS132- 32.00	480	25.00-32.00	A30	A26	A26
15.0	29.0	MS165 -32.00	480	23.00-32.00	A40	A40	A40
18.5	35.0	MS165 -42.00	630	30.00-42.00	A40	A40	A40
22.0	41.0	MS165 -54.00	810	40.00-54.00	A50	A40	A40
25.0	46.6	MS165 -54.00	810	40.00-54.00	A63	A40	A40
30.0	55.0	MS165 -65.00	975	52.00-65.00	A63	A40	A40

Type 2 coordination

MCCB DOL-NS

SCPD type : MCCB

Rated voltage : 400/415 V

Short circuit current : 50 kA

Starting type : DOL-NS

Coordination type : IEC Type 2 / IE1 / IE2

Overload relay : TOL

Frequency : 50-60 Hz

Motor		Moulded Case Circuit Breakers		Contactor	Overload Relay	
Rated Power	Rated Current		Instantaneous Tripping Current			Current setting range
[kW]	[A]	Type	[A]	Type	Type	[A]
0.37	1.1	XT2S160 MF 2	28	A9	TA25DU1.4	1 - 1.4
0.55	1.5	XT2S160 MF 2	28	A9	TA25DU1.8	1.3 - 1.8
0.75	1.9	XT2S160 MF 2	28	A9	TA25DU2.4	1.7 - 2.4
1.1	2.7	XT2S160 MF 4	56	A9	TA25DU4	2.8 - 4
1.5	3.6	XT2S160 MF 4	56	A16	TA25DU5	3.5 - 5
2.2	4.9	XT2S160 MF 8.5	120	A26	TA25DU6.5	4.5 - 6.5
3	6.5	XT2S160 MF 8.5	120	A26	TA25DU8.5	6 - 8.5
4	8.5	XT2S160 MF 12.5	175	A30	TA25DU11	7.5 - 11
5.5	11.5	XT2S160 MF 12.5	175	A30	TA25DU14	10 - 14
7.5	15.5	XT2S160 MA 20	210	A30	TA25DU19	13 - 19
11	22	XT2S160 MA 32	288	A30	TA42DU25	18 - 25
15	29	XT2S160 MA 52	392	A50	TA75DU42	29 - 42
18.5	35	XT2S160 MA 52	469	A50	TA75DU52	36 - 52
22	41	XT2S160 MA 52	547	A50	TA75DU52	36 - 52
30	55	XT2S160 MA 80	840	A63	TA75DU80	60 - 80
37	66	XT2S160 MA 80	960	A75	TA75DU80	60 - 80
45	80	XT2S160 MA 100	1200	A95	TA110DU110	80 - 110
55	97	XT3S250 MA 160	1440	A110	TA110DU110	80 - 110
75	132	XT3S250 MA 200	1800	A145	TA200DU175	130 - 175
90	160	XT3S250 MA 200	2400	A185	TA200DU200	150 - 200
110	193	T5S400 PR221-I In320	2720	AF205	EF205-210	63 - 210
132	230	T5S400 PR221-I In400	3200	AF265	EF370-380	115 - 380
160	280	T5S400 PR221-I In400	4000	AF305	EF370-380	115 - 380
200	350	T5S630 PR221-I In630	5040	AF370	EF370-380	115 - 380
250	430	T6S630 PR221-I In630	6300	AF460	EF460-500	150 - 500
290	520	T6S800 PR221-I In800	8000	AF580	EF750-800	250 - 800
315	540	T6S800 PR221-I In800	8000	AF580	EF750-800	250 - 800
355	610	T6S800 PR221-I In800	8000	AF750	EF750-800	250 - 800

6

Type 2 coordination

MCCB SD-NS

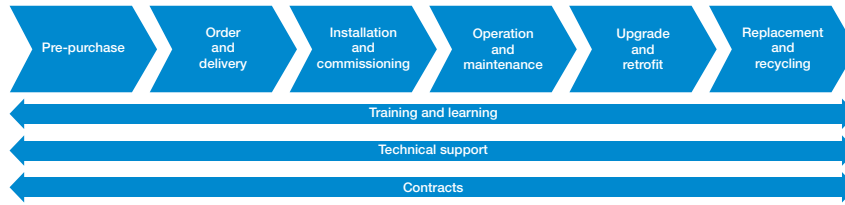
SCPD type : MCCB
 Rated voltage : 400/415 V
 Short circuit current : 50 kA
 Starting type : SD-NS
 Coordination type : IEC Type 2 / IE1 /IE2
 Overload relay : TOL
 Frequency : 50-60 Hz

Motor		MCCB		Contactor			Thermal release	
Pe [kW]	Ie [A]	type	Im [A]	line type	delta type	star type	type	[A]
18.5	35	XT2S160 MA52	469	A50	A50	A26	TA75DU25	18-25
22	41	XT2S160 MA52	547	A50	A50	A26	TA75DU32	22-32
30	55	XT2S160 MA80	720	A63	A63	A30	TA75DU42	29-42
37	66	XT2S160 MA80	840	A75	A75	A30	TA75DU52	36-52
45	80	XT2S160 MA100	1050	A75	A75	A30	TA75DU63	45-63
55	97	XT2S160 MA100	1200	A75	A75	A40	TA75DU63	45-63
75	132	XT3S250 MA160	1700	A95	A95	A75	TA110DU90	66-90
90	160	XT3S250 MA200	2000	A110	A110	A95	TA110DU110	80-110
110	195	XT3S250 MA200	2400	A145	A145	A95	TA200DU135	100-135
132	232	T5S400 PR221-I In320	2880	A145	A145	A110	EF205-210	60-200
160	282	T5S400 PR221-I In400	3600	A185	A185	A145	EF205-210	60-200
200	350	T5S630 PR221-I In630	5040	AF265	AF265	AF190	EF370-380	115-380
250	430	T6S630 PR221-I In630	6300	AF265	AF265	AF190	EF370-380	115-380
290	520	T6S630 PR221-I In630	8000	AF580	AF580	AF400	EF750-800	250-800
315	540	T6S800 PR221-I In800	8000	AF580	AF580	AF400	EF750-800	250-800
355	610	T6S800 PR221-I In800	8000	AF580	AF580	AF400	EF750-800	250-800

Service portfolio

Low Voltage Products Division delivers a vast range of services to cover the whole product lifecycle

The services offered by ABB's Low Voltage Products and Systems span the entire value chain, from the moment a customer makes the first enquiry to disposal and recycling of the product. Throughout the value chain, ABB provides training, technical support and customized contracts. All of this is supported by one of the most extensive country sales and service network.



Installation and commissioning

ABB provides comprehensive installation and commissioning services to achieve a problem-free start up, by following installation and commissioning procedures. The use of service personnel from ABB LP Service ensures that the switchgear is installed in a safe and correct way.

manager of an electrical site can find it convenient to have certain maintenance capabilities available within his own team.

The courses mainly cover:

- Operating equipment
- Maintenance principles
- Repairs for small faults

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Operation and maintenance

ABB can guide the customer through a fast and efficient fault finding procedure as well as analyze the operation of the product and the customer's process. From site surveys to preventive, predictive maintenance and reconditioning, ABB has all the options covered to keep its customers' processes operational.

Technical support

At each stage of the value chain, an ABB expert is available to offer advice to keep the customer's process or plant operational.

Upgrade and retrofits

Upgrades

An existing ABB product can often be upgraded to the latest software or hardware to improve the performance of the application. Existing processes can be economically modernized by upgrading with the latest technology.

Spare parts

Availability of original spare parts is essential for fast and efficient maintenance activities. This becomes even more critical when the product was produced some years ago and has components in it which are no longer in production. ABB LP Service is the only one able to supply original and guaranteed spare parts. These can be easily selected and ordered through the authorized channel.

Retrofits

Replacing old LV Switchgear of any make with ABB's latest versions can be done using the ABB special conversion kits which enable quick installation without structural modifications to the original compartment. In addition complete "turnkey" solutions are available. Specific conversion kits have been developed in order to replace old components with new ones that can be found in the latest switchgears.

Replacement and Recycling

ABB can advise on the best replacement products while ensuring that the existing products are disposed of in a way that meets all local regulations.

Maintenance contracts

In addition to the corrective maintenance of a faulty unit, which includes any type of emergency intervention, there is a complete preventive maintenance service package, ensuring those who manage the plant gain considerable advantages in terms of reliability, safety and reduction of costs. Also Customized contracts can be devised between the customer and ABB. Depending on the severity of the intervention needed, it can often be done on-site by our skilled and experienced engineers and is a faster way of resolution. ABB LP Service has an effective service network across the country and dedicated service workshops. For all your service requirements, contact our nearest Sales office.

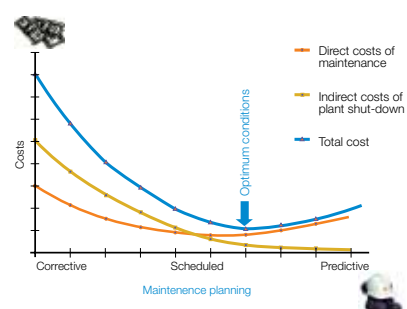
Entire value chain services

The main services available throughout the entire value chain include:

Training and learning – Hands on

ABB LP Service carries out training programs. Those trainings can be either general or bespoke and have the aim of providing the personnel in charge of management/maintenance with the necessary know-how to achieve an excellent level of operating ability in certain situations. The

Benefits of Maintenance Contracts



General conditions of sale

General terms and conditions of sale:

- All prices mentioned in this price list are in Indian rupees (INR) and this supersedes all previous price lists
- Prices are based on Ex-work basis
- Maximum retail prices (MRPs) mentioned in the publication are maximum recommended selling prices
- List prices (LPs) mentioned are exclusive of all taxes
- Prices are subject to revision without prior notice

Terms of delivery: Ex- work, Nelamangala or any other ABB warehouse in India

Standard delivery terms

Ex stock or 30 working days

Address of Nelamangala Warehouse

ABB INDIA LIMITED
#126, Hanchipura Village, Kasaba Hobli
Nelamangala Taluk, Bangalore 562123
Tel. : +91 80 2770 0081
Tel. : +91 80 2770 0082
Tel. : +91 80 2770 0083

Address of Works

Nelamangala
Survey No: 88/3, 88/4, Basavanhalli, Kasaba Hobli,
Nelamangala Taluk, Bangalore - 562123, Karnataka, India
Tel. : +91 80 2294 6618
Tel. : +91 80 2294 6619
Fax : +91 80 2294 9999

Peenya
Plot no. 5 & 6, II Phase,
Peenya Industrial Area 560058
Bangalore, Karnataka, India
Tel: +91 80 22949354/9585
Fax: +91 80 22949389

LV Capacitor factory:
Plot no. 485/6, 14th Cross
IV Phase, Peenya Industrial Area
Bangalore – 560 058
Email : lvcapacitors-sales@in.abb.com

Vadodara
Maneja Works, Maneja,
Vadodara - 390 013

Email: in-da.sales@abb.com
Tollfree No: 1800-4200-707

Classic Products

Isomax "S" Range of MCCB's
OETL upto 3150 Amps Load Break Switches
OESA 200 to 800 Switches

Warranty Policy:

ABB guarantee the supply according to the law. Upon expiration, the warranty expires even if the devices have not been operated for any reason. In the case of faults, as long as this does not depend on assembly errors by the Customer or third parties, on incorrect use of the materials, lack of or incorrect maintenance, normal wear and tear, faults caused by inexperience or negligence by the purchaser or by transport, by the improper storage of the materials, or failure by the Customer to adopt measures to reduce eventual dysfunction, overload with respect to the contractual limits, by unauthorized intervention, by tampering or action effected by the Customer, to force majeure, ABB will, throughout the warranty period, repair or replace any defective part of supply free of charge, in the shortest possible time, at its premises. Where the repair cannot be executed at ABB premises, except as otherwise agreed, all the supplementary or relevant expenses shall be borne by the customer.

Repair or replacement will be executed only if the customer has performed all its obligations to that date. The Customer may not suspend performance of the obligations in any case in which this warranty is invoked. The term for the repair or replacement of the faulty supply will be agreed by ABB and the customer. The shipment of any supply claimed to be faulty by the Customer to ABB and subsequently by ABB to the Customer, shall be at the risk and under the responsibility of the customer, who shall arrange adequate insurance coverage. The supply repaired or replaced is shipped at the expense and risk of the customer. Any dispute about a shipment has no effect on the remainder of the supply. The products replaced by ABB become the property of ABB.

Any claim regarding the supply, machinery, plant or components not compliant with the specifications or the

General conditions of sale

contractual documentation must be raised in writing, within a maximum term of 8 days from delivery, when the time limit for action expires. In the case of systems, this term is 60 days from execution of the disputed service when the time limit for action expires.

In the case of latent defects, the terms indicated above run from the date of discovery. Once the warranty period has expired claims are not accepted, even for latent defect. Where the claim is timely and justified, ABB's obligation is limited to replacement of the goods found not in compliance or repetition of execution of the non-compliant service, excluding all rights to the Customer to seek termination of the contract and/or compensation of damages.

With reference to the provision of spare parts, ABB reserves the right to provide materials either from the original supplier or from equivalent supplier.

Warranty Period:

- 1. Breakers & Switches:** The Warranty period is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.
- 2. Control Products:** The Warranty period is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.
- 3. Enclosures & Din Rail Components:** The warranty period is 5 years from the date of ABB's invoice if the components are used in ABB's enclosure. If non- ABB enclosure is used, Warranty period is 12 months from the date of commissioning or 18 months from the date of ABB's invoice, whichever is earlier.
- 4a. Wiring Accessories:** 10 years of warrantee The company at its discretion will repair or replace products if they have any manufacturing defect within 10 years from date of purchases for switches (without LED Lamp) and Power Sockets. For other ABB wiring accessories, the warrantee will be for 2 years. ABB mounting boxes are not covered under warrantee. Warrantee for all the products will not be valid: If devices are not used with original ABB Mounting Boxes. If devices are altered, dismantled, rectified or tampered. Warrantee states Company's entire liability. This does not extend to cover consequential losses or damage or installation cost arising from defective products. Since product improvement is a continuous process, the data furnished in this brochure may undergo revision. For the latest information, you may contact our nearest sales office.
- 4b. Plug & Sockets:** The Warranty period is 12 months from the date of commissioning or 18 months from the date of

ABB's invoice, whichever is earlier.

- 5. LV Capacitor:** The warranty is 12 months from the date of commissioning or 18 months from the date of ABB's invoice. Whichever is earlier.

Liability Clause:

The manufacturer shall not be liable for any consequential loss, injury or damages attributable to defect or failure of its products.

