

# Multi 9™, Compact®, Masterpack®, Interpack™, and Vigirex™ Circuit Protection Products

## PRICING

October 2004

Class 600



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# Multi 9™ Supplementary Protectors and Miniature Circuit Breakers

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**UL 489 Listed Multi 9 Miniature Circuit Breakers****Selection Table**

		<b>C60</b>		
				

**Ratings as per UL489, CSA 22.2 no. 235M-89 and IEC 947-2 Standards**

		1	2	3
Number of Poles		1	2	3
Rated Current (A) at 25°C		0.5–35	0.5–35	0.5–35
Interrupting Ratings as per UL489 (kA RMS)	AC 50/60 Hz 120 V	10	–	–
	240 V	5	10	10
	277 V	–	–	–
	480Y 277 V	–	–	–
	DC 60 V	10	–	–
	125 V	–	10	–
	250 V	–	–	–
Ultimate Breaking Capacity (Icu) as per IEC 60947-2 (kA RMS)	AC 50/60 Hz 240 V	10	20	20
	415 V	3	10	10
	440 V	–	6	6
	DC 60 V	10	–	–
	125 V	–	10	–
Service Breaking Capacity (Ics) (% Icu)		75%	75%	75%

**Trip Units**


Magnetic Setting	B curve	–
	C curve	Between 7 and 10 times ampere rating (7 and 14 for DC)
	D curve	Between 10 and 14 times ampere rating

**Dimensions and Weights**

Dimensions (in./mm)		0.71/18	1.42/36	2.13/54
Width	box/box	4.21/107		
	ring/ring	4.86/123.4		
	box/ring	4.54/115		
Height		3.00/76		
Depth	box/box	4.4/136	8.7/271	13.1/407
	ring/ring	5.2/161	10.3/321	15.5/482
	box/ring	4.8/148	9.5/297	14.3/445

# UL 489 Listed Multi 9 Miniature Circuit Breakers

## Selection Table

		C120		
				

### Ratings as per UL489, CSA 22.2 no. 511 and IEC 947-2 Standards

		1	2	3	
Number of Poles		1	2	3	
Rated Current (A) at 25°C		20–100	20–100	20–200	
Interrupting Ratings as per UL489 (kA RMS)	AC 50/60 Hz	120 V	–	–	
		240 V	14	14	
		277 V	–	–	
		480Y 277 V	–	–	
	DC ①	60 V	14	–	–
		125 V	–	14	–
250 V		–	–	–	
Ultimate Breaking Capacity (Icu) as per IEC 60947-2 (kA RMS)	AC 50/60 Hz	240 V	20	20	
		415 V	10	10	
		440 V	–	6	6
	DC	60 V	–	–	–
		125 V	14	14	–
		250 V	–	14	–
Service Breaking Capacity (Ics) (% Icu)		75%	75%	75%	

### Trip Units

Magnetic Setting	B curve	Between 3.2 and 4.8 times ampere rating
	C curve	Between 7 and 10 times ampere rating (7 and 14 for DC)
	D curve	Between 10 and 14 times ampere rating

### Dimensions and Weights

Dimensions (in./mm)	Width		1.06/27	2.13/54	3.19/81
	Height	box/box	3.50/89		
	Depth		3.00/76		
Weight (oz/g)			6.3/205	12.6/410	18.9/615

① C curve only.

UL Listed C120 circuit breakers are scheduled to be available in 4th quarter 2004. For information and availability, contact your nearest Square D/Schneider Electric sales office.

# UL 489 Listed C60 Miniature Circuit Breakers

## UL 489 Listed C60 Miniature Circuit Breakers 120/240 Vac and 60 Vdc (1P) or 125 Vdc (2P)①



Rating (A)	1P	List Price	2P	List Price	3P	List Price
<b>C Curve—Magnetic Setting Between 7 and 10 Times Ampere Rating AC (7–14 DC)—Box Lug/Box Lug</b>						
0.5	60100①	\$ 83	60134①	\$ 179		
1	60101①	83	60135①	179	60168	\$ 258
1.5	60102①	83	60136①	179	60169	258
2	60103①	83	60137①	179	60170	258
3	60104①	83	60138①	179	60171	258
4	60105①	83	60139①	179	60172	258
5	60106①	83	60140①	179	60173	258
6	60107①	76	60141①	164	60174	237
7	60108①	76	60142①	164	60175	237
8	60109①	76	60143①	164	60176	237
10	60110①	76	60144①	164	60177	237
13	60111①	76	60145①	164	60178	237
15	60112①	76	60146①	164	60179	237
20	60113①	76	60147①	164	60180	237
25	60114①	76	60148①	164	60181	237
30	60115①	80	60149①	171	60182	248
35	60116①	80	60150①	171	60183	248

<b>C Curve—Magnetic Setting Between 7 and 10 Times Ampere Rating—Ring Tongue/Ring Tongue</b>						
0.5	60200	\$ 87	60234	\$ 188		
1	60201	87	60235	188	60268	\$ 273
1.5	60202	87	60236	188	60269	273
2	60203	87	60237	188	60270	273
3	60204	87	60238	188	60271	273
4	60205	87	60239	188	60272	273
5	60206	87	60240	188	60273	273
6	60207	81	60241	174	60274	252
7	60208	81	60242	174	60275	252
8	60209	81	60243	174	60276	252
10	60210	81	60244	174	60277	252
13	60211	81	60245	174	60278	252
15	60212	81	60246	174	60279	252
20	60213	81	60247	174	60280	252
25	60214	81	60248	174	60281	252
30	60215	84	60249	182	60282	263
35	60216	84	60250	182	60283	263

<b>C Curve—Magnetic Setting Between 7 and 10 Times Ampere Rating—Box Lug/Ring Tongue</b>						
0.5	60300	\$ 86	60334	\$ 186		
1	60301	86	60335	186	60368	\$ 269
1.5	60302	86	60336	186	60369	269
2	60303	86	60337	186	60370	269
3	60304	86	60338	186	60371	269
4	60305	86	60339	186	60372	269
5	60306	86	60340	186	60373	269
6	60307	80	60341	171	60374	248
7	60308	80	60342	171	60375	248
8	60309	80	60343	171	60376	248
10	60310	80	60344	171	60377	248
13	60311	80	60345	171	60378	248
15	60312	80	60346	171	60379	248
20	60313	80	60347	171	60380	248
25	60314	80	60348	171	60381	248
30	60315	83	60349	179	60382	258
35	60316	83	60350	179	60383	258

① DC ratings apply to box lug/box lug only. Contact your nearest Square D/Schneider Electric sales office for information and availability of ring tongue DC rating.

*Continued on next page*

**Ratings and interrupting ratings:** page 4

**Cable range:** pressure terminals are suitable for copper cables:

■ 0.5 to 25 A: #14 to #4 AWG

■ 32 to 63 A: #14 to #2 AWG

**Width:** 1P: 18mm, 2P: 36mm, 3P: 54mm, 4P: 72mm

**Additional information:**

■ Catalog no. 0860CT9501R2/01

**UL 489 Listed C60 Miniature Circuit Breakers (120/240 Vac)—Continued**

Rating (A)	1P	List Price	2P	List Price	3P	List Price
<b>D Curve—Magnetic Setting Between 10 and 14 Times Ampere Rating—Box Lug/Box Lug</b>						
0.5	60117	\$ 83	60151	\$ 179		
1	60118	83	60152	179	60184	\$ 258
1.5	60119	83	60153	179	60185	258
2	60120	83	60154	179	60186	258
3	60121	83	60155	179	60187	258
4	60122	83	60156	179	60188	258
5	60123	83	60157	179	60189	258
6	60124	76	60158	164	60190	237
7	60125	76	60159	164	60191	237
8	60126	76	60160	164	60192	237
10	60127	76	60161	164	60193	237
13	60128	76	60162	164	60194	237
15	60129	76	60163	164	60195	237
20	60130	76	60164	164	60196	237
25	60131	76	60165	164	60197	237
30	60132	80	60166	171	60198	248
35	60133	80	60167	171	60199	248
<b>D Curve—Magnetic Setting Between 10 and 14 Times Ampere Rating—Ring Tongue/Ring Tongue</b>						
0.5	60217	\$ 87	60251	\$ 188		
1	60218	87	60252	188	60284	\$ 273
1.5	60219	87	60253	188	60285	273
2	60220	87	60254	188	60286	273
3	60221	87	60255	188	60287	273
4	60222	87	60256	188	60288	273
5	60223	87	60257	188	60289	273
6	60224	81	60258	174	60290	252
7	60225	81	60259	174	60291	252
8	60226	81	60260	174	60292	252
10	60227	81	60261	174	60293	252
13	60228	81	60262	174	60294	252
15	60229	81	60263	174	60295	252
20	60230	81	60264	174	60296	252
25	60231	81	60265	174	60297	252
30	60232	84	60266	182	60298	263
35	60233	84	60267	182	60299	263
<b>D Curve—Magnetic Setting Between 10 and 14 Times Ampere Rating—Box Lug/Ring Tongue</b>						
0.5	60317	\$ 86	60351	\$ 186		
1	60318	86	60352	186	60384	\$ 269
1.5	60319	86	60353	186	60385	269
2	60320	86	60354	186	60386	269
3	60321	86	60355	186	60387	269
4	60322	86	60356	186	60388	269
5	60323	86	60357	186	60389	269
6	60324	80	60358	171	60390	248
7	60325	80	60359	171	60391	248
8	60326	80	60360	171	60392	248
10	60327	80	60361	171	60393	248
13	60328	80	60362	171	60394	248
15	60329	80	60363	171	60395	248
20	60330	80	60364	171	60396	248
25	60331	80	60365	171	60397	248
30	60332	83	60366	179	60398	258
35	60333	83	60367	179	60399	258


**Ratings and interrupting ratings:** page 4  
**Cable range:** pressure terminals are suitable for copper cables:  
 ■ 0.5 to 25 A: #14 to #4 AWG  
 ■ 32 to 63 A: #14 to #2 AWG  
**Width:** 1P: 18mm, 2P: 36mm, 3P: 54mm, 4P: 72mm

**Additional information:**  
 ■ Catalog no. 0860CT9501R2/01

# Multi 9™ Listed Miniature Circuit Breakers

## UL 489A for DC Telecom Applications

### Selection Table

			C60
			
Ratings as per UL489A and IEC 947-2 Standards			
Number of Poles			1
Rated Current (A) at 25°C			0.5–63
Interrupting Ratings as per UL489A (kA RMS)	AC 50/60 Hz	240 V	–
		277 V	–
	DC	480Y 277 V	–
		60 V	10
Ultimate Breaking Capacity (Icu) as per IEC 947-2 (kA RMS)	AC 50/60 Hz	125 V	–
		240 V	10
		415 V	–
		440 V	–
Service Breaking Capacity (Ics)	(% Icu)		75%
Trip Units			
Magnetic Setting		C curve	Between 7 and 14 times ampere rating
Dimensions and Weights			
Dimensions H x W x D (in./mm)			3.19 x 0.71 x 3.00/81 x 18 x 76
Weight (oz/g)			3.85/110

### UL489A C60 Circuit Breakers for use in Communications Equipment (60 Vdc)



Rating (A)	1P	List Price
<b>C Curve—Magnetic Setting Between 7 and 10 Times Ampere Rating</b>		
0.5	60406	80
1	60407	67
2	60408	67
3	60409	67
4	60410	67
5	60411	67
6	60412	67
8	60413	67
10	60414	67
13	60415	67
15	60416	67
20	60417	67
30	60418	67
40	60419	74
50	60420	78
63	60421	82

Ratings and interrupting ratings: page 14

Cable range: pressure terminals are suitable for copper cables:

- 0.5 to 25 A: #14 to #4 AWG
- 32 to 63 A: #14 to #2 AWG

Width: 1P: 18mm

Additional information:

- Catalog no. 0860CT9501R2/01



# UL 489 Listed Multi 9 C120 Miniature Circuit Breakers

## UL 489 Listed C120 Miniature Circuit Breakers 240 Vac and 60 Vdc (1P) or 125 Vdc (2P)



Rating (A)	1P	List Price	2P	List Price	3P	List Price
<b>B Curve—Magnetic Setting Between 3 and 5 Times Ampere Rating</b>						
20	19864	<b>84</b>	19885	<b>183</b>	19976	<b>266</b>
30	19865	<b>84</b>	19886	<b>183</b>	19977	<b>266</b>
40	19866	<b>84</b>	19887	<b>183</b>	19978	<b>266</b>
50	19867	<b>84</b>	19888	<b>183</b>	19979	<b>266</b>
60	19868	<b>106</b>	19889	<b>201</b>	19980	<b>300</b>
80	19869	<b>109</b>	19890	<b>218</b>	19981	<b>326</b>
100	19870	<b>120</b>	19891	<b>240</b>	19982	<b>360</b>
<b>C Curve—Magnetic Setting Between 5 and 10 Times Ampere Rating</b>						
20	19871	<b>84</b>	19892	<b>183</b>	19983	<b>266</b>
30	19872	<b>84</b>	19893	<b>183</b>	19984	<b>266</b>
40	19873	<b>84</b>	19894	<b>183</b>	19985	<b>266</b>
50	19874	<b>84</b>	19895	<b>183</b>	19986	<b>266</b>
60	19875	<b>106</b>	19896	<b>201</b>	19987	<b>300</b>
80	19876	<b>109</b>	19897	<b>218</b>	19988	<b>326</b>
100	19877	<b>120</b>	19898	<b>240</b>	19989	<b>360</b>
<b>D Curve—Magnetic Setting Between 10 and 14 Times Ampere Rating</b>						
20	19878	<b>84</b>	19899	<b>183</b>	19990	<b>266</b>
30	19879	<b>84</b>	19970	<b>183</b>	19991	<b>266</b>
40	19880	<b>84</b>	19971	<b>183</b>	19992	<b>266</b>
50	19881	<b>84</b>	19972	<b>183</b>	19993	<b>266</b>
60	19882	<b>106</b>	19973	<b>201</b>	19994	<b>300</b>
80	19883	<b>109</b>	19974	<b>218</b>	19995	<b>326</b>
100	19884	<b>120</b>	19975	<b>240</b>	19996	<b>360</b>

**Ratings and interrupting ratings:** page 5

**Cable range:** pressure terminals are suitable for copper cables:

■ #14 to #1 AWG (1–50mm<sup>2</sup>)

**Width:** 1P: 27mm, 2P: 54mm, 3P: 81mm

**Accessories:** C120 uses same electrical auxiliaries as C60. See page 10  
C120 uses the same mechanical accessories as NC100. See page 20.

**Additional information:**

■ Catalog no. 0860CT9501R2/01

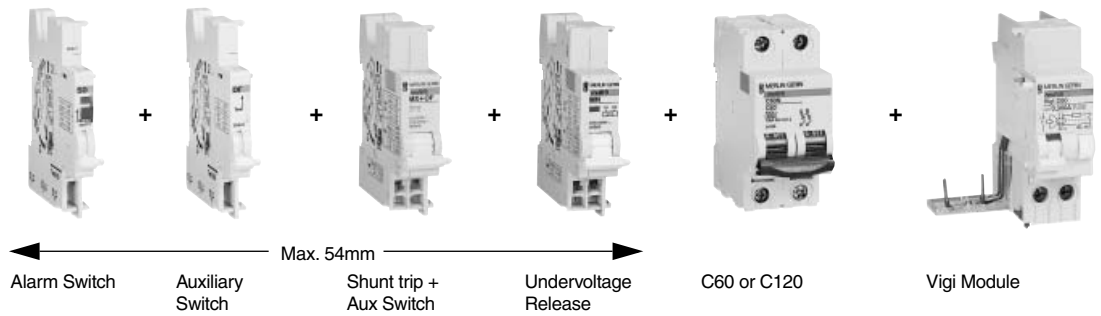
These UL Listed C120 circuit breakers are scheduled to replace NC100 products in 1st quarter 2005. For information and availability, contact your nearest Square D/Schneider Electric sales office.





**Accessories for C60 and C120<sup>①</sup>**

**Electrical  
Auxiliaries**

**Possible Combinations**

Mounted the left of the circuit breaker with a maximum width of 54mm.












		Volts (V)	VA or W	Width (mm)	Catalog No.	List Price
<b>MX + OF Shunt Trip + Auxiliary Switch for UL489 or UL1077 Rated C60 or C120</b>						
	AC	24	6	18	27118	\$ 93.00
		48	6	18	27110	93.00
		120	6	18	27109	93.00
		240	6	18	27109	93.00
		277	3	18	27109	93.00
	DC	12	6	18	27118	93.00
		24	6	18	27118	93.00
		48	3	18	27110	93.00
		125	1	18	27109	93.00
<b>MN Undervoltage Release for UL489 or UL1077 Rated C60 or C120</b>						
	AC	24		18	27108	134.00
		48		18	27106	134.00
		120		18	27107	134.00
		240		18	27105	134.00
	DC	24		18	27108	134.00
		48		18	27106	134.00
<b>OF Auxiliary Switch for UL489 or UL1077 Rated C60 or C120</b>						
	AC	12–240	6	9	26925	40.00
		277	3	9	26925	40.00
	DC	12–24	6	9	26925	40.00
		48	3	9	26925	40.00
		125	1	9	26925	40.00
<b>SD Alarm Switch for UL489 or UL1077 Rated C60 or C120</b>						
	AC	12–240	6	9	26928	40.00
		277	3	9	26928	40.00
	DC	12–24	6	9	26928	40.00
		48	3	9	26928	40.00
		125	1	9	26928	40.00
<b>Ground-fault Vigi™ Module (IEC Rated, Non UL)—See page 29</b>						


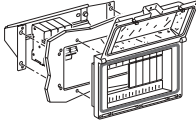



<sup>①</sup> C60—UL489 Listed, UL1077 Recognized and CSA 22.2 #5-02 and #235 Certified. C120—UL489 Listed

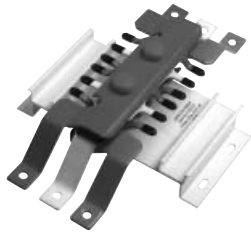
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**Accessories** — *Continued*

Connection Accessories		Catalog No.	List Price
	<b>Ring Tongue Terminal Kit for UL 1077 C60</b>		
	For one pole	17400	\$ 10.50
<b>Plug-in Base for UL1077 C60 — Non UL Recognized — IEC Rated</b>			
	One pole	MG26996	52.00
	<b>Comb Busbar with integral end caps – 63 A – Recognized for use with UL 1077 C60 – See page 30 for IEC Rated type</b>		
	12-Pole Long		
	1 Phase	MG10285	42.00
	2 Phase	MG10286	46.20
	3 Phase	MG10287	53.00
Tooth caps	20 pieces	60488	25.20
<b>Interphase Barrier for UL1077 — Non UL Recognized</b>			
	Bag of 10 pieces	MG27001	33.70
	Not available for C120.		
<b>Terminal Screw Shield for UL1077 C60 — Non UL Recognized</b>			
	Supplied as bag of two 4-Pole shields (May be divided into 1-, 2- or 3-Pole length)	MG26981	33.70
	Not available for C120.		
<b>Terminal Cover for UL1077 C60 — Non UL Recognized</b>			
	1-Pole (Set of two)	MG26975	16.90
	2-Pole (Set of two)	MG26976	33.70
	3-Pole (Requires one 1-Pole and one 2-Pole)	MG26975	16.90
		+MG26976	33.70
	4-Pole (Set of two)	MG26978	68.00
Not available for C120.			
<b>Spacer — Non UL Recognized</b>			
	9mm width	MG27062	6.20
	<b>Padlock Attachment — Non UL Recognized</b>		
	For all C60—bag of two—Accepts 0.315 in/8mm diameter padlock	MG26970	22.10
	For C120—bag of four—Accepts 0.315 in/8mm diameter padlock	MG27145	39.40
<b>Heavy-duty Padlock Attachment — Non UL Recognized</b>			
	For C60—set of two—Accepts 0.315 in/8mm diameter padlock	M9PAF	39.90

**Accessories** — *Continued*

<b>Other Accessories</b>	<b>Front Mounting Kit for C60</b>		<b>Catalog No.</b>	<b>List Price</b>			
		1P (18mm)	MG26983	\$ 11.20			
		2P (36mm)	MG26984	11.20			
		3P (54mm)	MG26985	11.20			
		4P (72mm)	MG26989	11.20			
		6P (108mm)	MG26990	11.20			
<b>Multi-pole Front Mounting Kit — Allows installation of up to 20–9mm modules (10 poles of C60)— Non UL Recognized</b>							
	DIN rail support	14211	35.70				
	Hinged transparent cover	14210	105.00				
<b>Rotary Handle — Non UL Recognized</b>							
	2P/3P/4P	Operating subassembly (Fixed to Multi 9). Requires handle.	MG27046	86.00			
		Drawout door interlock handle (6.5 in/165mm shaft)	MG27047	71.00			
		Fixed handle (Front or lateral)	MG27048	78.00			
<b>Label Holders for 2, 3 or 4P C60 or C120 – Non UL Recognized</b>							
	Bag of 10 pieces	27150	33.70				
<b>Identification — Non UL Recognized</b>							
	Strip of 10 characters.	See Table below	0.52				
	Order must specify a standard pack of 25 strips of same character.						
<b>Marking</b>	<b>Catalog No.</b>	<b>Marking</b>	<b>Catalog No.</b>	<b>Marking</b>	<b>Catalog No.</b>	<b>Marking</b>	<b>Catalog No.</b>
A	AB1GA	K	AB1GK	U	AB1GU	5	AB1R5
B	AB1GB	L	AB1GL	V	AB1GV	6	AB1R6
C	AB1GC	M	AB1GM	W	AB1GW	7	AB1R7
D	AB1GD	N	AB1GN	X	AB1GX	8	AB1R8
E	AB1GE	O	AB1GO	Y	AB1GY	9	AB1R9
F	AB1GF	P	AB1GP	Z	AB1GZ	0	AB1R0
G	AB1GG	Q	AB1GQ	1	AB1R1	0–9	AB1R11
H	AB1GH	R	AB1GR	2	AB1R2	+	AB1R12
I	AB1GI	S	AB1GS	3	AB1R3	-	AB1R13
J	AB1GJ	T	AB1GT	4	AB1R4	Blank	AB1RV



## Multi 9 MSC Mounting Base (non-UL recognized)

### Technical Data :

- IEC Rated: 250 A
- Insulation Voltage: 690 Vac
- Tested to Australia Standards AS3439-1 and AS3439-3 (IEC 439)
- Bus connectors compatible with Compact NS250 molded case circuit breakers and Interpact INS 250 switches

### Additional information:

- Catalog no. 0860CT9501R2/01


	Pole Capacity	Length (mm) ①	Cat . No.	List Price
<b>For C60 Circuit Breakers</b>				
MSC DC	12	110	C3DC123②	\$ 328
2 Phase (Black and Red)	16	146	C3DC163②	416
	20	182	C3DC203②	478
MSC 18	12	11	C325123②	218
3 Phase (Red, White and Blue)	18	164	C325183②	259
	24	218	C325243②	296
<b>For NC100 Circuit Breakers</b>				
MSC27	12	164	C125123②	259
3 Phase (Red, White and Blue)	18	245	C125183②	312
	24	326	C125243②	300
<b>Consult Factory for other sizes, up to 60 poles.</b>				

① Busbars extend 67.5mm either end of pan, width is 215mm.

② Add suffix -TF for top-fed only (no bus bars at lower end).

UL Rated MSC mounted bases are scheduled to be available in 4th quarter 2004. For information and availability, contact your nearest Square D/Schneider Electric sales office.

**UL 1077 Recognized Multi 9 Supplementary Protectors****Selection Table**

		<b>C60</b>			
					

**Ratings as per UL1077, CSA 22.2 no. 235 and IEC 947-2 Standards**

Number of Poles		1	2	3	4
Rated Current (A) at 25°C		0.5–63	1–63	1–63	1–63
Interrupting Ratings as per UL1077 (kA RMS)	AC 50/60 Hz 240 V	10	10	10	10
	277 V	5	–	–	–
	480Y 277 V	–	5	5	5
	DC	10	–	–	–
	60 V	–	10	–	–
	125 V	–	–	–	–
Ultimate Breaking Capacity (Icu) as per IEC 947-2 (kA RMS)	AC 50/60 Hz 240 V	10	20	20	20
	415 V	–	10	10	10
	440 V	–	6	6	6
Service Breaking Capacity (Ics) (% Icu)		75%	75%	75%	75%

**Trip Units**

Magnetic Setting	B curve	Between 3.2 and 4.8 times ampere rating
	C curve	Between 7 and 10 times ampere rating (7 and 14 for DC)
	D curve	Between 10 and 14 times ampere rating

**Dimensions and Weights**

Dimensions H x W x D (in./mm)	1	2	3	4
	3.19 x 0.71 x 3.00/ 81 x 18 x 76	3.19 x 1.42 x 3.00/ 81 x 36 x 76	3.19 x 2.13 x 3.00/ 81 x 54 x 76	3.19 x 2.48 x 3.00/ 81 x 72 x 76
Weight (oz/g)	3.85/110	7.70/220	11.55/330	15.40/440

**NC100H**



1		2		3		4	
10-40	50-80	10-40	50-80	10-40	50-80	10-40	50-80
20	5	20	5	20	5	20	5
10							
		10		10		10	
10							
	10	10	10				
10		20		20		20	
		10		10		10	
		6		6		6	

3.19 x 1.06 x 3.00/ 81 x 27 x 76	3.19 x 2.13 x 3.00/ 81 x 54 x 76	3.19 x 3.19 x 3.00/ 81 x 81 x 76	3.19 x 4.25 x 3.00/ 81 x 108 x 76
6.30/180	12.60/360	18.9/540	25.20/720

NC100H will be replaced by UL489 C120 equivalents at 240 V during 4th quarter 2004.  
For information and availability, contact your nearest Square D/Schneider Electric sales office.

# Multi 9™ C60 Supplementary Protectors UL 1077 Recognized C60 Supplementary Protectors

## Multi 9 C60 Supplementary Protectors



Rating (A)	1P	List Price	2P	List Price	3P	List Price	4P	List Price
<b>B Curve—Magnetic Setting Between 3.2 and 4.8 Times Ampere Rating</b>								
1	MG24110	\$ 67	MG24125	\$ 145	MG24140	\$ 210	MG24155	\$ 277
1.2	MG17402	67	MG17432	145				
1.5	MG17403	67	MG17433	145				
2	MG24111	67	MG24126	145	MG24141	210	MG24156	277
3	MG24112	67	MG24127	145	MG24142	210	MG24157	277
4	MG24113	67	MG24128	145	MG24143	210	MG24158	277
5	MG17404	67	MG17434	145				
6	MG24114	67	MG24129	145	MG24144	210	MG24159	277
7	MG17405	67	MG17435	145				
8	MG24115	67	MG24130	145	MG24145	210	MG24160	277
10	MG24116	67	MG24131	145	MG24146	210	MG24161	277
13	MG24117	67	MG24132	145	MG24147	210	MG24162	
15	MG17406	67	MG17436	145	MG17461	210		
16	MG24118	67	MG24133	145	MG24148	210	MG24163	277
20	MG24119	67	MG24134	145	MG24149	210	MG24164	277
25	MG24120	67	MG24135	145	MG24150	210	MG24165	277
30	MG17407	67	MG17437	145	MG17462	210		
32	MG24121	67	MG24136	145	MG24151	210	MG24166	277
35	MG17408	67	MG17438	145	MG17463	210		
40	MG24122	74	MG24137	149	MG24152	216	MG24167	280
50	MG24123	78	MG24138	160	MG24153	225	MG24168	292
60	MG17409	82	MG17439	168	MG17464	235		
63	MG24124	82	MG24139	168	MG24154	235	MG24169	300
<b>C Curve—Magnetic Setting Between 7 and 10 Times Ampere Rating (7 and 14 for DC)</b>								
0.5	MG17411	80						
1	MG24425	67	MG24442	145	MG24459	210	MG24476	277
1.2	MG17412	67	MG17442	145				
1.5	MG17413	67	MG17443	145				
2	MG24426	67	MG24443	145	MG24460	210	MG24477	277
3	MG24427	67	MG24444	145	MG24461	210	MG24478	277
4	MG24428	67	MG24445	145	MG24462	210	MG24479	277
5	MG17414	67	MG17444	145				
6	MG24430	67	MG24447	145	MG24464	210	MG24481	277
7	MG17415	67	MG17445	145				
8	MG24431	67	MG24448	145	MG24465	210	MG24482	277
10	MG24432	67	MG24449	145	MG24466	210	MG24483	277
13	MG24433	67	MG24450	145	MG24467	210	MG24484	
15	MG17416	67	MG17446	145	MG17466	210		
16	MG24434	67	MG24451	145	MG24468	210	MG24485	277
20	MG24435	67	MG24452	145	MG24469	210	MG24486	277
25	MG24436	67	MG24453	145	MG24470	210	MG24487	277
30	MG17417	67	MG17447	145	MG17467	210		
32	MG24437	67	MG24454	145	MG24471	210	MG24488	277
35	MG17418	67	MG17448	145	MG17468	210		
40	MG24438	74	MG24455	149	MG24472	216	MG24489	280
50	MG24439	78	MG24456	160	MG24473	225	MG24490	292
60	MG17419	82	MG17449	168	MG17469	235		
63	MG24440	82	MG24457	168	MG24474	235	MG24491	300

Continued on next page

Ratings and interrupting ratings: page 14

Cable range: pressure terminals are suitable for copper cables:

■ 0.5 to 25 A: #14 to #4 AWG

■ 32 to 63 A: #14 to #2 AWG

Width: 1P: 18mm, 2P: 36mm, 3P: 54mm, 4P: 72mm

Additional information:

■ Catalog no. 0860CT9501R2/01



**Multi 9 C60 Supplementary Protectors—Continued**

Rating (A)	1P	List Price	2P	List Price	3P	List Price	4P	List Price
<b>D Curve—Magnetic Setting Between 10 and 14 Times Ampere Rating</b>								
0.5	MG17421	\$ 80						
1	MG24500	67	MG24516	\$ 145	MG24532	\$ 210	MG24548	\$ 277
1.2	MG17422	67	MG17452	145				
1.5	MG17423	67	MG17453	145				
2	MG24501	67	MG24517	145	MG24533	210	MG24549	277
3	MG24502	67	MG24518	145	MG24534	210	MG24550	277
4	MG24503	67	MG24519	145	MG24535	210	MG24551	277
5	MG17424	67	MG17454	145				
6	MG24504	67	MG24520	145	MG24536	210	MG24552	277
7	MG17425	67	MG17455	145				
8	MG24505	67	MG24521	145	MG24537	210	MG24553	277
10	MG24506	67	MG24522	145	MG24538	210	MG24554	277
13	MG24507	67	MG24523	145	MG24539	210	MG24555	277
15	MG17426	67	MG17456	145	MG17471	210		
16	MG24508	67	MG24524	145	MG24540	210	MG24556	277
20	MG24509	67	MG24525	145	MG24541	210	MG24557	277
25	MG24510	67	MG24526	145	MG24542	210	MG24558	277
30	MG17427	67	MG17457	145	MG17472	210		
32	MG24511	67	MG24527	145	MG24543	210	MG24559	277
35	MG17428	67	MG17458	145	MG17473	210		
40	MG24512	74	MG24528	149	MG24544	216	MG24560	280
50	MG24513	78	MG24529	160	MG24545	225	MG24561	292
60	MG17429	82	MG17459	168	MG17474	235		
63	MG24514	82	MG24530	168	MG24546	235	MG24562	300

See pages 10–13 for C60 accessories.

# Multi 9™ NC100H Supplementary Protectors

## UL 1077 Recognized NC100H Supplementary Protectors



### Multi 9 NC100H Supplementary Protectors 480Y/277 Vac

Rating (A)	1P	List Price	2P	List Price	3P	List Price	4P	List Price
<b>B Curve—Magnetic Setting Between 3.2 and 4.8 Times Ampere Rating</b>								
80	MG27164	\$ 109	MG27175	\$ 218	MG27186	\$ 326	MG27197	\$ 481
<b>C Curve—Magnetic Setting Between 7 and 10 Times Ampere Rating</b>								
10	MG27154	84	MG27166	183	MG27177	266	MG27188	351
15	MG18256	84	MG18271	183	MG18286	266		
16	MG27155	84	MG27167	183	MG27178	266	MG27189	351
20	MG27156	84	MG27168	183	MG27179	266	MG27190	351
25	MG27157	84	MG27169	183	MG27180	266	MG27191	351
30	MG18257	84	MG18272	183	MG18287	266		
32	MG27158	84	MG27170	183	MG27181	266	MG27192	351
35	MG18258	84	MG18273	183	MG18288	266		
40	MG27159	84	MG27171	183	MG27182	266	MG27193	351
50	MG27160	84	MG27172	183	MG27183	266	MG27194	351
60	MG18259	106	MG18274	201	MG18289	300		
63	MG27162	106	MG27173	201	MG27184	300	MG27195	410
80	MG27163	109	MG27174	218	MG27185	326	MG27196	481
<b>D Curve—Magnetic Setting Between 10 and 14 Times Ampere Rating</b>								
10	MG27333	84	MG27344	183	MG27355	266	MG27366	351
15	MG18261	84	MG18276	183	MG18291	266		
16	MG27334	84	MG27345	183	MG27356	266	MG27367	351
20	MG27335	84	MG27346	183	MG27357	266	MG27368	351
25	MG27336	84	MG27347	183	MG27358	266	MG27369	351
30	MG18262	84	MG18277	183	MG18292	266		
32	MG27337	84	MG27348	183	MG27359	266	MG27370	351
35	MG18263	84	MG18278	183	MG18293	266		
40	MG27338	84	MG27349	183	MG27360	266	MG27371	351

**Ratings and interrupting ratings:** page 15

**Cable range:** pressure terminals are suitable for copper cables:

■ 10 to 40 A: #18 to #2 AWG

■ 50 to 80 A: #8 to #1 AWG

**Width:** 1P: 27mm, 2P: 54mm, 3P: 81mm, 4P: 108mm

**Additional information:**

■ Catalog no. 0860CT9501R2/01

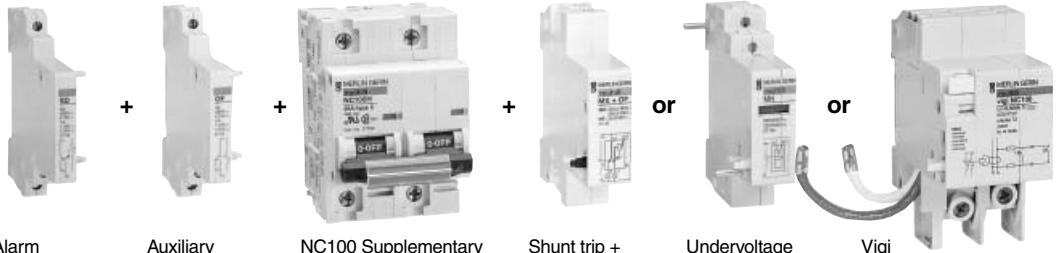
■ D-Fax no. 2940


NC100H will be replaced by UL489 C120 equivalents at 240 V during 4th quarter 2004.  
For information and availability, contact your nearest Square D/Schneider Electric sales office.  
See page 9.

**Accessories for UL 1077 Rated NC100**

**Electrical Accessories**

**Possible Combinations**



Alarm Switch	Auxiliary Switch	NC100 Supplementary Protector	Shunt trip + Aux Switch	Undervoltage Release	Vigi Module	
<b>Shunt Trip</b>				<b>Volts (V)</b>	<b>Catalog No.</b>	<b>List Price</b>
			AC	220–277	MG27128	\$ 93.00
				110–220	MG27129	93.00
			DC	110–130	MG27129	93.00
				24–48	MG27130	93.00

**Undervoltage Trip**

	AC	220–240	MG27125	134.00
		110–130	MG27126	134.00

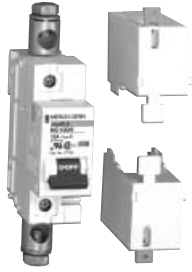



**Auxiliary and Alarm Switches**

	Auxiliary Switch	MG27121	40.00
	Alarm Switch	MG27122	40.00


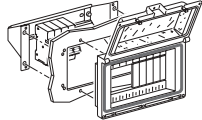



**Ground-fault Vigi Module — IEC Rated, Non UL Recognized—See page 33**

*Continued on next page*

**Accessories** — *Continued*

Connection Accessories	Rear Connection with Terminal Cover – Non UL Recognized	Catalog No.	List Price
	Rear connection with terminal cover For cable up to #1/0 AWG (50mm <sup>2</sup> )	MG27153	28.70
	<b>Terminal Screw Shield for NC100 – Non UL Recognized</b> Supplied as bag of two 4-Pole shields (May be divided into 1-, 2- or 3-Pole length)	MG27152	33.70
	<b>Terminal Cover for NC100 – Non UL Recognized</b> 1-Pole (set of two)	MG27151	22.50
	<b>Spacer – Non UL Recognized</b> 9mm width	MG27062	6.20



**Accessories** — *Continued*

Other Accessories	Front Mounting Kit for NC100	Catalog No.	List Price
	1P (27mm)	MG26986	\$ 11.20
	2P (54mm)	MG26987	11.20
	3P (81mm)	MG26988	11.20
	4P (108mm)	MG26990	11.20
<b>Multi-pole Front Mounting Kit — Allows installation of up to 20–9mm modules — Non UL Recognized</b>			
	DIN rail support	14211	35.70
	Hinged transparent cover	14210	105.00
<b>Rotary Handle – Non UL Recognized</b>			
	2P/3P/4P	Operating subassembly (fixed to Multi 9) Requires handle.	MG27046 86.00
		Door interlock handle (6.5 in/165mm shaft)	MG27047 71.00
		Fixed handle (Front or lateral)	MG27048 78.00
<b>Label Holders for 2, 3 or 4P C60 or NC100 – Non UL Recognized</b>			
	Bag of 10 pieces	MG27150	33.70
<b>Padlock Attachment for NC100 – Non UL Recognized</b>			
	Set of two	MG27145	39.40

# Multi 9™ Miniature Circuit Breakers

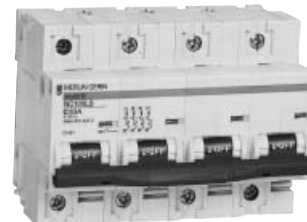
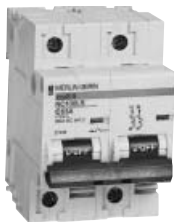
## IEC 947-2 Rated Multi 9 Miniature Circuit Breakers

### Selection Table

			DPN-N	C60							
											
Ratings as per IEC 898 and IEC 947-2 Standards			DPN-N	C60N		C60H		C60L			
Number of poles			1Ph + N	1	2, 3, 4	1	2, 3, 4	1	2, 3, 4		
Rated current (A)	In	30°C	1 to 40	0.5 to 63	0.5 to 63	0.5 to 63	0.5 to 63	0.5 to 63	0.5 to 25	32 to 40	50 to 63
		40°C									
Rated operational voltage (V)	Ue		230	440	440	440	440	440	440		
Ultimate breaking capacity as per IEC 947-2 Standards (kA rms)	Icu AC 50/60 Hz	130 V	–	–	30	–	–	–	–		
		230-240 V	7.5	10	20	15	30	25	50	40	30
		400-415 V	2 ①	3 ①	10	4 ①	15	6 ①	25	20	15
		440 V	–	6	–	10	–	20	15	10	
		DC (Poles in series)	60 V	–	15	–	20	–	25	–	
	125 V	–	–	2P=20, 3P=30	–	2P=25, 3P=40	–	2P=30, 3P=50			
	250 V	–	–	4P=40	–	4P=50	–	4P=60			
Service breaking capacity	Ics (% Icu)		50%	75%	75%	50%	50%	50%	50%		
Ultimate breaking capacity as per EN60898 Standards (kA)	Icn AC 50/60 Hz	230-400 V	6000 at 230 V	6000		10000					
		415 V	–		6000		10000				
Limitation class as per IEC 898			3	3							
<b>Trip Units</b>											
Magnetic setting (Times Ampere Rating)	B curve		3 to 5	3 to 5							
	C curve		5 to 10	5 to 10							
	D curve		–	10 to 14							
	MA curve		–	–						12	
<b>Dimensions and Weights</b>											
Dimensions H x W x D (in./mm)	1P		3.03 x 0.71 x 3.00/ 77 x 18 x 76	3.19 x 0.71 x 3.00/81 x 18 x 76							
	2P		–	3.19 x 1.42 x 3.00/81 x 36 x 76							
	3P		–	3.19 x 2.13 x 3.00/81 x 54 x 76							
	4P		–	3.19 x 2.48 x 3.00/81 x 72 x 76							
Weights (oz/g)	1P		4.23/120	3.88/110							
	2P		–	7.76/220							
	3P		–	11.64/330							
	4P		–	15.52/440							

① Single pole breaking capacity as per IT ungrounded grounding system (case of double fault)

	<b>C32</b>	<b>C120H</b>	
--	------------	--------------	--



	<b>C32H-DC</b>	<b>C120H</b>	
--	----------------	--------------	--

	1	2	1	2, 3, 4
	1 to 40	1 to 40	10 to 125	10 to 125
			440	440
			30	-
			15	30
			4.5 ①	15
			-	10
	10	20		
		20		
			50%	75%
			15	15
			-	-

	-	3 to 5 times ampere rating	
	7 to 10	5 to 10 (5 to 14 for DC) times ampere rating	
	-	10 to 14 times ampere rating	
	-	-	

	3.19 x 0.71 x 3.00/81 x 18 x 76	3.19 x 0.71 x 3.00/81 x 27 x 76	
	3.19 x 1.42 x 3.00/81 x 36 x 76	3.19 x 1.42 x 3.00/81 x 54 x 76	
	-	3.19 x 2.13 x 3.00/81 x 81 x 76	
	-	3.19 x 2.48 x 3.00/81 x 108 x 76	
	4.48/127	6.35/205	
	8.82/250	12.70/410	
	-	19.05/615	
	-	25.40/820	

# IEC 947-2 Rated Multi 9 DPN Miniature Circuit Breakers



## Multi 9 DPN-N Circuit Breaker — IEC 898: 6000A — IEC 947-2: 7.5 kA at 230 Vac

Rating (A)	1P+Neutral	List Price
<b>B Curve—Magnetic Setting Between 3 and 5 Ampere Rating</b>		
4	19249	\$ 124.00
6	19250	124.00
10	19252	124.00
16	19254	124.00
20	19255	124.00
25	19256	124.00
32	19257	124.00
40	19258	128.00

### C Curve—Magnetic Setting Between 5 and 10 Ampere Rating

1	19260	124.00
2	19261	124.00
4	19263	124.00
6	19264	124.00
10	19266	124.00
16	19268	124.00
20	19269	124.00
25	19270	124.00
32	19271	124.00
40	19272	128.00

### Accessories

Auxiliary switch, Alarm switch, Shunt trip, Undervoltage release and Padlocking device — See page 29 & 31

Comb Busbar for DPN-N	1 Phase + Neutral (13 Poles)	14880	26.30
	1 Phase + Neutral (24 Poles) — set of 2	14890	97.00
	Insulated connector (25mm <sup>2</sup> ) — set of 4	14885	37.50



## Multi 9 DPN-N Vigi Residual Current Circuit Breakers

Consist of the above Circuit Breaker with a built-in Ground Fault Device

Rating (A)	30 mA Sensitivity		300 mA Sensitivity	
	Catalog No.	List Price	Catalog No.	List Price
<b>B Curve—Magnetic Setting Between 3 and 5 Ampere Rating</b>				
6	19651	\$ 285.00	19671	\$ 356.00
10	19653	285.00	19673	356.00
13	19654	285.00	...	...
16	19655	285.00	19675	356.00
20	19656	285.00	19676	356.00
25	19657	285.00	19677	356.00
32	19658	292.00	19678	365.00
40	19659	296.00	19679	371.00

### C Curve—Magnetic Setting Between 5 and 10 Ampere Rating

6	19661	285.00	19681	356.00
10	19663	285.00	19683	356.00
16	19665	285.00	19685	356.00
20	19666	285.00	19686	356.00
25	19667	285.00	19687	356.00
32	19668	292.00	19688	365.00
40	19669	296.00	19689	371.00

### Accessories

Auxiliary switch, Alarm switch, Shunt trip, Undervoltage release and Padlocking device — See page 29

Comb Busbar for DPN-N	1 Phase + Neutral (13 Poles)	14880	26.30
	1 Phase + Neutral (24 Poles) — set of 2	14890	97.00
	Insulated connector (25mm <sup>2</sup> ) — set of 4	14885	37.50

Ratings and Interrupting ratings : page 22

Cable range : pressure terminals are suitable for 16mm<sup>2</sup> solid copper cables:

Width of DPN-N: 18mm

Width of DPN-N Vigi: 36mm

Additional information:

■ Catalog no. 0860CT9501R2/01



# IEC 947-2 Rated Multi 9 C60 Miniature Circuit Breakers



## Multi 9 C60N Circuit Breaker — IEC 898: 6000 A — IEC 947-2: 10 kA at 415 Vac

Rating (A)	1P	List Price	2P	List Price	3P	List Price	4P <sup>①</sup>	List Price
<b>B Curve—Magnetic Setting Between 3 and 5 Ampere Rating</b>								
1	24045	\$ 64	24071	\$ 138	24084	\$ 200	24097	\$ 264
2	24046	64	24072	138	24085	200	24098	264
3	24047	64	24073	138	24086	200	24099	264
4	24048	64	24074	138	24087	200	24100	264
6	24049	64	24075	138	24088	200	24101	264
10	24050	64	24076	138	24089	200	24102	264
16	24051	64	24077	138	24090	200	24103	264
20	24052	64	24078	138	24091	200	24104	264
25	24053	64	24079	138	24092	200	24105	264
32	20454	64	24080	138	24093	200	24106	264
40	24055	70	24081	142	24094	213	24107	267
50	24056	74	24082	151	24095	224	24108	277
63	24057	78	24083	160	24096	224	24109	286
<b>C Curve—Magnetic Setting Between 5 and 10 Ampere Rating</b>								
0.5	24067	78	24068	158	24069	229	24070	302
1	24395	64	24331	138	24344	200	24357	264
2	24396	64	24332	138	24345	200	24358	264
3	24397	64	24333	138	24346	200	24359	264
4	24398	64	24334	138	24347	200	24360	264
6	24399	64	24335	138	24348	200	24361	264
10	24401	64	24336	138	24349	200	24362	264
16	24403	64	24337	138	24350	200	24363	264
20	24404	64	24338	138	24351	200	24364	264
25	24405	64	24339	138	24352	200	24365	264
32	24406	64	24340	138	24353	200	24366	264
40	24407	70	24341	142	24354	213	24367	267
50	24408	74	24342	151	24355	224	24368	277
63	24409	78	24343	160	24356	224	24369	286
<b>D Curve—Magnetic Setting Between 10 and 14 Ampere Rating</b>								
1	24625	64	24653	138	24667	200	24681	264
2	24626	64	24654	138	24668	200	24682	264
3	24627	64	24655	138	24669	200	24683	264
4	24628	64	24656	138	24670	200	24684	264
6	24629	64	24657	138	24671	200	24685	264
10	24630	64	24658	138	24672	200	24686	264
16	24632	64	24660	138	24674	200	24688	264
20	24633	64	24661	138	24675	200	24689	264
25	24634	64	24662	138	24676	200	24690	264
32	24635	64	24663	138	24677	200	24691	264
40	24636	70	24664	142	24678	213	24692	267
50	24637	74	24665	151	24679	224	24693	277
63	24638	78	24666	160	24680	224	24694	286

① 4th Pole protected

Ratings and Interrupting ratings : page 22

Cable range : pressure terminals are suitable for solid copper cables:

■ 0.5 to 25 A : 16mm<sup>2</sup> stranded or 25mm<sup>2</sup> solid

■ 32 to 63 A : 25mm<sup>2</sup> stranded or 35mm<sup>2</sup> solid

Width : 1P: 18mm, 2P: 36mm, 3P: 54mm, 4P: 72mm

Additional information:

■ Catalog no. 0860CT9501R2/01



**Multi 9 C60H Circuit Breaker** — IEC 898: 10000 A — IEC 947-2: 15 kA at 415 Vac

Rating (A)	1P	List Price	2P	List Price	3P	List Price	4P <sup>①</sup>	List Price
<b>B Curve—Magnetic Setting Between 3 and 5 Ampere Rating</b>								
6	24643	\$ 83	24725	\$ 179	24738	\$ 259	24751	\$ 342
10	24644	83	24726	179	24739	259	24752	342
13	24645	83						
16	24646	83	24727	179	24740	259	24753	342
20	24647	83	24728	179	24741	259	24754	342
25	24648	83	24729	179	24742	259	24755	342
32	24649	83	24730	179	24743	259	24756	347
40	24650	91	24731	185	24744	277	24757	360
50	24651	96	24732	196	24745	291	24758	360
63	24652	101	24733	208	24746	291	24759	372

<b>C Curve—Magnetic Setting Between 5 and 10 Ampere Rating</b>								
0,5	24900	101	24902	205	24906	297	24908	393
0,75	24901	101	24903	196	24907	284	24909	377
1	24968	83	24981	179	24994	259	25007	342
2	24969	83	24982	179	24995	259	25008	342
3	24970	83	24983	179	24996	259	25009	342
4	24971	83	24984	179	24997	259	25010	342
6	24972	83	24985	179	24998	259	25011	342
10	24973	83	24986	179	24999	259	25012	342
16	24974	83	24987	179	25000	259	25013	342
20	24975	83	24988	179	25001	259	25014	342
25	24976	83	24989	179	25002	259	25015	342
32	24977	83	24990	179	25003	259	25016	342
40	24978	91	24991	185	25004	277	25017	347
50	24979	96	24992	196	25005	291	25018	360
63	24980	101	24993	208	25006	291	25019	372

<b>D Curve—Magnetic Setting Between 10 and 14 Ampere Rating</b>								
0,5	25171	101	25172	205	25173	297	25174	393
1	25152	101	25183	196	25196	284	25211	377
2	25155	83	25184	179	25197	259	25212	342
3	25157	83	25185	179	25198	259	25213	342
4	25158	83	25186	179	25199	259	25214	342
6	25159	83	25187	179	25200	259	25215	342
10	25160	83	25188	179	25201	259	25216	342
16	25161	83	25189	179	25202	259	25217	342
20	25164	83	25190	179	25203	259	25218	342
25	25165	83	25191	179	25205	259	25219	342
32	25166	83	25192	179	25207	259	25220	342
40	25167	91	25193	185	25208	279	25221	347
50	25168	96	25194	196	25209	291	25222	360
63	25169	101	25195	208	25210	291	25223	372

① 4th Pole protected

**Ratings and Interrupting ratings :** page 22  
**Cable range :** pressure terminals are suitable for solid copper cables:  
 ■ 0,5 to 25 A : 16mm<sup>2</sup> stranded or 25mm<sup>2</sup> solid  
 ■ 32 to 63 A : 25mm<sup>2</sup> stranded or 35mm<sup>2</sup> solid  
**Width :** 1P: 18mm, 2P: 36mm, 3P: 54mm, 4P: 72mm

**Additional information:**  
 ■ Catalog no. 0860CT9501R2/01



**Multi 9 C60L Circuit Breaker — IEC 947-2: 25 kA at 415 Vac<sup>①</sup>**

Rating (A)	1P	List Price	2P	List Price	3P	List Price	4P4T	List Price
<b>Z Curve—Magnetic Setting Between 2.4 and 3.6 Ampere Rating</b>								
1	26133	\$ 103						
1.6	26134	103	26154	\$ 221	26174	\$ 319	26232	\$ 422
2	26135	103	26155	221	26176	319	26234	422
3	26136	103	26157	221	26177	319	26236	422
4	26137	103	26158	221	26178	319	26237	422
6	26139	103	26159	221	26180	319	26239	422
10	26141	103	26161	221	26182	319	26241	422
16	26142	103	26163	221	26184	319	26242	422
20	26143	103	26164	221	26185	319	26243	422
25	26145	112	26165	227	26224	341	26244	426
32	26146	118	26166	242	26225	358	26245	443
40	26147	124	26167	255	26226	358	26246	457
<b>B Curve—Magnetic Setting Between 3.2 and 4.8 Ampere Rating</b>								
6	25331	103	25357	221	25370	319	25383	422
10	25332	103	25358	221	25371	319	25384	422
16	25333	103	25359	221	25372	319	25385	422
20	25334	103	25360	221	25373	319	25386	422
25	25335	103	25361	221	25374	319	25387	422
32	25336	103	25362	221	25375	319	25388	422
40	25337	112	25363	227	25376	341	25389	426
50	25338	118	25364	242	25377	358	25390	443
63	25339	124	25365	255	25378	358	25391	457
<b>C Curve—Magnetic Setting Between 7 and 10 Ampere Rating</b>								
0.5	25406	124	25407	252	25408	366	25409	484
1	25392	103	25418	221	25431	319	25444	422
2	25393	103	25419	221	25432	319	25445	422
3	25394	103	25420	221	25433	319	25446	422
4	25395	103	25421	221	25434	319	25447	422
6	25396	103	25422	221	25435	319	25448	422
10	25397	103	25423	221	25436	319	25449	422
16	25398	103	25424	221	25437	319	25450	422
20	25399	103	25425	221	25438	319	25451	422
25	25400	103	25426	221	25439	319	25452	422
32	25401	103	25427	221	25440	319	25453	422
40	25402	112	25428	227	25441	341	25454	426
50	25403	118	25429	242	25442	358	25455	443
63	25404	124	25430	255	25443	358	25456	457
<b>K Curve—Magnetic Setting Between 10 and 14 Ampere Rating</b>								
1	25460	103	25478	221	25496	319	25514	422
1.6	25461	103	25479	221	25497	319	25515	422
2	25462	103	25480	221	25498	319	25516	422
3	25463	103	25481	221	25499	319	25517	422
4	25464	103	25482	221	25500	319	25518	422
6	25465	103	25483	221	25501	319	25519	422
10	25467	103	25485	221	25503	319	25521	422
16	25468	103	25486	221	25504	319	25522	422
20	25469	103	25487	221	25505	319	25523	422
25	25470	103	25488	221	25506	319	25524	422
32	25471	103	25489	221	25507	319	25525	422
40	25472	112	25490	227	25508	341	25526	426

① 0–25 A: 25 kA, 32–40 A: 20 kA, 50–63 A: 15 kA

Ratings and Interrupting ratings : page 22

Cable range : pressure terminals are suitable for solid copper cables:

■ 0.5 to 25 A : 16mm<sup>2</sup> stranded or 25mm<sup>2</sup> solid

■ 32 to 63 A : 25mm<sup>2</sup> stranded or 35mm<sup>2</sup> solid

Width : 1P: 18mm, 2P: 36mm, 3P: 54mm, 4P: 72mm

Additional information:

■ Catalog no. 0860CT9501R2/01



**Multi 9 C60L-MA Circuit Breaker for Motor Circuit Protection ①**

Rating (A)	2P	List Price	3P	List Price
<b>MA Curve—Magnetic Only—Magnetic Setting at 12 x Ampere Rating</b>				
1.6	26345	\$ 207	26357	\$ 299
2.5	26346	207	26358	299
4	26347	207	26359	299
6.3	26348	207	26360	299
10	26349	207	26361	299
12.5	26350	207	26362	299
16	26352	207	26368	299
25	26353	207	26369	299
40	26355	213	26370	320

Ratings and Interrupting ratings : page 22

Accessories : see page 29

Cable range : pressure terminals are suitable for solid copper cables:

■ 1 to 40 A : 16mm<sup>2</sup> stranded or 25mm<sup>2</sup> solid

Width : 2P: 36mm, 3P: 54mm

Additional information:

■ Catalog no. 0860CT9501R2/01



**Multi 9 C32H-DC Circuit Breaker for DC Application – 125 Vdc (1P) or 250 Vdc (2P)**

Rating (A)	1P	List Price	2P	List Price
<b>C Curve—Magnetic Setting Between 7 and 10 Ampere Rating</b>				
1	20531	\$ 138	20541	\$ 264
2	20532	138	20542	264
3	20533	138	20543	264
6	20534	138	20544	264
10	20535	138	20545	264
16	20536	138	20546	264
20	20537	138	20547	264
25	20538	138	20548	264
32	20539	138	20549	264
40	20540	142	20550	267

① Up to 25 A: 50 kA@240 Vac, 25 kA@415 Vac  
40 A: 40 kA@240 Vac, 20 kA@415 Vac

Note: For applications above 40 A, C60 and C120 circuit breakers can be used.



Ratings and Interrupting ratings : page 22

1P=127 Vdc

2P=250 Vdc; in series with load

Accessories :

■ Auxiliary and alarm switch #27132 and 27135. See page 29.

■ Padlocking device #26970. See page 31.

Cable range : pressure terminals are suitable for solid copper cables:

■ 1 to 40 A : 16mm<sup>2</sup> stranded or 25mm<sup>2</sup> solid

Width : 1P: 18mm, 2P: 36mm

Additional information:

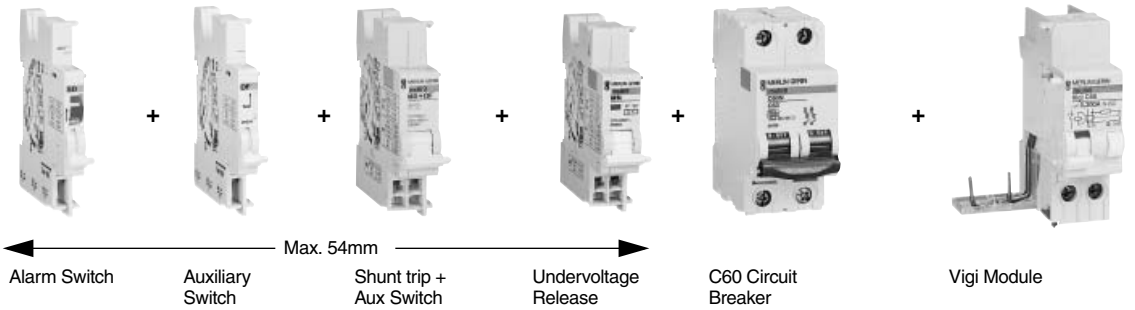
■ Catalog no. 0860CT9501R2/01

**Accessories for IEC Rated C60**

**Electrical Accessories**

**Possible Combinations**

Mounted the left of the circuit breaker with a maximum width of 54mm.



	Volts (V)	VA or W	Width (mm)	Catalog No.	List Price
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**MX + OF Shunt Trip + Auxiliary Switch**



AC	12	6	18	26948	\$ 93.00
	24	6	18	26948	93.00
	48	6	18	26947	93.00
	130	6	18	26947	93.00
	220-415	6	18	26946	93.00
DC	12	6	18	26948	93.00
	24	6	18	26948	93.00
	48	3	18	26947	93.00
	110-130	1	18	26946	93.00

**MN Undervoltage Release**



AC	24			—	—
	48		18	26961	134.00
	115 400 Hz		18	26959	134.00
	220		18	26960	134.00
DC	24			—	—
	48		18	26961	134.00

**Auxiliary and Alarm Switches**



Auxiliary (OF) 12-415 Vac; 12-130 Vdc	26924	40.00
Alarm (SD) 12-415 Vac; 12-130 Vdc	26927	40.00

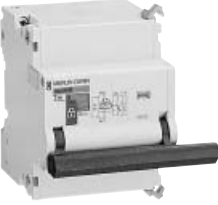

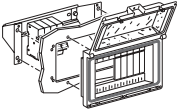
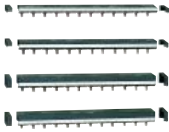






**Ground-fault Vigi Module (220-415 Vac – AC Class)**



2P	25 A	10 mA	26580	412.00
		30 mA	26581	412.00
	63 A	30 mA	26611	412.00
		300 mA—Selective	26616	412.00
		1 A—Selective	26618	412.00
3P	63 A	30 mA	26620	449.00
		300 mA—Selective	26631	449.00
		1 A—Selective	26636	449.00
4P	63 A	30 mA	26643	471.00
		300 mA—Selective	26648	471.00
		1 A—Selective	26650	471.00

# Multi 9™ C60 Miniature Circuit Breakers

## Accessories — Continued

Electrical Accessories (cont.)		Motor Operator				
	1P, 2P	AC	230	18310	454.00	
	3P, 4P	AC	230	18311	638.00	
Other Accessories		Front Mounting Kit			Catalog No.	List Price
	1P (18mm)			MG26983	\$ 11.20	
	2P (36mm)			MG26984	11.20	
	3P (54mm)			MG26985	11.20	
	4P (72mm)			MG26989	11.20	
<b>Multi-pole Front Mounting Kit — Allows installation of up to 20–9mm modules (10 poles of C60)</b>						
	DIN rail support			14211	35.70	
	Hinged transparent cover			14210	105.00	
<b>Comb Busbar – IEC Rated</b>						
	Comb busbars (12-Pole long)	1 Phase		14881	21.10	
		2 Phase		14882	26.30	
		3 Phase		14883	33.70	
		4 Phase		14884	43.80	
	24 poles (Set of 2)	1 Phase		14891	69.00	
		2 Phase		14892	100.00	
		3 Phase		14893	131.00	
		4 Phase		14894	184.00	
	1-meter long (57 poles)	1 Phase		14801	116.00	
		2 Phase		14802	132.00	
		3 Phase		14803	164.00	
		4 Phase		14804	228.00	
	Extra end caps		1P/2P (40 pieces)	14886	33.70	
			3P/4P (40 pieces)	14887	37.50	
	Connector		1P/4P – #4 AWG/25mm <sup>2</sup> (Set of four)	14885	37.50	
	Tooth caps		40 pieces	14888	37.50	
<b>Rotary Handle</b>						
	2P/3P/4P	Operating subassembly (Fixed to Multi 9)		27046	86.00	
		Drawout door interlock handle (6.5 in/165mm shaft)		27047	71.00	
		Fixed handle (Front or lateral)		27048	78.00	
<b>Spacer</b>						
	9mm width			27062	6.20	
<b>Terminal Screw Shield</b>						
	Bag of two 1, 2, 3 or 4-Pole shields			26981	33.70	
<b>Terminal Cover</b>						
	1-Pole (Set of two)			26975	17.00	
	2-Pole (Set of two)			26976	33.70	
	3-Pole (Requires one 1-Pole and one 2-Pole)			26975	17.40	
				+26976	33.70	
	4-Pole (Set of two)			26978	68.00	

Continued on next page

# Multi 9™ C60 Miniature Circuit Breakers

## Accessories — Continued

Other Accessories	Interphase Barrier	Catalog No.	List Price
	Bag of 10 pieces	27001	33.70
	<b>Crimped Lug Connection</b>		
	Bag of 8 pieces	27053	33.70
	<b>Plug-in Base</b>		
	One pole	26996	52.00
	<b>Label Holders for 2, 3 or 4P C60 or NC100</b>		
	Bag of 10 pieces	27150	33.70
	<b>Padlock Attachment</b>		
	Set of two—Accepts 0.315 in/8mm diameter padlock	26970	22.00

**IEC 947-2 Rated Multi 9 C120H (10–125 A)—15 kA at 240 Vac****Multi 9 C120H (10–125 A) - Circuit Breakers – 15 kA at 240 Vac**

Rating (A)	1P	List Price	2P	List Price	3P	List Price	4P4T	List Price
<b>B Curve—Magnetic Setting Between 3 and 5 Ampere Rating</b>								
10	18394	\$ 80	18405	\$ 173	18416	\$ 252	18427	\$ 333
16	18395	80	18406	173	18417	252	18428	333
20	18396	80	18407	173	18418	252	18429	333
25	18397	80	18408	173	18419	252	18430	333
32	18398	80	18409	173	18420	252	18431	333
40	18399	80	18410	173	18421	252	18432	333
50	18400	80	18411	173	18422	252	18433	333
63	18401	101	18412	190	18423	286	18434	390
80	18402	104	18413	208	18424	310	18435	457
100	18403	104	18414	208	18425	310	18436	457
125	18404	135	18415	270	18426	402	18437	594
<b>C Curve—Magnetic Setting Between 5 and 10 Ampere Rating</b>								
10	18438	80	18449	173	18460	252	18471	333
16	18439	80	18450	173	18461	252	18472	333
20	18440	80	18451	173	18462	252	18473	333
25	18441	80	18452	173	18463	252	18474	333
32	18442	80	18453	173	18464	252	18475	333
40	18443	80	18454	173	18465	252	18476	333
50	18444	80	18455	173	18466	252	18477	333
63	18445	101	18456	190	18467	286	18478	390
80	18446	104	18457	208	18468	310	18479	457
100	18447	104	18458	208	18469	310	18480	457
125	18448	135	18459	270	18470	402	18481	594
<b>D Curve—Magnetic Setting Between 10 and 14 Ampere Rating</b>								
10	18482	80	18493	173	18504	252	18515	333
16	18483	80	18494	173	18505	252	18516	333
20	18484	80	18495	173	18506	252	18517	333
25	18485	80	18496	173	18507	252	18518	333
32	18486	80	18497	173	18508	252	18519	333
40	18487	80	18498	173	18509	252	18520	333
50	18488	80	18499	173	18510	252	18521	333
63	18489	101	18500	190	18511	286	18522	390
80	18490	104	18501	208	18512	310	18523	457
100	18491	104	18502	208	18513	310	18524	457
125	18492	135	18503	270	18514	402	18525	594

Ratings and Interrupting ratings : page 23

Cable range : pressure terminals are suitable for solid copper cables:

■ 10 to 100 A : 35mm<sup>2</sup> stranded or 50mm<sup>2</sup> solid

Width : 1P: 27mm, 2P: 54mm, 3P: 81mm, 4P: 108mm

Additional information:

■ Catalog no. 0860CT9501R2/01

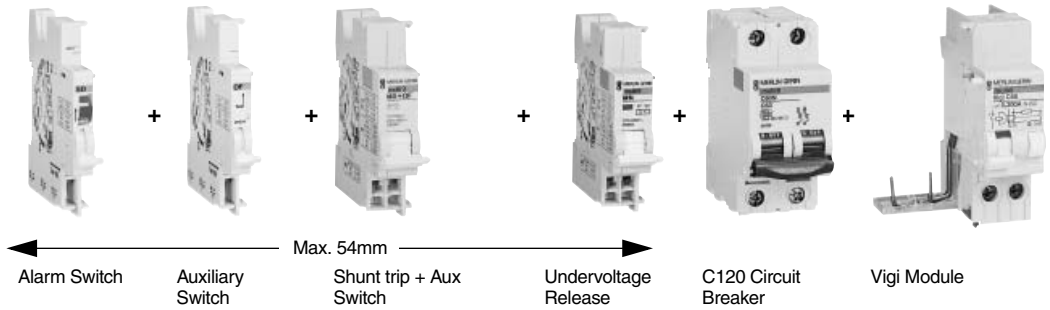


**Accessories for IEC Rated C120 (Electrical auxiliaries same as C60)**

**Electrical Accessories**

**Possible Combinations**

Mounted the left of the circuit breaker with a maximum width of 54mm.



	Volts (V)	VA or W	Width (mm)	Catalog No.	List Price
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**MX + OF Shunt Trip + Auxiliary Switch**



AC	12	6	18	26948	\$ 93.00	
	24	6	18	26948	93.00	
	48	6	18	26947	93.00	
	130	6	18	26947	93.00	
	220-415	6	18	26946	93.00	
	DC	12	6	18	26948	93.00
		24	6	18	26948	93.00
		48	3	18	26947	93.00
		110-130	1	18	26946	93.00

**MN Undervoltage Release**



AC	24			—	—
	48		18	26961	134.00
	115 400 Hz		18	26959	134.00
	220		18	26960	134.00
DC	24			—	—
	48		18	26961	134.00

**Auxiliary and Alarm Switches**



Auxiliary (OF) 12-415 Vac; 12-130 Vdc	26924	40.00
Alarm (SD) 12-415 Vac; 12-130 Vdc	26927	40.00

	Poles	Volts (V)	Amperes	Sensitivity	Catalog No.	List Price
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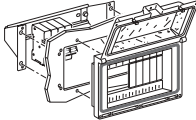




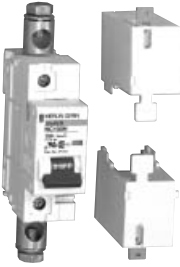


**Ground-fault Vigi C120 Module — AC Class**



2P	230 to 415 Vac	100 A	30 mA	18591	1695.00
			300 mA—Selective	18556	1250.00
			1 A Selective	18557	1242.00
3P	230 to 415 Vac	100 A	30 mA	18594	1797.00
			300 mA—Selective	18558	1303.00
			1 A Selective	18559	1294.00
4P	230 to 415 Vac	100 A	30 mA	18597	1797.00
			300 mA—Selective	18560	1303.00
			1 A—Selective	18561	1294.00

Continued on next page

**Accessories** — *Continued*

Other Accessories		Catalog No.	List Price
	<b>Front Mounting Kit for C120</b>		
	1P (27mm)	MG26986	\$ 11.20
	2P (54mm)	MG26987	11.20
	3P (81mm)	MG26988	11.20
	4P (108mm)	MG26990	11.20
	<b>Multi-pole Front Mounting Kit — Allows installation of up to 20–9mm modules — Non UL Recognized</b>		
	DIN rail support	14211	35.70
	Hinged transparent cover	14210	105.00
	<b>Rotary Handle</b>		
	2P/3P/4P	Operating subassembly (requires handle)	27046 86.00
		Door interlock handle	27047 71.00
		Fixed handle (Front or lateral)	27048 78.00
	<b>Spacer</b>		
	9mm width	27062	6.20
	<b>Terminal Screw Shield for C120</b>		
	Supplied as bag of two 4-Pole shields (May be divided into 1-, 2- or 3-Pole lengths)	18527	33.70
	<b>Terminal Cover for C120</b>		
	1-Pole (set of two)	18526	22.50
	<b>Rear Connection</b>		
	Rear connection with 1P C120 terminal cover For cable up to #1/0 AWG (50mm <sup>2</sup> )	18528	40.50
	<b>Label Holders for 2, 3 or 4P C60 or C120</b>		
	Bag of 10 pieces	27150	33.70
	<b>Padlock Attachment for C120</b>		
	Set of four—Accepts 0.315 in/.8mm diameter padlock	27145	39.40

# Multi 9™ Miniature Circuit Breakers

## Other Multi 9 Devices



### UL Rated Multi 9 SPD Series Transient Voltage Surge Suppressor (TVSS)

Service Voltage U <sub>N</sub>	No. of Poles	Dry Contacts	Max Surge Current/Phase I <sub>MAX</sub>	UL Suppressed Voltage Rating L-N (SVR)	Catalog Number	List Price
120 V	1	No	20 kA	500 V	12710	\$ 94
230 V	1	No	20 kA	700 V	12711	94
400 V	1	No	20 kA	1500 V	12712	94
120 V	1	No	45 kA	500 V	12713	161
120 V	1	Yes	45 kA	500 V	12714	189
230 V	1	No	45 kA	700 V	12715	161
230 V	1	Yes	45 kA	700 V	12716	189
400 V	1	No	45 kA	1500 V	12717	161
400 V	1	Yes	45 kA	1500 V	12718	189
120 V	1	No	65 kA	400 V	12719	243
120 V	1	Yes	65 kA	400 V	12720	269
230 V	1	No	65 kA	700 V	12721	243
230 V	1	Yes	65 kA	700 V	12722	269
400 V	1	No	65 kA	1200 V	12723	243
400 V	1	Yes	65 kA	1200 V	12724	269
120 V	2	No	20 kA	400 V	12725	136
230 V	2	No	20 kA	700 V	12726	136
120 V	2	No	45 kA	400 V	12727	215
230 V	2	No	45 kA	700 V	12728	215
208Y/120 V	4	No	20 kA	400 V	12729	269
208Y/120 V	4	Yes	20 kA	400 V	12730	323
400Y/230 V	4	No	20 kA	700 V	12731	269
400Y/230 V	4	Yes	20 kA	700 V	12732	323
208Y/120 V	4	No	45 kA	400 V	12733	484
208Y/120 V	4	Yes	45 kA	400 V	12734	538
400Y/230 V	4	No	45 kA	700 V	12735	484
400Y/230 V	4	Yes	45 kA	700 V	12736	538
208Y/120 V	4	No	80 kA	400 V	12737	660
208Y/120 V	4	Yes	80 kA	400 V	12738	713
400Y/230 V	4	No	80 kA	700 V	12739	660
400Y/230 V	4	Yes	80 kA	700 V	12740	713

Cable range: #12-#4 AWG (3-25mm<sup>2</sup>)

Width : 1P: 18mm; 2P: 36mm; 4P: 89mm

NOTE: See Class 1312 Catalog 1312CT0101 for recommended protection of the SPD.

Additional information:

■ Catalog no. 1311CT0101



#### Replacement Modules for 1P Multi 9 SPDs

Select the replacement module for SPD with corresponding catalog number.

Cat. No.	List Price
12710M	\$ 86
12711M	86
12712M	86
12713M	153
12714M	153
12715M	153
12716M	153
12717M	153
12718M	153
12719M	235
12720M	235
12721M	235
12722M	235
12723M	235
12724M	235

# Multi 9™ Miniature Circuit Breakers IEC Rated Switches



## IEC Rated ID Residual Current Switches

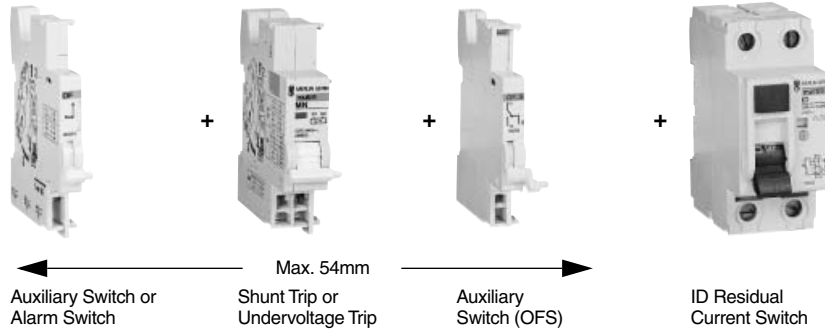
Consist of IEC Rated Switches and Built-in Ground Fault Device

Rating (A)	Sensitivity — AC Class	2P (240 Vac) List Price	4P (415 Vac) List Price
25	10 mA	16200	\$ 221
	30 mA	16201	147
40	30 mA	16204	154
	30 mA	16208	263
63	300 mA — Selective	23028	263
	30 mA	16212	309
80	300 mA — Selective	23032	309
	30 mA	23034	339
100	300 mA	23034	339
	300 mA — Selective	23035	339
		23059	543

**Note:** Does not provide overcurrent or short circuit protection.

### Accessories

Possible Combination	Cat. No.	List Price
----------------------	----------	------------

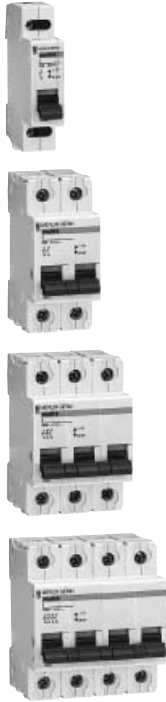


<b>Auxiliary switch (OFS)</b> – Required to install any other accessory	26923	\$ 40.00
---	-------	----------

**Auxiliary switch, Undervoltage release, Shunt trip, Terminal shield and Padlocking device** – See page 29, 30, 31

**Cable range** : pressure terminals are suitable for copper cables up to 35mm<sup>2</sup> stranded or 50mm<sup>2</sup> solid  
**Width** : 2P: 36mm; 4P: 72mm

**Additional information:**  
 ■ Catalog no. 0860CT9501R2/01



### IEC Rated I Current Switches

Rating (A)	1P (250 Vac) List Price	2P (440 Vac) List Price	3P (440 Vac) List Price	4P (440 Vac) List Price
20	15005 \$ 32.60	15006① \$ 69	15007① \$ 100	15008① \$ 132
32	15009 32.60	15010① 71	15011① 107	15012① 133
40	15024 35.70	15020 71	15023 107	15019 133
63	15013 38.90	15014 80	15015 112	15016 143
100	15090 53.00	15091 104	15092 155	15093 229
125	15057 68.00	15058 135	15059 202	15060 297

#### Accessories

Auxiliary Switches	Cat. No.	List Price
	15096	\$ 40

① 415 Vac

#### Width :

- 20 to 32 A — 1P and 2P : 18mm
- 20 to 32 A — 3P and 4P : 36mm
- 40 to 125 A — 18mm per pole (similar to C60)

**Cable range :** pressure terminals are suitable for cables up to 35mm<sup>2</sup>

- 20 and 32 A : 10mm<sup>2</sup>
- 63 and 100 A : 50mm<sup>2</sup>

#### Additional information:

- Catalog no. 0860CT9501R2/01



### IEC Rated CM Changeover Switch

		Cat. No.	List Price
2 positions	1 circuit – Double through switch	18070	\$ 33.60
	2 circuits – Two Double through switches	18071	58.00
	1 circuit – One normally open + one normally closed	18072	42.00
3 positions	1 circuit + one stop	18073	42.00
	2 circuits – one stop	18074	88.00

**Width :** 15102 (18mm), 12129 (36mm), 15103 (36mm), 15130 (36mm), 15131 (36mm)

**Voltage:** 250 Vac

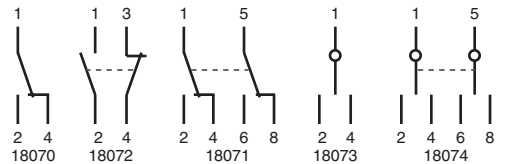
**Rating:** 20 A

**Lamp:** Neon type – ignition at 60 Vac

**Cable range:** pressure terminals are suitable for cables from 10mm<sup>2</sup> up to 2 x 2.5mm<sup>2</sup>

#### Additional information:

- Catalog no. 0860CT9501R2/01



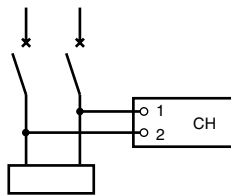
# Multi 9™ Miniature Circuit Breakers

## IEC Rated Counters



### IEC Rated CH Hours Counter

		Cat. No.	List Price
Hour counter	220 to 240 Vac 50 Hz	15440	\$ 148



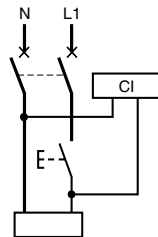
**Cable range:** pressure terminals are suitable for cables up to 2.5mm<sup>2</sup>  
**Maximum counting:** 99999.99 Hours  
**Width :** 36mm

**Additional information:**  
 ■ **Catalog no.** 0860CT9501R2/01



### IEC Rated CI Impulse Counter

		Cat. No.	List Price
Impulse counter	220 to 240 Vac 50/60 Hz	15443	\$ 302



**Cable range:** pressure terminals are suitable for cables up to 2.5mm<sup>2</sup>  
**Maximum impulsions:** 999 999  
**Width :** 36mm

**Additional information:**  
 ■ **Catalog no.** 0860CT9501R2/01

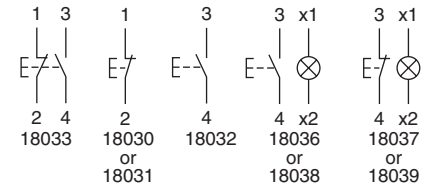


### IEC Rated Multi 9 BP Push Button

Type	Width in 9mm modules	Power	Color	BP	Circuit	Cat. No.	List Price
<b>Single BP</b>							
2			Grey		1 NC	18030	\$ 33.60
			Red		1 NC	18031	33.60
			Grey		1 NO	18032	33.60
			Grey		1 NO + 1 NC	18033	42.00
<b>Double BP</b>							
2			Green/Red		1 NO/1 NC	18034	42.00
			Green/Red		1 NO/1 NO	18035	42.00
<b>Single BP + Indicator Light</b>							
2		110–230 Vac	Green/Grey		1 NO	18036	\$ 42.00
			Red/Grey		1 NC	18037	42.00
		12–48 Vac/Vdc	Green/Grey		1 NO	18038	42.00
			Red/Grey		1 NC	18039	42.00

**Width :** 18mm  
**Voltage:** 250 Vac  
**Rating:** 20 A  
**Lamp:** LED technology  
**Cable range:** pressure terminals are suitable for 10mm<sup>2</sup> cables

**Additional information:**  
 ■ Catalog no. 0860CT9501R2/01



### IEC Rated Multi 9 V Indicator Lights

Type	Width in 9mm modules	Color	Cat. No. 110–230 Vac	List Price	Cat. No. 12–48 Vac/Vdc	List Price
<b>Single Indicator Light</b>						
2		Red	18320	\$ 33.60	18330	\$ 33.60
		Green	18321	38.90	18331	38.90
		White	18322	37.80	18332	33.60
		Blue	18323	37.80	18333	37.80
		Yellow	18324	33.60	18334	33.60
<b>Double Indicator Light</b>						
2		Green/Red	18325	\$ 37.80		
<b>Blinker</b>						
2		Red	18326	\$ 58.00		

**Width :** 18mm  
**Lamp:** LED technology  
 Maximum power of the LED: 0.3 w  
**Cable range:** pressure terminals are suitable for 10mm<sup>2</sup> cables

**Additional information:**  
 ■ Catalog no. 0860CT9501R2/01

# Enclosures for IEC Rated Miniature Circuit Breakers

## MINI PRAGMA™ DIN Type Enclosure


**Includes:**

- Plastic enclosure with a symmetrical DIN rail,
- Ground or neutral terminal block,
- Hinged transparent cover,
- Circuit identification labels,
- Rigid cover with markings to ease cable or through entry cutouts.

**Degree of protection:** IP40 as per IEC 529.

**Standard:** IEC 439.3

**Additional information:**

- Catalog no. 0860CT9501R2/01

	No. of C60 poles	No. of 9mm modules	Cat. No.	List Price
<b>Surface Mounting with Transparent Door (H x W x D)</b>				
201 x 112 x 94mm	4	8	13326	\$ 59
201 x 148 x 94mm	6	12	13327	66
201 x 184 x 94mm	8	16	13328	74
201 x 256 x 94mm	12	24	13329	88

**Accessories**

Sealing kit			13319	7.40
Ronis Key Lock			14180	22.10
Extra terminal block for ground or neutral—80 A—Eight holes: four 10mm <sup>2</sup> + four 16mm <sup>2</sup> – Mountable on the DIN rail using one pole space			13576	16.80
Extra blanking plate divisible per module of 9mm – (5) poles			13229	20.00



## PRAGMA™ F DIN Type Enclosure

**Includes :**

- A metallic back plate,
- A removable metallic chassis,
- A front plastic frame,
- Insulating front plates with circuit identification labels,
- Two insulating gland plastic plates,
- A ground/neutral terminal block - (14) 10 + (15) 16 + (1) 35mm<sup>2</sup>

**Degree of protection:** IP30 without door, IP41 with door as per IEC 529.

**Standard:** IEC 439.3

**Additional information:**

- Catalog no. 0860CT9501R2/01

	Dimensions (H x W x D)	No. of 18mm modules	Cat. No.	List Price
<b>Surface mounting without transparent door</b>				
1 Row	300 x 550 x 170mm	24	13811	\$ 448
2 Row	450 x 550 x 170mm	48	13812	566
3 Row	600 x 550 x 170mm	72	13813	639
4 Row	750 x 550 x 170mm	96	13814	809
5 Row	900 x 550 x 170mm	120	13815	911
6 Row	1050 x 550 x 170mm	144	13816	1080
<b>Transparent Door</b>				
1 Row		24	13851	243
2 Row		48	13852	287
3 Row		72	13853	345
4 Row		96	13854	397
5 Row		120	13855	478
6 Row		144	13856	537
<b>Accessories</b>				
Ronis Lock			13877	22.10
Compact NS Installation Kit (as a main) - two rows are required			13863	103.00
Extra blanking plate (24 poles)			13430	20.00



## KAEDRA Weatherproof DIN Type Enclosures

**Includes :**

- Non-metallic (styrene) enclosure with a symmetrical 35mm DIN rail,
- Ground or neutral terminal block,
- Hinged transparent cover,
- Ergonomic design for simplified cabling

**Degree of protection:** IP65 as per IEC 529.

**Impact strength:** IK09

**Insulating Material:** Class 2

**Standard:** IEC 670 and IEC 439.3

**Additional information:**

- **Catalog no.** 0860CT9501R2/01



	Dimensions (H x W x D)	No. of 18mm modules	Cat. No.	List Price
<b>KAEDRA Weatherproof Mini Enclosures<sup>①</sup></b>				
1 row 3 modules	3.15 x 5.9 x 3.86 in (80 x 150 x 98mm)	3	13956	\$ 78
1 row 4 modules	4.84 x 7.87 x 4.41 in (123 x 200 x 112mm)	4	13957	93
1 row 6 modules	6.26 x 7.87 x 4.41 in (159 x 200 x 112mm)	6	13958	103
1 row 8 modules	7.68 x 7.87 x 4.41 in (195 x 200 x 112mm)	8	13959	133
1 row 12 modules	10.51 x 7.87 x 4.41 in (267 x 200 x 112mm)	12	13960	173
<b>KAEDRA Weatherproof Enclosures<sup>②</sup></b>				
1 row of 12 modules	13.39 x 11.02 x 6.23 in (340 x 280 x 160mm)	12	13962	\$ 173
2 rows of 12 modules	13.39 x 18.11 x 6.23 in (340 x 460 x 160mm)	24	13964	252
3 rows of 12 modules	13.39 x 24.02 x 6.23 in (340 x 610 x 160mm)	36	13966	336
1 row of 18 modules	13.39 x 11.02 x 6.23 in (340 x 280 x 160mm)	18	13963	221
2 rows of 18 modules	13.39 x 18.11 x 6.23 in (340 x 460 x 160mm)	36	13965	336
3 rows of 18 modules	13.39 x 24.02 x 6.23 in (340 x 610 x 160mm)	54	13967	431
4 rows of 18 modules	13.39 x 33.15 x 6.23 in (340 x 842 x 160mm)	72	13968	525

**Accessories**

	Association kit, 2 sleeves + 4 nuts + 4 washers	13934	31.50
	Blanking plate (set of 10 x 5 modules)	13940	20.00
	Sealing kit ( 2 screws, 5 fasteners)	13947	14.70
	Keylock (Eurolock no. 850)	13948	22.10
	Plain front plate, 12 modules	13944	21.00
	Plain front plate, 18 modules	13945	21.00
	Cable gland, PG11 (18.6mm/0.732 in)	83992	4.20
	Cable gland, PG13.5	83993	5.00
	Cable gland, PG16 (22.5mm/0.886 in)	83994	7.60
	Cable gland, PG21 (28.3mm/1.114 in)	83995	9.10
	Cable gland, PG29 (37mm/1.457 in)	83996	14.20
	Cable gland, PG36 (47mm/1.85 in)	83997	18.90

<sup>①</sup> **Accessories include:** Terminal blocks and terminal block support; 1 marking kit, Class II plugs.

<sup>②</sup> **Accessories include:** Terminal blocks and terminal block support; 1 marking kit per row; 1 wiring strap per row; Class II plugs, and blanking plates (5 x 18mm modules).



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**Compact<sup>®</sup> Circuit Breakers**



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# UL 489 Listed Compact NS and C Circuit Breakers

## Selection Table




		NSE100		NSF150-250	
					
Type of Circuit Breaker		N		N H	
Number of poles		3		3, 4, 4 with Oversized Neutral	
Rated current (A)		15–100 <sup>③</sup>		15–250	
Rated voltage (Vac)		480		600Y/347 600Y/347	
Interrupting Rating as per UL 489 (kA RMS)	AC 50/60 Hz	240 V	65	65	100
		480 V	18	35	65
		600Y/347 V		18	25
		600 V		–	–
Ultimate breaking capacity (Icu) as per IEC 947-2 (kA RMS)	AC 50/60 Hz	220/240 V	50	85	100
		380/415 V	30	36	70
		440 V	15	35	65
		500 V	–	30	50
		525 V	–	22	35
		660/690 V	–	8	10
	DC	125 V	10 (1-Pole)	50 (1-Pole)	85 (1-Pole)
		250 V	10 (2-Pole)	50 (1-Pole)	85 (1-Pole)
	500 V	–	50 (2-Pole)	85 (2-Pole)	
Service breaking capacity (Ics) as per IEC 947-2 (kA RMS)	(%Icu)	50%		100%	
Trip Units					
Functions	Thermal-magnetic	Yes		Yes	
	Electronic	No		No	
	Instantaneous only	Yes		Yes	
Type of Switch		A – Automatic		A – Automatic	
Suitable for use on a circuit capable of delivering no more than (kA RMS) <sup>②</sup>	240 V	65		100	
	480 V	18		65	
	600Y/347 V	–		25	
	600 V	–		–	
Magnetic trip point (A)	1100		2000		
Short-time withstand current (Icw)	–		–		
Dimensions and Weights					
Dimensions H x W x D (in./mm)	3P	4.72 x 3.54 x 3.14/ 120 x 90 x 80		7.44 x 4.13 x 3.38/ 189 x 105 x 86	
	4P			7.44 x 5.5 x 3.38 189 x 139 x 86	
Weight (lb/kg)	3P	2.21/1.00		NSF150: 3.53/1.60 NSF250: 3.75/1.70	
	4P			NSF 150: 4.6/2.1 NSF250: 5.1/2.3	

① 800 A in CK1000L and HL drawout version; 1000 A in CK1200 drawout version.

② When protected by any protective device.

③ 15 A–60 A marked Line and Load; NOT suitable for reverse feeding.

④ 100% rated.

NSJ400-600			CK400-1200				CM1250-2500 <sup>①</sup>	
								
N	H	L	N	H	HL	L	H	
3, 4, 4 with Oversized Neutral			3, 4	3, 4	3	3	3	
150 <sup>②</sup> , 250 <sup>②</sup> , 400 <sup>②</sup> , 600		400, 600	400, 800, 1200 <sup>①</sup>		1000 <sup>①</sup>	1000 <sup>①</sup>	1250, 1600, 2000, 2500	
600			600			480	600	
65	100	150	65	100	150	150	125	
35	65	100	50	65	125	125	85	
–	–	–	–	–	–	–	–	
18	25	25	35	42	65	–	50	
85	100	150	85	100	150	150	125	
45	70	150	50	70	150	150	85	
42	65	130	42	65	100	100	85	
30	50	70	40	50	100	100	50	
22	35	50	–	–	–	–	50	
10	20	35	25	40	60	60	50	
–	85 (1-Pole)							
–	85 (1-Pole)							
–	85 (2-Pole)							
100%			50%				50%	
No			No				No	
Yes			Yes				Yes	
Yes			Yes				No	
<b>A — Automatic</b>			<b>NA — Non automatic</b>				<b>NA — Non automatic</b>	
150								
100								
25								
6000			Non automatic				Non automatic	
–			15 kA RMS — 1 sec.				32 kA RMS — 3 sec.	
13.38 x 5.51 x 4.33/ 340 x 140 x 110			15.75 x 8.27 x 4.33/ 400 x 210 x 110		15.75 x 8.27 x 7.87/ 400 x 210 x 200		16.93 x 16.46 x 10.39/ 430 x 418 x 264	
13.38 x 7.5 x 4.33 340 x 191 x 110								
13.25/6.0			31/14.0		55/25		CM1250–1600: 90/40 CM2000: 118/54 CM2500: 195/88	
17.2/7.8								

<sup>①</sup> In obsolescence. For new applications, use Powerpact R-frame. See Digest 173.

# Compact® Circuit Breakers

## Catalog Number Construction

### Compact NS Circuit Breakers

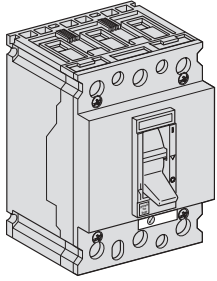
1	2	3	4	5	6	7	8	9	10	11	12	13
_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _
<b>1 Type</b>	<b>2 Interrupting Ratings</b>		<b>3 Termination</b>		<b>4 Standard</b>		<b>5 Poles</b>		<b>6 Voltage</b>		<b>7 Amperage</b>	
UL Line: NE: NSE100 NF: NSF150/250 NJ: NSJ400/600 IEC Line NF: NS100/160/250 NJ: NS400/630	N: Standard interrupting H: High interrupting L: Very high interrupting		F: Bus bar L: Lugs (both ends) S: Rear connections N: Plug-in D: Drawout M: Lugs (line-side only) P: Lugs (load-side only)		None: UL-CSA E: IEC		2: 3-pole 2-trip 3: 3-pole 3-trip 4: 4-pole 3-trip or 4-pole 4-trip 5: 4-pole Oversized neutral rating		4: 480 Vac 6: 600 or 690 Vac 7: 750 Vdc 1: 1000 Vac		015: 15 A to 630: 630 A	
<b>8 Trip Function</b>	<b>9 Accessories</b>		<b>10 Vigi Module</b>		<b>11 Operators</b>		<b>12 Term. Options</b>		<b>13 Ammeters</b>			
None: Thermal-magnetic M_: Magnetic only S_: Switch D_: DC circuit breaker E_: Electronic F_: Frame only N_: Protected neutral	A_: Aux. switches B_: Alarm switches S_: Shunt trip U_: Undervoltage trip		V_: Vigi		M_: Motor operator R_: Rotary handle		T_: Special termination H_: Drawout options		P_: Ammeter			

### Compact CK Circuit Breakers

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _	_ _
<b>1 Type</b>	<b>2 Interrupting Ratings</b>		<b>3 Standard or 100% Rating</b>		<b>4 Termination</b>		<b>5 Standard</b>		<b>6 Poles</b>		<b>7 Voltage</b>		<b>8 Amperage</b>	
UL Line: CK: CK400/1200 IEC Line: CK: C801/1251	A: Standard interrupting H: High interrupting I: Very high interrupting		X: Standard rating E: 100% rating None: Switch		F: Bus bar or rear connection L: Lugs (both sides) M: Lugs (line side) P: Lugs (load side) D: Drawout		None: UL-CSA E: IEC		3: 3-Pole 3-Trip 4: 4-Pole 3-Trip or 4-Pole 4-Trip		4: 480 Vac 6: 600 or 690 Vac 7: 750 Vdc 1: 1000 Vdc		UL Listed: 20: 200 A to 12: 1200 A IEC Rated: 08: 800 A to 12: 1250 A	
<b>11 Accessories</b>		<b>12 Disconnecting Blocks</b>		<b>13 Special Termination</b>		<b>14 Other Accessories</b>		<b>10 Trip Function</b>						
A_: Aux. switches AT: Overcurrent switches S_: Shunt trip U_: Undervoltage trip		D		FRL: Flat rear connection ERL: Edgewise rear connection E: Edgewise rear connection (drawout) F: Flat rear connection (drawout)		M_: Motor operator PL: Padlocking device _K: Kirk® key lock BT: Boot		UL Listed: 4: 400 A 8: 800 A 0: 1000 A 1: 1200 A 5: 1250 A (IEC) LI: L-I protection LS: L-I-S protection L2-L8: L-I-S protection plus other options						
<b>15 Drawout Options</b>														
DO: Standard drawout DU: Universal drawout														

**Compact CM Circuit Breakers**

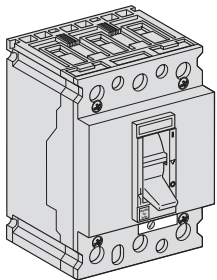
1	2	3	4	5	6	7	8	9	10	11	12
<p><b>1 Type</b>                  UL Line:                  CM: CM1250/2500                  IEC Line:                  CM: CM1250/3200</p>	<p><b>2 Interrupting Ratings</b>                  None: High interrupting                  A: Switch</p>	<p><b>3 Standard or 100% Rating</b>                  X: Standard rating                  E: 100% rating</p>	<p><b>4 Termination</b>                  F: Bus bar</p>	<p><b>5 Standard</b>                  None: UL-CSA                  E: IEC</p>	<p><b>6 Poles</b>                  3: 3-pole 3-trip                  4: 4-pole 3-trip or                  4-pole 4-trip</p>	<p><b>7 Voltage</b>                  6: 600 or 690 Vac</p>	<p><b>8 Amperage</b>                  125: 1250 A                  to                  320: 3200 A</p>	<p><b>9 Trip Function</b>                  LI: L-I protection                  LS: L-S-I protection                  L2: L-S-I-G protection</p>	<p><b>10 Accessories</b>                  A_: Aux. switches                  S_: Shunt trip                  U_: Undervoltage trip</p>	<p><b>11 Special Termination</b>                  S_: Rear connections</p>	<p><b>12 Other Accessories</b>                  M_: Motor operator                  PL: Padlocking device                  _K: Kirk® key lock                  BT: Boot</p>

**UL 489 Listed Compact NSE Circuit Breakers****Compact NSE Circuit Breaker with Thermal-Magnetic Trip Unit**

Rating (A)	Cable Connection	List Price
<b>NSE100N—480 Vac Max.—18 kA at 480 Vac</b>		
15	NENL34015	\$ 573
20	NENL34020	573
30	NENL34030	573
40	NENL34040	573
50	NENL34050	573
60	NENL34060	573
70	NENL34070	678
80	NENL34080	678
90	NENL34090	678
100	NENL34100	678

**Compact NSE Molded Case Switch****NSE100A—Automatic 480 Vac**

100	NEHL34000S10	543
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**Compact NSE Circuit Breaker for Motor Circuit Protection****NSE75HC—600Y/347 Vac**

3	NEHL36003M01	726
7	NEHL36007M02	726
15	NEHL36015M03	726
30	NEHL36030M04	726
50	NEHL36050M05	920
75	NEHL36075M06	1095

**Ratings and interrupting ratings:** page 44

**Cable range:** Pressure terminals are suitable for copper and aluminum cables:

- #14 AWG—#1/0 AWG Cu or
- #8 AWG—#1/0 AWG Al

**Additional information:**

■ **Catalog no.** 0621CT9701

■ **Data Sheet no.** 0615HO9701 (NSE100), 0615HO9801 (NSE75)

■ **D-Fax no.** 2427 (NSE100), 2834 (NSE75)


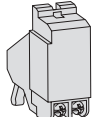

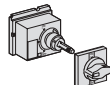
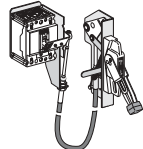

**Accessories:** See page 49



**Accessories**

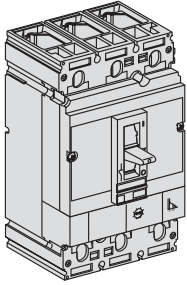
- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

N E N L 3 4 0 1 5 A A S A  
Options

Electrical Accessories	Auxiliary Switch (SPDT Type)	Voltage (V)	Option No.	Catalog No.	List Price			
	Standard	Standard auxiliary switch (OF)	AA	29450	\$ 198			
		Standard alarm switch (SD)	BC	29450	198			
	Low level	Low level auxiliary switch (LOF)	AE	29452	248			
		Low level alarm switch (SD)	BH	29452	248			
	<b>Shunt Trip and Undervoltage Trip</b>							
	MX (Shunt trip)	AC 50/60 Hz	42	SW	28069	478		
			48	SL	28070	478		
			110/130	SA	28071	478		
			208	SB	28067	478		
			220/240	SC	28072	478		
			277	SD	28068	478		
			380/415	SF	28073	478		
		DC	24	SO	28075	478		
			48	SP	28076	478		
			110/125	SR	28077	478		
			250	SS	28078	478		
			MN (Undervoltage trip)	AC 50/60 Hz	48	UL	28080	478
					110/130	UA	28081	478
					208	UB	28089	478
	220/240	UC			28082	478		
	277	UD			28090	478		
	380/415	UF			28083	478		
	440/480	UH			28084	478		
	DC	24		UO	28085	478		
		48		UP	28086	478		
		110/125		UR	28087	478		
		250		US	28088	478		
		<b>Operating Handles</b>						
				<b>Directly Mounted</b>				
				Black handle		RD12	28050	138
	Red handle on yellow bezel			RD22	28051	143		
		MCC conversion accessory			28054	51		
	<b>Door Mounted</b>							
	Black handle			28052	234			
	Red handle on yellow bezel			28053	239			
	DIN rotary handle <sup>①</sup>			28059	216			
<b>Indication Auxiliary Switch</b>								
	One early break switch			28056	80			
<b>Cable Operating Handle with A1 Handle</b>								
	Cable length	36/914		9422CGJ30	127			
	(in./mm)	60/1524		9422CGJ50	135			
		120/3048		9422CGJ10	155			
	A1 painted handle (order separately)			9422A1	66			
				<b>CP1 Discount</b>				
<b>Connection Accessories</b>								
	<b>Long Terminal Covers (1 Pair)</b>							
		3P		28034	72			
<b>Miscellaneous</b>								
	<b>Base Plate for Adaptation on DIN Rail (35 x 15mm DIN rail)</b>			28040	77			
	<b>Removable Locking Device for 3 Padlocks</b>			29370	33.60			
	<b>100 Identification Labels</b>			29314	79			
	<b>DIN Front Accessory Cover</b>			28039	26.30			

<sup>①</sup> Will need the DIN Front Accessory Cover (Catalog No. 28039—listed above in the Miscellaneous section) in order to complete the assembly.

Compact® NSF Circuit Breakers  
**UL 489 Listed Compact NSF Circuit Breakers**



**Compact NSF Circuit Breaker with Thermal-Magnetic Trip Unit**

Rating (A)	Bus Bar Connection		Cable Connection	
	3-Pole	List Price	3-Pole	List Price
<b>NSF150N—3-Pole—600Y/347 Vac Max—35 kA at 480 Vac</b>				
15	NFNF36015	\$ 945	NFNL36015	\$ 995
20	NFNF36020	945	NFNL36020	995
30	NFNF36030	945	NFNL36030	995
40	NFNF36040	945	NFNL36040	995
50	NFNF36050	945	NFNL36050	995
60	NFNF36060	945	NFNL36060	995
70	NFNF36070	1079	NFNL36070	1195
80	NFNF36080	1079	NFNL36080	1195
90	NFNF36090	1079	NFNL36090	1195
100	NFNF36100	1079	NFNL36100	1195
125	NFNF36125	1758	NFNL36125	1907
150	NFNF36150	1758	NFNL36150	1907

<b>NSF150N—4-Pole—600Y/347 Vac Max—35 kA at 480 Vac<sup>①</sup></b>								
Rating (A)	4P3T	List Price	4P4T	List Price	4P3T	List Price	4P4T	List Price
100	NFNF46100	1403	NFNF46100N10	1478	NFNL46100	1560	NFNL46100N10	1635
125	NFNF46125	2285	NFNF46125N12	2408	NFNL46125	2442	NFNL46125N12	2565
150	NFNF46150	2285	NFNF46150N15	2408	NFNL46150	2442	NFNL46150N15	2565

<b>NSF150N—4-Pole with Oversized Neutral Protection—600Y/347 Vac Max—35 kA at 480 Vac<sup>①</sup></b>				
Phase	N		4P4T Oversized Neutral	4P4T Oversized Neutral
100	150		NFNF56100N15	1927
125	250		NFNF56125N25	3319
150	250		NFNF56150N25	3319

<b>NSF250N—3-Pole—600Y/347 Vac Max—35 kA at 480 Vac</b>				
Rating (A)	3-Pole	List Price	3-Pole	List Price
175	NFNF36175	1758	NFNL36175	1907
200	NFNF36200	1758	NFNL36200	1907
225	NFNF36225	1758	NFNL36225	1907
250	NFNF36250	3028	NFNL36250	3177

<b>NSF250N—4-Pole—600Y/347 Vac Max—35 kA at 480 Vac<sup>①</sup></b>								
	4P3T	List Price	4P4T	List Price	4P3T	List Price	4P4T	List Price
175	NFNF46175	2285	NFNF46175N17	2408	NFNL46175	2442	NFNL46175N17	2565
200	NFNF46200	2285	NFNF46200N20	2408	NFNL46200	2442	NFNL46200N20	2565
225	NFNF46225	2285	NFNF46225N22	2408	NFNL46225	2442	NFNL46225N22	2565
250	NFNF46250	3936	NFNF46250N25	4149	NFNL46250	4093	NFNL46250N25	4306

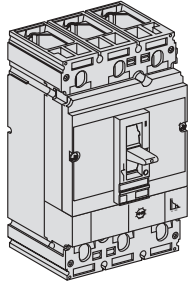
<b>NSF150H—3-Pole—600Y/347 Vac Max—65 kA at 480 Vac</b>				
Rating (A)	3-Pole	List Price	3-Pole	List Price
15	NFHF36015	1277	NFHL36015	1327
20	NFHF36020	1277	NFHL36020	1327
30	NFHF36030	1277	NFHL36030	1327
40	NFHF36040	1277	NFHL36040	1327
50	NFHF36050	1277	NFHL36050	1327
60	NFHF36060	1277	NFHL36060	1327
70	NFHF36070	1452	NFHL36070	1568
80	NFHF36080	1452	NFHL36080	1568
90	NFHF36090	1452	NFHL36090	1568
100	NFHF36100	1452	NFHL36100	1568
125	NFHF36125	2387	NFHL36125	2503
150	NFHF36150	2387	NFHL36150	2503

<sup>①</sup> 4-pole available in plug-in, drawout and rear connected configurations only. Availability of 4-pole busbar and lug configurations to be announced.

*Continued on next page*

**Ratings and interrupting ratings:** page 44  
**Other termination:** page 52  
**Accessories:** See page 54

**Additional information:**  
 ■ **Catalog no.** 0615CT9901  
 ■ **Data Sheet no.** 0615HO9703  
 ■ **D-Fax no.** 2429



### Compact NSF Circuit Breaker with Thermal-Magnetic Trip Unit—Continued

Rating (A)	Bus Bar Connection		Cable Connection		
		List Price		List Price	
<b>NSF150H—4-Pole—600Y/347 Vac Max—65 kA at 480 Vac<sup>①</sup></b>					
	<b>4P3T</b>		<b>4P4T</b>		
100	NFHF46100	\$ 1888	NFHF46100N10	\$ 1990	
			NFHL46100	\$ 2045	
			NFHL46100N10	\$ 2147	
125	NFHF46125	3103	NFHF46125N12	3270	
			NFHL46125	3260	
			NFHL46125N12	3417	
150	NFHF46150	3103	NFHF46150N15	3270	
			NFHL46150	3260	
			NFHL46150N15	3417	
<b>NSF150H—4-Pole with Oversized Neutral Protection—600Y/347 Vac Max—65 kA at 480 Vac</b>					
<b>Phase</b>	<b>N</b>		<b>4P4T Oversized Neutral</b>		
				<b>4P4T Oversized Neutral</b>	
100	150		NFHF56100N15	2779	
				NFHL56100N15	2936
125	250		NFHF56125N25	4748	
				NFHL56125N25	4905
150	250		NFHF56150N25	4748	
				NFHL56150N25	4905
<b>NSF250H—3-Pole—600Y/347 Vac Max—65 kA at 480 Vac</b>					
<b>Rating (A)</b>	<b>3-Pole</b>	<b>List Price</b>	<b>3-Pole</b>	<b>List Price</b>	
175	NFHF36175	2387	NFHL36175	2503	
200	NFHF36200	2387	NFHL36200	2503	
225	NFHF36225	2387	NFHL36225	2503	
250	NFHF36250	4077	NFHL36250	4193	
<b>NSF250H—4-Pole—600Y/347 Vac Max—65 kA at 480 Vac<sup>①</sup></b>					
	<b>4P3T</b>		<b>4P4T</b>		
175	NFHF46175	3103	NFHF46175N17	3270	
			NFHL46175	3260	
			NFHL46175N17	3427	
200	NFHF46200	3103	NFHF46200N20	3270	
			NFHL46200	3260	
			NFHL46200N20	3427	
225	NFHF46225	3103	NFHF46225N22	3270	
			NFHL46225	3260	
			NFHL46225N22	3427	
250	NFHF46250	5300	NFHF46250N25	5586	
			NFHL46250	5457	
			NFHL46250N25	5743	

### Compact NSF Molded Case Switch

#### 3-Pole Molded Case Switch—Automatic—600Y/347 Vac Max.

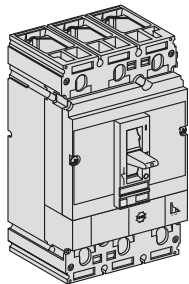
Rating (A)	3-Pole	List Price	3-Pole	List Price
60	NFHF36000S06	1275	NFHL36000S06	1365
150	NFHF36000S15	1275	NFHL36000S15	1365
225	NFHF36000S22	1525	NFHL36000S22	1674
250	NFHF36000S25	1525	NFHL36000S25	1674

#### 4-Pole Molded Case Switch—Automatic—600Y/347 Vac Max<sup>①</sup>

	4P	List Price	4P	List Price
150	NFHF46000S15	1746	NFHL46000S15	1903
225	NFHF46000S22	1746	NFHL46000S22	1903
250	NFHF46000S25	2088	NFHL46000S25	2245

#### 4-Pole Molded Case Switch with Oversized Neutral—Automatic—600Y/347 Vac Max<sup>①</sup>

Phase	N	4P Oversized Neutral	4P Oversized Neutral	
100	150	NFHF56000S10	1989	
			NFHL56000S10	2146
150	250	NFHF56000S15	1989	
			NFHL56000S15	2146



### Compact NSF Circuit Breaker for Motor Circuit Protection

NSF150HC—600Y/347 Vac Max		Bus Bar Connection	Cable Connection	
150	Magnetic adjustable from 6 to 12 handle rating	NFHF36150M29	1758	
			NFHL36150M29	1874
NSF250HC—600Y/347 Vac Max				
200	Magnetic adjustable from 5 to 10 handle rating	NFHF36200M30	1758	
			NFHL36200M30	1874
250	Magnetic adjustable from 5 to 10 handle rating	NFHF36250M32	1758	
			NFHL36250M32	1874

<sup>①</sup> 4-pole available in plug-in, drawout and rear connected configurations only. Availability of 4-pole busbar and lug configurations to be announced.

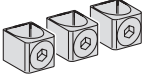
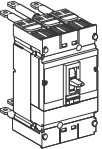
Ratings and interrupting ratings: page 44  
 Other termination: page 52  
 Accessories: See page 54

Additional information:  
 ■ Catalog no. 0615CT9901  
 ■ Data Sheet no. 0615HO9703  
 ■ D-Fax no. 2429

## Installation and Connection

- For factory-installed connection accessories complete the circuit breaker catalog number by inserting the **termination numbers** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

N | F | N | L | 3 | 6 | 0 | 1 | 5  
 Termination No.

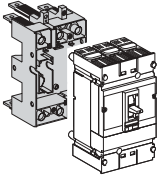
				Term. No.	Catalog No.	List Price
<b>Bus Bar Connection</b>						
<b>3-Pole Kit for Compact NSF Circuit Breaker (Terminal Cover Included)</b>				F	37405	\$ 72
<b>4-Pole Kit for Compact NSF Circuit Breaker (Terminal Cover Included)①</b>				F	M37406	100
<b>Cable Connection</b>						
<b>15–60 A Lugs (Terminal Cover Included)</b>						
	Field-installable	One side	Following wire sizes only: #14–#3/0 AWG solid or stranded Cu (1) #12–#4/0 AWG stranded Al (1)	3P	29280	25.20
	Factory-installed	Both sides		3P L		50
				3P M		25.20
				3P P		25.20
<b>70–175 A Lugs (Terminal Cover Included)①</b>						
	Field-installable	One side	Following wire sizes only: #4–#3/0 AWG solid or stranded Cu (1) #3–#3/0 AWG stranded Al (1)	3P	37486	58
				4P	M37485	79
Factory-installed	Both sides			3P L		116
				4P L		157
	Line side only			3P M		58
				4P M		79
	Load side only			3P P		58
				4P P		79
<b>200–250 A Lugs (Terminal Cover Included)①</b>						
Field-installable	One side		Following wire sizes only: 250–350 kcmil solid or stranded Cu (1) 250–350 kcmil stranded Al (1)	3P	37488	58
				4P	M37491	79
Factory-installed	Both sides			3P L		116
				4P L		157
	Line side only			3P M		58
				4P M		79
	Load side only			3P P		58
				4P P		79
<b>Voltage Takeoffs for 70–250 A Lugs (Set of Two)</b>					29348	18.90
<b>Rear Connection = Bus Bar Connection + Rear Connection Kit</b>						
	<b>Mixed Rear Connection Kit</b>			3P S	29239	254
				4P S	29240	343
	Consisting of:	Kit 3P	Short rear connections (Set of two)		29235	56 ea.
			Long rear connections (Set of two)		29236	70 ea.
			Short terminal covers		29321	72
		Kit 4P	Short rear connections (Set of two)		29235	56 ea.
			Long rear connections (Set of two)		29236	70 ea.
			Short terminal covers		29322	79

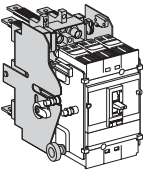
① 4-pole available in plug-in, drawout and rear connected configurations only. Availability of 4-pole busbar and lug configurations to be announced.

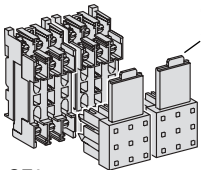
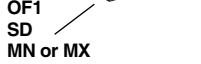
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**Installation and Connection—Continued**

- For factory-installed connection accessories complete the circuit breaker catalog number by inserting the **termination numbers** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

		Term. No.	Catalog No.	List Price
<b>Plug-In Mounting = Bus Bar Connection + Plug-In Kit</b>				
	<b>Kit for Compact NSF Circuit Breaker (Stationary and Moving Part)</b>		3P N	29293 \$ 425
			4P N	M29294 567
Consisting of:		<b>Stationary Part</b>		
		Plug-in base	3P	29278 232
			4P	M29279 336
		<b>Moving Part</b>		
			3P HJ00	193
			4P HJ00	234
		Short terminal covers	3P	29321 72
			4P	29322 79
		Power connections	3P	29268 (3) 31.50 ea.
			4P	29268 (4) 31.50 ea.

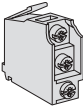
		Term. No.	Catalog No.	List Price
<b>Drawout Mounting = Bus Bar Connection + Drawout Kit</b>				
	<b>Kit for Compact NSF Circuit Breaker (Stationary and Moving Part)</b>		3P D	29303 946
			4P D	M29304 1277
Consisting of:		<b>Stationary Part</b>		
		Plug-in base	3P	29278 232
			4P	M29279 313
		Fixed part of chassis		
				29282 391
		<b>Moving Part</b>		
			3P HJ00	323
			4P HJ00	360
		Moving part of chassis		
				29283 130
		Short terminal covers	3P	29321 72
			4P	29322 79
		Safety Trip Interlock		
				29270 26.30
		Power connections	3P	29268 (3) 31.50 ea.
			4P	29268 (4) 31.50 ea.

<b>Plug-in and Drawout Accessories</b>				
	<b>OF2 Secondary Disconnecting Blocks</b>			
		Fixed part	9-wire connector	29273 63
		Moving part	9-wire connector	29274 39.90
			Support for 2 moving connectors	29275 22.10
	<b>Shutters</b>		Two shutters for plug-in base	29271 31.50
	<b>Chassis Accessories</b>			
		Extended escutcheon for toggle		29284 51
		Locking device (key lock is not included)		29286 109
		Two position indicating switches (connected/disconnected)		29287 138

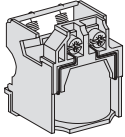
**Accessories**

- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

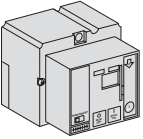
N<sub>1</sub>F<sub>1</sub>N<sub>1</sub>L<sub>1</sub>3<sub>1</sub>6<sub>1</sub>0<sub>1</sub>1<sub>1</sub>5<sub>1</sub>A<sub>1</sub>B<sub>1</sub>S<sub>1</sub>A<sub>1</sub>M<sub>1</sub>A<sub>1</sub>R<sub>1</sub>D<sub>1</sub>1<sub>1</sub>2<sub>1</sub>  
Options

Electrical Accessories	Auxiliary Switch (SPDT Type)		Voltage (V)	Option No.	Catalog No.	List Price		
	Standard			One auxiliary switch (OF)	AA	29450	\$ 198	
				Two auxiliary switches (OF)	AB	29450 (2)	198 ea.	
				Alarm switch (SD)	BC <sup>①</sup>	29450	198	
				Overcurrent trip switch (SDE)	BD <sup>①</sup>		226	
				Consisting of:	OF switch	29450	198	
				SDE adapter <sup>②</sup>	29451	27.30		
	Low level				One auxiliary switch (OF)	AE	29452	248
					Two auxiliary switches (OF)	AF	29452 (2)	248 ea.
					Alarm switch (SD)	BH <sup>③</sup>	29452	248
					Overcurrent trip switch (SDE)	BJ <sup>③</sup>		275
					Consisting of:	OF switch	29452	248
					SDE adapter <sup>②</sup>	29451	27.30	

**Shunt Trip and Undervoltage Trip**

	MX (Shunt trip)	AC 50/60 Hz	24	SK	29384	478	
			48	SL	29385	478	
			110/130	SA	29386	478	
			208/277	SD	29387	478	
			380/480	SH	29388	478	
			525/600	SJ	29389	478	
			DC	12	SN	29382	478
				24	SO	29390	478
				30	SU	29391	478
	48	SP		29392	478		
	60	SV		29383	478		
	125	SR		29393	478		
	MN (Undervoltage trip)	AC 50/60 Hz	24	UK	29404	478	
			48	UL	29405	478	
			110/130	UA	29406	478	
			208/277	UD	29407	478	
			380/480	UH	29408	478	
			525/600	UJ	29409	478	
DC		12	UN	29402	478		
		24	UO	29410	478		
		30	UU	29411	478		
		48	UP	29412	478		
		60	UV	29403	478		
		125	UR	29413	478		
		250	US	29414	478		

**Motor Operator with SDE Adapter**

	MT150 for NSF150	AC 50/60 Hz	48/60	ML	29440	774	
			110/130	MA	29433	774	
			208/277	MD	29434	774	
			380/480	MH	29435	774	
			DC	24/30	MO	29436	774
				48/60	MP	29437	774
				110/130	MR	29438	774
				250	MS	29439	774
				MT250 for NSF250	AC 50/60 Hz	48/60	ML
	110/130	MA	31540			2082	
	208/277	MD	31541			2082	
	380/480	MH	31542			2082	
	DC	24/30	MO			31543	2082
		48/60	MP			31544	2082
		110/130	MR	31545	2082		
		250	MS	31546	2082		
			Locking device with Ronis key lock	29449	156		

① BE = BC + BD  
 ② SDE adapter provided with motor operator  
 ③ BK = BH + BJ


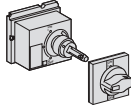
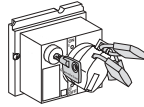
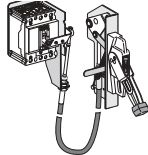
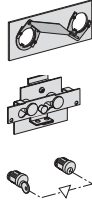


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# Compact® NSF Circuit Breakers

## Accessories—Continued

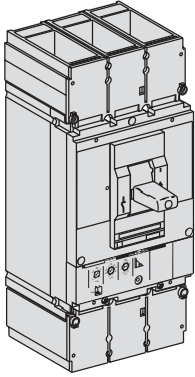
- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

N, F, N, L, 3, 6, 0, 1, 5, A, B, S, A, M, A  
Options

		Option No.	Catalog No.	List Price	
<b>Operating Handles</b>	<b>Directly Mounted</b>				
		Standard black handle	RD12	29337	\$ 150
		Red handle on yellow bezel	RD22	29339	156
		MCC conversion accessory		29341	63
	<b>Door Mounted</b>				
		Standard black handle	RE12	29338	255
		Red handle on yellow bezel	RE22	29340	266
		Telescopic handle for drawout mounting	RT12	29343	328
	<b>Accessories</b>				
		Key lock adapter		29344	38.90
		Key locks <sup>①</sup>	Ronis 1351.500	41940	122
			Profalux KS5 B24 D4Z	42888	122
Indication auxiliary switch		One early-break switch		29345	80
	Two early-make switches		29346	119	
<b>Cable Operating Handle with A1 Handle</b>					
	Cable length (in./mm)	36/ 914	9422CSF30	134	
		60/1524	9422CSF50	142	
		120/3048	9422CSF10	162	
	A1 painted handle (order separately)		9422A1	66	
			<b>CP1 Discount</b>		
<b>Locks, Interlocking</b>	<b>Handle Padlocking Device</b>				
		Removable (lock OFF or ON)	29370	33.60	
		Fixed (lock OFF or ON)	29371	51	
		Fixed (lock OFF only)	NFPAF	81	
	<b>Interlocking (Not UL Listed)</b>				
		Mechanical for circuit breakers with rotary operating handles		29369	329
		Mechanical for circuit breakers with toggles		29354	329
		Two locks (keyed alike)	Ronis 1351.500	41950	122
	Profalux KS5 B24 D4Z		42878	122	
	<b>Installation Accessories</b>	<b>Front Panel Escutcheons</b>			
		Toggle	29315	31.50	
		Rotary operating handle, motor operator or extended escutcheon	29317	42	
<b>Phase Barriers</b>		Set of 6	29329	34.70	
<b>Handle Rubber Boot</b>			29319	90	
					
<b>Sealing Accessories</b>			29375	29.40	
<b>Spare Parts</b>	<b>10 Toggle Extensions</b>		29313	93	
	<b>100 Identification Labels</b>		29314	79	
	<b>Voltage Takeoffs for the 70–250 A Aluminum Lug (Set of 2)</b>		29348	18.90	

<sup>①</sup> Will need the key lock adapter above (Catalog No. 29344) for both Ronis and Profalux key lock installation.

## UL 489 Listed Compact NSJ Circuit Breakers



## Compact NSJ Circuit Breaker with STR23SP Electronic Trip Unit

Rating (A)	Bus Bar Connection	List Price	Cable Connection	List Price
<b>NSJ400N—3-Pole—35 kA at 480 Vac</b>				
150 <sup>①</sup>	NJNF36150E20	\$ 3199	NJNL36150E20	\$ 3389
250 <sup>①</sup>	NJNF36250E20	3199	NJNL36250E20	3389
400 <sup>①</sup>	NJNF36400E20	3199	NJNL36400E20	3389
<b>NSJ400N—4-Pole—35 kA at 480 Vac—Adjustable Neutral Protection setting for None, 50%, 100%<sup>③</sup></b>				
150 <sup>①</sup>	NJNF46150E20	4318	NJNL46150E20	4570
250 <sup>①</sup>	NJNF46250E20	4318	NJNL46250E20	4570
400 <sup>①</sup>	NJNF46400E20	4318	NJNL46400E20	4570
<b>NSJ400N—4-Pole with Oversized Neutral Protection—35 kA at 480 Vac—Adjustable Neutral Protection<sup>②③</sup></b>				
Phase	Neutral Settings	4P4T Oversized Neutral	4P4T Oversized Neutral	
250 <sup>①</sup>	Off 200 400	NJNF56250E20	NJNL56250E20	5434
400	Off 300 600	NJNF56400E20	NJNL56400E20	6324
<b>NSJ600N—3-Pole—35 kA at 480 Vac</b>				
600	NJNF36600E20	5291	NJNL36600E20	5543
<b>NSJ600N—4-Pole—35 kA at 480 Vac—Adjustable Neutral Protection setting for None, 50%, 100%<sup>③</sup></b>				
600	NJNF46600E20	7143	NJNL46600E20	7479
<b>NSJ400H—3-Pole—65 kA at 480 Vac</b>				
150 <sup>①</sup>	NJHF36150E20	5464	NJHL36150E20	5654
250 <sup>①</sup>	NJHF36250E20	5464	NJHL36250E20	5654
400 <sup>①</sup>	NJHF36400E20	5464	NJHL36400E20	5654
<b>NSJ400H—4-Pole—65 kA at 480 Vac—Adjustable Neutral Protection setting for None, 50%, 100%</b>				
150 <sup>①</sup>	NJHF46150E20	7375	NJHL46150E20	7627
250 <sup>①</sup>	NJHF46250E20	7375	NJHL46250E20	7627
400 <sup>①</sup>	NJHF46400E20	7375	NJHL46400E20	7627
<b>NSJ400H—4-Pole with Oversized Neutral Protection—65 kA at 480 Vac—Adjustable Neutral Protection<sup>②③</sup></b>				
Phase	Neutral Settings	4P4T Oversized Neutral	4P4T Oversized Neutral	
250 <sup>①</sup>	Off 200 400	NJHF56250E20	NJHL56250E20	7726
400	Off 300 600	NJHF56400E20	NJHL56400E20	7900
<b>NSJ600H—3-Pole—65 kA at 480 Vac</b>				
600	NJHF36600E20	5659	NJHL36600E20	5911
<b>NSJ600H—4-Pole—65 kA at 480 Vac—Adjustable Neutral Protection setting for None, 50%, 100%<sup>③</sup></b>				
600	NJHF46600E20	7752	NJHL46600E20	8088
<b>NSJ400L—3-Pole—100 kA at 480 Vac</b>				
400 <sup>①</sup>	NJLF36400E20	6423	NJLL36400E20	6613
<b>NSJ400L—4-Pole—100 kA at 480 Vac—Adjustable Neutral Protection setting for None, 50%, 100%<sup>③</sup></b>				
400 <sup>①</sup>	NJLF46400E20	7505	NJLL46400E20	7757
<b>NSJ400L—4-Pole with Oversized Neutral Protection—35 kA at 480 Vac—Adjustable Neutral Protection<sup>②③</sup></b>				
Phase	Neutral Settings	4P4T Oversized Neutral	4P4T Oversized Neutral	
250 <sup>①</sup>	Off 200 400	NJLF56250E20	NJLL56250E20	9887
400	Off 300 600	NJLF56400E20	NJLL56400E20	10356
<b>NSJ600L—3-Pole—100 kA at 480 Vac</b>				
600	NJLF36600E20	8806	NJLL36600E20	9058
<b>NSJ600L—4-Pole—100 kA at 480 Vac—Adjustable Neutral Protection setting for None, 50%, 100%<sup>③</sup></b>				
600	NJLF46600E20	11887	NJLL46600E20	12223

① 100% Rated

② Only available with STR23SP-OSN trip unit factory installed.

③ 4-pole available in plug-in, drawout and rear connected configurations only. Availability of 4-pole busbar and lug configurations to be announced.

Rating and interrupting ratings: page 45

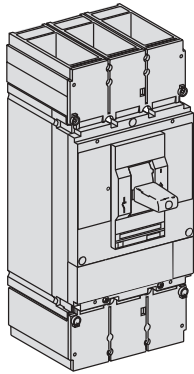
Cable range: pressure terminals are suitable for copper and aluminum cables.

- 400 A terminal:
  - 1 cable: #2 AWG–600 kcmil Cu or
  - 1 cable: #2 AWG–500 kcmil Al
- 600 A terminal
  - 2 cables: 2/0 AWG–350 kcmil Cu or
  - 2 cables: 2/0 AWG–500 kcmil Al

Additional information:

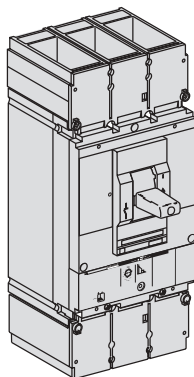
- Catalog no. 0615CT9901
- Data Sheet no. 0615HO9702
- D-Fax no. 2428
- Other termination: page 59
- Other trip units: page 58
- Accessories: See page 61





### Compact NSJ Molded Case Switch — Automatic

Rating (A)	Bus Bar Connection	List Price	Cable Connection	List Price	
<b>NSJ400A—3-Pole</b>					
400	NJHF36000S40	\$ 2859	NJHL36000S40	\$ 3049	
<b>NSJ400A—4-Pole<sup>①</sup></b>					
400	NJHF46000S40	3860	NJHL46000S40	4112	
<b>NSJ400A—4-Pole with Oversized Neutral<sup>①</sup></b>					
<b>Phase</b>	<b>Neutral</b>				
250	400	NJHF56000S25	4246	NJHL56000S25	4498
400	600	NJHF56000S40	5432	NJHL56000S40	5684
<b>NSJ600A—3-Pole</b>					
600	NJHF36000S60	4737	NJHL36000S60	4989	
<b>NSJ600A—4-Pole<sup>①</sup></b>					
600	NJHF46000S60	6393	NJHL46000S60	6729	



### Compact NSJ Circuit Breaker for Motor Circuit Protection

<b>NSJ400HC</b>					
400	Magnetic adjustable from 5 to 10 handle rating	NJHF36400M36	3029	NJHL36400M36	3219
<b>NSJ600HC</b>					
600	Magnetic adjustable from 5 to 10 handle rating	NJHF36600M42	5014	NJHL36600M42	5266

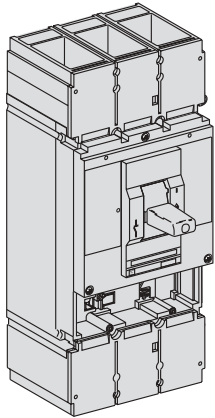
<sup>①</sup> 4-pole available in plug-in, drawout and rear connected configurations only. Availability of 4-pole busbar and lug configurations to be announced.

**Rating and interrupting ratings:** page 45  
**Cable range:** pressure terminals are suitable for copper and aluminum cables.

- 400 A terminal:
  - 1 cable: #2 AWG—600 kcmil Cu or
  - 1 cable: #2 AWG—500 kcmil Al
- 600 A terminal
  - 2 cables: 2/0 AWG—350 kcmil Cu or
  - 2 cables: 2/0 AWG—500 kcmil Al

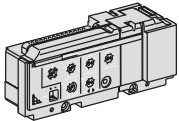
**Additional information:**

- **Catalog no.** 0615CT9901
- **Data Sheet no.** 0615HO9702
- **D-Fax no.** 2428
- Other termination:** page 59
- Other trip units:** page 58
- Accessories:** See page 61



### Compact NSJ Circuit Breaker Basic Frame

Rating (A)	Bus Bar Connection			
	3P	List Price	4P <sup>②</sup>	List Price
<b>NSJ400/600N</b>				
150 <sup>①</sup>	NJNF36150F40	\$ 1844	NJNF46150F40	\$ 2490
250 <sup>①</sup>	NJNF36250F40	1844	NJNF46250F40	2490
400 <sup>①</sup>	NJNF36400F40	1844	NJNF46400F40	2490
600	NJNF36600F60	3936	NJNF46600F60	5315
<b>NSJ400/600H</b>				
150 <sup>①</sup>	NJHF36150F40	4109	NJHF46150F40	5546
250 <sup>①</sup>	NJHF36250F40	4109	NJHF46250F40	5546
400 <sup>①</sup>	NJHF36400F40	4109	NJHF46400F40	5546
600	NJHF36600F60	4304	NJHF46600F60	5811
<b>NSJ400/600L</b>				
400 <sup>①</sup>	NJLF36400F40	5068	NJLF46400F40	6589
600	NJLF36600F60	7451	NJLF46600F60	9686



### Electronic Trip Unit (Field Replaceable)

Long-time, Short-time and Instantaneous Protection	Trip Function	Catalog Number	List Price
STR23SP	E20	36940	1355
<b>Long-time, Short-time, Instantaneous Protection and Options</b>			
STR53UP-F	E53	36942	2101
STR53UP-FT	E54	36943	2986
STR53UP-FI	E58	36944	3075
STR53UP-FTI	E59	36945	3961
Communication wiring		32441	72
Replacement battery		32434	280

### External Neutral Sensor

150	36950	537
250	36951	537
400	36952	537
600	36953	537

**Summary of options:**

F: Fault indicators

T: Residual type ground-fault protection

I: Ammeter

① 100% Rated

② 4-pole available in plug-in, drawout and rear connected configurations only. Availability of 4-pole busbar and lug configurations to be announced.

## Installation and Connection

- For factory-installed connection accessories complete the circuit breaker catalog number by inserting the **termination numbers** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

N | J | N | L | 3 | 6 | 4 | 0 | 0 | E | 2 | 0  
 └─ Termination No.

Bus Bar Connection	Term. No.	Catalog No.	List Price
<b>Bus Bar Connection Hardware Compact NSJ Circuit Breaker<sup>①</sup></b>			
Set of 3 terminal screws and washers for one side	3P	36966	\$ 15.80 ea.
Set of 4 terminal screws and washers for one side	4P	M36967	21 ea.

Cable Connection			
<b>400 A Lugs (Terminal Cover Included)<sup>①</sup></b>			
#2 AWG–600 kcmil stranded copper cable			
#2 AWG–500 kcmil stranded aluminum cable			
Field-installable	One side	3P	32508 95
		4P	M32509 126
Factory-installed	Both sides	3P L	190
		4P L	252
	Line side only	3P M	95
		4P M	126
	Load side only	3P P	95
		4P P	126
<b>600 A Lugs (Terminal Cover Included)<sup>①</sup></b>			
2 x #2/0 AWG–350 kcmil stranded copper cable			
2 x #2/0 AWG–500 kcmil stranded aluminum cable			
Field-installable	One side	3P	32510 126
		4P	M32511 168
Factory-installed	Both sides	3P L	252
		4P L	336
	Line side only	3P M	126
		4P M	168
	Load side only	3P P	126
		4P P	168
<b>Voltage Takeoffs for 400 and 600A Lugs (Set of Two)</b>			29348 18.90

Rear Connection = Bus Bar Connection + Rear Connection Kit			
<b>Mixed Rear Connection Kit</b>			
		3P S	32477 565
		4P S	32478 748
Consisting of:	Kit 3P	Short rear connections (Set of two)	32475 146 ea.
		Long rear connections (Set of two)	32476 174 ea.
		Short terminal covers	32562 99
	Kit 4P	Short rear connections (Set of two)	32475 146 ea.
		Long rear connections (Set of two)	32476 174 ea.
		Short terminal covers	32563 107

Plug-in Mounting = Bus Bar Connection + Plug-in Kit			
<b>Kit for Compact NSJ Circuit Breaker (Stationary and Moving Part)</b>			
		3P N	32546 1028
		4P N	M32574 1388
Consisting of:	<b>Stationary Part</b>		
	Plug-in base	3P	32514 710
		4P	M32515 957
	<b>Moving Part</b>		
		3P HJ00	318
		4P HJ00	390
	Short terminal covers	3P	32562 99
		4P	32563 107
	Safety Trip Interlock		32520 30.50
	Power connections	3P	32518 (3) 63 ea.
4P		32518 (4) 63 ea.	

<sup>①</sup> 4-pole available in plug-in, drawout and rear connected configurations only. Availability of 4-pole busbar and lug configurations to be announced.

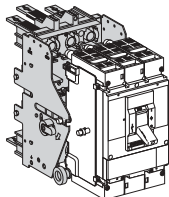
*Continued on next page*

**Installation and Connection—Continued**

- For factory-installed connection accessories complete the circuit breaker catalog number by inserting the **termination numbers** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

N | J | N | L | 3 | 6 | 4 | 0 | 0 | E | 2 | 0  
 Termination No.

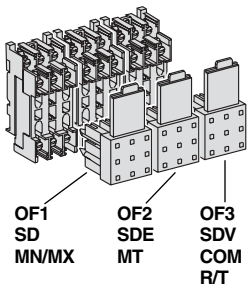
**Drawout Mounting = Bus Bar Connection + Drawout Kit**



**Kit for Compact NSJ Circuit Breaker (Stationary and Moving Part)**

	Term. No.	Catalog No.	List Price
	3P D	32548	1644
	4P D	M32549	2187
<b>Consisting of:</b>			
<b>Stationary Part</b>			
Plug-in base	3P	32514	710
	4P	M32515	957
Fixed part of chassis		32532	462
<b>Moving Part</b>			
	3P HJ00		473
	4P HJ00		573
Moving part of chassis		32533	154
Short terminal covers	3P	32562	99
	4P	32563	107
Safety trip interlock		32520	30.50
Power connections	3P	32518 (3)	63 ea.
	4P	32518 (4)	63 ea.

**Plug-in and Drawout Accessories**



**Secondary Disconnecting Blocks**

Fixed part	9-wire connector	29273	63
Moving part	9-wire connector	32523	39.40
	Support for 3 moving connectors	32525	28.40

**Shutters**

Two shutters for plug-in base	32521	54
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**Chassis Accessories**

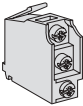
Extended escutcheon for toggle	32534	69
Locking device (key lock is not included)	29286	109
Two position indicating switches (connected/disconnected)	29287	138

**Accessories**

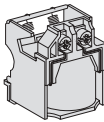
- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

N, J, N, L, 3, 6, 4, 0, 0, E, 2, 0, A, B, S, A, M, A  
Options

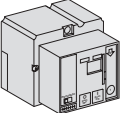
**Electrical Accessories**

Auxiliary Switch (SPDT Type)	Volts (V)	Option No.	Catalog No.	List Price
Standard 	One auxiliary switch (OF)	AA	29450	\$ 198
	Two auxiliary switches (OF)	AB	29450 (2)	198 ea.
	Three auxiliary switches (OF)	AC	29450 (3)	198 ea.
	Alarm switch (SD)	BC <sup>①</sup>	29450	198
	Overcurrent trip switch (SDE)	BD <sup>①</sup>	29450	198
Low level	One auxiliary switch (OF)	AE	29452	248
	Two auxiliary switches (OF)	AF	29452 (2)	248 ea.
	Three auxiliary switches (OF)	AG	29452 (3)	248 ea.
	Alarm switch (SD)	BH <sup>②</sup>	29452	248
	Overcurrent trip switch (SDE)	BJ <sup>②</sup>	29452	248


**Shunt Trip and Undervoltage Trip**

MX (Shunt trip) 	AC 50/60 Hz	24	SK	29384	478
		48	SL	29385	478
		110/130	SA	29386	478
		208/277	SD	29387	478
		380/480	SH	29388	478
		525/600	SJ	29389	478
	DC	12	SN	29382	478
		24	SO	29390	478
		30	SU	29391	478
		48	SP	29392	478
		60	SV	29383	478
		125	SR	29393	478
		250	SS	29394	478
		MN (Undervoltage trip)	AC 50/60 Hz	24	UK
48	UL			29405	478
110/130	UA			29406	478
208/277	UD			29407	478
380/480	UH			29408	478
525/600	UJ			29409	478
DC	12		UN	29402	478
	24		UO	29410	478
	30		UU	29411	478
	48		UP	29412	478
	60		UV	29403	478
	125		UR	29413	478
	250		US	29414	478

**Motor operator with SDE Adapter**

MT600 	AC 50/60 Hz	48/60	ML	32839	2263
		110/130	MA	32840	2263
		208/277	MD	32841	2263
		380/415	MF	32842	2263
		440/480	MH	32847	2263
		DC	24/30	MO	32843
	48/60	MP	32844	2363	
	110/130	MR	32845	2363	
	250	MS	32846	2363	
	Locking device	Mounting hardware			32649
Ronis lock				41940	97
Profalux lock				42888	97
Operations counter				32648	150
Mini test kit (battery not supplied)				43362	538

**Test Kits**

	Portable test kit	120		55391	9961
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
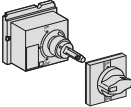
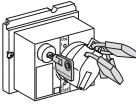
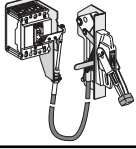
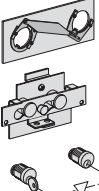
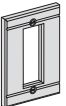

① BE = BC + BD  
② BK = BH + BJ

Continued on next page

**Accessories—Continued**

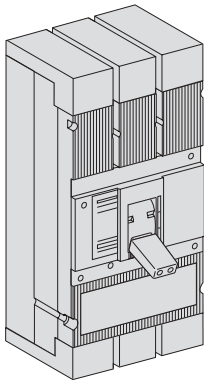
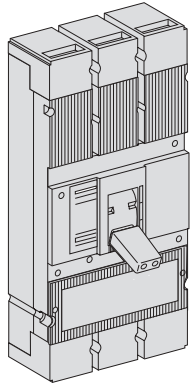
- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

N, J, N, L, 3, 6, 4, 0, 0, E, 2, 0, A, B, S, A, M, A, R, D, 1, 2  
Options

		Option No.	Catalog No.	List Price		
<b>Operating Handles</b>	<b>Direct Mounted</b>					
		Standard black handle	RD12	32597	\$ 244	
		Red handle on yellow bezel	RD22	32599	271	
		MCC conversion accessory		32606	68	
	<b>Door Mounted</b>					
		Standard black handle	RE12	32598	371	
		Red handle on yellow bezel	RE22	32600	398	
		Telescopic handle for drawout mounting	RT12	32603	411	
	<b>Accessories</b>					
		Key lock adapter		32604	38.90	
		Key locks <sup>①</sup>	Ronis 1351.500	41940	97	
			Profalux KS5 B24 D4Z	42888	97	
Indication auxiliary switch		One early-break switch		32605	80	
	Two early-make switches		29346	119		
<b>Cable Operating Mechanism and A1 Handle</b>						
	Cable length (in./mm)	36/ 914	9422CSJ30	227		
		60/ 1524	9422CSJ50	235		
		120/3048	9422CSJ10	255		
	A1 painted handle (order separately)		9422A1	66		
				<b>CP1 Discount</b>		
<b>Locks, Interlocking</b>	<b>Handle Padlocking Device</b>					
		Removable (lock OFF or ON)	29370	33.60		
		Fixed (lock OFF or ON)	32631	81		
		Fixed (lock OFF only)	NJPAF	81		
	<b>Interlocking (Not UL Listed)</b>					
		Mechanical for circuit breakers with rotary operating handles		32621	329	
		Mechanical for circuit breakers with toggles		32614	329	
		Key lock type (2 locks, 1 key)	Ronis	41950	122	
	Profalux		42878	122		
	<b>Installation Accessories</b>	<b>Template for Front Panel Cut-outs</b>				
			Toggle		32556	36.80
			Rotary operating handle, motor operator or extended escutcheon		32558	49.40
<b>Phase Barriers</b>		Set of 6	32570	48.30		
<b>Handle Rubber Boot</b>			32560	114		
						
<b>Sealing Accessories</b>			29375	29.40		
<b>Connection Accessory</b>		Terminal Shield, 3P (One side)		36965	72	
<b>Spare Parts</b>		100 Identification Labels		29314	79	
		Extended Handle		32553	22.10	
		Voltage Takeoffs (Set of 2)		29348	18.90	

<sup>①</sup> Will need the key lock adapter above (Catalog No. 32604) for both Ronis and Profalux key lock installation.

# UL 489 Listed Compact CK Circuit Breakers



## Compact CK Circuit Breaker with STR25DP Trip Unit and Full Ampere Rating Plug<sup>①</sup>

### Bus Bar Connection

	Plug Rating (A)	3-Pole		4-Pole	
		Catalog No.	List Price	Catalog No.	List Price
<b>CK400/800/1200N—Standard Rated—50 kA at 480 Vac</b>					
CK400N	400	CKAXF36404LI	\$ 6653	CKAXF46404LI	\$ 7660
CK800N	800	CKAXF36808LI	6653	CKAXF46808LI	7660
CK1200N	1200	CKAXF36121LI	11556	CKAXF46121LI	14034
<b>CK400/800/1200NN—100% Rated—50 kA at 480 Vac</b>					
CK400NN	400	CKAEF36404LI	7324		
CK800NN	800	CKAEF36808LI	7324		
CK1200NN <sup>②</sup>	1200	CKAEF36121LIERL	14025		
<b>CK400/800/1000/1200H—Standard Rated—65 kA at 480 Vac</b>					
CK400H	400	CKHXF36404LI	8003	CKHXF46404LI	9415
CK800H	800	CKHXF36808LI	8003	CKHXF46808LI	9415
CK1000HL <sup>③</sup>	1000	CKIXF36100LI	20421		
CK1200H	1200	CKHXF36121LI	12913	CKHXF46121LI	15797
<b>CK400/800/1200HH—100% Rated—65 kA at 480 Vac</b>					
CK400HH	400	CKHEF36404LI	8943		
CK800HH	800	CKHEF36808LI	8943		
CK1200HH <sup>②</sup>	1200	CKHEF36121LIERL	15547		
<b>CK1000L—Standard Rated—480 Vac Max.—150 kA at 480 Vac</b>					
CK1000L	1000	CKIXF34100LI	20421		

### Cable Connection

<b>CK400/800/1200N—Standard Rated—50 kA at 480 Vac</b>					
CK400N	400	CKAXL36404LI	\$ 7058	CKAXL46404LI	\$ 8065
CK800N	800	CKAXL36808LI	7058	CKAXL46808LI	8065
CK1200N	1200	CKAXL36121LI	12035	CKAXL46121LI	14513
<b>CK400/800/1200NN—100% Rated—50 kA at 480 Vac</b>					
CK400NN	400	CKAEL36404LI	7729		
CK800NN	800	CKAEL36808LI	7729		
CK1200NN <sup>②</sup>	1200				
<b>CK400/800/1000/1200H—Standard Rated—65 kA at 480 Vac</b>					
CK400H	400	CKHXL36404LI	8408	CKHXL46404LI	9820
CK800H	800	CKHXL36808LI	8408	CKHXL46808LI	9820
CK1000HL <sup>③</sup>	1000	CKIXL36100LI	20900		
CK1200H	1200	CKHXL36121LI	13392	CKHXL46121LI	16276
<b>CK400/800/1200HH—100% Rated—65 kA at 480 Vac</b>					
CK400HH	400	CKHEL36404LI	9348		
CK800HH	800	CKHEL36808LI	9348		
CK1200HH <sup>②</sup>	1200				
<b>CK1000L—Standard Rated—480 Vac Max.—150 kA at 480 Vac</b>					
CK1000L	1000	CKIXL34100LI	20900		

## Compact CK Molded Case Switch — Non-Automatic

### Bus Bar Connection

CK800NA	800	CKAF36008S	5202	CKAF46008S	6762
CK1200NA	1200	CKAF36001S	8259	CKAF46001S	10737

### Cable Connection

CK800NA	800	CKAL36008S	5607	CKAL46008S	7167
CK1200NA	1200	CKAL36001S	8738	CKAL46001S	11216

① STRxxDP, SP and UP trip units allow Long Time adjustment from 0.8 to 1 times plug rating.  
 ② Edgewise rear connectors are mandatory for line and load. Not available for cable connected.

Ratings and interrupting ratings: page 45

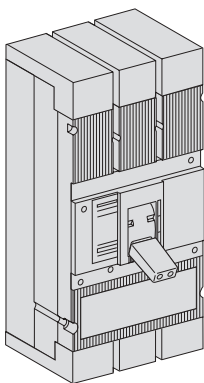
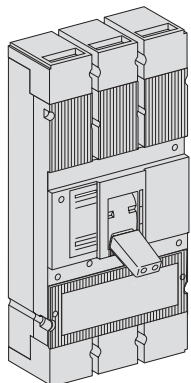
Cable range: pressure terminals are suitable for copper and aluminum cables:

- 800 A terminal:
  - 1 to 2 cables: #2/0 AWG to 400 kcmil Cu
  - 1 to 3 cables: #2/0 AWG to 300 kcmil Cu
  - 1 to 3 cables: #4/0 AWG to 400 kcmil Al
- 1200 A terminal:
  - 1 to 4 cables: #3/0 AWG to 500 kcmil Cu
  - 1 to 4 cables: #4/0 AWG to 500 kcmil Al
  - 1 to 3 cables: 250 to 600 kcmil Cu or Al

③ 150 kA at 480 Vac.

Additional information:

- Catalog no. AC0037/2E
- Data Sheet no. 0628HO9801
- D-Fax no. 2662
- Other termination: page 66
- Other trip units: page 65
- Other rating plugs: page 65
- Accessories: See page 68



## Compact CK Circuit Breaker with STR25DE Trip Unit<sup>①</sup>

### Bus Bar Connection

Sensor Rating (A)	3-Pole		4-Pole		
	Catalog No.	List Price	Catalog No.	List Price	
<b>CK400/800/1200N—Standard Rated—50 kA at 480 Vac</b>					
CK400N	400	CKAXF3604E1	\$ 6653	CKAXF4604E1	\$ 7660
CK800N	800	CKAXF3608E1	6653	CKAXF4608E1	7660
CK1200N	1200	CKAXF3612E1	11556	CKAXF4612E1	14034

### CK400/800/1200NN—100% Rated—50 kA at 480 Vac

CK400NN	400	CKAEF3604E1	7324		
CK800NN	800	CKAEF3608E1	7324		
CK1200NN <sup>②</sup>	1200	CKAEF3612E1	14025		

### CK400/800/1000/1200H—Standard Rated—65 kA at 480 Vac

CK400H	400	CKHXF3604E1	8003	CKHXF4604E1	9415
CK800H	800	CKHXF3608E1	8003	CKHXF4608E1	9415
CK1000HL <sup>③</sup>	1000	CKIXF3610E1	20421		
CK1200H	1200	CKHXF3612E1	12913	CKHXF4612E1	15797

### CK400/800/1200HH—100% Rated—65 kA at 480 Vac

CK400HH	400	CKHEF3604E1	8943		
CK800HH	800	CKHEF3608E1	8943		
CK1200HH <sup>①</sup>	1200	CKHEF3612E1	15547		

### CK1000L—Standard Rated—480 Vac Max.—150 kA at 480 Vac

CK1000L	1000	CKIXF3410E1	20421		
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### Cable Connection

#### CK400/800/1200N—Standard Rated—50 kA at 480 Vac

CK400N	400	CKAXL3604E1	\$ 7058	CKAXL4604E1	\$ 8065
CK800N	800	CKAXL3608E1	7058	CKAXL4608E1	8065
CK1200N	1200	CKAXL3612E1	12035	CKAXL4612E1	14513

#### CK400/800/1200NN—100% Rated—50 kA at 480 Vac

CK400NN	400	CKAEL3604E1	7729		
CK800NN	800	CKAEL3608E1	7729		
CK1200NN <sup>②</sup>	1200				

#### CK400/800/1000/1200H—Standard Rated—65 kA at 480 Vac

CK400H	400	CKHXL3604E1	8408	CKHXL4604E1	9820
CK800H	800	CKHXL3608E1	8408	CKHXL4608E1	9820
CK1000HL <sup>③</sup>	1000	CKIXL3610E1	20900		
CK1200H	1200	CKHXL3612E1	13392	CKHXL4612E1	16276

#### CK400/800/1200HH—100% Rated—65 kA at 480 Vac

CK400HH	400	CKHEL3604E1	9348		
CK800HH	800	CKHEL3608E1	9348		
CK1200HH <sup>②</sup>	1200				

#### CK1000L—Standard Rated—480 Vac Max.—150 kA at 480 Vac

CK1000L	1000	CKIXL3410E1	20900		
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<sup>①</sup> STRxxDE, SE and UE trip units allow Long Time adjustment from 0.4 to 1 times sensor rating.

<sup>②</sup> Edgewise rear connectors are mandatory for line and load. Not available for cable connected.

<sup>③</sup> 150 kA at 480 Vac.

**Ratings and interrupting ratings:** page 45

**Cable range:** pressure terminals are suitable for copper and aluminum cables:

■ 800 A terminal:

- 1 to 2 cables: #2/0 AWG to 400 kcmil Cu
- 1 to 3 cables: #2/0 AWG to 300 kcmil Cu
- 1 to 3 cables: #4/0 AWG to 400 kcmil Al

■ 1200 A terminal:

- 1 to 4 cables: #3/0 AWG to 500 kcmil Cu
- 1 to 4 cables: #4/0 AWG to 500 kcmil Al
- 1 to 3 cables: 250 to 600 kcmil Cu or Al

**Additional information:**

■ **Catalog no.** AC0037/2E

■ **Data Sheet no.** 0628HO9801

■ **D-Fax no.** 2662

**Other termination:** page 66

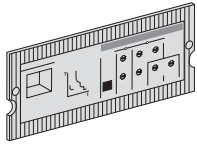
**Other trip units:** page 65

**Other rating plugs:** page 65

**Accessories:** See page 68



**Other Electronic Trip Units (Replaceable by Field Services only)**



	Trip Function	Catalog No.	List Price
<b>Long-time ①, and Instantaneous Protection</b>			
STR25DP	LI	35400	3134
STR25DE	E1	46501②	
<b>Long-time ①, Short-time and Instantaneous Protection</b>			
STR45SP	LS	35407	5041
STR35SE	E5	46504②	
<b>Long-time ①, Short-time, Instantaneous Protection and Options</b>			
STR55UP T	L2	35413	6552
STR55UP RF	L3	35416	7585
STR55UP TRF	L4	35417	9097
STR55UP FC	L5	35420	5887
STR55UP RFC	L7	35422	7585
STR55UP TFC	L6	35424	7379
STR55UP TRFC	L8	35425	9097
STR55UE T	E9	46512②	6236
STR55UE RF	E3	46516②	7748
STR55UE TRF	E4	46517②	9260
STR55UE FC	E5	46520②	6050
STR55UE RFC	E7	46522②	7748
STR55UE TFC	E6	46524②	7542
STR55UE TRFC	E8	46525②	9260

① Long Time:

- Adjustable from 0.8 to 1 times plug rating on STRxxDP, SP and UP trip units
- Adjustable from 0.4 to 1 times sensor rating on STRxxDE, SE and UE trip units
- Can be defeated by using LT OFF rating plug Cat. No. 35300 on STRxxDP, SP and UP trip units.
- Substitute MI in the trip function block for factory installation. For use only on 400 A, 800 A and 1200 A.

② Cannot be used in a drawout assembly.

**Summary of Options :**

- F: Fault indicators.
- T: Residual type ground fault protection
- R: Load monitoring
- C: Communication with Digipact®



**Rating Plugs ③**

	Rating (A)	Amperage No.	Catalog No.	List Price
<b>CK400</b>	200	204	35301	\$ 163
	225	224	35302	163
	250	254	35303	163
	300	304	35304	163
	350	354	35305	163
	400	404	35306	163
<b>CK800</b>	400	408	35311	163
	500	508	35312	163
	600	608	35313	163
	700	708	35314	163
	800	808	35315	163
<b>CK1200</b>	600	061	35331	163
	700	071	35332	163
	800	081	35333	163
	900	091	35334	163
	1000	101	35335	163
	1200	121	35336 ④	163
<b>CK1000L</b>	500	050	35321	163
<b>CK1000HL</b>	600	060	35322	163
	700	070	35323	163
	800	080	35324	163
	1000	100	35325 ④	163

**External Neutral Sensor**

**Ground-fault Protection for 3Ø4W System**

400	35700	1073
800	35701	1073
1000	35702	1073
1200	35703	1073

③ Required on STRxx25DP, SP and UP trip units only.

④ Cannot be used in a drawout assembly.

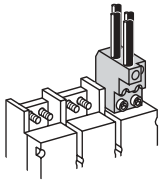
## Installation and Connection

- For factory-installed connection accessories complete the circuit breaker catalog number by inserting the **termination numbers** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

C K A X L 3 6 1 2 1 L I  
 Termination No.

	Term. No.	Special Term. No.	Catalog No.	List Price
<b>Bus Bar Connection</b>				
Connection screws and terminal cover	F		35626 (2)	No Charge

### Cable Connection



#### 800 A Lugs—(3) #2/0 AWG—300 kcmil for CK400 and CK800

Field-installable	One side		46961	\$ 203
Factory-mounted	Both sides	L		406
	Line side only	M		203
	Load side only	P		203

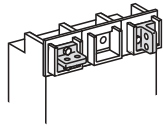
#### 1200 A Lugs—(4) #4/0 AWG—500 kcmil for CK1000 and CK1200

Field-installable	One side		46960	239
Factory-mounted	Both sides	L ①		478
	Line side only	M ①		239
	Load side only	P ①		239

#### Optional 1200 A Lugs—(3) 250–600 kcmil

Field-installable	One side		46966	239
Factory-mounted	Both sides	L ②		478
	Line side only	M ②		239
	Load side only	P ②		239

### Rear Connection



<b>Flat Connection</b>		N/H	F	FRL <sup>③</sup>	46415	813
		L	F	FRL <sup>③</sup>	46417	1134
Consisting of:	Rear connectors	N/H			46958 (6)	99 ea.
		HL/L			46916 (6)	152 ea.
	Terminal cover				46993 (2)	110 ea.
<b>Edgewise Connection</b>		N/H	F	ERL <sup>③</sup>	46415	814
		L	F	ERL <sup>③</sup>	46419	1260
Consisting of:	Rear connectors	N/H			46958 (6)	99 ea.
		HL/L			46913 (6)	173 ea.
	Terminal cover				46993 (2)	110 ea.

Continued on next page

① For CK400 or CK800 insert PT1 in block 13. (See catalog number construction, page 46)

② For CK400, CK800 or CK1200 insert PT2 in block 13. (See catalog number construction, page 46)

③ Insert FRL or ERL in block 13. (See catalog number construction, page 46)

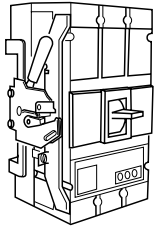
Installation and Connection—Continued

- For factory-installed connection accessories complete the circuit breaker catalog number by inserting the **termination numbers** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

C K A X F 3 6 1 2 1 L I D O  
 Termination No.

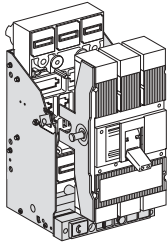
	Term. No.	Special Term. No.①	Drawout Option②	Catalog No.	List Price
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**Standard Chassis**



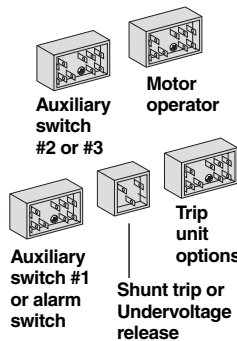
<b>Flat Connection</b>		N/H	D	F	DO	\$ 3391
		HL/L	D	F	DO	3391
Consisting of:	Complete chassis	N/H				46851 2472
		HL/L				46852 2472
	Plugs	N/H				46896 (3) 127 ea.
		HL/L				46915 (3) 127 ea.
	Terminal cover					46993 (2) 110 ea.
	Rear connections					46990 (6) 53 ea.
<b>Edgewise Connection</b>		N/H	D	E	DO	3481
		HL/L	D	E	DO	3481
Consisting of:	Complete chassis	N/H				46851 2472
		LH/L				46852 2472
	Plugs	N/H				46896 (3) 127 ea.
		HL/L				46915 (3) 127 ea.
	Terminal cover					46993 (2) 110 ea.
	Rear connections					46988 (6) 68 ea.

**Universal Chassis**



<b>Flat Connection</b>		N/H	D	F	DU	4441
		HL/L	D	F	DU	4441
Consisting of:	Moving chassis					46824 655
	Fixed chassis	N/H				46820 2867
		HL/L				46822 2867
	Plugs	N/H				46896 (3) 127 ea.
		HL/L				46915 (3) 127 ea.
	Terminal cover					46993 (2) 110 ea.
Rear connections					46990 (6) 53 ea.	
<b>Edgewise Connection</b>		N/H	D	E	DU	4531
		HL/L	D	E	DU	4531
Consisting of:	Moving chassis					46824 655
	Fixed chassis	N/H				46820 2867
		LH/L				46822 2867
	Plugs	N/H				46896 (3) 127 ea.
		HL/L				46915 (3) 127 ea.
	Terminal cover					46993 (2) 110 ea.
Rear connections					46988 (6) 68 ea.	

**Accessories**



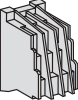
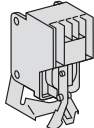
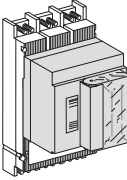

	Option No.	Catalog No.	List Price
<b>Secondary Disconnecting Blocks</b>			
Moving part	3 term. ③	D ⑤	36693 \$ 33.60
	6 term. ④	D ⑤	36696 50
Fixed part	3 term. ③	D ⑤	42940 33.60
	6 term. ④	D ⑤	42941 50
Optional fixed part cover			39967 62
<b>Door Escutcheon</b>			
Door frame	Around racking mechanism		46830 153
	Around handle		46831 308
	Around rotary handle		46832 431
<b>Drawout Shutters</b>			
		On fixed chassis (1 piece)	46987 (6) 134 ea.
<b>Lockings (see page 69)</b>			

- ① Insert F or E in block 13. (See catalog number construction, page 46)
- ② Insert DO or DU in block 15. (See catalog number construction, page 46)
- ③ Three wires are needed for shunt trip or undervoltage trip.
- ④ Six wires are needed for auxiliary switches or motor operator.
- ⑤ Option D inserted in block 12, (See catalog number construction, page 46), will supply both moving and fixed parts for all electrical accessories installed.

**Accessories**

- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

C | K | A | X | L | 3 | 6 | 1 | 2 | 1 | L | I | A | 2 | S | A | M | A  
Options

			Volts (V)	Option No.	Catalog No.	List Price	
<b>Electrical Accessories</b>	<b>Auxiliary and Alarm Switch</b>						
		One auxiliary (OF) + 1 alarm (SD) switch ①			AB	36405	\$ 302
		Three auxiliary (OF) + 1 alarm (SD) switch ①			A3	36402	823
		Two auxiliary (OF) switches ①			A2	36404	427
		Overcurrent trip switch SDE ②			AT	36403	240
		Position switches For drawout only ③	One connected			DA	46963
One disconnected for Universal chassis					DB	46964	331
One disconnected for Standard chassis					39965	331	
<b>Shunt Trip and Undervoltage Trip</b>							
	MX (Shunt trip) ④	AC 60 Hz	120	SA	36437	478	
			240	SC	36446	478	
			480	SH	36446	478	
		DC	12	SN	36434	478	
			24	SO	36435	478	
			48	SP	36436	478	
	MN (Undervoltage trip) ⑤	AC 60 Hz	120	UA	36418	478	
			240	UC	36419	478	
			480	UH	36420	478	
		DC	24	UO	36410	478	
			48	UP	36411	478	
			125	UR	36412	478	
<b>Motor Operator</b>							
	Standard type	AC 60 Hz	120	MA	35678	3953	
			240	MC	35679	3953	
		DC	24	MO	35670	3953	
			48	MP	35671	3953	
			125	MR	35672	3953	
	Locking device for Ronis key lock 1351.500 (Lock not supplied, cannot be fitted on automatic transfer switch)					44876	179
One Ronis key lock 1351.500					41945	122	
<b>Test Kits</b>							
	Battery operated (battery not supplied)				43362	538	
	Portable test kit			120		55391	9961


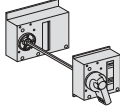
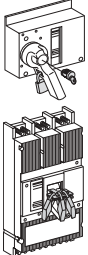
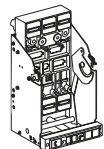
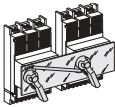
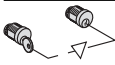
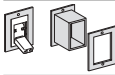



*Continued on next page*

① 6 A (auxiliary), 5 A (alarm) at 480 Vac; 3 A at 600 Vac; 0.5 A at 125 Vdc, 0.25 A at 250 Vdc.  
 ② 2 A at 240 Vac, 0.1 A at 125 Vdc. Factory-mounted.  
 ③ 6 A at 480 Vac, 3 A at 600 Vac, 0.5 A at 125 Vdc, 0.25 A at 250 Vdc.  
 ④ Minimum operating voltage 55% of rated voltage in ac and 75% of rated voltage in dc.  
 ⑤ Dropout at 35–70% of rated voltage, pickup at 85% of rated voltage.

**Accessories—Continued**

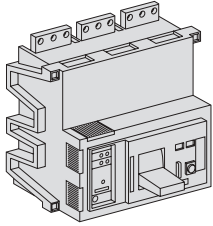
- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

C K A X L 3 6 1 2 1 L I A 2 S A M A R O  
Options

			Option No.	Catalog No.	List Price	
<b>Rotary Operating Handles</b>	<b>Directly Mounted</b>	Standard	With black toggle	RO	46933 \$ 377	
						
	<b>Door Mounted</b>	Rear door	(=46933+42897)		46872 647	
						
<b>Locks, Interlocking</b>	<b>Padlocking and Locking Devices</b>					
		<b>Of the Handle</b> (in OFF position)				
		For 1 to 3 padlocks (padlocks not supplied)			44936	33.60
		By key lock	Mounting kit (factory mounted)		LK	35636 161
			Mounting kit and key interlock		KK	35636+ 35635-F 940
	Key interlock only			35635-F	779	
	<b>Of the Rotary Operating Handle</b> (circuit breaker in OFF position)					
	For 1 to 3 padlocks (not supplied)			Built-in		
	One key lock			Ronis 1351.500	41940 97	
		<b>Drawout Assembly Locking</b>				
	By 3 padlocks (padlocks not supplied)			Built-in		
	Key lock for locking in disconnected position			35635	704	
	Door interlock, connected position locking device			46834	210	
	Racking interlock locking device			46835	153	
	<b>Mechanical Interlocking</b> (for fixed circuit breakers with rotary handle)					
	Mechanical device (rotary operating handles not included)			46946	813	
	<b>Mechanical Interlocking</b> (for fixed circuit breakers with rotary handle)					
	One set of 2 key locks (keyed alike)		Ronis 1351.500	41950	122	
	<b>Installation Accessories</b>					
<b>Door Cutout Escutcheons</b>		For fixed mounting of circuit breaker		44938	\$ 33.60	
		Escutcheon with handle extension (IP 40), for withdrawable device without motor operator		46977	372	
<b>Handle Rubber Boot</b>				BT	44965 153	
<b>Sealing Accessories</b>						
		For trip unit		46939	106	
		For cover		44937	50	
<b>Circuit Label Holder</b>						
		Set of 10		42976	54	
<b>Extended Handle</b>						
	Standard		46998	29.40		
	Long for extended escutcheon (drawout mounting)		46996	29.40		
<b>Toggle</b>						
	For rotary handle		Black	46970	101	
			Red	46971	101	

# Compact® CM Circuit Breakers

## UL 489 Listed Compact CM Circuit Breaker<sup>①</sup>



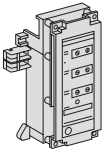
### Compact CM Circuit Breaker with ST206D Trip Unit

	Rating (A)	Trip Function	Catalog No.	List Price
<b>Standard Rated—85 kA at 480 Vac</b>				
CM1250HE	1250		CMXF36125LI	\$ 13551
CM1600HE	1600		CMXF36160LI	14483
CM2000HE <sup>②</sup>	2000		CMXF36200LI	16652
CM2500HE <sup>②</sup>	2500		CMXF36250LI	26839
<b>100% Rated—85 kA at 480 Vac</b>				
CM1250HH	1250		CMEF36125LI	14561
CM1600HH	1600		CMEF36160LI	15585
CM2000HH <sup>②</sup>	2000		CMEF36200LI	17969
CM2500HH <sup>②</sup>	2500		CMEF36250LI	29174

### Compact CM Molded Case Switch — Non-Automatic

CM1600HA	1600		CMAF36016S	11037
CM2000HA <sup>②</sup>	2000		CMAF36020S	13208
CM2500HA <sup>②</sup>	2500		CMAF36025S	24901

### Other Electronic Trip Units (Replaceable by Field Services only)



#### Long-time and Instantaneous Protection

ST206D		LI	55722	3445
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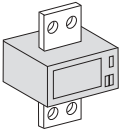
#### Long-time, Short-time and Instantaneous Protection

ST306S		LS	55723	5028
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#### Long-time, Short-time, Instantaneous Protection and Ground-fault Protection

ST306ST (1250–2000 A)		L2	55724	6597
ST316ST (2500 A)		L2	55725	6597

### External Neutral Sensor



#### Ground-fault Protection for 3Ø4W System

For CM1250			55760	1215
For CM1600			55759	1215
For CM2000			55758	1215
For CM2500			55757	1215

<sup>①</sup> In obsolescence. For new applications, use Powerpact R-frame. See Digest 173.

<sup>②</sup> Rear connectors are included.

**Note:** CM3200 circuit breaker or switch (IEC Rated, not UL Listed) is available with 3200 A rating. See the IEC Rated Compact CM section, page 101.

Ratings and interrupting ratings: page 45

#### Additional information:

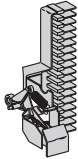


- Catalog no. AC0036/3E
- Data Sheet no. 0630HO9801
- D-Fax no. 2833

Accessories: See page 71

## Accessories

- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.


C M X F 3 6 2 5 0 L I A 2 S A  
Options

		Volts (V)	Options	Catalog No.	List Price			
<b>Connection Accessories</b>	<b>Connectors</b>	2000 A (3 per kit for one side)		55797	\$ 964			
		2000 A (Complete kit for line and load)		55798	1928			
		2500 A (Complete kit for line and load)		55799	4363			
	Connectors are mandatory for line and load. Prices are given for replacement only.							
<b>Electrical Accessories</b>	<b>Auxiliary Switches</b>	Two auxiliary switch (OF) ①		A2	55755	559		
		Four auxiliary switch (OF) + 1 alarm switch (SD) ①		A4	55754	1398		
		Overcurrent trip switch ②		Standard				
								
<b>Electrical Accessories</b>	<b>Shunt Trip and Undervoltage Trip</b>	MX (shunt trip) ③	AC 60 Hz	120	SA	55740	826	
				240	SC	55741	826	
				480	SH	55742	826	
			DC	24	SO	55744	826	
				48	SP	55745	826	
				125	SR	55746	826	
		MN (undervoltage trip) ④	AC 60 Hz	120	UA	55728	826	
				240	UC	55729	826	
				480	UH	55730	826	
				DC	24	UO	55732	826
					48	UP	55733	826
					125	UR	55734	826
		<b>Motor Operator ⑤⑥</b>	AC 60 Hz	120	MA	55611	8093	
					240	MC	55613	8093
					277	MD	55615	8093
				480	MH	55617	8093	
	DC		24	MO	55618	8093		
				48	MP	55620	8093	
				125	MR	55624	8093	
						55624	8093	
<b>Test Kit</b>		Portable test kit (120 Vac)			55391	9961		
								
<b>Locks</b>	<b>OFF Position Locking Device</b>	Padlock device for 1 to 3 padlocks (padlocks not included) ⑦		PL	55653	186		
		By key lock	Mounting provision ⑧	LK	55768	215		
			Mounting provision and Key interlock ⑧	KK	55768+ 35635	919		
		Key interlock only			35635	704		
<b>Spare Parts</b>		Operating handle			55661	67		
		Extended toggle			55662	92		
								

- ① 6 A (auxiliary), 5 A (alarm) at 480 Vac; 3 A at 600 Vac; 0.5 A at 125 Vdc; 0.25 A at 250 Vdc.  
 ② 2 A at 240 Vac and 0.1 A at 125 Vdc.  
 ③ Minimum operating voltage 55% of rated voltage in AC and 75% of rated voltage in dc.  
 ④ Dropout at 35–70% of rated voltage, pickup at 85% of rated voltage.  
 ⑤ Not UL Listed. Includes 4 auxiliary and 1 alarm switch #55676: factory-mounted only.  
 ⑥ Factory-mounted only.  
 ⑦ Field installable.  
 ⑧ In obsolescence. For new applications, use Powerpact R-frame. See Digest 173.

## IEC 947-2 Rated Compact NS and C Circuit Breakers

## Selection Table

				NS100			NS160–250			
										
Ratings as per IEC 947-2 and EN 60947-2 Standards				N	H	L	N	H	L	
Number of poles				2, 3, 4			2, 3, 4			
Rated current (A)		I <sub>n</sub>	40°C	100			160, 250			
Rated insulation voltage (V)		U <sub>i</sub>		750			750			
Rated impulse withstand voltage (kV)		U <sub>imp</sub>		8			8			
Rated operational voltage (V)		U <sub>e</sub>	AC 50/60 Hz	690			690			
			DC	500			500			
Ultimate breaking capacity (kA RMS)		I <sub>cu</sub>	AC 50/60 Hz	220/240 V	85	100	150	85	100	150
				380/415 V	25	70	150	36	70	150
				440 V	25	65	130	35	65	130
				500 V	18	50	100	30	50	70
				525 V	18	35	100	22	35	50
				660/690 V	8	10	75	8	10	20
				1000 V	–	–	–	–	–	–
			DC ②	250 V	50 (1P)	85 (1P)	100 (1P)	50 (1P)	85 (1P)	100 (1P)
				500 V	50 (2P)	85 (2P)	100 (2P)	50 (2P)	85 (2P)	100 (2P)
				750 V	–	–	–	–	–	–
Service breaking capacity		I <sub>cs</sub>	(% I <sub>cu</sub> )	100%	100%	100%	100%	100%	100%	100%
Utilization category				A			A			
Suitability for isolation				Yes			Yes			
Trip Units										
Functions		Thermal-magnetic		Yes			Yes			
		Electronic		Yes			Yes			
		Instantaneous only		Yes			Yes			
		Molded case switch		Yes			Yes			
Type of Switch				NA – Non-automatic						
Short-time withstand current (RMS)		I <sub>cw</sub>	1 sec.	NS100NA: 1800 A, NS160NA: 2500 A, NS250NA: 3500 A						
Making capacity (peak)		I <sub>cm</sub>		NS100NA: 2600 A, NS160NA: 3600 A, NS250NA: 4900 A						
Dimensions and Weights										
Dimensions H x W x D (in./mm)		2/3P		6.3 x 4.1 x 3.4/ 161 x 105 x 86			6.3 x 4.1 x 3.4/ 161 x 105 x 86			
		4P		6.3 x 5.5 x 3.4/ 161 x 140 x 86			6.3 x 5.5 x 3.4/ 161 x 140 x 86			
Weight (lb/kg)		2/3P		3.5/1.6			NS160 = 3.5/1.6 NS250 = 4.2/1.9			
		4P		4.6/2.1			NS160 = 4.6/2.1 NS250 = 5.1/2.3			

① Rated current is at 40°C for drawout mounting.

C1001N/H = 1000 A





C1001L = 910 A

C1251N/H = 1160 A

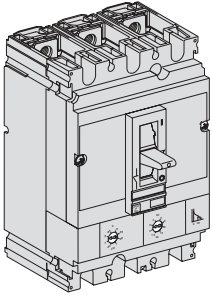
② 1P, 2P, 3P are the number of poles required to perform the dc interruption.

③ NS400L is 100 kA @ 500 V; 100 kA @ 525 V; 75 kA @ 660/690 V.



NS400–630				C801–1001			C1251		CM1250–3200 <sup>①</sup>			
												
N	H	L	H-DC	N	H	L	N	H	N-1000 V	N-DC	N	H
3, 4			3	3, 4			3, 4		3	3	3, 4	
400, 630			–	800, 1000			1250 <sup>①</sup>		1250 <sup>①</sup>	1250 <sup>①</sup>	1250, 1600, 2000, 2500, 3200	
750			–	750			750		1000	750	750	
8			–	8			8		8	8	8	
690			–	690			690		1000	–	690	
			500	–			–		–	750	–	
85	100	150	–	85	100	150	85	100	–	–	85	125
45	70	150	–	50	70	150	50	70	–	–	70	85
42	65	130	–	42	65	100	42	65	–	–	65	85
30	50	70 <sup>③</sup>	–	40	50	100	40	50	–	–	50	50
22	35	50 <sup>③</sup>	–				–	–	–	–	–	–
10	20	35 <sup>③</sup>	–	25	40	60	25	40	–	–	50	50
–	–	–	–	–	–	–	–	–	20	–	–	–
–	–	–	85 (1P)	–	–	–	–	–	–	50 (2P)	–	–
–	–	–	85 (2P)	–	–	–	–	–	–	50 (3P)	–	–
–	–	–	–	–	–	–	–	–	–	25 (3P)	–	–
100%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	50%	
A				B	B	A	B	B	B	A	B	
Yes				Yes			Yes				Yes	
–				–			–				–	
Yes				Yes			Yes				Yes	
Yes				Yes			Yes				–	
Yes				Yes			Yes				Yes	
<b>NA – Non-automatic</b>				<b>NI – Non-automatic</b>			<b>NI – Non-automatic</b>					
NS400NA: 5000 A, NS630NA: 6000 A				C801NI: 10000 A, C1251NI: 15000 A			32000 A for 3 sec.					
NS400NA: 7100 A, NS630NA: 8500 A				C801NI: 20000 A, C1251NI: 30000 A			65000 A					
10.0 x 5.5 x 4.3/ 255 x 140 x 110				14.7 x 8.3 x 6.8/ 374 x 210 x 172		14.7 x 8.3 x 10/ 374 x 210 x 262	14.7 x 8.3 x 6.8/ 374 x 210 x 172		16.9 x 16.5 x 17.8/ 430 x 418 x 451			
10.0 x 7.3 x 4.3/ 255 x 185 x 110				14.7 x 11.0 x 6.8/ 374 x 280 x 172		14.7 x 11.0 x 10/ 374 x 280 x 262	14.7 x 11.0 x 6.8/ 374 x 280 x 172		16.9 x 22.6 x 17.8/ 430 x 573 x 451			
13.2/6.0				29/13		55/25	29/13		CM1250–1600 = 90/41 CM2000 = 101/46 CM2500 = 139/63 CM3200 = 183/83			
17.2/7.8				38/17		73/33	38/17		CM1250–1600 = 124/56 CM2000 = 135/61 CM2500 = 172/78			

<sup>①</sup> In obsolescence. For new applications, use Powerpact R-frame. See Digest 173.

**IEC 947-2 Rated Compact NS100/160/250 Circuit Breakers****Complete Device****Compact NS100/160/250N Circuit Breaker with Thermal-Magnetic Trip Unit**

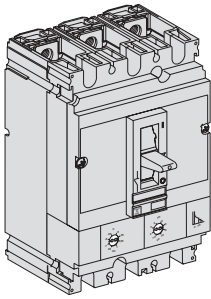
<b>Bus Bar Connection</b>								
	3P 2T		3P 3T		4P 3T		4P 4T	
Rating (A)	Catalog No.	List Price	Catalog No.	List Price	Catalog No.	List Price	Catalog No.	List Price
<b>NS100N—25 kA at 380/415 Vac</b>								
16	NFNFE26016	\$ 718	NFNFE36016	\$ 898	NFNFE46016	\$ 1168	NFNFE46016N01	\$ 1257
25	NFNFE26025	718	NFNFE36025	898	NFNFE46025	1168	NFNFE46025N02	1257
32	NFNFE26032	718	NFNFE36032	898	NFNFE46032	1168	NFNFE46032N03	1257
40	NFNFE26040	718	NFNFE36040	898	NFNFE46040	1168	NFNFE46040N04	1257
50	NFNFE26050	718	NFNFE36050	898	NFNFE46050	1168	NFNFE46050N05	1257
63	NFNFE26063	718	NFNFE36063	898	NFNFE46063	1168	NFNFE46063N06	1257
80	NFNFE26080	821	NFNFE36080	1026	NFNFE46080	1334	NFNFE46080N08	1436
100	NFNFE26100	821	NFNFE36100	1026	NFNFE46100	1334	NFNFE46100N10	1436
<b>NS160N—36 kA at 380/415 Vac</b>								
125	NFNFE26125	1279	NFNFE36125	1598	NFNFE46125	2078	NFNFE46125N12	2238
160	NFNFE26160	1279	NFNFE36160	1598	NFNFE46160	2078	NFNFE46160N16	2238
<b>NS250N—36 kA at 380/415 Vac</b>								
200	NFNFE26200	1403	NFNFE36200	1754	NFNFE46200	2198	NFNFE46200N20	2455
250	NFNFE26250	2302	NFNFE36250	2877	NFNFE46250	3539	NFNFE46250N25	4028
<b>Cable Connection</b>								
<b>NS100N—25 kA at 380/415 Vac</b>								
16	NFNLE26016	752	NFNLE36016	948	NFNLE46016	1235	NFNLE46016N01	1324
25	NFNLE26025	752	NFNLE36025	948	NFNLE46025	1235	NFNLE46025N02	1324
32	NFNLE26032	752	NFNLE36032	948	NFNLE46032	1235	NFNLE46032N03	1324
40	NFNLE26040	752	NFNLE36040	948	NFNLE46040	1235	NFNLE46040N04	1324
50	NFNLE26050	752	NFNLE36050	948	NFNLE46050	1235	NFNLE46050N05	1324
63	NFNLE26063	752	NFNLE36063	948	NFNLE46063	1235	NFNLE46063N06	1324
80	NFNLE26080	855	NFNLE36080	1076	NFNLE46080	1401	NFNLE46080N08	1503
100	NFNLE26100	855	NFNLE36100	1076	NFNLE46100	1401	NFNLE46100N10	1503
<b>NS160N—36 kA at 380/415 Vac</b>								
125	NFNLE26125	1379	NFNLE36125	1748	NFNLE46125	2278	NFNLE46125N12	2438
160	NFNLE26160	1379	NFNLE36160	1748	NFNLE46160	2278	NFNLE46160N16	2438
<b>NS250N—36 kA at 380/415 Vac</b>								
200	NFNLE26200	1503	NFNLE36200	1904	NFNLE46200	2398	NFNLE46200N20	2655
250	NFNLE26250	2403	NFNLE36250	3027	NFNLE46250	3739	NFNLE46250N25	4228

*Continued on next page*

**Ratings and interrupting ratings:** page 72  
**Cable range:** pressure terminals are suitable for copper and aluminum cables:  
 ■ 100–160 A terminal:  
 1 cable: 1.5 to 95mm<sup>2</sup> Cu or Al  
 ■ 250 A terminal:  
 1 cable: 1.5 to 185mm<sup>2</sup> Cu or Al

**Other termination:** page 80  
**Other trip units:** page 78  
**Accessories:** See page 82  
**Additional information:**  
 ■ **Catalog no.** ABTED297054EN  
 ■ **Installation Guide no.** ABTED297054EN  
 ■ **Data Sheet no.** ABTED396051  
 ■ **D-Fax no.** 1001

**Complete Device**—Continued



**Compact NS100/160/250H Circuit Breaker with Thermal-Magnetic Trip Unit**

<b>Bus Bar Connection</b>						
Rating (A)	3P 3T		4P 3T		4P 4T	
	Catalog No.	List Price	Catalog No.	List Price	Catalog No.	List Price
<b>NS100H—70 kA at 380/415 Vac</b>						
16	NFHFE36016	\$ 1252	NFHFE46016	\$ 1628	NFHFE46016N01	\$ 1717
25	NFHFE36025	1252	NFHFE46025	1628	NFHFE46025N02	1717
32	NFHFE36032	1252	NFHFE46032	1628	NFHFE46032N03	1717
40	NFHFE36040	1252	NFHFE46040	1628	NFHFE46040N04	1717
50	NFHFE36050	1252	NFHFE46050	1628	NFHFE46050N05	1717
63	NFHFE36063	1252	NFHFE46063	1628	NFHFE46063N06	1717
80	NFHFE36080	1380	NFHFE46080	1793	NFHFE46080N08	1896
100	NFHFE36100	1380	NFHFE46100	1793	NFHFE46100N10	1896
<b>NS160H—70 kA at 380/415 Vac</b>						
125	NFHFE36125	2267	NFHFE46125	2947	NFHFE46125N12	3107
160	NFHFE36160	2267	NFHFE46160	2947	NFHFE46160N16	3107
<b>NS250H—70 kA at 380/415 Vac</b>						
200	NFHFE36200	2382	NFHFE46200	2931	NFHFE46200N20	3229
250	NFHFE36250	3506	NFHFE46250	4312	NFHFE46250N25	4802
<b>Cable Connection</b>						
<b>NS100H—70 kA at 380/415 Vac</b>						
16	NFHLE36016	1302	NFHLE46016	1695	NFHLE46016N01	1784
25	NFHLE36025	1302	NFHLE46025	1695	NFHLE46025N02	1784
32	NFHLE36032	1302	NFHLE46032	1695	NFHLE46032N03	1784
40	NFHLE36040	1302	NFHLE46040	1695	NFHLE46040N04	1784
50	NFHLE36050	1302	NFHLE46050	1695	NFHLE46050N05	1784
63	NFHLE36063	1302	NFHLE46063	1695	NFHLE46063N06	1784
80	NFHLE36080	1430	NFHLE46080	1860	NFHLE46080N08	1963
100	NFHLE36100	1430	NFHLE46100	1860	NFHLE46100N10	1963
<b>NS160H—70 kA at 380/415 Vac</b>						
125	NFHLE36125	2417	NFHLE46125	3147	NFHLE46125N12	3307
160	NFHLE36160	2417	NFHLE46160	3147	NFHLE46160N16	3307
<b>NS250H—70 kA at 380/415 Vac</b>						
200	NFHLE36200	2532	NFHLE46200	3131	NFHLE46200N20	3429
250	NFHLE36250	3656	NFHLE46250	4512	NFHLE46250N25	5002

Continued on next page

Ratings and interrupting ratings: page 72

Cable range: pressure terminals are suitable for copper and aluminum cables:

- 100–160 A terminal:
  - 1 cable: 1.5 to 95mm<sup>2</sup> Cu or Al
- 250 A terminal:
  - 1 cable: 1.5 to 185mm<sup>2</sup> Cu or Al

Other termination: page 80

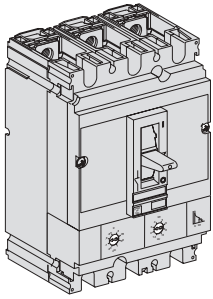
Other trip units: page 78

Accessories: See page 82

Additional information:

- Catalog no. ABTED297054EN
- Installation Guide no. ABTED297054EN
- Data Sheet no. ABTED396051
- D-Fax no. 1001

Complete Device—Continued



**Compact NS100/160/250L Circuit Breaker with Thermal-Magnetic Trip Unit**

Bus Bar Connection						
	3P 3T		4P 3T		4P 4T	
Rating (A)	Catalog No.	List Price	Catalog No.	List Price	Catalog No.	List Price
<b>NS100L—150 kA at 380/415 Vac</b>						
16	NFLFE36016	\$ 1955	NFLFE46016	\$ 2542	NFLFE46016N01	\$ 2631
25	NFLFE36025	1955	NFLFE46025	2542	NFLFE46025N02	2631
32	NFLFE36032	1955	NFLFE46032	2542	NFLFE46032N03	2631
40	NFLFE36040	1955	NFLFE46040	2542	NFLFE46040N04	2631
50	NFLFE36050	1955	NFLFE46050	2542	NFLFE46050N05	2631
63	NFLFE36063	1955	NFLFE46063	2542	NFLFE46063N06	2631
80	NFLFE36080	2083	NFLFE46080	2708	NFLFE46080N08	2811
100	NFLFE36100	2083	NFLFE46100	2708	NFLFE46100N10	2811
<b>NS160L—150 kA at 380/415 Vac</b>						
125	NFLFE36125	3276	NFLFE46125	4259	NFLFE46125N12	4418
160	NFLFE36160	3276	NFLFE46160	4259	NFLFE46160N16	4418
<b>NS250L—150 kA at 380/415 Vac</b>						
200	NFLFE36200	3570	NFLFE46200	4391	NFLFE46200N20	4689
250	NFLFE36250	4694	NFLFE46250	5773	NFLFE46250N25	6262
Cable Connection						
<b>NS100L—150 kA at 380/415 Vac</b>						
16	NFLLE36016	2005	NFLLE46016	2609	NFLLE46016N01	2698
25	NFLLE36025	2005	NFLLE46025	2609	NFLLE46025N02	2698
32	NFLLE36032	2005	NFLLE46032	2609	NFLLE46032N03	2698
40	NFLLE36040	2005	NFLLE46040	2609	NFLLE46040N04	2698
50	NFLLE36050	2005	NFLLE46050	2609	NFLLE46050N05	2698
63	NFLLE36063	2005	NFLLE46063	2609	NFLLE46063N06	2698
80	NFLLE36080	2133	NFLLE46080	2775	NFLLE46080N08	2878
100	NFLLE36100	2133	NFLLE46100	2775	NFLLE46100N10	2878
<b>NS160L—150 kA at 380/415 Vac</b>						
125	NFLLE36125	3426	NFLLE46125	4459	NFLLE46125N12	4618
160	NFLLE36160	3426	NFLLE46160	4459	NFLLE46160N16	4618
<b>NS250L—150 kA at 380/415 Vac</b>						
200	NFLLE36200	3720	NFLLE46200	4591	NFLLE46200N20	4889
250	NFLLE36250	4844	NFLLE46250	5973	NFLLE46250N25	6462

Continued on next page

Ratings and interrupting ratings: page 72

Cable range: pressure terminals are suitable for copper and aluminum cables:

- 100–160 A terminal:
  - 1 cable: 1.5 to 95mm<sup>2</sup> Cu or Al
- 250 A terminal:
  - 1 cable: 1.5 to 185mm<sup>2</sup> Cu or Al

Other termination: page 80

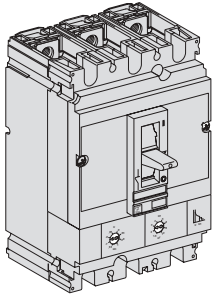
Other trip units: page 78

Accessories: See page 82

Additional information:

- Catalog no. ABTED297054EN
- Installation Guide no. ABTED297054EN
- Data Sheet no. ABTED396051
- D-Fax no. 1001

**Complete Device**—Continued



**Compact NS100/160/250NA Molded Case Switch – Non-Automatic**

<b>Bus Bar Connection</b>						
	<b>2P</b>		<b>3P</b>		<b>4P</b>	
<b>Rating (A)</b>	<b>Catalog No.</b>	<b>List Price</b>	<b>Catalog No.</b>	<b>List Price</b>	<b>Catalog No.</b>	<b>List Price</b>
<b>NS100NA</b>						
100	NFNFE26000S10	\$ 781	NFNFE36000S10	\$ 977	NFNFE46000S10	\$ 1305
<b>NS160NA</b>						
160	NFNFE26000S16	1098	NFNFE36000S16	1372	NFNFE46000S16	1820
<b>NS250NA</b>						
250	NFNFE26000S25	1336	NFNFE36000S25	1670	NFNFE46000S25	2138
<b>Cable Connection</b>						
<b>NS100NA</b>						
100	NFNLE26000S10	815	NFNLE36000S10	1027	NFNLE46000S10	1327
<b>NS160NA</b>						
160	NFNLE26000S16	1198	NFNLE36000S16	1522	NFNLE46000S16	2020
<b>NS250NA</b>						
250	NFNLE26000S25	1436	NFNLE36000S25	1820	NFNLE46000S25	2338

**Cable range:** pressure terminals are suitable for copper and aluminum cables:

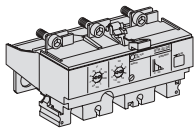
- 100–160 A terminal:  
1 cable: 1.5 to 95mm<sup>2</sup> Cu or Al
- 250 A terminal:  
1 cable: 1.5 to 185mm<sup>2</sup> Cu or Al

**Other termination:** page [80](#)

**Accessories:** See page [82](#)

**Additional information:**

- **Catalog no.** ABTED297054EN
- **Installation Guide no.** ABTED297054EN
- **Data Sheet no.** ABTED396051
- **D-Fax no.** 1001



**Trip Unit (Replaceable by Field Services only)**

**Thermal-Magnetic Trip Unit TM16D to TM250D**

Rating (A)	2P		3P		4P 3T		4P 4T	
	Catalog No.	List Price	Catalog No.	List Price	Catalog No.	List Price	Catalog No.	List Price
16	29025	\$ 223	29035	\$ 278	29045	\$ 362	29055	\$ 452
25	29024	223	29034	278	29044	362	29054	452
32	29027	223	29037	278	29047	362	29057	452
40	29023	223	29033	278	29043	362	29053	452
50	29026	223	29036	278	29046	362	29056	452
63	29022	223	29032	278	29042	362	29052	452
80 for NS100	29021	326	29031	406	29041	528	29051	631
100 for NS100	29020	326	29030	406	29040	528	29050	631
125	30421	466	30431	583	30441	758	30451	918
160 for NS160	30420	466	30430	583	30440	758	30450	918
200	31421	466	31431	583	31441	758	31451	1015
250	31420	1365	31430	1706	31440	2099	31450	2588

**Thermal-Magnetic Trip Unit TM16G to TM63G**

Rating (A)	Trip Function	Magnetic	3P 3T		4P 4T	
			Catalog No.	List Price	Catalog No.	List Price
16	H56	63 A	29155	342	29165	501
25	H57	80 A	29154	342	29164	501
40	H57	80 A	29153	342	29163	501
63	H58	125 A	29152	342	29162	501

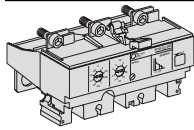
**Magnetic Only Trip Unit MA2.5 to MA220**

2.5	M59	6-14xln	29125	357		
6.3	M60	6-14xln	29124	357		
12.5	M61	6-14xln	29123	357		
25	M62	6-14xln	29122	357		
50	M63	6-14xln	29121	357		
100	M64	6-14xln	29120	357	29130	500
150	M52	8-13xln	30500	357	30510	500
220	M53	8-13xln	31500	499	31510	698

**Molded Case Switch Trip Module NA250 — Non Automatic**

250	29201	195	29202	273
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*Continued on next page*



**Electronic Trip Unit STR—SE (Standard Protection)**

	Rating	Trip Function	3P 3T		4P 3T, 4T, 3T+rN	
			Catalog No.	List Price	Catalog No.	List Price
STR22SE	40 A	E20	29072	\$ 822	29802	\$ 1069
STR22SE	100 A	E20	29070	822	29800	1069
STR22SE	160 A	E20	30470	822	30480	1069
STR22SE	250 A	E20	31470	1878	31480	2311

**Electronic Trip Unit STR—ME (Motor Protection)**

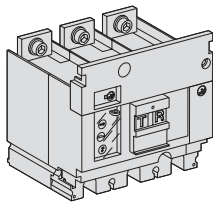
STR22ME	40 A	E40	29173	822		
STR22ME	50 A	E40	29172	822		
STR22ME	80 A	E40	29171	822		
STR22ME	100 A	E40	29170	822		
STR22ME	150 A	E40	30520	822		
STR22ME	220 A	E40	31520	1878		

SDTAM contactor opening module for STR22ME trip unit

110-240 Vac and Vdc	29424	273		
24-48 Vac, 24-72 Vdc	29430	273		

**Electronic Trip Unit STR—GE (Protection of systems supplied by generators)**

STR22GE	40 A (NS100)	E30	29076	822	29086	1069
STR22GE	100 A (NS100)	E30	29075	822	29085	1069
STR22GE	160 A (NS160/250)	E30	30475	822	30485	1069
STR22GE	250 A (NS250)	E30	31475	1878	31485	2311



**Vigi™ Module or Ammeter Module**

**Vigi Module**

ME for NS100/160 200-400 Vac	0.3 A	VA	29212	1145	29213	1158
MH for NS100/160 220-440 Vac	0.03 A-10 A	VB	29210	1635	29211	1654
MH for NS250 220-440 Vac	0.03 A-10 A	VB	31535	2445	31536	2692
MH for NS100/160 440-550 Vac	0.03 A-10 A	VC	29215	1635	29216	1654
MH for NS250 440-550 Vac	0.03 A-10 A	VC	31533	2445	31534	2692
Connection of a 4-pole Vigi on a 3-pole circuit breaker					29214	43.10

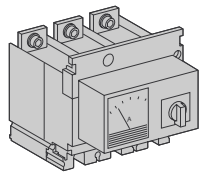
**Insulation Monitoring Module**

Operation is identical to that of a Vigi module but without circuit breaker tripping

For NS100/160/NS250	VF	29459	1615	29460	1666
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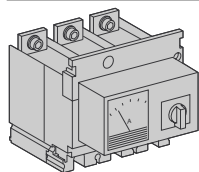
**Ammeter Module**

100 A	PA	29455	989	29456	1094
160 A	PB	30555	989	30556	1094
250 A	PC	31565	989	31566	1094



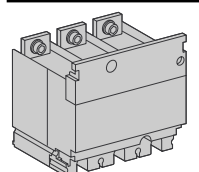
**Ammeter Module with I Max**

100 A	PL	34849	911		
160 A	PM	34850	911		
250 A	PN	34851	911		



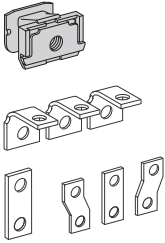

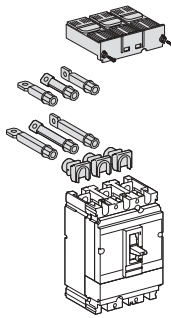
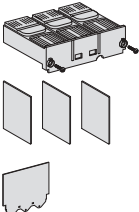
**Current Transformer Module**

100 A	PF	29457	651	29458	704
160 A	PG	30557	651	30558	704
250 A	PH	31567	651	31568	704



## Installation and Connection

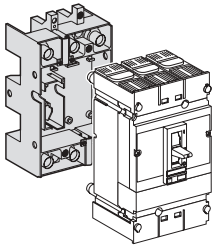
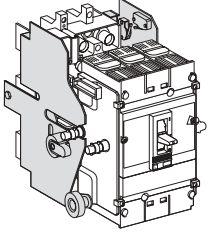
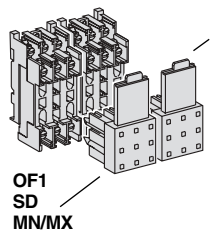
N F N L E 3 6 0 1 6  
Termination No.

			Term. No.	Catalog No.	List Price	
<b>Bus Bar Connection</b>						
	<b>Connecting Nuts and Bolts</b>		F			
	Twelve M6 nuts and bolts for NS100			29234	\$ 79	
	Twelve M8 nuts and bolts for NS160/250			30554	79	
	<b>Terminal Extensions — Supplied with 2 (or 3) Phase Barriers</b>					
	Angular terminal	set of 3			29261	46
		set of 4			29262	61
	Straight terminal extensions	set of 3			29263	46
		set of 4			29264	61
	Spreaders	3P			31563	43.10
		4P			31564	59
<b>Cable Connection</b>						
	<b>100–160 A Lugs (1) 1.5 to 95mm<sup>2</sup> Cu or Al</b>					
	Field-installable	One side	3P		29242	25.20
			4P		29243	33.60
	Factory-mounted	Both sides	3P	L		50
			4P	L		67
		Line side only	3P	M		25.20
			4P	M		33.60
		Load side only	3P	P		25.20
			4P	P		33.60
	<b>250 A Lugs (1) 95 to 185mm<sup>2</sup> Cu or Al</b>					
Field-installable	One side	3P		29259	75	
		4P		29260	100	
Factory-mounted	Both sides	3P	L		150	
		4P	L		200	
	Line side only	3P	M		75	
		4P	M		100	
	Load side only	3P	P		75	
		4P	P		100	
Voltage takeoffs for 250 A lugs		set of 2		29348	18.90	
<b>Distribution Lugs (6) 35mm<sup>2</sup> Cu or Al (Field-installable Only)</b>						
		Set of 3 lugs with phase barriers		29248	189	
		Set of 4 lugs with phase barriers		29249	247	
<b>Rear Connection = Bus Bar Connection + Rear Connection</b>						
	<b>Short Rear Connection Kit</b>					
			3P	S	29237	240
			4P	S	29238	303
	Consisting of:	Kit 3P	Short rear connections (set of two)		29235 (3)	56 ea.
			Short terminal covers (set of two)		29321	72
		Kit 4P	Short rear connections (set of two)		29235 (4)	56 ea.
			Short terminal covers (set of two)		29322	79
	<b>Mixed Rear Connection Kit</b>					
			3P		29239	254
			4P		29240	331
Consisting of:	Kit 3P	Short rear connections (set of two)		29235 (2)	56 ea.	
		Long rear connection (set of two)		29236	70	
		Short terminal covers (set of two)		29321	72	
	Kit 4P	Short rear connections (set of two)		29235 (2)	56 ea.	
		Long rear connections (set of two)		29236 (2)	70 ea.	
		Short terminal covers (set of two)		29322	79	
<b>Connection Accessories</b>						
	<b>Terminal Covers</b>					
	Short (1 pair) (Cable connection)	3P		29321	72	
		4P		29322	79	
	Long (1 pair) (Bus connection)	3P		29323	81	
4P			29324	86		
<b>Phase Barriers</b>		Set of 6		29329	34.70	
<b>Two Insulating Screens (fixed circuit breaker)</b>						
		3P		29330	35.70	
		4P		29331	35.70	

Continued on next page



**Installation and Connection**—Continued

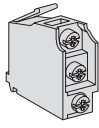
		Term. No	Catalog No.	List Price		
<b>Plug-in Mounting = Bus Bar Connection + Plug-in Kit</b>						
	<b>Kit for Compact Circuit Breaker (Stationary and Moving Part)</b>	2P (3P frame)	N	29288	\$ 348	
		3P	N	29289	425	
		4P	N	29290	567	
	<b>Stationary Part</b> Consisting of:	Plug-in base	2P		29265	186
			3P		29266	232
			4P		29267	336
	<b>Moving Part</b> ① Consisting of:	Safety trip interlock			29270	26.30
		Short terminal covers	3P		29321	72
			4P		29322	79
		Power connections	2P		29268 (2)	31.50 ea.
3P				29268 (3)	31.50 ea.	
4P				29268 (4)	31.50 ea.	
<b>Kit for VigiCompact™ Circuit Breaker (Stationary and Moving Part)</b>		3P	N	29291	576	
	4P	N	29292	762		
<b>Stationary Part</b> Consisting of:	Plug-in base	3P		29266	232	
		4P		29267	336	
<b>Moving Part</b> ① Consisting of:	Safety trip interlock			29270	26.30	
	Short terminal covers	3P		29321	72	
		4P		29322	79	
	Power connections	3P		29269 (3)	82 ea.	
		4P		29269 (4)	82 ea.	
<b>Drawout Mounting = Bus Bar Connection + Drawout Kit</b>						
	<b>Kit for Compact Circuit Breaker (Stationary and Moving Part)</b>	2P (3P frame)	D	29298	868	
		3P	D	29299	945	
		4P	D	29300	1087	
	<b>Stationary Part</b> Consisting of:	Plug-in base	2P		29265	186
			3P		29266	232
			4P		29267	336
		Fixed part of chassis	2P/3P/4P		29282	391
	<b>Moving Part</b> ① Consisting of:	Safety trip interlock			29270	26.30
		Short terminal covers	3P		29321	72
			4P		29322	79
Power connections		2P		29268 (2)	31.50 ea.	
		3P		29268 (3)	31.50 ea.	
		4P		29268 (4)	31.50 ea.	
Moving part of chassis		2P/3P/4P		29283	130	
<b>Kit for VigiCompact Circuit Breaker (Stationary and Moving Part)</b>	3P	D	29301	1097		
	4P	D	29302	1283		
<b>Stationary Part</b> Consisting of:	Plug-in base	3P		29266	232	
		4P		29267	336	
	Fixed part of chassis	3P/4P		29282	391	
<b>Moving Part</b> ① Consisting of:	Safety trip interlock			29270	26.30	
	Short terminal covers	3P		29321	72	
		4P		29322	79	
	Power connections	3P		29269 (3)	82 ea.	
		4P		29269 (4)	82 ea.	
	Moving part of chassis	3P/4P		29283	130	
<b>Plug-in and Drawout Accessories</b>						
	<b>Secondary Disconnecting Blocks</b>	Fixed part	9-wire connector	29273	63	
		Moving part	9-wire connector	29274	39.90	
			Support for 2 moving connectors	29275	22.10	
	<b>Plug-In Base Accessories</b>	Long insulated terminals	3P		29276	53
			4P		29277	67
		Two shutters for plug-in base			29271	31.50
	<b>Chassis Accessories</b>	Extended escutcheon for toggle			29284	51
		Extended escutcheon for Vigi module			29285	53
		Locking device (key lock is not included)			29286	109
		Two position indicating switches (connected/disconnected)			29287	138

① Termination number is HJ00 for moving part only.

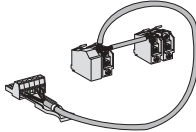
## Accessories

- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

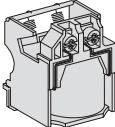
N, F, N, L, E, 3, 6, 0, 1, 6, A, B, S, A, M, A  
Options

Electrical Accessories	Auxiliary Switch (SPDT Type)		Volts (V)	Option No.	Catalog No.	List Price	
	Standard	One auxiliary switch (OF)		AA	29450	\$ 198	
		Two auxiliary switches (OF)		AB	29450 (2)	198 ea.	
		Alarm switch (SD)		BC ①	29450	198	
		Overcurrent trip switch (SDE)		BD ①		226	
		Consisting of:	OF switch			29450	198
			SDE adapter ②			29451	27.30
	Low Level	One auxiliary switch (OF)			AE	29452	248
		Two auxiliary switches (OF)			AF	29452 (2)	248 ea.
		Alarm switch (SD)			BH ③	29452	248
		Overcurrent trip switch (SDE)			BJ ③		275
		Consisting of:	OF switch			29452	248
			SDE adapter ①			29451	27.30

### Auxiliary, Alarm and Overcurrent Trip Switches with Communication Module

	Low level OF+SD+SDE				29453	674
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### Shunt Trip and Undervoltage Trip

	MX (shunt trip)	AC 50/60 Hz	24	SK	29384	478
			48	SL	29385	478
			110/130	SA	29386	478
			208/277	SD	29387	478
			380/480	SH	29388	478
			525/600	SJ	29389	478
		DC	12	SN	29382	478
			24	SO	29390	478
			30	SU	29391	478
			48	SP	29392	478
			60	SV	29383	478
			125	SR	29393	478
	MN (undervoltage trip)	AC 50/60 Hz	24	UK	29404	478
			48	UL	29405	478
			110/130	UA	29406	478
			208/277	UD	29407	478
			380/480	UH	29408	478
			525/600	UJ	29409	478
		DC	12	UN	29402	478
			24	UO	29410	478
			30	UU	29411	478
			48	UP	29412	478
			60	UV	29403	478
			125	UR	29413	478
	250	US	29414	478		
	MN 48 Vac with time delay			29420	847	
	Consisting of: MN 48 Vdc			29412	478	
	Delay unit 48 V 50/60 Hz			29426	370	
	MN 220/240 Vac with time delay			29422	814	
	Consisting of: MN 250 Vdc			29414	478	
	Delay unit 220/240 V 50/60 Hz			29427	336	

### Wiring Harness

	9-wire disconnecting harness				29272	151
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① BE = BC + BD

② Not needed with STR trip unit. SDE adapter provided with motor operator.

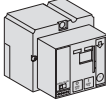
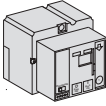
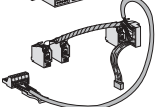
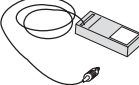

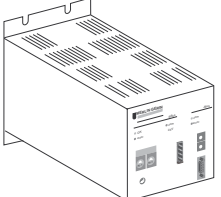
③ BK = BH + BJ

# Compact® NS100/160/250 Circuit Breakers

## Accessories—Continued

- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

N<sub>1</sub>F<sub>1</sub>N<sub>1</sub>L<sub>1</sub>E<sub>1</sub>3<sub>1</sub>6<sub>1</sub>0<sub>1</sub>1<sub>1</sub>6<sub>1</sub>A<sub>1</sub>B<sub>1</sub>S<sub>1</sub>A<sub>1</sub>M<sub>1</sub>A<sub>1</sub>  
Options

Electrical Accessories	Motor Operator with SDE Adapter		Volts (V)	Option No.	Catalog No.	List Price
	MT150 for NS100/160	AC 50/60 Hz	48/60	ML	29440	\$ 774
			110/130	MA	29433	774
			208/277	MD	29434	774
			380/480	MH	29435	774
		DC	24/30	MO	29436	774
			48/60	MP	29437	774
	110/130		MR	29438	774	
	250		MS	29439	774	
	MT250 for NS250	AC 50/60 Hz	48/60	ML	31548	2082
			110/130	MA	31540	2082
			208/277	MD	31541	2082
			380/480	MH	31542	2082
		DC	24/30	MO	31543	2082
			48/60	MP	31544	2082
		110/130	MR	31545	2082	
		250	MS	31546	2082	
	Locking device with Ronis key lock				29449	156
<b>Wiring Harness</b>						
	9-wire disconnecting harness				29272	151
<b>Motor Operator with Communication and Auxiliary Switches Modules and SDE Adapter</b>						
	MT150 for MS100/160	AC 50/60 Hz	220/240		29441	1782
	MT250 for NS250	AC 50/60 Hz	220/240		31549	2528
						
<b>Test kits</b>		Mini test kit (batteries not supplied)			43362	538
		Calibration test kit			120	55391
						
<b>Communication Module</b>	<b>Data Concentrator</b>					
	DC150	AC 50/60 Hz and DC	110/240 115/125		50823	4150
						


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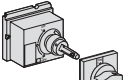
**Accessories—Continued**

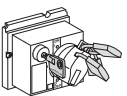
- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

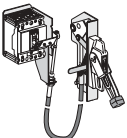
N<sub>1</sub>F<sub>1</sub>N<sub>1</sub>L<sub>1</sub>E<sub>1</sub>3<sub>1</sub>6<sub>1</sub>0<sub>1</sub>1<sub>1</sub>6<sub>1</sub>A<sub>1</sub>B<sub>1</sub>S<sub>1</sub>A<sub>1</sub>M<sub>1</sub>A<sub>1</sub>R<sub>1</sub>D<sub>1</sub>1<sub>1</sub>2  
Options

**Operating Handles**


Directly Mounted	Option No.	Catalog No.	List Price
	Standard black handle	RD12	\$ 150
	Red handle on yellow bezel	RD22	156
	MCC conversion accessory		63
	CNOMO conversion accessory (not UL Listed)		103

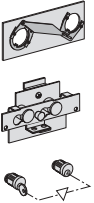
Door Mounted	Option No.	Catalog No.	List Price
	Standard black handle		255
	Red handle on yellow bezel		266
	Telescopic handle for drawout mounting		328

Accessories	Option No.	Catalog No.	List Price
	Key lock adapter		29344 38.90
	Key locks <sup>①</sup>	Ronis 1351.500	41940 97
		Profalux KS5 B24 D4Z	42888 97
	Indication	One early-break switch	29345 80
	Auxiliary switch	Two early-make switches	29346 119


Cable Operating Handle and A1 Handle	Option No.	Catalog No.	List Price
	3P operating mechanism	36/914	9422CSF30 134
	cable length (in./mm)	90/1524	9422CSF50 142
		120/3048	9422CSF10 162
	A1 painted handle (order separately)		9422A1 66
			<b>CP1 Discount</b>


**Locks, Interlocking**

Handle Padlocking Device	Option No.	Catalog No.	List Price
	Removable (lock OFF or ON)		29370 33.60
	Fixed (lock OFF or ON)		29371 51
	Fixed (lock OFF only)		NFPAF 81

Interlocking	Option No.	Catalog No.	List Price
	Mechanical for circuit breakers with rotary operating handles		29369 329
	Mechanical for circuit breakers with toggles		29354 329
	Key lock type (2 locks, 1 key)	Ronis 1351.500	41950 122
Profalux KS5 B24 D4Z		42878 122	

**Installation Accessories**

Front-panel Escutcheons	Option No.	Catalog No.	List Price
	Toggle		29315 31.50
	Vigi™ module		29316 29.40
	Rotary operating handle, motor operator or extended escutcheon		29317 42
	Vigi module or ammeter (IP405)		29318 42

Handle Rubber Boot	Option No.	Catalog No.	List Price
		29319	90

Sealing Accessories	Option No.	Catalog No.	List Price
		29375	29.40

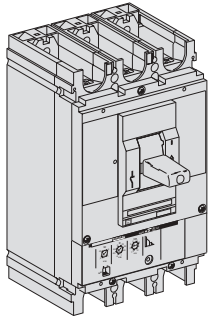
**Spare Parts**

10 Spare Handle Extensions	Option No.	Catalog No.	List Price
		29313	93
100 Identification Labels		29314	79

<sup>①</sup> Will need the key lock adapter above (Catalog No. 29344) for both Ronis and Profalux key lock installation.

# IEC 947-2 Rated Compact NS400/630 Circuit Breakers

## Complete Device



### Compact NS400/630N Circuit Breaker with STR23SE Trip Unit—45 kA at 380/415 Vac

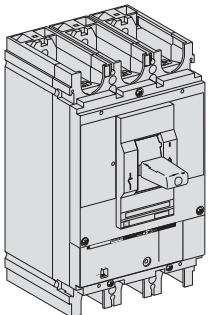
Bus Bar Connection					
		3P		4P	
	Rating (A)	Catalog No.	List Price	Catalog No.	List Price
NS400N	150	NJNFE36150E20	\$ 3039	NJNFE46150E20	\$ 3768
	250	NJNFE36250E20	3039	NJNFE46250E20	3768
	400	NJNFE36400E20	3039	NJNFE46400E20	3768
NS630N	630	NJNFE36630E20	5026	NJNFE46630E20	5931
Cable Connection					
NS400N	150	NJNLE36150E20	3228	NJNLE46150E20	4020
	250	NJNLE36250E20	3228	NJNLE46250E20	4020
	400	NJNLE36400E20	3228	NJNLE46400E20	4020
NS630N	630	NJNLE36630E20	5278	NJNLE46630E20	6267

### Compact NS400/630H Circuit Breaker with STR23SE Trip Unit—70 kA at 380/415 Vac

Bus Bar Connection					
	Rating (A)	Catalog No.	List Price	Catalog No.	List Price
NS400H	150	NJHFE36150E20	5190	NJHFE46150E20	6539
	250	NJHFE36250E20	5190	NJHFE46250E20	6539
	400	NJHFE36400E20	5190	NJHFE46400E20	6539
NS630H	630	NJHFE36630E20	5376	NJHFE46630E20	6774
Cable Connection					
NS400H	150	NJHLE36150E20	5379	NJHLE46150E20	6791
	250	NJHLE36250E20	5379	NJHLE46250E20	6791
	400	NJHLE36400E20	5379	NJHLE46400E20	6791
NS630H	630	NJHLE36630E20	5565	NJHLE46630E20	7026

### Compact NS400/630L Circuit Breaker with STR23SE Trip Unit—150 kA at 380/415 Vac

Bus Bar Connection					
	Rating (A)	Catalog No.	List Price	Catalog No.	List Price
NS400L	150	NJLFE36150E20	6102	NJLFE46150E20	7505
	250	NJLFE36250E20	6102	NJLFE46250E20	7505
	400	NJLFE36400E20	6102	NJLFE46400E20	7505
NS630L	630	NJLFE36630E20	8365	NJLFE46630E20	10289
Cable Connection					
NS400L	150	NJLLE36150E20	6291	NJLLE46150E20	7757
	250	NJLLE36250E20	6291	NJLLE46250E20	7757
	400	NJLLE36400E20	6291	NJLLE46400E20	7757
NS630L	630	NJLLE36630E20	8554	NJLLE46630E20	10541



### Compact NS400/630NA Molded Case Switch

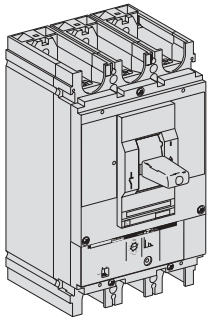
Bus Bar Connection					
	Rating (A)	Catalog No.	List Price	Catalog No.	List Price
NS400NA	400	NJNFE36000S40	2796	NJNFE46000S40	\$ 3523
NS630NA	630	NJNFE36000S63	3569	NJNFE46000S63	4283
Cable Connection					
NS400NA	400	NJNLE36000S40	2985	NJNLE46000S40	3985
NS630NA	630	NJNLE36000S63	3821	NJNLE46000S63	4619

*Continued on next page*

**Ratings and interrupting ratings:** page 73  
**Cable range:** pressure terminals are suitable for copper and aluminum cables:  
 ■ 400 A terminal:  
 1 cable: 35 to 300mm<sup>2</sup> Cu or Al  
 ■ 630 A terminal:  
 2 cables: 85 to 240mm<sup>2</sup> Cu or Al

**Other termination:** page 89  
**Other trip units:** page 87  
**Accessories:** page 91  
**Additional information:**  
 ■ Catalog no. ABTED297054EN  
 ■ Installation Guide no. ABTED297054EN  
 ■ Data Sheet no. ABTED396041  
 ■ D-Fax no. 2384

Complete Device—continued



**Compact NS400/630H Circuit Breaker for DC Application—Magnetic Only**

Bus Bar Connection						
	Rating (A)	Type	Magnetic (A)	Trip Function	Catalog No.	List Price
NS400H	400	MP1	800–1600	D10	NJHFE36400D10	\$ 4775
		MP2	1250–2500	D32	NJHFE36400D32	4775
NS630H	630	MP1	800–1600	D10	NJHFE36630D10	4946
		MP2	1250–2500	D32	NJHFE36630D32	4946
		MP3	2000–4000	D36	NJHFE36630D36	4946
Cable Connection						
NS400H	400	MP1	800–1600	D10	NJHLE36400D10	4964
		MP2	1250–2500	D32	NJHLE36400D32	4964
NS630H	630	MP1	800–1600	D10	NJHLE36630D10	5198
		MP2	1250–2500	D32	NJHLE36630D32	5198
		MP3	2000–4000	D36	NJHLE36630D36	5198

**Compact NS400/630H Circuit Breaker for Motor Circuit Protection—Magnetic Only**

Bus Bar Connection						
	Rating (A)	Type	Magnetic (A)	Trip Function	Catalog No.	List Price
NS400H	400	MA320	2016–4000	M36	NJHFE36400M36	\$ 3522
NS400L	400	MA320	2016–4000	M36	NJLFE36400M36	4207
NS630H	630	MA500	3150–6250	M64	NJHFE36630M64	5836
NS630L	630	MA500	3150–6250	M64	NJLFE36630M64	6972
Cable Connection						
NS400H	400	MA320	2016–4000	M36	NJHLE36400M36	3711
NS400L	400	MA320	2016–4000	M36	NJLLE36400M36	4396
NS630H	630	MA500	3150–6250	M64	NJHLE36630M64	6088
NS630L	630	MA500	3150–6250	M64	NJLLE36630M64	7224

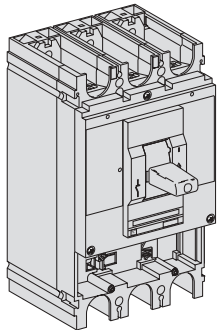


**Compact NS400N Circuit Breakers – 1000 Vac—10 kA at 1150 Vac**

	Rating (A)	3P	List Price
Bus Bar Connection			
NS400N with STR23SP Trip Unit	150	NJNFE1150E20	\$ 3192
	250	NJNFE1250E20	3192
	400	NJNFE1400E20	3554
Cable Connection			
NS400N with STR23SP Trip Unit	150	NJNLE1150E20	\$ 3381
	250	NJNLE1250E20	3381
	400	NJNLE1400E20	3806

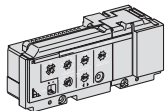
**Ratings and interrupting ratings:** page 73  
**Cable range:** pressure terminals are suitable for copper and aluminum cables:  
 ■ 400 A terminal:  
 1 cable: 35 to 300mm<sup>2</sup> Cu or Al  
 ■ 630 A terminal:  
 2 cable: 85 to 240mm<sup>2</sup> Cu or Al

**Other termination:** page 89  
**Other trip units:** page 87  
**Accessories:** page 91  
**Additional information:**  
 ■ **Catalog no.** ABTED297054EN  
 ■ **Installation Guide no.** ABTED297054EN  
 ■ **Data Sheet no.** ABTED396041, ABTED397078 (1000 Vac)  
 ■ **D-Fax no.** 2384, 998 (1000 Vac)



### Compact NS400/630 Circuit Breaker Basic Frame

Rating (A)	3P		4P	
	Catalog No.	List Price	Catalog No.	List Price
<b>NS400/630N—Bus Bar Connection</b>				
150	NJNFE36150F40	\$ 1823	NJNFE46150F40	\$ 2553
250	NJNFE36250F40	1823	NJNFE46250F40	2553
400	NJNFE36400F40	1823	NJNFE46400F40	2553
630	NJNFE36630F63	3810	NJNFE46630F63	4716
<b>NS400/630H—Bus Bar Connection</b>				
150	NJHFE36150F40	3974	NJHFE46150F40	5324
250	NJHFE36250F40	3974	NJHFE46250F40	5324
400	NJHFE36400F40	3974	NJHFE46400F40	5324
630	NJHFE36630F63	4160	NJHFE46630F63	5558
<b>NS400/630L—Bus Bar Connection</b>				
150	NJLFE36150F40	4886	NJLFE46150F40	6290
250	NJLFE36250F40	4886	NJLFE46250F40	6290
400	NJLFE36400F40	4886	NJLFE46400F40	6290
630	NJLFE36630F63	7149	NJLFE46630F63	9073



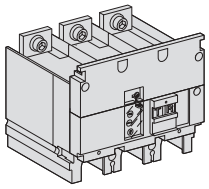
### Electronic Trip Unit (Field Replaceable)

	Trip Function	Catalog No.	List Price
<b>Long-time and Instantaneous Protection</b>			
STR23SE	E20	32420	\$ 1216
<b>Long-time, Short-time, Instantaneous Protection and Options</b>			
STR53UE-F	E53	32424	2101
STR53UE-FT	E54	32425	2986
STR53UE-FI	E58	32426	3075
STR53UE-FTI	E59	32427	3961
Communication wiring		32441	72
Replacement battery for STR53UE		32434	280
<b>Motor Circuit Protection</b>			
STR43ME-F	E43	32430	1776
Optional STDAM (110/240 Vac)		29424	273
Optional STDAM (24/48 Vdc)		29430	273
STR43ME-FI	E48	32431	2750
Optional STDAM (110/240 Vac)		29424	273
Optional STDAM (24/48 Vdc)		29430	273
Communication wiring		32441	72
Replacement battery for STR43ME		32434	280

**Summary of options:**

F: Fault indicators  
 T: Residual type ground fault protection  
 I: Ammeter

*Continued on next page*



### Vigi™ Module or Ammeter Module

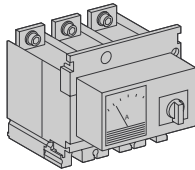
		3P		4P		
Rating	Trip Function	Catalog No.	List Price	Catalog No.	List Price	
<b>Vigi Module</b>						
MB 220 to 440 Vac	0.3-30 A	VD	32455	\$ 2903	32456	\$ 3131
MB 440 to 550 Vac	0.3-30 A	VE	32453	2903	32454	3131
Connection for a 4P Vigi on a 3P circuit breaker				32457	46.20	

### Insulating Monitoring Module

Operation is identical to that of a Vigi module but without circuit breaker tripping

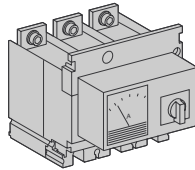
220 to 440 Vac	VF	32659	2875	32660	3073
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### Ammeter Module



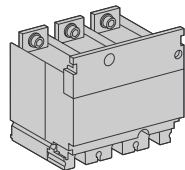
400 A	PD	32655	1350	32656	1450
630 A	PE	32855	1350	32856	1450

### Ammeter Module with I Max



400 A	PJ	34852	1350		
630 A	PK	34853	1350		

### Current Transformer Module



400 A	PP	32657	975	32658	1025
630 A	PQ	32857	975	32858	1025



## Installation and Connection

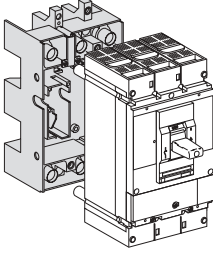
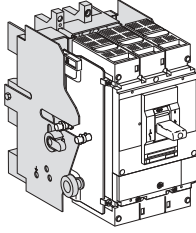
- For factory-installed connection accessories complete the circuit breaker catalog number by inserting the **termination numbers** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

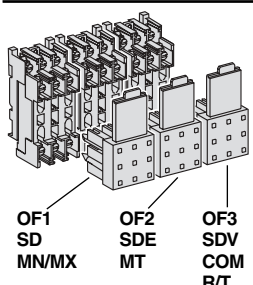
N | J | N | L | E | 3 | 6 | 4 | 0 | 0 | E | 2 | 0  
Termination No.

		Term. No.	Catalog No.	List Price	
<b>Bus Bar Connection</b>					
<b>Bus Bar Connection Hardware</b>		3P (three per set)	36966	\$ 15.80	
		4P (four per set)	36967	21	
<b>Front Connection</b>					
Distance between poles of all Compact and VigiCompact NS400/630/N/H/L circuit breakers is 1.8 in./45mm					
A set of spreaders is available for connection to extend this distance to 2.1 in./52.5mm or 2.8 in./70mm					
2.1 in./52.5mm		3P	32490	101	
		4P	32491	134	
2.8 in./70mm		3P	32492	194	
		4P	32493	259	
<b>Terminal Extensions</b>					
angular terminals		set of 3	32484	101	
		set of 4	32485	134	
edgewise pads		set of 3	32486	207	
		set of 4	32487	277	
<b>Cable Connection</b>					
<b>400 A Lugs (1) 2/0 AWG to 600 kcmil Cu or 500 kcmil Al/35 to 300mm<sup>2</sup> Cu/Al</b>					
Field-installable	One side	3P	32479	\$ 95	
		4P	32480	126	
Factory-mounted	Both sides	3P	L	189	
		4P	L	252	
	Line side only	3P	M	95	
		4P	M	126	
	Load side only	3P	P	95	
		4P	P	126	
<b>630 A Lugs (2) 2/0 AWG to 500 kcmil Cu/Al/35 to 240mm<sup>2</sup> Cu/Al</b>					
Field-installable	One side	3P	32481	126	
		4P	32482	168	
Factory-mounted	Both sides	3P	L	252	
		4P	L	336	
	Line side only	3P	M	126	
		4P	M	168	
	Load side only	3P	P	126	
		4P	P	168	
<b>Voltage Take Offs for 400 and 630 A Lugs (Set of Two)</b>			29348	18.90	
<b>Rear Connection = Bus Bar Connection + Rear Connection</b>					
<b>Mixed Rear Connection Kit</b>		3P	S	32477	565
		4P	S	32478	747
Consisting of:	Kit 3P	Short rear connections		32475 (2)	146 ea.
		Long rear connections		32476	174
		Short terminal covers		32562	99
	Kit 4P	Short rear connections		32475 (2)	146 ea.
		Long rear connections		32476 (2)	174 ea.
		Short terminal covers		32563	107
<b>Connection Accessories</b>					
<b>Terminal Shields</b>	Short (1 pair)	3P	32562	99	
		4P	32563	107	
	Long (1 pair)	3P	32564	130	
		4P	32565	146	
	For spreaders (1 pair)	3P	32572	146	
		4P	32573	162	
<b>Phase Barriers</b>		Set of 6	32570	48.30	
<b>Two Insulating Screens (fixed breaker)</b>	2.1 in./52.5mm pitch	3P	32576	36.80	
		4P	32577	36.80	
	2.8 in./70mm pitch	3P	32578	43.10	
		4P	32579	43.10	

Continued on next page

Installation and Connection—Continued

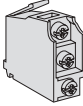
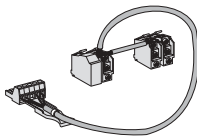
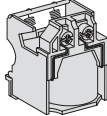
			Term. No.	Catalog No.	List Price		
<b>Plug-in Mounting = Bus Bar Connection + Plug-in Kit</b>							
	<b>Kit for Compact Circuit Breaker (Stationary and Moving Part)</b>		3P	N	32538	\$ 1029	
			4P	N	32539	1268	
	Consisting of:		<b>Stationary Part</b>				
			Plug-in base		3P	32516	711
					4P	32517	879
			<b>Moving Part</b>				
					HJ00		
			Safety trip interlock			32520	30.50
			Short terminal covers		3P	32562	99
					4P	32563	107
		Power connections		3P	32518 (3)	63 ea.	
				4P	32518 (4)	63 ea.	
		<b>Kit for VigiCompact™ Circuit Breaker (Stationary and Moving Part)</b>		3P	N	32540	1246
				4P	N	32541	1558
Consisting of:		<b>Stationary Part</b>					
		Plug-in base		3P	32516	711	
				4P	32517	879	
		<b>Moving part</b>					
				HJ00			
		Safety trip interlock			32520	30.50	
		Short terminal covers		3P	32562	99	
				4P	32563	107	
		Power connections		3P	32519 (3)	135 ea.	
				4P	32519 (4)	135 ea.	
<b>Drawout Mounting = Bus Bar Connection + Drawout Kit</b>							
	<b>Kit for Compact Circuit Breaker (Stationary and Moving Part)</b>		3P	D	32542	\$ 1645	
			4P	D	32543	1885	
	Consisting of:		<b>Stationary Part</b>				
			Plug-in base		3P	32516	711
					4P	32517	879
			Fixed part of chassis		2P/3P/4P	32532	462
			<b>Moving Part</b>				
					HJ00		
			Safety trip interlock			32520	30.50
			Short terminal covers		3P	32562	99
				4P	32563	107	
		Power connections		3P	32518 (3)	63 ea.	
				4P	32518 (4)	63 ea.	
		Moving part of chassis		2P/3P/4P	32533	154	
		<b>Kit for VigiCompact™ Circuit Breaker</b>		3P	D	32544	1863
				4P	D	32545	2175
Consisting of:		<b>Stationary Part</b>					
		Plug-in base		3P	32516	711	
				4P	32517	879	
		Fixed part of chassis		2P/3P/4P	32532	462	
		<b>Moving part</b>					
				HJ00			
		Safety trip interlock			32520	30.50	
		Short terminal covers		3P	32562	99	
				4P	32563	107	
		Power connections		3P	32519 (3)	135 ea.	
				4P	32519 (4)	135 ea.	
		Moving part of chassis		2P/3P/4P	32533	154	
<b>Plug-in and Chassis Accessories</b>							
<b>Secondary Disconnecting Blocks</b>							
		Fixed part		9-wire connector	29273	63	
		Moving part		9-wire connector	32523	39.90	
				Support for 3 moving connectors	32525	28.40	
<b>Plug-In Base Accessories</b>							
		Two IP4 shutters for plug-in base			32521	54	
		Long insulated terminals		3P	32526	67	
				4P	32527	89	
<b>Chassis Accessories</b>							
		Extended escutcheon for toggle			32534	69	
		Extended escutcheon for Vigi module			29285	53	
		Locking devices (not included)			29286	109	
		Two position indicating switches (connected/disconnected)			29287	138	



## Accessories

- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

N, J, N, L, E, 3, 6, 4, 0, 0, E, 2, 0, A, B, S, A, Options

		Volts (V)	Option No.	Catalog No.	List Price						
<b>Electrical Accessories</b>	<b>Auxiliary Switch (SPDT Type)</b>										
		Standard	One auxiliary switch (OF)		AA	29450	\$ 198				
			Two auxiliary switches (OF)		AB	29450 (2)	198 ea.				
			Three auxiliary switches (OF)		AC	29450 (3)	198 ea.				
			Alarm switch (SD)		BC ①	29450	198				
			Overcurrent trip switch (SDE)		BD ①	29450	198				
			Low Level		One auxiliary switch (OF)		AE	29452	248		
			Two auxiliary switches (OF)		AF	29452 (2)	248 ea.				
			Three auxiliary switches (OF)		AG	29452 (3)	248 ea.				
			Alarm switch (SD)		BH ②	29452	248				
			Overcurrent trip switch (SDE)		BJ ②	29452	248				
	<b>Auxiliary, Alarm and Overcurrent Trip Switches with Communication Module</b>										
		Low level	OF + SD + SDE		32551	674					
<b>Shunt trip and Undervoltage Trip</b>											
	MX (Shunt trip)	AC 50/60 Hz	24	SK	29384	478					
			48	SL	29385	478					
			110/130	SA	29386	478					
			208/277	SD	29387	478					
			380/480	SH	29388	478					
			525/600	SJ	29389	478					
				DC	12	SN	29382	478			
					24	SO	29390	478			
					30	SU	29391	478			
					48	SP	29392	478			
					60	SV	29383	478			
					125	SR	29393	478			
					250	SS	29394	478			
			MN (Undervoltage trip)	AC 50/60 Hz		24	UK	29404	478		
						48	UL	29405	478		
						110/130	UA	29406	478		
						208/277	UD	29407	478		
						380/480	UH	29408	478		
						525/600	UJ	29409	478		
						DC		12	UN	29402	478
						24	UO	29410	478		
						30	UU	29411	478		
						48	UP	29412	478		
					60	UV	29403	478			
					125	UR	29413	478			
					250	US	29414	478			
			MN 48 Vac with time delay				29420	847			
		Consisting of:		MN 48 Vdc		29412	478				
				Delay unit 48 V 50/60 Hz		29426	370				
		MN 220/240 Vac with time delay				29422	814				
		Consisting of:		MN 250 Vdc		29414	478				
				Delay unit 220/240 V 50/60 Hz		29427	336				
<b>Wiring Harness</b>											
				9-wire disconnecting harness	29272	151					

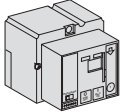
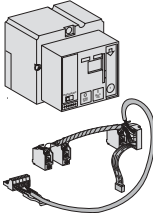


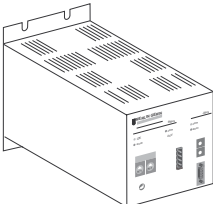
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① BE = BC + BD  
② BK = BH + BJ

**Accessories—Continued**

- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

N | J | N | L | E | 3 | 6 | 4 | 0 | 0 | E | 2 | 0 | A | B | S | A | M | A  
Options

		Voltage (V)	Option No.	Catalog No.	List Price	
<b>Electrical Accessories</b>	<b>Motor Operator with SDE Adapter</b>					
		MT400 for NS400	AC 50/60 Hz	48 /60 ML	32639	\$ 2263
				110/130 MA	32640	2263
				208/277 MD	32641	2263
				380/415 MF	32642	2263
				440/480 MH	32647	2263
		DC	24/30 MO	32643	2363	
			48/60 MP	32644	2363	
			110/130 MR	32645	2363	
			250 MS	32646	2363	
			MT630 for NS630	AC 50/60 Hz	48/60 ML	32839
	110/130 MA	32840			2263	
	208/277 MD	32841			2263	
	380/415 MF	32842			2263	
	440/480 MH	32847			2263	
	DC	24/30 MO		32843	2363	
		48/60 MP		32844	2363	
		110/130 MR		32845	2363	
		250 MS		32846	2363	
		Locking device with Ronis key lock (not included)				32649
Operations counter				32648	150	
<b>Wiring Harness</b>		9-wire disconnecting harness		29272	151	
<b>Motor Operators with Communication and Auxiliary Switches Modules</b>						
	MT400 for NS400	AC 50/60 Hz	220/240	32652	3749	
	MT630 for NS630	AC 50/60 Hz	220/240	32848	3749	
<b>Test Kits</b>			Mini test kit (battery not supplied)		43362	538
			Portable test kit		120	55391
<b>Communication Module</b>	<b>Data Concentrator</b>					
		DC150	AC 50/60 Hz and DC	110/240	50323	4150
			115/125			


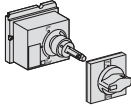
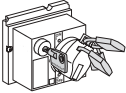
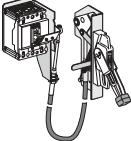
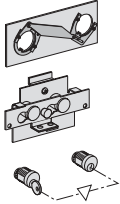


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# Compact® NS400/630 Circuit Breakers

## Accessories—Continued

- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

N, J, N, L, E, 3, 6, 4, 0, 0, E, 2, 0, A, B, S, A, M, A, R, D, 1, 2  
Options —

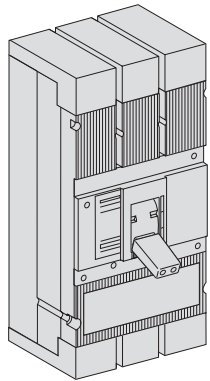
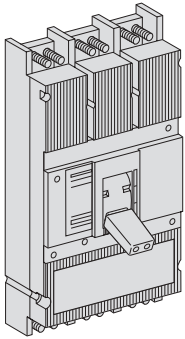
		Option No.	Catalog No.	List Price	
<b>Operating Handles</b>	<b>Direct Mounted</b>				
		Standard black handle	RD12	32597	\$ 244
		Red handle on yellow bezel	RD22	32599	271
		MCC conversion accessory		32606	68
		CNOMO conversion accessory		32602	129
	<b>Door Mounted</b>				
		Standard black handle	RE12	32598	371
		Red handle on yellow bezel	RE22	32600	398
		Telescopic handle for drawout mounting	RT12	32603	411
	<b>Accessories</b>				
		Key lock adapter		32604	38.90
		Key locks <sup>①</sup>	Ronis 1351.500	41940	97
			Profalux KS5 B24 D4Z	42888	97
		Indication auxiliary switch	One early-break switch	32605	80
	Two early-make switches		29346	119	
<b>Cable Operating Mechanism and A1 Handle</b>					
	3P operating mechanism cable length (in./mm)	36/914	CP1 Discount	9422CSJ30	227
		90/1524	CP1 Discount	9422CSJ50	235
		120/3048	CP1 Discount	9422CSJ10	255
	A1 painted handle (order separately)	CP1 Discount	9422A1	66	
<b>Locks, Interlocking</b>	<b>Handle Padlocking Device</b>				
		Removable (lock OFF or ON)	29370	33.60	
		Fixed (lock OFF or ON)	32631	81	
		Fixed (lock OFF only)	NJPAF	81	
	<b>Interlocking (Not UL Listed)</b>				
		Mechanical for circuit breakers with rotary operating handles		32621	329
		Mechanical for circuit breakers with toggles		32614	329
		Key lock type (2 locks, 1 key)	Ronis	41950	122
	Profalux		42878	122	
	<b>Installation Accessories</b>	<b>Front-panel Escutcheons</b>			
		Toggle		32556	36.80
		Rotary operating handle, motor operator or extended escutcheon		32558	49.40
		Vigi module		29316	29.40
		Vigi module or ammeter (IP405)		29318	42
<b>Handle Rubber Boot</b>					
				32560	114
<b>Sealing Accessories</b>					
<b>Spare Parts</b>	Spare Extended Handles		29375	29.40	
	Spare Extended Handles		32553	22.10	
	100 Identification Labels		29314	79	

<sup>①</sup> Will need the key lock adapter above (Catalog No. 32604) for both Ronis and Profalux key lock installation.

# Compact® C801/1001/1251 Circuit Breakers

## IEC 947-2 Rated Compact C Circuit Breakers

### Complete Device



### Compact C801/1001/1251 Circuit Breaker with STR25DE Trip Unit

Bus Bar Connection					
		3P 3T		4P 3T	
Rating (A)		Catalog No.	List Price	Catalog No.	List Price
<b>C801/1001/1251N—50 kA at 380/415 Vac</b>					
C801N	800	CKAXFE36080LI	\$ 6485	CKAXFE46080LI	\$ 7441
C1001N	1000	CKAXFE36100LI	8814	CKAXFE46100LI	10469
C1251N	1250	CKAXFE36125LI	11143	CKAXFE46125LI	13497
<b>C801/1001/1251H—70 kA at 380/415 Vac</b>					
C801H	800	CKHXFE36080LI	7768	CKHXFE46080LI	9109
C1001H	1000	CKHXFE36100LI	10100	CKHXFE46100LI	12141
C1251H	1250	CKHXFE36125LI	12432	CKHXFE46125LI	15173
<b>C801/1001L—150 kA at 380/415 Vac</b>					
C801L	800	CKIXFE36080LI	10168	CKIXFE46080LI	12229
C1000L	1000	CKIXFE36100LI	19566	CKIXFE46100LI	24446
Cable Connection					
<b>C801/1001/1251N—50 kA at 380/415 Vac</b>					
C801N	800	CKAXLE36080LI	6891	CKAXLE46080LI	7969
C1001N	1000	CKAXLE36100LI	9292	CKAXLE46100LI	11091
C1251N	1250	CKAXLE36125LI	11621	CKAXLE46125LI	14119
<b>C801/1001/1251H—70 kA at 380/415 Vac</b>					
C801H	800	CKHXLE36080LI	8174	CKHXLE46080LI	9637
C1001H	1000	CKHXLE36100LI	10578	CKHXLE46100LI	12763
C1251H	1250	CKHXLE36125LI	12910	CKHXLE46125LI	15795
<b>C801/1001L—150 kA at 380/415 Vac</b>					
C801L	800	CKIXLE36080LI	10574	CKIXLE46080LI	12757
C1000L	1000	CKIXLE36100LI	20044	CKIXLE46100LI	25068

### Compact C801/1251NI Molded Case Switch

Bus Bar Connection					
C801NI	800	CKAFE36008S	4941	CKAFE46008S	6424
C1251NI	1250	CKAFE36001S	7847	CKAFE46001S	10201
Cable Connection					
C801NI	800	CKALE36008S	5347	CKALE46008S	6951
C1251NI	1250	CKALE36001S	8325	CKALE46001S	10823

Ratings and interrupting ratings: page 73

Cable range: pressure terminals are suitable for copper and aluminum cables:

- 800 A terminal:
  - 1 to 3 cables: 70 to 185mm<sup>2</sup> Cu or Al
- 1250 A terminal:
  - 1 to 4 cables: 70 to 240mm<sup>2</sup> Cu or Al

Other termination: page 97

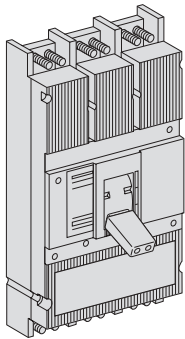
Other trip units: page 96

Accessories: See page 99

Additional information:

- Catalog no. ABTED297054EN
- Installation Guide no. ABTED297054EN
- Data Sheet no. ABTED396042
- D-Fax no. 999

**Complete Device**—Continued



**Compact C1251N Circuit Breaker with STR25DE Trip Unit —1000 Vac**

Rating (A)	3P 3T	
	Catalog No.	List Price
<b>Bus Bar Connection</b>		
400	CKAXFE31040LI	\$ 7774
800	CKAXFE31080LI	10103
1250	CKAXFE31125LI	12453
<b>Cable Connection</b>		
400	CKAXLE31040LI	8180
800	CKAXLE31080LI	10581
1250	CKAXLE31125LI	12931

**Compact C1251N DC Circuit Breaker for DC Application—Magnetic Only**

Rating (A)	Type	Magnetic	3P	
			Catalog No.	List Price
<b>Bus Bar Connection</b>				
1250	P21	1600–3200 A	CKAXFE37125M2	\$ 10431
	P41	3200–6400 A	CKAXFE37125M4	10431

**Ratings and interrupting ratings:** page 73

**Cable range:** pressure terminals are suitable for copper and aluminum cables:

- 800 A terminal:
  - 1 to 3 cables: 70 to 185mm<sup>2</sup> Cu or Al
- 1250 A terminal:
  - 1 to 4 cables: 70 to 240mm<sup>2</sup> Cu or Al

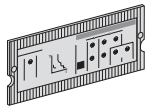
**Other termination:** page 97

**Other trip units:** page 96

**Accessories:** See page 99

**Additional information:**

- **Catalog no.** ABTED297054EN
- **Installation Guide no.** ABTED297054EN
- **Data Sheet no.** ABTED397062
- **D-Fax no.** 997 (1000 Vac)



### Electronic Trip Unit (Replaceable by Field Services only)

#### Long-time and Instantaneous Protection

STR25DE with fine setting	LI	46501	3134
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#### Long-time, Short-time and Instantaneous Protection

STR35SE	LS	46504	5041
STR35GE	LG	46506	5041

#### Long-time, Short-time, Instantaneous Protection and Options

STR55UE	L9	46512	6236
STR55UE RF	L3	46516	7748
STR55UE TRF	L4	46517	9260
STR55UE FC	L5	46520	6050
STR55UE RFC	L7	46522	7748
STR55UE TFC	L6	46524	7542
STR55UE TRFC	L8	46525	9260
Optional ZSI wiring		46485	542

#### Summary of options:

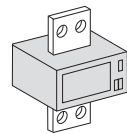
- F: Fault indicators
- T: Residual type ground-fault protection
- R: Load monitoring
- C: Communication with Digipact®

#### Instantaneous Protection Only

STR35ME	M1	46505	5230
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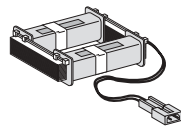
### Neutral Sensor

#### Ground-fault Protection for 3Ø4W System (External Neutral Sensor)



800	46248	1073
1000	46249	1073
1250	46250	1073

#### Neutral Protection (Internal Neutral Sensor)



500	46223	1073
800	46220	1073
1000	46221	1073
1250	46222	1073

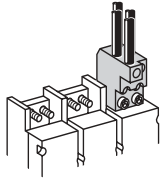


## Installation and Connection

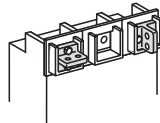
- For factory-installed connection accessories complete the circuit breaker catalog number by inserting the **termination numbers** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

C | K | A | X | L | E | 3 | 6 | 1 | 2 | 5 | L | I |  
 Termination No.

		Term. No.	Special Term. No.	Catalog No.	List Price
<b>Cable Connection</b>					
<b>800 A Lugs—(3) 70 to 185mm<sup>2</sup> for C801</b>					
Field-installable	One side	3P		46961	\$ 203
		4P		46965	264
Factory-mounted	Both sides	3P	L		406
		4P	L		528
	Line side only	3P	M		203
		4P	M		264
	Load side only	3P	P		203
		4P	P		264
<b>1250 A Lugs—(4) 70 to 240mm<sup>2</sup> for C1001/1251</b>					
Field-installable	One side	3P		46960	239
		4P		46994	311
Factory-mounted	Both sides	3P	L		478
		4P	L		622
	Line side only	3P	M		239
		4P	M		311
	Load side only	3P	P		239
		4P	P		311
<b>Optional 1250 A Lugs — (3) 250–600 kcmil for C1001/1251</b>					
Field-installable	One side			46966	239
Factory-mounted	Both sides	3P	L		478
		4P	L		239
	Line side only	3P	M		239
		4P	M		311
Load side only	3P	P		239	
	4P	P		311	



## Rear Connection



<b>Flat Connection</b>		N/H	3P	F	FRL ①	46415	813
			4P	F	FRL ①	46416	1077
		L	3P	F	FRL ①	46417	1134
			4P	F	FRL ①	46418	1506
Consisting of:	Rear connectors	N/H	3P			46958 (6)	99 ea.
			4P			46958 (8)	99 ea.
		L	3P			46916 (6)	152 ea.
	Terminal cover		4P			46916 (8)	152 ea.
			3P			46993 (2)	110 ea.
			4P			46992 (2)	144 ea.
<b>Edgewise Connection</b>		N/H	3P	F	FRL ①	46415	813
			4P	F	FRL ①	46416	1077
		L	3P	F	FRL ①	46419	1260
			4P	F	FRL ①	46420	1260
Consisting of:	Rear connectors	N/H	3P			46958 (6)	99 ea.
			4P			46958 (8)	99 ea.
		L	3P			46913 (6)	173 ea.
	Terminal cover		4P			46913 (8)	173 ea.
			3P			46993 (2)	110 ea.
			4P			46992 (2)	144 ea.

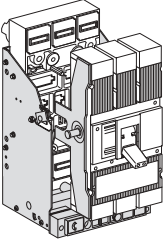
① Consult factory for other available options.

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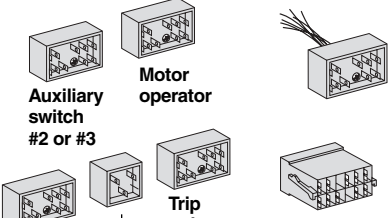
Installation and Connection—Continued

- For factory-installed connection accessories complete the circuit breaker catalog number by inserting the **termination numbers** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

C K A X F E 3 6 1 2 5 L I D U  
Termination No.

				Term. No.	Special Term. No.	Drawout Option	Catalog No.	List Price	
<b>Universal Chassis</b>									
	<b>Flat Connection</b>	N/H	3P	D	F	DU ①	46423	\$ 4438	
			4P	D	F	DU ①	46424	5794	
		L	3P	D	F	DU ①	46429	4438	
			4P	D	F	DU ①	46430	5794	
	Consisting of:	Moving chassis		3P				46824	655
				4P				46825	852
		Fixed chassis	N/H	3P				46820	2867
				4P				46821	3726
			L	3P				46822	2867
				4P				46823	3726
		Plugs	N/H	3P				46896 (3)	127 ea.
				4P				46896 (4)	127 ea.
			L	3P				46915 (3)	127 ea.
				4P				46915 (4)	127 ea.
		Terminal cover		3P				46993 (2)	110 ea.
			4P				46992 (2)	144 ea.	
Rear connections			3P				46990 (6)	53 ea.	
			4P				46990 (8)	53 ea.	
<b>Edgewise Connection</b>	N/H	3P	D	E	DU ①	46425	4533		
		4P	D	E	DU ①	46426	5920		
	L	3P	D	E	DU ①	46431	4533		
		4P	D	E	DU ①	46432	4533		
Consisting of:	Moving chassis		3P				46824	655	
			4P				46825	852	
	Fixed chassis	N/H	3P				46820	2867	
			4P				46821	3726	
		L	3P				46822	2867	
			4P				46823	3726	
	Plugs	N/H	3P				46896 (3)	127 ea.	
			4P				46896 (4)	127 ea.	
		L	3P				46915 (3)	127 ea.	
			4P				46915 (4)	127 ea.	
	Terminal cover		3P				46993 (2)	110 ea.	
			4P				46992 (2)	144 ea.	
	Rear connections		3P				46988 (6)	68 ea.	
			4P				46988 (8)	68 ea.	

Accessories

<b>Secondary Disconnecting Blocks</b>								
	Moving part	N/H	3 term. ②	D ④		42942	33.60	
			6 term. ③	D ④		42943	50	
			L	3 term. ②	D ④		42944	33.60
				6 term. ③	D ④		42945	50
		N/H/L	10 term.	D ④		46894	202	
			Fixed part	3 term.	D ④		42940	33.60
6 term.	D ④				42941	50		
10 term.	D ④			46893	202			
	Fixed Part Block Cover				39967	62		
<b>Door Escutcheon</b>								
	Around racking mechanism				46830	153		
	Around handle				46831	308		
	Around rotary handle				46832	431		
<b>Drawout Shutters</b>								
	On fixed chassis (1 piece)				46987 (6)	134 ea.		

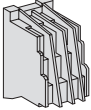
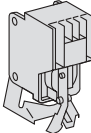
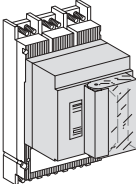
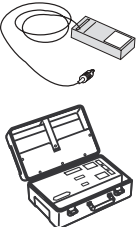
① Consult factory for other available options.  
② 3 wires are needed for shunt trip or undervoltage trip.

③ 6 wires are needed for auxiliary switches or motor operator.  
④ Option D inserted in block 12. (See catalog number construction, page 46), will supply both moving and fixed parts for all electrical accessories installed.

**Accessories**

- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

C | K | A | X | L | E | 3 | 6 | 1 | 2 | 5 | L | I | A | B | S | A | M | A  
Options

		Volts (V)	Option No.	Catalog No.	List Price				
<b>Electrical Accessories</b>	<b>Auxiliary and Alarm Switch</b>								
		1 auxiliary (OF) + 1 alarm (SD) switch ①		AB	44900	\$ 302			
		3 auxiliary (OF) + 1 alarm (SD) switch ①		A3	44901	823			
		Overcurrent trip switch SDE ②		AT	46962	240			
		Position switches ③ (for drawout only)		1 connected	46963	331			
		1 disconnected	46964	331					
	<b>Shunt Trip and Undervoltage Trip</b>								
	MX (shunt trip)	AC 50/60 Hz or DC	110/130	SA	44912	478			
			220/300	SC	44913	478			
			380/480	SH	44914	478			
			24	SO	44910	478			
			48/60	SP	44911	478			
	MN (undervoltage trip)	AC 50/60 Hz	48 (50 Hz)		44924	478			
			110/130	UA	44925	478			
			220/250	UC	44926	478			
			380/415		44932	478			
			440 (60 Hz)		44932	478			
			DC	24/30	UO	44923	478		
				48	UP	44924	478		
				110/130	UR	44925	478		
				250		44926	478		
				300		44932	478		
				<b>Motor Operator</b>					
				Standard type	AC 50/60 Hz	110/127	MA	46928	3953
						220/240	MC	46929	3953
						380/415 ④		46930	3953
440/480 ⑤							46931	3953	
DC	24	MO				46917	3953		
	48/60					46918	3953		
	110/125	MR				46919	3953		
	220/250					46920	3953		
	Locking device for Ronis key lock 1351.500 (lock not supplied, cannot be fitted on automatic transfer switch)						44876	179	
1 Ronis key lock 1351.500							41945	122	
	<b>Test Kits</b>								
	Battery operated (battery not supplied)					43362	538		
	Portable test kit		120	55391	9961				


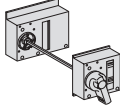
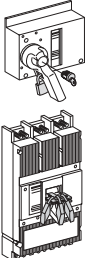
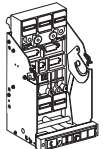
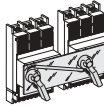
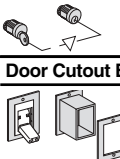



① 6 A (auxiliary), 5 A (alarm) at 480 Vac; 3 A at 600 Vac, 0.5 A at 125 Vdc, 0.25 A at 250 Vdc.  
 ② 2 A at 240 Vac, 0.1 A at 125 Vdc. Factory-mounted.  
 #46967 when used with TS type motor operator.  
 ③ 6 A at 480 Vac, 3 A at 600 Vac, 0.5 A at 125 Vdc, 0.25 A at 250 Vdc.  
 ④ Consists of a 220/240 Vac motor operator #46929 and a dropping resistor #44870.  
 ⑤ Consists of a 220/240 Vac motor operator #46929 and a dropping resistor #44871.

*Continued on next page*

**Accessories—Continued**

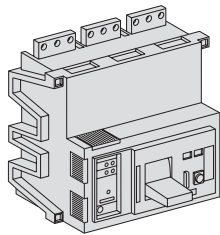
- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

C | K | A | X | L | E | 3 | 6 | 1 | 2 | 5 | L | I | A | B | S | A | M | A | R | O  
Options \_\_\_\_\_

			Option No.	Catalog No.	List Price	
<b>Rotary Operating Handles</b>	<b>Directly Mounted</b>					
		Standard	With black toggle	RO	46933	\$ 377
	<b>Door Mounted</b>					
		Rear door	(=46933+42897)		46872	647
<b>Locks, Interlocking</b>	<b>Padlocking and Locking Devices</b>	<b>Of the Handle (in OFF Position)</b>				
		For 1 to 3 padlocks (padlocks not supplied)		PL	44936	33.60
		By key lock	Mounting kit (factory mounted)	LK	35636	161
			Mounting kit and key interlock	KK	35636+35635-F	940
			Key interlock only		35635-F	779
	<b>Of the Rotary Operating Handle (Circuit Breaker in OFF Position)</b>					
	For 1 to 3 padlocks (not supplied)			Built-in		
	One key lock	Ronis 1351.500		41940	97	
		<b>Drawout Assembly Locking</b>				
		By 3 padlocks (padlocks not supplied)			Built-in	
	Key lock for locking in disconnected position			35635	704	
	Door interlock, connected position locking device			46834	210	
	Racking interlock locking device			46835	153	
	<b>Mechanical Interlocking (for Fixed Circuit Operating Handles Not Included)</b>					
	Mechanical device (rotary operating handles not included)			46946	813	
	<b>Mechanical Interlocking (for Fixed Circuit Breakers with Rotary Handle)</b>					
	One set of 2 key locks (keyed alike) Ronis 1351.500			41950	122	
<b>Installation Accessories</b>	<b>Door Cutout Escutcheons</b>					
		For fixed mounting of circuit breaker		44938	33.60	
		Escutcheon with handle extension (IP 40), for withdrawable device without motor operator		46977	372	
		<b>Handle Rubber Boot</b>				
				BT	44965	153
		<b>Sealing Accessories</b>				
		For trip unit			46939	106
		For cover			44937	50
		<b>Circuit Label-holder</b>				
		Set of 10			42976	54
	<b>Extended Handle</b>					
	Standard			46998	29.40	
	Long for extended escutcheon (drawout mounting)			46996	29.40	
	<b>Toggle</b>					
	For rotary handle	Black		46970	101	
		Red		46971	101	

Compact® CM1250/1600/2000/3200 Circuit Breakers  
**IEC 947-2 Rated Compact CM Circuit Breakers<sup>①</sup>**

**Complete Device**



**Compact CM1250/1600/2000/2500/3200 Circuit Breaker with STCM1 Trip Unit**

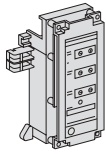
Rating (A)	3P 3T		4P 3T		
	Catalog No.	List Price	Catalog No.	List Price	
<b>70 kA at 380/415 Vac</b>					
CM1250N	1250	CMAFE36125LI	\$ 13045	CMAFE46125LI	\$ 15925
CM1600N	1600	CMAFE36160LI	13930	CMAFE46160LI	17076
CM2000N	2000	CMAFE36200LI	15992	CMAFE46200LI	19756
CM2500N	2500	CMAFE36250LI	21303	CMAFE46250LI	26661
CM3200N <sup>②</sup>	3200	CMAFE36320LI	32333		
<b>85 kA at 380/415 Vac</b>					
CM1250H	1250	CMHFE36125LI	14389	CMHFE46125LI	17673
CM1600H	1600	CMHFE36160LI	15398	CMHFE46160LI	18984
CM2000H	2000	CMHFE36200LI	17748	CMHFE46200LI	22038
CM2500H	2500	CMHFE36250LI	23804	CMHFE46250LI	29911
CM3200H <sup>②</sup>	3200	CMHFE36320LI	36377		
<b>Compact CM1600/2000/2500/3200 Molded Case Switch</b>					
CM1600NI	1600	CMAFE36016S	10485	CMAFE46016S	13631
CM2000NI	2000	CMAFE36020S	12548	CMAFE46020S	16312
CM2500NI	2500	CMAFE36025S	19293	CMAFE46025S	25080
CM3200NI <sup>②</sup>	3200	CMAFE36032S	30752		

① In obsolescence. For new applications, use Powerpact R-frame. See Digest 173.

② Rear connectors are included.

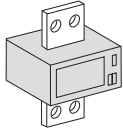
Ratings and interrupting ratings: page [73](#)

Additional information:  
 ■ Data Sheet no. ABTED397059  
 ■ D-Fax no. 996



### Electronic Trip Unit (Replaceable by Field Services only)

	Trip Function	Catalog No.	List Price
<b>Long-time and Instantaneous Protection</b>			
STCM1	LI	55532	\$ 3445
<b>Long-time, Short-time, and Instantaneous Protection</b>			
STCM2	LS	55533	5028
<b>Long-time, Short-time, Instantaneous Protection and Ground-fault Protection</b>			
STCM3 Not available on CM1250 to 3200 4P and CM3200 3P.	L2	55534	6597



### External Neutral Sensor

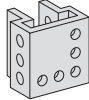

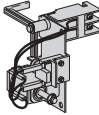
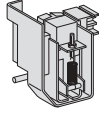
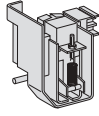
<b>Ground-fault Protection for 3Ø4W System</b>		
For CM1250		55528 1215
For CM1600		55529 1215
For CM2000		55530 1215
For CM2500		55531 1215

<sup>①</sup> In obsolescence. For new applications, use Powerpact R-frame. See Digest 173.

## Accessories

- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

C M A F E 3 6 3 2 0 L I A 2  
Options

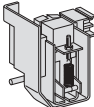
		Volts (V)	Options	Catalog No.	List Price	
<b>Connection Accessories</b>	<b>Rear Connectors</b>					
		CM1250—CM2000	Phase or neutral (one piece)		55660	\$ 256
		CM2500	Phase (set of 4)		55377	868
			Neutral		55660	256
		CM3200	Phase		Built-in	No charge
			Neutral (1 piece)		Built-in	No charge
<b>Electrical Accessories</b>		<b>Auxiliary Switches</b>				
		2 auxiliary switches (OF)		A2	55541	559
		4 auxiliary switches (OF) + 1 alarm switch (SD)		A4	55542	1398
		Overcurrent trip switch		Standard		No charge
<b>Shunt Trip and Undervoltage Trip</b>						
	MX (Shunt trip)	AC 50 Hz	48	55546	826	
			110/127	55547	826	
			208/240	55548	826	
			380/415	55549	826	
			440	55550	826	
		AC 60 Hz	120/127	55547	826	
			240/265	55548	826	
			440/480	55550	826	
			DC	24	55544	826
	30	55545		826		
	48	55546		826		
	110/125	55547		826		
	220	55548		826		
		MXP (Permanent shunt trip)	AC 50 Hz	48	55693	1074
				110	55586	1074
				127	55587	1074
				220	55588	1074
				240	55589	1074
			380/415	55591	1074	
AC 60 Hz			120	55592	1074	
			127	55586	1074	
			240	55593	1074	
		265	55588	1074		
DC		277	55594	1074		
		440	55595	1074		
		480	55591	1074		
		24	55597	1074		
		30	55598	1074		
		48	55599	1074		
		MN (Undervoltage release)	AC 50 Hz	60	55697	1074
				110	55600	1074
				125	55601	1074
	220			55602	1074	
	AC 60 Hz			48	55681	826
			110	55552	826	
			127	55553	826	
			220	55554	826	
	AC 50 Hz		240	55555	826	
		380/415	55557	826		
		AC 60 Hz	120	55558	826	
			127	55552	826	
			240	55559	826	
			265	55554	826	
			277	55560	826	
		440	55561	826		
		480	55557	826		

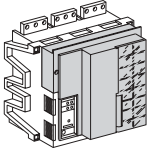
① In obsolescence. For new applications, use Powerpact R-frame. See Digest 173.

Continued on next page

**Accessories**—Continued

- For factory-installed accessories complete the circuit breaker catalog number by inserting the **option number** in the appropriate block.
- For field-installable accessories order the 5-digit catalog number.

Electrical Accessories <i>continued</i>	Shunt Trip and Undervoltage Trip	Volts (V)	Options	Catalog No.	List Price
	MN DC (undervoltage release)	24		55563	826
		30		55564	826
		48		55565	826
		60		55685	826
		110		55566	826
		125		55567	826
		220		55568	826

Motor Operator ①②					
		AC 50 Hz		55603	8093
				55604	8093
				55605	8093
				55607	8093
				55609	8093
				55610	8093
		AC 60 Hz		55611	8093
				55613	8093
				55614	8093
				55615	8093
				55616	8093
				55617	8093
		DC		55618	8093
				55620	8093
				55622	8093
	55623		8093		
	55624		8093		
	55625		8093		

Accessories	Sealable Cover	OFF Position Locking Device	Test Kit
	Sealable transparent cover for STCM tripping unit	Padlock device for 1 to 3 padlocks (Padlocks not included) ③	Text kit (110–220 Vac)
	55652	68	55391
		Padlock device (Padlock not included) + 1 key lock	
		Profalux B24D4Z ①	
		Ronis 1351B ①	
		55653	186
		55654	308
		55655	308
			9961

Spare Parts	For Compact CM Circuit Breaker	For Motor Operator	Connector for Compact CM2500 N/H Circuit Breaker	For Compact CM Circuit Breaker Switch
	Operating handle	Cover	Upstream right or downstream left	Trip unit cover device
	55661	55670	55673	55535
	67	301	272	223
	Extended handle	Circuit-breaker handle	Upstream left or downstream right	
	55662	55671	55674	
	92	61	272	
	3P cover	Manual operating	Upstream or downstream central	
	55663	55672	55675	
	307	42	249	
	Neutral pole cover			
	55664			
	209			
	Cover screen for auxiliary terminal knock-out location			
	55665			
	44.10			

① Factory mounted only  
 ② Includes (4) auxiliary + (1) alarm switches  
 ③ Field Installable  
 ④ In obsolescence. For new applications, use Powerpact R-frame. See Digest 173.



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# Masterpact® Circuit Breakers

## UL 489/1066 Listed Masterpact Circuit Breakers

### Selection Table for UL 489 Listed Masterpact Circuit Breakers

Ratings as per UL 489 and NEMA AB1 Standards			MP08	MP12	MP16			
Number of poles			3, 4	3, 4	3, 4			
Rated current (A)			800	1200	1600			
Rating of 4th pole (A)			800	1200	1600			
Type of Circuit Breaker			H1	H2	H1	H2	H1	H2
Interrupting ratings as per UL 489 (kA RMS)	AC 50/60 Hz	240 V	65	100	65	100	65	100
		480 V	65	100	65	100	65	100
		600 V	65	65	65	65	65	65
Short-time ratings (kA RMS)	AC 50/60 Hz	1s	50	50	50	50	50	50
Ultimate breaking capacity as per IEC 947-2 (Icu) (kA RMS)	AC 50/60 Hz	220/415 V	65	100	65	100	65	100
		440 V	65	100	65	100	65	100
		500/690 V	65	85	65	85	65	85
Control Units								
Sensor ratings (A)			250, 400, 600, 800	250, 400, 600, 800, 1200	250, 400, 600, 800, 1200, 1600			
Functions	STR 18M		I	I	I			
	STR 28D		LI	LI	LI			
	STR 38S		LSI	LSI	LSI			
	STR 58U		LSI	LSI	LSI			
Dimensions and Weights								
Dimensions H x W x D (in./mm)	3P	Fixed	16 x 17 x 11/ 406 x 432 x 279	16 x 17 x 11/ 406 x 432 x 279	16 x 17 x 11/ 406 x 432 x 279			
		Drawout	17 x 17 x 14/ 432 x 432 x 356	17 x 17 x 14/ 432 x 432 x 356	17 x 17 x 14/ 432 x 432 x 356			
	4P	Fixed	16 x 22 x 11/ 406 x 559 x 279	16 x 22 x 11/ 406 x 559 x 279	16 x 22 x 11/ 406 x 559 x 279			
		Drawout	17 x 22 x 14/ 432 x 559 x 356	17 x 22 x 14/ 432 x 559 x 356	17 x 22 x 14/ 432 x 559 x 356			
Weight (lb/kg)	3P	Fixed	105/48	105/48	120/54			
		Drawout	150/68	165/74	215/98			
	4P	Fixed	132/60	132/60	151/68			
		Drawout	185/84	185/84	265/120			

### Selection Table for UL 1066 Listed Masterpact Circuit Breakers

Ratings as per UL 1066/ANSI C37.13/NEMA SG3 Standards			MC08	MC16	MC20		
Number of poles			3, 4	3, 4	3, 4		
Rated current (A)			800	1600	2000		
Rating of 4th pole (A)			800	1600	2000		
Type of Circuit Breaker			N1	H1	N1	H1	H1
Interrupting ratings (kA RMS)	AC 50/60 Hz	254 V	50	65	50	65	65
		508 V	50	65	50	65	65
		635 V	50	65	50	65	65
Short-time ratings (kA RMS)	AC 50/60 Hz	1s	42	50	50	50	65
Control Units							
Sensor ratings (A)			250, 400, 600, 800	250, 400, 600, 800, 1200, 1600	250, 400, 600, 800, 1200, 1600, 2000		
Functions	STR 18M		I	I	I		
	STR 28D		LI	LI	LI		
	STR 38S		LSI	LSI	LSI		
	STR 58U		LSI	LSI	LSI		
Dimensions and Weights							
Dimensions H x W x D (in./mm)	3P	Drawout	17 x 17 x 14/ 432 x 432 x 356	17 x 17 x 14/ 432 x 432 x 356	17 x 17 x 14/ 432 x 432 x 356		
Weight (lb/kg)	3P	Drawout	150/68	165/75	215/98		

MP20		MP25		MP30		MP40		MP50		MP63	
3, 4		3, 4		3, 4		3, (4: not UL Listed)		3, (4: not UL Listed)		3	
2000		2500		3000		4000		5000		6300: not UL Listed	
2000		2500		3000		4000		5000			
H1	H2	H1	H2	H1	H2	H1	H2	H1	H2	H1	H2
75	100	75	100	75	100	100	125	100	125	100	150
75	100	75	100	75	100	100	125	100	125	100	150
75	75	75	75	75	75	100	100	100	100	100	100
75	75	75	75	75	75	100	100	100	100	100	100
75	100	75	100	75	100	100	150	100	150	100	150
75	100	75	100	75	100	100	150	100	150	100	150
75	85	75	85	75	85	85	85	85	85	85	85

250, 400, 600, 800, 1200, 1600, 2000		600, 800, 1200, 1600, 2000, 2500		800, 1200, 1600, 2000, 2500, 3000		2000, 2500, 3000, 3200, 4000		2000, 2500, 3000, 3200, 4000, 5000		2000, 2500, 3000, 3200, 4000, 5000, 6300	
I		I		I		I		I		I	
LI		LI		LI		LI		LI		LI	
LSI		LSI		LSI		LSI		LSI		LSI	
LSI		LSI		LSI		LSI		LSI		LSI	

16 x 17 x 11/ 406 x 432 x 279		16 x 17 x 11/ 406 x 432 x 279		16 x 17 x 11/ 406 x 432 x 279		16 x 32 x 11/ 406 x 813 x 279		16 x 32 x 11/ 406 x 813 x 279			
17 x 17 x 14/ 432 x 432 x 356		17 x 17 x 14/ 432 x 432 x 356		17 x 17 x 14/ 432 x 432 x 356		19 x 32 x 14/ 483 x 813 x 356		19 x 32 x 14/ 483 x 813 x 356		19 x 41 x 14/ 483 x 1041 x 356	
16 x 22 x 11/ 406 x 559 x 279		16 x 22 x 11/ 406 x 559 x 279		16 x 22 x 11/ 406 x 559 x 279							
17 x 22 x 14/ 432 x 559 x 356		17 x 22 x 14/ 432 x 559 x 356		17 x 22 x 14/ 432 x 559 x 356		19 x 41 x 14/ 483 x 1041 x 356		19 x 41 x 14/ 483 x 1041 x 356			
160/73		260/118		260/118		300/136		390/177			
215/98		365/166		365/166		560/254		650/295		727/330	
200/91		325/147		325/147		430/195					
265/120		453/205		453/205		600/272		695/315			

MC32	MC40	MC50
3	3, (4: not UL Listed)	3, (4: not UL Listed)
3200	4000	5000
	4000	5000
H1	H1	H1
65	100	100
65	100	100
65	100	100
65	100	100

2000, 2500 3000, 3200		2000, 2500 3000, 3200, 4000		2000, 2500 3000, 3200, 4000, 5000	
I		I		I	
LI		LI		LI	
LSI		LSI		LSI	
LSI		LSI		LSI	

17 x 22 x 14/ 432 x 559 x 356		19 x 32 x 14/ 483 x 813 x 356		19 x 32 x 14/ 483 x 813 x 356	
410/186		560/254		650/295	

# UL 489/1066 Listed Masterpact Circuit Breakers

**To order a complete circuit breaker, order:**

- 1 Circuit breaker frame .....page [108](#)  
or cradle only .....page [109](#)  
or circuit breaker without cradle .....page [109](#)
- 2 Connections .....page [109](#)
- 3 Control unit .....page [110](#)
- 4 Rating plug .....page [111](#)
- 5 Accessories .....page [112](#)
- 6 Request for quote forms .....page [133](#)

**Additional information:**

- **Catalog no.** 0631CT9501 (Square D)
- **Data Sheet no.** 0631HO9701
- **D-Fax no.** 350

## UL Listed Masterpact Circuit Breaker Frame

Rating (A)	AIR/480 V (kA)	Fixed 3P	List Price	Fixed 4P	List Price	Drawout with Cradle 3P	List Price	Drawout with Cradle 4P	List Price
<b>MP08 to MP63—UL 489/NEMA AB1 Standards</b>									
<b>Standard Interrupting (H1)</b>									
MP08H1	800 65	P08H13FPPS0800	\$ 6236	P08H14FPPS0800	\$ 9354	P08H13DPPS0800	\$ 8972	P08H14DPPS0800	\$ 13457
MP12H1	1200 65	P12H13FPPS1200	7031	P12H14FPPS1200	10547	P12H13DPPS1200	11822	P12H14DPPS1200	17734
MP16H1	1600 65	P16H13FPPS1600	7837	P16H14FPPS1600	11755	P16H13DPPS1600	13149	P16H14DPPS1600	19725
MP20H1	2000 75	P20H13FPPS2000	9373	P20H14FPPS2000	14060	P20H13DPPS2000	15538	P20H14DPPS2000	23306
MP25H1	2500 75	P25H13FPPS2500	16148	P25H14FPPS2500	24221	P25H13DPPS2500	22564	P25H14DPPS2500	33846
MP30H1	3000 75	P30H13FPPS3000	20084	P30H14FPPS3000	30125	P30H13DPPS3000	28825	P30H14DPPS3000	43237
MP40H1	4000 100	P40H13FPPS4000	37549			P40H13DPPS4000	52351	P40H14DPPS4000 ①	78527
MP50H1	5000 100	P50H13FPPS5000	49519			P50H13DPPS5000	65320	P50H14DPPS5000 ①	97979
MP63H1	6300 100					P63H13DPPS6300 ①	89115		
<b>High Interrupting (H2)</b>									
MP08H2	800 100	P08H23FPPS0800	6792	P08H24FPPS0800	10190	P08H23DPPS0800	10143	P08H24DPPS0800	14286
MP12H2	1200 100	P12H23FPPS1200	7422	P12H24FPPS1200	11133	P12H23DPPS1200	12214	P12H24DPPS1200	18311
MP16H2	1600 100	P16H23FPPS1600	8271	P16H24FPPS1600	12407	P16H23DPPS1600	13588	P16H24DPPS1600	20381
MP20H2	2000 100	P20H23FPPS2000	9892	P20H24FPPS2000	14838	P20H23DPPS2000	17228	P20H24DPPS2000	25842
MP25H2	2500 100	P25H23FPPS2500	18109	P25H24FPPS2500	27163	P25H23DPPS2500	24441	P25H24DPPS2500	36662
MP30H2	3000 100	P30H23FPPS3000	23094	P30H24FPPS3000	34641	P30H23DPPS3000	30703	P30H24DPPS3000	46054
MP40H2	4000 125	P40H23FPPS4000	45423			P40H23DPPS4000	60352	P40H24DPPS4000 ①	90528
MP50H2	5000 125	P50H23FPPS5000	59487			P50H23DPPS5000	75287	P50H24DPPS5000 ①	112929
MP63H2	6300 150					P63H23DPPS6300 ①	107341		
<b>Switches (NA)—Control Unit and Rating Plug Not Required</b>									
MP08NA	800	P08NA3FPPS0000	6109	P08NA4FPPS0000	9162	P08NA3DPPS0000	8341	P08NA4DPPS0000	12511
MP12NA	1200	P12NA3FPPS0000	6924	P12NA4FPPS0000	10386	P12NA3DPPS0000	11132	P12NA4DPPS0000	16699
MP16NA	1600	P16NA3FPPS0000	7198	P16NA4FPPS0000	10796	P16NA3DPPS0000	11409	P16NA4DPPS0000	17112
MP20NA	2000	P20NA3FPPS0000	9053	P20NA4FPPS0000	13578	P20NA3DPPS0000	13645	P20NA4DPPS0000	20467
MP25NA	2500	P25NA3FPPS0000	14106	P25NA4FPPS0000	21159	P25NA3DPPS0000	19479	P25NA4DPPS0000	29217
MP30NA	3000	P30NA3FPPS0000	17725	P30NA4FPPS0000	26588	P30NA3DPPS0000	27368	P30NA4DPPS0000	41052
MP40NA	4000	P40NA3FPPS4000	34990			P40NA3DPPS0000	47746	P40NA4DPPS0000 ①	71617
MP50NA	5000	P50NA3FPPS5000	43876			P50NA3DPPS0000	59675	P50NA4DPPS0000 ①	89513
MP63NA	6300					P63NA3DPPS0000①	85949		
<b>MC08 to MC50—UL1066/ANSI C37.13/NEMA SG3 Standards</b>									
<b>Special Interrupting (N1)</b>									
MC08N1	800 50					C08N13DPPS0800	9229	C08N14DPPS0800	13844
MC16N1	1600 50					C16N13DPPS1600	13186	C16N14DPPS1600	19687
<b>Standard Interrupting (H1)</b>									
MC08H1	800 65					C08H13DPPS0800	10278	C08H14DPPS0800	15416
MC16H1	1600 65					C16H13DPPS1600	15320	C16H14DPPS1600	22980
MC20H1	2000 65					C20H13DPPS2000	17927	C20H14DPPS2000	26892
MC32H1	3200 65					C32H13DPPS3200	31695		
MC40H1	4000 100					C40H13DPPS4000	53369		
MC50H1	5000 100					C50H13DPPS5000	65320		

① Not UL Listed

## Masterpact Drawout Circuit Breaker Without Cradle or Cradle Only

- Prices do not include control unit and rating plug.
- Cradle price is included in the complete drawout price.
- Vertical connections (CCS) are mandatory on 1600 A frame and above, and are optional for 800 A and 1200 A frames.

Rating (A)	AIR/480 V (kA)	Drawout w/o Cradle 3P	List Price	Cradle Only 3P	List Price	Drawout w/o Cradle 4P	List Price	Cradle Only 4P	List Price	
<b>MP08 to MP63—UL 489/NEMA AB1 Standards</b>										
<b>Standard Interrupting (H1)</b>										
MP08H1	800	65	P08H13A0800	\$ 6878	P16H03C	\$ 2514	P08H14A0800	\$ 10317	P16H04C	\$ 3770
MP12H1	1200	65	P12H13A1200	9730	P16H03C	2514	P12H14A1200	14595	P16H04C	3770
MP16H1	1600	65	P16H13A1600	11056	P16H03C	2514	P16H14A1600	16584	P16H04C	3770
MP20H1	2000	75	P20H13A2000	13211	P20H03C	2849	P20H14A2000	19817	P20H04C	4272
MP25H1	2500	75	P25H13A2500	18240	P30H03C	5188	P25H14A2500	27360	P30H04C	7781
MP30H1	3000	75	P30H13A3000	24503	P30H03C	5188	P30H14A3000	36755	P30H04C	7781
MP40H1	4000	100	P40H13A4000	44495	P40H03C	9429	P40H14A4000 ①	66743	P40H04C ①	14144
MP50H1	5000	100	P50H13A5000	50682	P50H03C	17566	P50H14A5000 ①	76022	P50H04C ①	26349
MP63H1	6300	100	P63H13A6300 ①	69406	P63H03C ①	24440				
<b>High Interrupting (H2)</b>										
MP08H2	800	100	P08H23A0800	7432	P16H03C	2514	P08H24A0800	11148	P16H04C	3770
MP12H2	1200	100	P12H23A1200	10125	P16H03C	2514	P12H24A1200	15188	P16H04C	3770
MP16H2	1600	100	P16H23A1600	11495	P16H03C	2514	P16H24A1600	17243	P16H04C	3770
MP20H2	2000	100	P20H23A2000	14903	P20H03C	2849	P20H24A2000	22354	P20H04C	4272
MP25H2	2500	100	P25H23A2500	20119	P30H03C	5188	P25H24A2500	30179	P30H04C	7781
MP30H2	3000	100	P30H23A3000	26382	P30H03C	5188	P30H24A3000	39573	P30H04C	7781
MP40H2	4000	125	P40H23A4000	52370	P40H03C	9429	P40H24A4000 ①	78554	P40H04C ①	14144
MP50H2	5000	125	P50H23A5000	60649	P50H03C	17566	P50H24A5000 ①	90973	P50H04C ①	26349
MP63H2	6300	150	P63H23A6300 ①	86973	P63H03C ①	24440				
<b>Switches (NA)—Control Units and Rating Plug Not Required</b>										
MP08NA			P08NA3A0000	6246	P16H03C	2514	P08NA4A0000	9369	P16H04C	3770
MP12NA			P12NA3A0000	9040	P16H03C	2514	P12NA4A0000	13560	P16H04C	3770
MP16NA			P16NA3A0000	9316	P16H03C	2514	P16NA4A0000	13974	P16H04C	3770
MP20NA			P20NA3A0000	10069	P20H03C	2849	P20NA4A0000	15103	P20H04C	4272
MP25NA			P25NA3A0000	15180	P30H03C	5188	P25NA4A0000	22770	P30H04C	7781
MP30NA			P30NA3A0000	23044	P30H03C	5188	P30NA4A0000	34566	P30H04C	7781
MP40NA			P40NA3A0000	39888	P40H03C	9429	P40NA4A0000 ①	59832	P40H04C ①	14144
MP50NA			P50NA3A0000	45036	P50H03C	17566	P50NA4A0000 ①	67554	P50H04C ①	26349
MP63NA			P63NA3A0000 ①	65581	P63H03C ①	24440				
<b>MC08 to MC50—UL 1066/ANSI C37.13/NEMA SG3 Standards</b>										
<b>Special Interrupting (N1)</b>										
MC08N1	800	50	C08N13A0800	7135	C16H03C	2514	C08N14A0800	10702	C16H04C	3770
MC16N1	1600	50	C16N13A1600	11093	C16H03C	2514	C16N14A1600	16639	C16H04C	3770
<b>Standard Interrupting (H1)</b>										
MC08H1	800	65	C08H13A0800	8182	C16H03C	2514	C08H14A0800	12273	C16H04C	3770
MC16H1	1600	65	C16H13A1600	13226	C16H03C	2514	C16H14A1600	19840	C16H04C	3770
MC20H1	2000	65	C20H13A2000	15600	C20H03C	2849	C20H14A2000	23399	C20H04C	4272
MC32H1	3200	65	C32H13A3200	26353	C32H03C	6380				
MC40H1	4000	100	C40H13A4000	44495	C40H03C	9429				
MC50H1	5000	100	C50H13A5000	52256	C50H03C	17566				

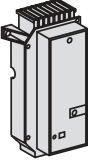
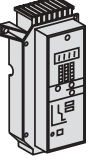
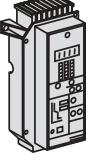
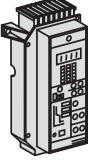
## Vertical Connections

- Vertical terminations are mandatory on 1600 A frame and above.

	3P	4P
MP08–MC08–MP12–MP16–MC16	R16H03CBCP 697	R16H04CBCP 1045
MP20–MC20	R20H03CBCP 872	R20H04CBCP 1309
MP25–MP30	R30H03CBCP 2325	R30H04CBCP 3489
MC32	R32H03CBCP 2960	
MP40–MC40	R40H03CBCP 2960	R40H04CBCP 4444
MP50–MC50–MP63	R63H03CBCP 5925	R50H04CBCP 8886

① Not UL Listed.

## Control Units

STR 18M	Option	List Price
	<b>Control Unit</b> (instantaneous protection only)	
	STR18M	\$ 1406
<hr/>		
STR 28D	<b>Control Unit</b> (long-time and instantaneous protection)	
	STR28D (long-time = 0.4x1 sensor rating)	1489
	STR28DP (long-time = 0.8x1 plug rating)	1380
	<b>Options</b>	
	Ammeter	I 896
	Pre-trip overload indication switch	ALR No charge
	<hr/>	
STR 38S	<b>Control Unit</b> (long-time, short-time and instantaneous protection)	
	STR38S (long-time = 0.4x1 sensor rating)	1718
	STR38SP (long-time = 0.8x1 plug rating)	2069
	<b>Ground-fault Protection</b> ①	
	Residual type	T 879
	Source ground return type	W 980
	External neutral sensor (TCE) – see page 112	
	<b>Options</b>	
	Ammeter	I 896
	Pre-trip overload indication switch	ALR No charge
	LED fault indicators on the circuit breaker front face (PIL or AD module or 24 Vdc external power supply is required)	F 357
Power supply with battery	PIL 240	
<hr/>		
STR 58U	<b>Control Unit</b> (long-time, short-time and instantaneous protection)	
	STR58U (long-time = 0.4x1 sensor rating)	2446
	STR58UP (long-time = 0.8x1 plug rating)	2337
	<b>Ground-fault Protection</b> ①②	
	Residual type	T 879
	Source ground return type	W 980
	External neutral sensor (TCE) – see page 112	
	<b>Options</b>	
	Ammeter	I 896
	Pre-trip overload indication switch	ALR No charge
	LED fault indicators on the circuit breaker front face (PIL or AD module or 24 Vdc external power supply is required)	F 357
	Segregated alarm switch (fault indicator [F] included. Output contact as a function of selected fault type. 24 Vdc external power supply or AD module is mandatory)	FV 978
	Power supply with battery	PIL 240
	Zone-selective interlocking, for short-time protection (ST) and ground-fault protection (T/W)	Z 815
	Load monitoring (outputs optical trial output contacts 0.1 A/240 Vac)	R 1057
Communication (transmits all the trip unit parameters via Digipact® modules) ③	C 641	

Continued on next page

① External neutral sensor not included.

② External AD module (see page 112) is required if load is below 20% or if setting is red zone.

③ Communication options are available for Masterpact circuit breakers with STR 58U control unit, C option and Digipact communication modules. See page 112.

# UL Listed Masterpact® Circuit Breakers

## Control Units—Continued

Rating Plug (RL)	Sensor Rating (A)	Plug Rating (A)	Catalog No.	List Price
■ Mandatory for UL Listed Masterpact circuit breakers with STR 28D, STR 38S and STR 58U control units. ■ Not required on IEC Rated Masterpact circuit breakers.				
250		125	54731	\$ 109
		150	54732	109
		200	54733	109
		250	54734	109
400		200	54735	109
		250	54736	109
		300	54737	109
		400	54738	109
600		300	54739	109
		400	54740	109
		500	54741	109
		600	54742	109
800		400	54743	109
		500	54744	109
		600	54745	109
		800	54746	109
1200		600	54747	109
		800	54748	109
		1000	54749	109
		1200	54750	109
1600		800	54751	109
		1000	54752	109
		1200	54753	109
		1600	54754	109
2000		1000	54755	109
		1200	54756	109
		1600	54757	109
		2000	54758	109
2500		1200	54759	109
		1600	54760	109
		2000	54761	109
		2500	54762	109
3000		1600	54763	109
		2000	54764	109
		2500	54765	109
		3000	54766	109
3200		1600	54846	109
		2000	54845	109
		2500	54844	109
		3000	54843	109
		3200	54842	109
4000		2000	54767	109
		2500	54768	109
		3000	54769	109
		3200	54841	109
		4000	54770	109
5000		2500	54771	109
		3000	54772	109
		3200	54840	109
		4000	54773	109
		5000	54774	109
6300		3000	54839	109
		3200	54838	109
		4000	54837	109
		5000	54836	109
		6000	54835	109
		6300	54834	109

Continued on next page

**Control Units**—Continued

**Neutral Sensor for 3ØH4W Systems (TCE)**

	Rating (A)	Catalog No.	List Price
	■ External neutral transformer (TCE) must have the same rating as the circuit breaker current sensor.		
	200	685511	\$ 528
	250	685512	528
	320	685513	528
	400	685514	528
	500	685515	528
	600	685516	528
	630	685517	528
	800	685518	528
	1000	685519	528
	1200	685522	528
	1250	685523	528
	1600	685524	528
	2000	685525	528
	2500	685526	528
	3000	685527	528
3200	685528	528	
4000	685521	528	
5000	685673	1004	
6300	685674	1004	

**Accessories**

■ Must be ordered as separate items.

**Sealable Cover (PBD)**

	For sealing STR 18M, STR 28D, STR 38S and STR 58U control units (supplied with unit at no charge)	685837	54
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**Test Kit (ME)**

	For testing STR 28D, STR 38S and STR 58U control units Power supply 110, 220 Vac 50/60 Hz	55391	10910
	Spare test cable for Masterpact	55390	164
	Spare test cable kit (Compact and Masterpact)	34546	877

**Mini Test Kit (BU)**

	For testing STR 28D, STR 38S and STR 58U control units—identical to Compact test kit box (batteries not supplied)	43362	589
		<b>DE2 discount</b>	

**Power Supply Module (AD)**

	Input voltage		
	For STR 18M to STR 58U control units <b>Output voltage:</b> 24 Vdc	24/30 Vdc	685823 619
		48/60 Vdc	685824 619
		125 Vdc	685825 619
		120 Vac 50/60 Hz	685826 619
		220 Vac 50/60 Hz	685827 619
		380 Vac 50/60 Hz	685829 619

**Battery Module (BAT)**

	Battery back-up power supply for AD module	685831	1785
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**Data Concentrator**

	DC150	110/240 Vac or 115/125 Vdc	50825	4545
	UL Pending – Consult us		<b>DE2 discount</b>	

**Indication and Control Interface**




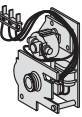
	SC150	Powered by the DC150 module	50784	1596
	UL Pending – Consult us		<b>DE2 discount</b>	

Continued on next page



**Accessories—Continued**

- When adding (not replacing) field-installable accessories, refer to page 114 for secondary disconnects.
- Maximum 2 shunt trips or 1 shunt trip + 1 undervoltage trip.


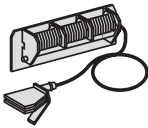





For Circuit Breaker Frame	Closing Coil (XF)/Shunt Trip (MX)	Volts (V)	Catalog No.	Catalog No.	List Price		
			(XF)	(MX)			
	AC 50/60 Hz	100 ①	685655CC	685655ST	\$ 365		
		110/127	685654CC	685654ST	365		
		200 ①	685657CC	685657ST	365		
		220/250	685658CC	685658ST	365		
		277 ①	685659CC	685659ST	365		
		380/415 ①	685660CC	685660ST	365		
		440/480	685661CC ①	685661ST	365		
		500/525 ①	685662CC	685662ST	365		
		DC	24	685650CC	685650ST	365	
	30 ①		685651CC	685651ST	365		
	48		685652CC	685652ST	365		
	60 ①		685653CC	685653ST	365		
	100/110 ①		685654CC	685654ST	365		
	125		685656CC	685656ST	365		
	200/220 ①		685658CC	685658ST	365		
	250		685659CC ①	685659ST	365		
	350		685660CC	685660ST	365		
	<b>Undervoltage Trip (MN)</b>						
		AC 50/60 Hz	100 ①		685680	577	
110/127				685679	577		
200 ①				685682	577		
220/250				685683	577		
277 ①				685684	577		
380/415 ①				685685	577		
440/480				685686	577		
500/525 ①				685687	577		
DC			24		685675	577	
		30 ①		685676	577		
		48		685677	577		
		60		685678	577		
		100/110 ①		685679	577		
		125		685681	577		
		200/220 ①		685683	577		
		250		685684	577		
		350 ①		685685	577		
		<b>Time Delayed Undervoltage Trip (MNR) – Not UL Listed</b>					
		AC 50/60 Hz	100		685689	1120	
	110/127			685690	1120		
	200			685691	1120		
	220/250			685692	1120		
	380/415			685693	1120		
	440/480			685694	1120		
	MNR=MNR (see above) + 688337					79	
	<b>Spring Charging Motor (MCH)—Includes Spring Charged Switch</b>						
	AC 50/60 Hz	100/127		685762	2045		
		200/240		685763	2045		
		250/277 ①		685759	2045		
		380 ①		685764	2045		
		415 ①		685767	2045		
		440 ①		685768	2045		
		480 ①		685769	2045		
		DC	24/30		685760	2045	
			48/60		685761	2045	
	100/125			685765	2045		
	200/250 ①			685766	2045		
	<b>Mechanical Operation Counter (CDM) with Motor Only</b>				685733	504	

① Not UL Listed.

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








**Accessories—Continued**

■ When adding (not replacing) field-installable accessories, refer to this page for secondary disconnects.

		Catalog No.	List Price		
<b>For Circuit Breaker Frame</b>	<b>Two Standard (2a+2b) Auxiliary Switches</b>	Standard	<b>No charge</b>		
	<b>Four Auxiliary Switches (OF)</b>				
	Four changeovers (SPDT)	685725	<b>\$ 299</b>		
<b>24 Additional Auxiliary Switches (OFSUP)</b>					
	Twenty-four additional switches (SPDT) not available on fixed mounted. Not compatible with mechanical interlocking. Must be ordered as a separate item	685724	<b>1485</b>		
<b>One Ready to Close Switch (PF)</b>					
	One ready to close switch	685727	<b>258</b>		
<b>One Overcurrent Trip Switch (SDE)</b>					
	Not available on switch version	Standard	<b>No charge</b>		
<b>Secondary Disconnects</b>					
■ Supplied at no charge when ordering with complete circuit breaker or adding field-installable accessories.					
	Fixed mounting	685871	<b>No charge</b>		
	Consisting of:	Empty socket	685990 (1)	<b>No charge</b>	
		Connectors (12 terminals)	685995 (2)	<b>No charge</b>	
	Drawout mounting	685868	<b>No charge</b>		
	Five additional terminal blocks (BS)	685994	<b>No charge</b>		
<b>Push Button Padlocking Device (VBP)</b>					
	By padlock (not supplied)	685728	<b>102</b>		
<b>“OFF” Position Lock by Key Lock</b>					
	Kirk® key lock with provision	VSKA	685732+35635	<b>1073</b>	
	Provision for Kirk key lock	VKA	685732	<b>497</b>	
	Ronis (1 key lock) with provision	VSRA1	685730	<b>237</b>	
	Ronis (2 key locks keyed alike) with provision	VSRA2	685738	<b>473</b>	
<b>Mechanical Interlocking for Fixed Circuit Breakers</b>					
■ Must be ordered as a separate item. Not UL Listed.					
	Two circuit breakers	Stacks—mounted, by rigid link	VM2FT	685985	<b>1589</b>
		Adjacent, by flexible link	VM2FC	685982	<b>1816</b>
	Three circuit breaker stacks—mounted	By rigid link (2 normal sources + 1 standby)	VM31FT	685976	<b>2542</b>
		By rigid link (2 normal sources + 1 coupler)	VM32FT	685987	<b>2542</b>
		By rigid link (3 normal sources/only one device closed)	VM33FT	685986	<b>2542</b>

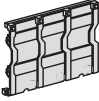


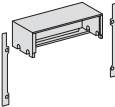



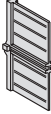
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**Accessories—Continued**

		Catalog No.	List Price	
<b>For Cradle</b>	<b>Position Switches</b>			
		Four SPDT connected position switches (CE)	685977 \$ 125	
		Two SPDT disconnected position switches (CD)	685978 61	
		One SPDT test position switch (CT) Not available on MC circuit breakers	688789 61	
	<b>Padlocking Device</b>		Standard No charge	
	<b>Disconnected Position Lock by Key Lock (Factory Mounted) (Not UL Listed)</b>			
		By Ronis key lock	One key lock supplied + provision	VSRC1 685969 256
			Two key locks supplied + provision	VSRC2 685740 512
		By Kirk® key lock	One key lock + provision	VSKC 35635+ 685971 1073
			Provision only	VKC 685971 497
<b>Door Interlock (VPEC)</b>				
	Lock when circuit breaker connected	685966 181		
<b>Racking Interlock when Door Opened (VPOC)</b>				
	One piece	685967 130		
<b>Withdrawal/Spring Charged Interlock (VEAA) (Factory Mounted)</b>				
	Incompatible with MN or MNR undervoltage trip	685857 342		
<b>Mechanical Interlocking for Drawout Circuit Breakers</b>				
■ Must be ordered as a separate item. Not UL Listed.				
	Two device	Stacks—mounted, by rigid link	VM2CT 685975 1262	
		Adjacent, by flexible link	VM2CC 685959 1488	
	Three device stacks—mounted	By rigid link (Two normal sources + one standby)	VM31CT 684499 2018	
		By rigid link (Two normal sources + one coupler)	VM32CT 684498 2018	
		By rigid link (Three normal sources/ only one device closed)	VM33CT 684497 2018	
<b>Rejection Feature (VDC)</b>				
	Standard (supplied at no charge when supplied with the circuit breaker)	685974 No charge		




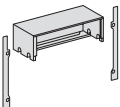
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**Accessories**—Continued

						Catalog No.	List Price
<b>For Cradle</b>	<b>Safety Shutters (VO)</b>						
		MP08–MP20–MC08–MC20	3P	M08–M25	685946	\$ 373	
			4P	M08–M25	685947	485	
		MP25–MP30	3P	M32 ①	685948	373	
			4P	M32 ①	685949	485	
		MC32	3P	M40 ①	685950	373	
			4P	M40 ①	685951	485	
		MP40–MP50–MC40–MC50	3P	M50 ①	684480	636	
			4P	M50 ①	684481	828	
		MP63	3P	M63 ①	684483	812	
			4P	M63 ①	684484	1056	
		<b>Shutter Locking Device (VVC)</b>					
			MP08–MP30–MC08–MC20		M08–M32	685965	55
			MC32	4P	M40	685965 (2)	55 ea.
			MP40–MP63–MC40–MC50		M50–M63	685965 (2)	55 ea.
		<b>Arc Chute Cover (CC)</b>					
		■ Incompatible with top front connections and partitioning fixture.					
			Fixed				No charge
			Drawout				No charge
		<b>Secondary Disconnect Terminal Cover (CB)</b>					
			Drawout				No charge
		<b>Door Escutcheon</b>		Can be used with fixed or drawout circuit breakers		685980	202
							
		<b>Door Escutcheon with Transparent Cover (CCP)</b>		Provides a higher degree of protection		685981	706
							
		<b>Interphase Barrier (EIP)</b>					
		■ Not available for 4000 A, 5000 A, 6300 A and all fixed-mounted circuit breakers. (Kit contains 3 barriers.)					
		3P			685979	87	
		4P			685979	87	

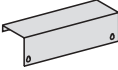
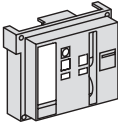
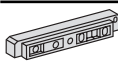

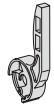


① Only field-installable if not mounted in switchgear.

**Spare Parts**

		Catalog No.	List Price	
<b>Arc Chute (1 piece)</b>				
		AC	685548 \$ 215	
		DC	688870 371	
		1000 Vac	690212 371	
<b>Clusters for Cradle (Set of 2)</b>				
		M08-M12N 3P	685870 (3) 223 ea.	
		M08-M12N 4P	685870 (4) 223 ea.	
	MP08-MP16 3P	M16N 3P	685872 (3) 446 ea.	
	MC08-MC16 3P		685872 (3) 446 ea.	
	MP08-MP16 4P	M16N 4P	685874 (3) 615 ea.	
	MC08-MC16 4P		685874 (3) 615 ea.	
	MP20-MC20 3P	M20-M25N 3P	685874 (3) 615 ea.	
	MP20-MC20 4P	M20-M25N 4P	685874 (4) 615 ea.	
		M08-M16H/L 3P	685872 (3) 446 ea.	
		M08-M16H/L 4P	685872 (4) 446 ea.	
		M20-M25H 3P	685874 (3) 615 ea.	
		M20-M25H 4P	685874 (4) 615 ea.	
	MP25-MP30 3P	M20-M25L 3P	685875 (3) 782 ea.	
	MP25-MP30 4P	M20-M25L 4P	685875 (4) 782 ea.	
		M32H 3P	685875 (3) 782 ea.	
		M32H 4P	685875 (4) 782 ea.	
	MC32 3P	M40H 3P	685875 (1) +685876 (2) 1340 ea.	
		M40H 4P	685875 (2) +685876 (2) 1340 ea.	
	MP40-MP50 3P	M50H 3P	685875 (6) 782 ea.	
	MC40-MC50 3P		685876 (2) 1340 ea.	
	MP40-MP50 4P		685876 (8) 1340 ea.	
	MC40-MC50 4P		685876 (8) 1340 ea.	
		M50H 4P	685875 (7) 782 ea.	
	MP63 3P	M63H 3P	685875 (3) +685876 (3) 1340 ea.	
		M63H 4P	685875 (4) +685876 (3) 1340 ea.	
	<b>Arc Chute Cover (CC)</b>			
		<b>Fixed</b>		
		MP08-MP30 3P	M08-M30 3P	690300 368
MP08-MP30 4P		M08-M30 4P	690301 490	
MP40-MP50 3P			690302 651	
		M40 3P	690301 490	
		M40 4P	690302 651	
	<b>Drawout</b>			
	MP08-MP30 3P	M10-M40DC 3P	689623 298	
	MC08-MC20 3P		689623 298	
	MP08-MP30 4P	M10-M40DC 4P	689676 397	
	MC08-MC20 4P	M60-M80DC 2P	689676 397	
	MC32 3P		689676 397	
	MP40-MP50 3P		689624 529	
	MP40-MP50 4P		689625 706	
	MP63 3P		689625 706	
		M08-M32 3P	685960 298	
		M08-M32 4P	685961 397	
		M40 3P	685961 397	
		M40 4P	685962 529	
		M50 3P	685962 529	
		M50 4P	685963 706	
		M63 3P	685963 706	
		M63 4P	685963 706	



*Continued on next page*

**Spare Parts**—Continued

		Catalog No.	List Price	
<b>Secondary Disconnect Terminal Cover (CB)</b>				
	<b>Drawout</b>			
	MP08–MP30 3P	689619	\$ 186	
	MC08–MC20 3P	689619	186	
	MP08–MP30 4P	689620	248	
	MC08–MC20 4P	689620	248	
	MC32 3P	689620	248	
	MP40–MP50 3P	689621	332	
	MP40–MP50 4P	689622	443	
	MP63	689622	443	
		M08–M32 3P	685955	186
		M08–M32 4P	685956	248
		M40 3P	685956	248
		M40 4P	685957	332
		M50 3P	685957	332
		M50 4P	685958	443
	M63 3P	685958	443	
	M63 4P	685958	443	
<b>Escutcheon for Circuit Breaker (1 Piece)</b>				
	MP08–MP30 3P	M08–M32 3P	685710	227
	MC08–MC20 3P	M40 4P		
	MP40–MP50 3P	M50 3P		
	MC40–MC50 3P			
	MP08–MP20 4P			
	MC08–MC20 4P			
	MP63 3P	M32 4P	685711	273
	MC32 3P	M40 3P		
	MP40–MP50 4P	M50 4P		
	MC40–MC50 4P	M63 3P		
<b>Left Side Escutcheon for Circuit Breaker</b>				
	3P	684450	261	
	4P	684451	313	
<b>Escutcheon for Chassis</b>				
	One piece	685633	147	
<b>Shunt Trip Close Coil and Undervoltage Retaining Nut</b>				
	One piece	685712	66	
<b>Charging Handle</b>				
	One piece	685713	89	
<b>Fixing Bracket</b>				
	Two pieces	685926	251	
<b>Racking Handle</b>				
	One piece	685631	150	
<b>Battery Module (PIL)</b>				
	For STR 38S–STR 58U	54726	240	

Continued on next page

**Spare Parts**—Continued

		Catalog No.	List Price
<b>Circuit Breaker Mismatch Protection (Vdc)</b>			
	One piece	685974	\$ 53
<b>Sealable Cover</b>			
	For STR 18M to STR 58U (PBD) control units	685837	54
	For direct current Masterpact circuit breakers (PCB)	689462	54
<b>Installation Instructions</b>			
	IEC Rated Masterpact circuit breakers	689990	No charge
	UL Listed Masterpact circuit breakers	48049-071-02	No charge
<b>Lifting Hooks</b>			
	Set of two	3U14321	429
<b>Vertical UL 489—UL 1066 Connectors</b>			
	MP08—MC08—MP12—MP16—MC16 3P (set of three)	685884 (2)	348 ea.
	MP08—MC08—MP12—MP16—MC16 4P (one connector)	690973 (8)	131 ea.
	MP20—MC20 3P (set of three)	685916 (2)	436 ea.
	MP20—MC20 4P (one connector)	690974 (8)	163 ea.
	MP25—MP30 3P (set of three top or bottom connectors)	685915 (2)	1163 ea.
	MP25—MP30 4P (set of four top or bottom connectors)	691295 (2)	1743 ea.
	MC32	690529 (4)+ 690530 (2)	493 ea. 493 ea.
	MP40—MC40 3P (set of six connectors)	688256 (1)	2962 ea.
	MP40—MC40 4P (one connector)	691296 (8)	555 ea.
	MP50—MC50—MP63 3P (set of six top or bottom connectors)	688256 (2)	2962 ea.
	MP50—MC50 4P (one connector)	691296 (16)	555 ea.

# IEC Rated Masterpact® Circuit Breakers

## IEC 947-2 Rated 690 Vac Masterpact Circuit Breakers

### Selection Table

Ratings as per IEC 947-2 and EN 60947-2 Standards				M08				M10				M12			
Number of poles				3, 4				3, 4				3, 4			
Rated current (A)		In	40°C	800				1000				1250			
Rating of 4th pole (A)				800				1000				1250			
Rated insulation voltage (V)		Ui		1000				1000				1000			
Rated impulse withstand voltage (kV)		Uimp		8				8				8			
Rated operating voltage (V)		Ue	AC 50/60 Hz	690				690				690			
Type of Circuit Breaker				N1	H1	H2	L1	N1	H1	H2	L1	N1	H1	H2	L1
Ultimate breaking capacity (kA RMS)	Icu	AC 50/60 Hz	220/415 V	40	65	100	130	40	65	100	130	40	65	100	130
			440 V	40	65	100	110	40	65	100	110	40	65	100	110
			500/690 V	40	65	85	65	40	65	85	65	40	65	85	65
Service breaking capacity	Ics	(% Icu)		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Short-time withstand current (kA RMS)	Icw	AC 50/60 Hz	0.5s	40	65	65	12	40	65	65	12	40	65	65	12
			1 s	30	50	50	12	30	50	50	12	30	50	50	12
			3 s	22	32	32	12	22	32	32	12	22	32	32	12
Making capacity (kA peak)	Icm	AC 50/60 Hz	220/415 V	84	143	220	286	84	143	220	286	84	143	220	286
			440 V	84	143	220	242	84	143	220	242	84	143	220	242
			500/690 V	84	143	187	143	84	143	187	143	84	143	187	143
Electrodynamic withstand (kA peak)			84	143	143	24	84	143	143	24	84	143	143	24	
Utilization category				B	B	B	B	B	B	B	B	B	B	B	B
Suitability for isolation		As per IEC 947-2 Standards		Yes				Yes				Yes			
Control Units															
Sensor ratings (A)				200 to 800				200 to 1000				200 to 1250			
Function		STR 18M		I				I				I			
		STR 28D		LI				LI				LI			
		STR 38S		LSI				LSI				LSI			
		STR 58U		LSI				LSI				LSI			
Type of Switch				NI				NI				NI			
Short-time withstand current (kA RMS)	Icw	AC 50/60 Hz	0.5 s	40				40				40			
			1 s	30				30				30			
			3 s	22				22				22			
Making capacity (kA peak)	Icm	AC 50/60 Hz	440 V	84				84				84			
			500/690 V	84				84				84			
Electrodynamic withstand (kA peak)				84				84				84			
Suitability for isolation as per IEC Standards				Yes				Yes				Yes			
Closing time (ms)				70				70				70			
Endurance (C-O cycles) x 1000	Mechanical	With maintenance		20				20				20			
		W/O maintenance		10				10				10			
	Electrical	W/O maintenance		440 V - In		10		10		10		10			
				690 V - In		10		10		10		10			
Motor control (AC3-947-4) ①		690 V		10		10		10		10		10			
Dimensions and Weights															
Dimensions H x W x D (in./mm)	Fixed	3P	14 x 17 x 11/ 356 x 432 x 279		14 x 17 x 11/ 356 x 432 x 279		14 x 17 x 11/ 356 x 432 x 279								
			4P	14 x 21 x 11/ 356 x 533 x 279		14 x 21 x 11/ 356 x 533 x 279		14 x 21 x 11/ 356 x 533 x 279							
	Drawout	3P		17 x 17 x 14/ 432 x 432 x 356		17 x 17 x 14/ 432 x 432 x 356		17 x 17 x 14/ 432 x 432 x 356							
			4P	17 x 22 x 14/ 432 x 559 x 356		17 x 22 x 14/ 432 x 559 x 356		17 x 22 x 14/ 432 x 559 x 356							
Maximum weight (lb/kg)	Fixed	3P		95/43		95/43		95/43							
			4P	119/54		119/54		119/54							
	Drawout	3P		143/65		143/65		143/65							
			4P	177/80		177/80		177/80							

① Closing at six times Ie and opening at 0.17 times Um.



<b>M16</b>				<b>M20</b>				<b>M25</b>				<b>M32</b>		<b>M40</b>		<b>M50</b>		<b>M63</b>	
3, 4				3, 4				3, 4				3, 4		3, 4		3, 4		3, 4	
1600				2000				2500				3200		4000		5000		6300	
1600				2000				2500				3200		4000		2500		3200	
1000				1000				1000				1000		1000		1000		1000	
8				8				8				8		8		8		8	
690				690				690				690		690		690		690	
<b>N1</b>	<b>H1</b>	<b>H2</b>	<b>L1</b>	<b>N1</b>	<b>H1</b>	<b>H2</b>	<b>L1</b>	<b>N1</b>	<b>H1</b>	<b>H2</b>	<b>L1</b>	<b>H1</b>	<b>H2</b>	<b>H1</b>	<b>H2</b>	<b>H1</b>	<b>H2</b>	<b>H1</b>	<b>H2</b>
40	65	100	130	55	75	100	130	55	75	100	130	75	100	75	100	100	150	100	150
40	65	100	110	55	75	100	110	55	75	100	110	75	100	75	100	100	150	100	150
40	65	85	65	55	75	85	65	55	75	85	65	75	85	75	85	85	85	85	85
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
40	65	65	17	55	75	75	17	55	75	75	17	75	75	75	75	100	100	100	100
40	50	50	17	55	75	75	17	55	75	75	17	75	75	75	75	100	100	100	100
22	32	32	12	50	57	57	17	50	75	75	17	75	75	75	75	100	100	100	100
84	143	220	286	121	165	220	286	121	165	220	286	165	220	165	220	220	330	220	330
84	143	220	242	121	165	220	242	121	165	220	242	165	220	165	220	220	330	220	330
84	143	187	143	121	165	187	143	121	165	187	143	165	187	165	187	187	187	187	187
84	143	143	34	121	165	165	34	121	165	165	34	165	165	165	165	220	220	220	220
B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Yes				Yes				Yes				Yes		Yes		Yes		Yes	
<b>200 to 1600</b>				<b>200 to 2000</b>				<b>300 to 2500</b>				<b>600 to 3200</b>		<b>2000 to 4000</b>		<b>2000 to 5000</b>		<b>2000 to 6300</b>	
I				I				I				I		I		I		I	
LI				LI				LI				LI		LI		LI		LI	
LSI				LSI				LSI				LSI		LSI		LSI		LSI	
LSI				LSI				LSI				LSI		LSI		LSI		LSI	
<b>NI</b>				<b>NI</b>				<b>NI</b>				<b>HI</b>		<b>HI</b>		<b>HI</b>		<b>HI</b>	
40				55				55				75		75		100		100	
30				55				55				75		75		100		100	
22				50				50				75		75		100		100	
84				84				84				105		105		187		187	
84				84				84				105		105		187		187	
84				121				121				165		165		220		220	
Yes				Yes				Yes				Yes		Yes		Yes			
70				70				70						80		80		80	
20				15				15				15		10		10		10	
10				10				10				10		5		5		5	
10				9				8				4		3		3		2	
10				7				6				2.6		2.5		2.5		1.5	
10				7				6				2.6		2.5		2.5		1.5	
14 x 17 x 11/ 356 x 432 x 279				14 x 17 x 11/ 356 x 432 x 279				14 x 17 x 11/ 356 x 432 x 279				14 x 17 x 11/ 356 x 432 x 279		14 x 21 x 11/ 356 x 533 x 279		14 x 32 x 11/ 356 x 812 x 279		-	
14 x 21 x 11/ 356 x 533 x 279				14 x 21 x 11/ 356 x 533 x 279				14 x 21 x 11/ 356 x 533 x 279				14 x 21 x 11/ 356 x 533 x 279		14 x 32 x 11/ 356 x 812 x 279		-		-	
17 x 17 x 14/ 432 x 432 x 356				17 x 17 x 14/ 432 x 432 x 356				17 x 17 x 14/ 432 x 432 x 356				17 x 17 x 14/ 432 x 432 x 356		17 x 22 x 14/ 432 x 559 x 356		19 x 32 x 14/ 483 x 812 x 356		19 x 41 x 14/ 483 x 1041 x 356	
17 x 22 x 14/ 432 x 559 x 356				17 x 22 x 14/ 432 x 559 x 356				17 x 22 x 14/ 432 x 559 x 356				17 x 22 x 14/ 432 x 559 x 356		19 x 32 x 14/ 483 x 812 x 356		19 x 41 x 14/ 483 x 1041 x 356		19 x 41 x 14/ 483 x 1041 x 356	
102/46				121/55				121/55				177/80		198/90		242/110		-	
128/58				152/69				152/69				198/90		242/110		-		-	
152/69				181/82				181/82				287/130		331/150		474/215		540/245	
187/85				225/102				225/102				331/150		441/200		507/230		584/265	

**IEC 947-2 Rated 1000 Vac Masterpact Circuit Breakers****Selection Table**

<b>Ratings as per IEC 947-2 and EN 60947-2 Standards</b>				<b>M08</b>	<b>M10</b>	<b>M12</b>	
Number of poles				3, 4	3, 4	3, 4	
Rated current (A)		In	40°C	800	1000	1250	
Rating of 4th pole (A)				800	1000	1250	
Rated insulation voltage (V)		Ui		1000	1000	1000	
Rated impulse withstand voltage (kV)		Uimp		8	8	8	
Rated operational voltage (V)		Ue AC 50/60 Hz		1000	1000	1000	
<b>Type of Circuit Breaker</b>				<b>H1</b>	<b>H1</b>	<b>H1</b>	
Ultimate breaking capacity (kA RMS)		Icu	AC 60/60 Hz	220/415 V	65	65	65
				440 V	65	65	65
				500/690 V	65	65	65
				1000 V	45	45	45
Service breaking capacity		Ics	(% Icu)	100%	100%	100%	
Short-time withstand current (kA RMS)		Icw	AC 60/60 Hz	0.5 s	45	45	45
				1 s	45	45	45
				3 s	32	32	32
Making capacity (kA peak)		Icm	AC 50/60 Hz	220/415 V	95	95	95
				440 V	143	143	143
				500/690 V	143	143	143
				1000 V	143	143	143
Utilization category				B	B	B	
Suitability for isolation as per IEC 947-2				Yes	Yes	Yes	
<b>Control Units, Dimensions and Weights (Same as 690 Vac Circuit Breaker)</b>							

	<b>M16</b>	<b>M20</b>	<b>M25</b>	<b>M32</b>
	3, 4	3, 4	3, 4	3, 4
	1600	2000	2500	3200
	1600	2000	2500	3200
	1000	1000	1000	1000
	8	8	8	8
	1000	1000	1000	1000
	<b>H1</b>	<b>H1</b>	<b>H1</b>	<b>H1</b>
	65	75	75	75
	65	75	75	75
	65	75	75	75
	45	45	45	45
	100%	100%	100%	100%
	45	45	45	45
	45	45	45	45
	32	45	45	45
	95	95	95	95
	143	165	165	165
	143	165	165	165
	143	165	165	165
	B	B	B	B
	Yes	Yes	Yes	Yes

# IEC Rated Masterpact® Circuit Breakers

## IEC 947-2 Rated 690/1000 Vac Masterpact Circuit Breakers

### To order a complete circuit breaker, order:

- 1 Circuit breaker frame ..... page [124](#)  
or cradle only ..... page [125](#)  
or circuit breaker without cradle ..... page [126](#)
- 2 Connections ..... page [127](#)
- 3 Control unit ..... page [110](#)
- 4 Accessories ..... page [112](#)
- 5 Request for quotation form ..... page [135](#)

### Additional information:

- Catalog no. ABTED36050EN
- Installation Guide no. ABTED29601V1EN
- Data Sheet no. ABTED29601V1EN
- D-Fax no. 995

## IEC 947-2 Rated Masterpact Circuit Breaker Frame

- Prices do not include control unit.
- Prices include horizontal connections (PPS).

Rating 40°C (A)	Ics=100% Icu (kA) 220/440 V	Fixed 3P	List Price	Fixed 4P ①	List Price	Drawout with cradle 3P	List Price	Drawout with cradle 4P ①	List Price	
<b>M08 to M25 N1 Type—690 Vac</b>										
M08	800	40	M08N13FPPS0800	\$ 5551	M08N14FPPS0800	\$ 7216	M08N13DPPS0800	\$ 8040	M08N14DPPS0800	\$ 10452
M10	1000	40	M10N13FPPS1000	5912	M10N14FPPS1000	7687	M10N13DPPS1000	8887	M10N14DPPS1000	11554
M12	1250	40	M12N13FPPS1200	6274	M12N14FPPS1200	8157	M12N13DPPS1200	10634	M12N14DPPS1200	13824
M16	1600	40	M16N13FPPS1600	7007	M16N14FPPS1600	9109	M16N13DPPS1600	11842	M16N14DPPS1600	15395
M20	2000	55	M20N13FPPS2000	8405	M20N14FPPS2000	10926	M20N13DPPS2000	14015	M20N14DPPS2000	18219
M25	2500	55	M25N13FPPS2500	14571	M25N14FPPS2500	18942	M25N13DPPS2500	20409	M25N14DPPS2500	26532
<b>M08 to M63 H1 Type—690 Vac</b>										
M08	800	65	M08H13FPPS0800	6236	M08H14FPPS0800	8108	M08H13DPPS0800	8971	M08H14DPPS0800	11663
M10	1000	65	M10H13FPPS1000	6634	M10H14FPPS1000	8624	M10H13DPPS1000	9903	M10H14DPPS1000	12874
M12	1250	65	M12H13FPPS1200	7031	M12H14FPPS1200	9140	M12H13DPPS1200	11822	M12H14DPPS1200	15369
M16	1600	65	M16H13FPPS1600	7836	M16H14FPPS1600	10188	M16H13DPPS1600	13149	M16H14DPPS1600	17095
M20	2000	75	M20H13FPPS2000	8965	M20H14FPPS2000	12184	M20H13DPPS2000	15538	M20H14DPPS2000	20199
M25	2500	75	M25H13FPPS2500	16148	M25H14FPPS2500	20992	M25H13DPPS2500	22564	M25H14DPPS2500	29333
M32	3200	75	M32H13FPPS3200	20081	M32H14FPPS3200	26105	M32H13DPPS3200	28825	M32H14DPPS3200	37472
M40	4000	75	M40H13FPPS4000	32958	M40H14FPPS4000	42844	M40H13DPPS4000	46946	M40H14DPPS4000	61031
M50 ②	5000	100	M50H13FPPS5000	49519			M50H13DPPS5000	65320	M50H14DPPS5000	84916
M63 ②	6300	100					M63H13DPPS6300	89115	M63H14DPPS6300	115849
<b>M08 to M63 H2 Type—690 Vac</b>										
M08	800	100	M08H23FPPS0800	6793	M08H24FPPS0800	8831	M08H23DPPS0800	9524	M08H24DPPS0800	12382
M10	1000	100	M10H23FPPS1000	7108	M10H24FPPS1000	9240	M10H23DPPS1000	10505	M10H24DPPS1000	13657
M12	1250	100	M12H23FPPS1200	7422	M12H24FPPS1200	10780	M12H23DPPS1200	12215	M12H24DPPS1200	15879
M16	1600	100	M16H23FPPS1600	8272	M16H24FPPS1600	10753	M16H23DPPS1600	13588	M16H24DPPS1600	17665
M20	2000	100	M20H23FPPS2000	9892	M20H24FPPS2000	12860	M20H23DPPS2000	17228	M20H24DPPS2000	22396
M25	2500	100	M25H23FPPS2500	18110	M25H24FPPS2500	23543	M25H23DPPS2500	24441	M25H24DPPS2500	31773
M32	3200	100	M32H23FPPS3200	23094	M32H24FPPS3200	30023	M32H23DPPS3200	30703	M32H24DPPS3200	39914
M40	4000	100	M40H23FPPS4000	37779	M40H24FPPS4000	49113	M40H23DPPS4000	49953	M40H24DPPS4000	64938
M50 ②	5000	150	M50H23FPPS5000	59487			M50H23DPPS5000	75286	M50H24DPPS5000	97872
M63 ②	6300	150					M63H23DPPS6300	107341	M63H24DPPS6300	139543
<b>M08 to M25 L1 Type—690 Vac</b>										
M08	800	130	M08L13FPPS0800	9042	M08L14FPPS0800	11755	M08L13DPPS0800	11633	M08L14DPPS0800	15162
M10	1000	130	M10L13FPPS1000	9619	M10L14FPPS1000	12505	M10L13DPPS1000	12836	M10L14DPPS1000	16688
M12	1250	130	M12L13FPPS1200	10196	M12L14FPPS1200	13254	M12L13DPPS1200	15387	M12L14DPPS1200	20003
M16	1600	130	M16L13FPPS1600	11755	M16L14FPPS1600	15281	M16L13DPPS1600	19688	M16L14DPPS1600	25594
M20	2000	130	M20L13FPPS2000	14059	M20L14FPPS2000	18277	M20L13DPPS2000	22473	M20L14DPPS2000	29216
M25	2500	130	M25L13FPPS2500	20992	M25L14FPPS2500	27290	M25L13DPPS2500	28310	M25L14DPPS2500	36803

① The 4th pole is not protected; add \$459 for neutral protection.  
 ② The 4th neutral pole rating is half the phase rating.

Continued on next page

# IEC Rated Masterpack® Circuit Breakers

## IEC 947-2 Rated Masterpack Circuit Breaker Frame—Continued

- Prices do not include control unit.
- Prices include horizontal connections (PPS).

Rating 40°C (A)	Ics=100% Icu (kA) 220/440 V	Fixed 3P	List Price	Fixed 4P ①	List Price	Drawout with Cradle 3P	List Price	Drawout with Cradle 4P ①	List Price
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### M08 to M32 H1 Type—1000 Vac

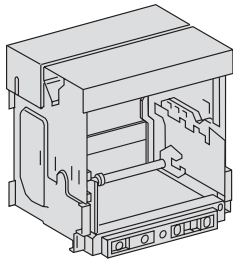
- Extra list price to add to M08 to M32—690 Vac.
- Prices do not include control unit.
- Not available in switch version.
- Drawout only.
- Non-compatible with front connections (AA).

M08 to M32 800 to 3200 A	1040	1386
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### M08 to M63 NI and HI Switches—690 Vac

Rating	Fixed 3P	List Price	Fixed 4P ①	List Price	Drawout with Cradle 3P	List Price	Drawout with Cradle 4P ①	List Price
M08 800	M08NI3FPPS0000	\$ 6109	M08NI4FPPS0000	\$ 7941	M08NI3DPPS0000	\$ 8341	M08NI4DPPS0000	\$ 10842
M10 1000	M10NI3FPPS0000	6516	M10NI4FPPS0000	8470	M10NI3DPPS0000	9736	M10NI4DPPS0000	12657
M12 1200	M12NI3FPPS0000	6924	M12NI4FPPS0000	9001	M12NI3DPPS0000	11132	M12NI4DPPS0000	14472
M16 1600	M16NI3FPPS0000	7198	M16NI4FPPS0000	9358	M16NI3DPPS0000	11409	M16NI4DPPS0000	14832
M20 2000	M20NI3FPPS0000	9053	M20NI4FPPS0000	11756	M20NI3DPPS0000	13645	M20NI4DPPS0000	17738
M25 2500	M25HI3FPPS0000	14106	M25HI4FPPS0000	18338	M25HI3DPPS0000	19479	M25HI4DPPS0000	25322
M32 3200	M32HI3FPPS0000	17725	M32HI4FPPS0000	23043	M32HI3DPPS0000	27368	M32HI4DPPS0000	35578
M40 4000	M40HI3FPPS0000	28361	M40HI4FPPS0000	36869	M40HI3DPPS0000	43789	M40HI4DPPS0000	56925
M50 5000	M50HI3FPPS0000	43876			M50HI3DPPS0000	59675	M50HI4DPPS0000	77578
M63 6300					M63HI3DPPS0000	85949	M63HI4DPPS0000	111734

## Cradle Only



- Cradle price is included in the complete drawout price.

	3P	List Price	4P	List Price
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### N1/NI Type—690 Vac

M08	M08N03C	\$ 2287	M08N04C	\$ 2973
M10	M10N03C	2287	M10N04C	2973
M12	M12N03C	2287	M12N04C	2973
M16	M16N03C	2287	M16N04C	2973
M20	M20N03C	2592	M20N04C	3370
M25	M25N03C	4720	M25N04C	6136

### H1/H2/HI/L1 Type—690 Vac

M08	M08H03C	2514	M08H04C	3268
M10	M10H03C	2514	M10H04C	3268
M12	M12H03C	2514	M12H04C	3268
M16	M16H03C	2514	M16H04C	3268
M20	M20H03C	2847	M20H04C	3702
M25	M25H03C	5188	M25H04C	6744
M32	M32H03C	5188	M32H04C	6744
M40	M40H03C	8298	M40H04C	10788
M50	M50H03C	17566	M50H04C	22836
M63	M63H03C	24440	M63H04C	31772

### H1 Type—1000 Vac—Extra list price to add to the price of a 690 Vac H1 cradle

M08 to M32	491	654
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① The 4th pole is not protected; add \$459 for neutral protection.

## IEC Rated Masterpact Drawout Circuit Breaker Without Cradle

■ Prices do not include control unit.

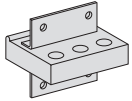
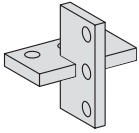
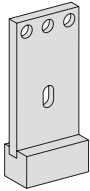
	Rating 40°C	Ics=100% Icu (kA) 220/440 V	Drawout without Cradle 3P	List Price	Drawout without Cradle 4P ①	List Price
<b>M08 to M25 N1 Type—690 Vac</b>						
M08	800	40	M08N13APPS0800	\$ 6041	M08N14APPS0800	\$ 7852
M10	1000	40	M10N13APPS1000	6931	M10N14APPS1000	9010
M12	1250	40	M12N13APPS1200	8764	M12N14APPS1200	11394
M16	1600	40	M16N13APPS1600	10033	M16N14APPS1600	13042
M20	2000	55	M20N13APPS2000	11995	M20N14APPS2000	15593
M25	2500	55	M25N13APPS2500	16473	M25N14APPS2500	21414
<b>M08 to M63 H1 Type—690 Vac</b>						
M08	800	65	M08H13APPS0800	6780	M08H14APPS0800	8815
M10	1000	65	M10H13APPS1000	7759	M10H14APPS1000	10087
M12	1250	65	M12H13APPS1200	9774	M12H14APPS1200	12706
M16	1600	65	M16H13APPS1600	11168	M16H14APPS1600	14518
M20	2000	75	M20H13APPS2000	13324	M20H14APPS2000	17321
M25	2500	75	M25H13APPS2500	18246	M25H14APPS2500	23719
M32	3200	75	M32H13APPS3200	24819	M32H14APPS3200	32264
M40	4000	75	M40H13APPS4000	40580	M40H14APPS4000	52755
M50 ②	5000	100	M50H13APPS5000	50141	M50H14APPS5000	65184
M63 ②	6300	100	M63H13APPS6300	67909	M63H14APPS6300	88281
<b>M08 to M63 H2 Type—690 Vac</b>						
M08	800	100	M08H23APPS0800	7361	M08H24APPS0800	9569
M10	1000	100	M10H23APPS1000	8371	M10H24APPS1000	10909
M12	1250	100	M12H23APPS1200	10187	M12H24APPS1200	13241
M16	1600	100	M16H23APPS1600	11629	M16H24APPS1600	15117
M20	2000	100	M20H23APPS2000	15100	M20H24APPS2000	19628
M25	2500	100	M25H23APPS2500	20217	M25H24APPS2500	26281
M32	3200	100	M32H23APPS3200	26792	M32H24APPS3200	34829
M40	4000	100	M40H23APPS4000	43737	M40H24APPS4000	56858
M50 ②	5000	150	M50H23APPS5000	60606	M50H24APPS5000	78789
M63 ②	6300	150	M63H23APPS6300	87046	M63H24APPS6300	113160
<b>M08 to M25 L1 Type—690 Vac</b>						
M08	800	130	M08L13APPS0800	9607	M08L14APPS0800	12488
M10	1000	130	M10L13APPS1000	10840	M10L14APPS1000	14091
M12	1250	130	M12L13APPS1200	13517	M12L14APPS1200	17572
M16	1600	130	M16L13APPS1600	18033	M16L14APPS1600	23443
M20	2000	130	M20L13APPS2000	20607	M20L14APPS2000	26789
M25	2500	130	M25L13APPS2500	24279	M25L14APPS2500	31563
<b>M08 to M63 NI/HI Switches—690 Vac</b>						
M08	800		M08NI3APPS0000	6118	M08NI4APPS0000	7953
M10	1000		M10NI3APPS0000	7584	M10NI4APPS0000	9858
M12	1200		M12NI3APPS0000	9049	M12NI4APPS0000	11763
M16	1600		M16NI3APPS0000	9340	M16NI4APPS0000	12142
M20	2000		M20NI3APPS0000	11337	M20NI4APPS0000	14737
M25	2500		M25NI3APPS0000	15006	M25NI4APPS0000	19507
M32	3200		M32NI3APPS0000	23290	M32NI4APPS0000	30276
M40	4000		M40NI3APPS0000	37263	M40NI4APPS0000	48444
M50	5000		M50NI3APPS0000	44214	M50NI4APPS0000	57479
M63	6300		M63NI3APPS0000	64585	M63NI4APPS0000	83960

① The 4th pole is not protected; add \$459 for neutral protection.

② The 4th neutral pole rating is half the phase rating.

# IEC Rated Masterpact® Circuit Breakers

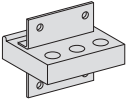
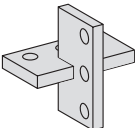
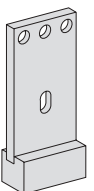
## Connections

			Fixed 3P	List Price	Fixed 4P	List Price ①	Drawout 3P	List Price ①	Drawout 4P	List Price ①	
<b>M08 to M25 N1</b>											
<b>Horizontal (PP)</b>			Standard	No charge	Standard	No charge	Standard	No charge	Standard	No charge	
											
<b>Vertical (CC)</b>											
											
M08-M10 M12	Line	R12N03FUCM	\$ 315	R12N04FUCM	\$ 419	R12N03CUCM	\$ 138	R12N04CUCM	\$ 184		
		Load	R12N03FDCM	315	R12N04FDCM	419	R12N03CDCM	138	R12N04CDCM	184	
			Both	R12N03FBCM	630	R12N04FBCM	837	R12N03CBCM	276	R12N04CBCM	368
	M16	Line	R16N03FUCM	327	R16N04FUCM	436	R16N03CUCM	145	R16N04CUCM	194	
			Load	R16N03FDCM	327	R16N04FDCM	436	R16N03CDCM	145	R16N04CDCM	194
				Both	R16N03FBCM	653	R16N04FBCM	872	R16N03CBCM	290	R16N04CBCM
	M20-M25	Line	R25N03FUCM	593	R25N04FUCM	792	R25N03CUCM	293	R25N04CUCM	392	
			Load	R25N03FDCM	593	R25N04FDCM	792	R25N03CDCM	293	R25N04CDCM	392
				Both	R25N03FBCM	1187	R25N04FBCM	1585	R25N03CBCM	587	R25N04CBCM
<b>Front (AA) ①</b>											
											
M08-M10 M12	Line	R12N03FUAM	265	R12N04FUAM	352	R12N03CUAM	600	R12N04CUAM	800		
		Load	R12N03FDAM	265	R12N04FDAM	352	R12N03CDAM	600	R12N04CDAM	800	
			Both	R12N03FBAM	529	R12N04FBAM	704	R12N03CBAM	1201	R12N04CBAM	1601
	M16	Line	R16N03FUAM	638	R16N04FUAM	851	R16N03CUAM	490	R16N04CUAM	652	
			Load	R16N03FDAM	638	R16N04FDAM	851	R16N03CDAM	490	R16N04CDAM	652
				Both	R16N03FBAM	1277	R16N04FBAM	1702	R16N03CBAM	980	R16N04CBAM
	M20-M25	Line	R25N03FUAM	886	R25N04FUAM	1181	R25N03CUAM	983	R25N04CUAM	1310	
			Load	R25N03FDAM	886	R25N04FDAM	1181	R25N03CDAM	983	R25N04CDAM	1310
				Both	R25N03FBAM	1771	R25N04FBAM	2362	R25N03CBAM	1967	R25N04CBAM

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# IEC Rated Masterpact® Circuit Breakers

## Connections—Continued

		Fixed 3P	List Price	Fixed 4P	List Price <sup>①</sup>	Drawout 3P	List Price <sup>①</sup>	Drawout 4P	List Price <sup>①</sup>
<b>M08 to M63 H1/H2</b>									
<b>Horizontal (PP)</b>		Standard	No charge	Standard	No charge	Standard	No charge	Standard	No charge
									
<b>Vertical (CC)</b>		M08–M10 M12–M16	Line R16H03FUCM \$ 315	R16H04FUCM \$ 436	R16H03CUCM \$ 145	R16H04CUCM \$ 194			
			Load R16H03FDCM 315	R16H04FDCM 436	R16H03CDCM 145	R16H04CDCM 194			
			Both R16H03FBCM 630	R16H04FBCM 872	R16H03CBCM 290	R16H04CBCM 389			
		M20–M25	Line R25H03FUCM 593	R25H04FUCM 792	R25H03CUCM 293	R25H04CUCM 392			
			Load R25H03FDCM 593	R25H04FDCM 792	R25H03CDCM 293	R25H04CDCM 392			
			Both R25H03FBCM 1187	R25H04FBCM 1585	R25H03CBCM 587	R25H04CBCM 784			
		M32	Line R32H03FUCM 874	R32H04FUCM 1164	R32H03CUCM 715	R32H04CUCM 955			
			Load R32H03FDCM 874	R32H04FDCM 1164	R32H03CDCM 715	R32H04CDCM 955			
			Both R32H03FBCM 1748	R32H04FBCM 2328	R32H03CBCM 1431	R32H04CBCM 1909			
		M40	Line R40H03FUCM 1342	R40H04FUCM 1789	R40H03CUCM 1193	R40H04CUCM 1510			
			Load R40H03FDCM 1342	R40H04FDCM 1789	R40H03CDCM 1193	R40H04CDCM 1510			
			Both R40H03FBCM 2684	R40H04FBCM 3579	R40H03CBCM 2385	R40H04CBCM 3020			
		M50	Line R50H03FUCM 1764		R50H03CUCM 1569	R50H04CUCM 2006			
			Load R50H03FDCM 1764		R50H03CDCM 1569	R50H04CDCM 2006			
			Both R50H03FBCM 3528		R50H03CBCM 3137	R50H04CBCM 4011			
		M63	Line		R63H03CUCM 2444	R63H04CUCM 2870			
			Load		R63H03CDCM 2444	R63H04CDCM 2870			
			Both		R63H03CBCM 4888	R63H04CBCM 5741			
<b>Front (AA) ①</b>		M08–M10 M12–M16	Line R16H03FUAM 638	R16H04FUAM 851	R16H03CUAM 490	R16H04CUAM 652			
			Load R16H03FDAM 638	R16H04FDAM 851	R16H03CDAM 490	R16H04CDAM 652			
			Both R16H03FBAM 1276	R16H04FBAM 1702	R16H03CBAM 980	R16H04CBAM 1304			
		M20–M25	Line R25H03FUAM 886	R25H04FUAM 1181	R25H03CUAM 983	R25H04CUAM 1304			
			Load R25H03FDAM 886	R25H04FDAM 1181	R25H03CDAM 983	R25H04CDAM 1304			
			Both R25H03FBAM 1771	R25H04FBAM 2362	R25H03CBAM 1967	R25H04CBAM 2608			
		M32	Line R32H03FUAM 1219	R32H04FUAM 1625	R32H03CUAM 1668	R32H04CUAM 2224			
			Load R32H03FDAM 1219	R32H04FDAM 1625	R32H03CDAM 1668	R32H04CDAM 2224			
			Both R32H03FBAM 2438	R32H04FBAM 3250	R32H03CBAM 3335	R32H04CBAM 4448			

① Incompatible with AC partitioning fixture;  
Incompatible with CC (arc chute cover) if front connections are on top.

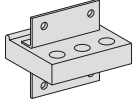
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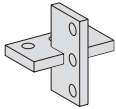
# IEC Rated Masterpact® Circuit Breakers

## Connections—Continued

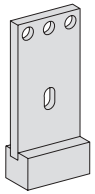
	Fixed 3P	List Price	Fixed 4P	List Price <sup>①</sup>	Drawout 3P	List Price <sup>①</sup>	Drawout 4P	List Price <sup>①</sup>
<b>M08 to M25 L1</b>								
<b>Horizontal (PP)</b>	Standard	No Charge	Standard	No Charge	Standard	No Charge	Standard	No Charge



<b>Vertical (CC)</b>									
M08–M10 M12–M16	Line	R16L13FUCM	\$ 315	R16L14FUCM	\$ 436	R16L13CUCM	\$ 145	R16L14CUCM	\$ 194
	Load	R16L13FDCM	315	R16L14FDCM	436	R16L13CDCM	145	R16L14CDCM	194
	Both	R16L13FBCM	630	R16L14FBCM	872	R16L13CBCM	290	R16L14CBCM	389
M20–M25	Line	R25L13FUCM	873	R25L14FUCM	1164	R25L13CUCM	715	R25L14CUCM	955
	Load	R25L13FDCM	873	R25L14FDCM	1164	R25L13CDCM	715	R25L14CDCM	955
	Both	R25L13FBCM	1746	R25L14FBCM	2328	R25L13CBCM	1431	R25L14CBCM	1909
M08–M10 M12–M16	Line	R16L13FUAM	638	R16L14FUAM	851	R16L13CUAM	490	R16L14CUAM	652
	Load	R16L13FDAM	638	R16L14FDAM	851	R16L13CDAM	490	R16L14CDAM	652
	Both	R16L13FBAM	1277	R16L14FBAM	1702	R16L13CBAM	980	R16L14CBAM	1304
M20–M25	Line	R25L13FUAM	1219	R25L14FUAM	1625	R25L13CUAM	1668	R25L14CUAM	2224
	Load	R25L13FDAM	1219	R25L14FDAM	1625	R25L13CDAM	1668	R25L14CDAM	2224
	Both	R25L13FBAM	2438	R25L14FBAM	3250	R25L13CBAM	3335	R25L14CBAM	4448



### Front (AA) <sup>①</sup>



**Control Units—see page 110**

**Accessories—see page 112**

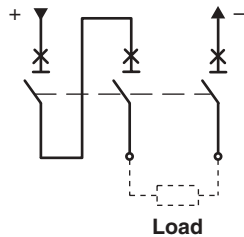
<sup>①</sup> Incompatible with AC partitioning fixture; incompatible with CC (arc chute cover) if front connections are on top.

## IEC 947-2 Rated 250 to 1000 Vdc Masterpact Circuit Breakers

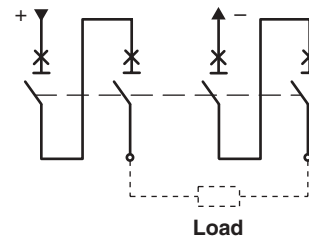
## Selection Table

Ratings as per IEC 947-2 Standard			M10DC		
Number of poles			3	4	
Rated operational voltage (Vdc)	Ue		250/500	750/1000	
Rated current (A)	In	40°C	1000	1000	
Rated insulation voltage (V)	Ui		1000	1000	
Rated impulse withstand voltage (kV)	Uimp		8	8	
Ultimate breaking capacity (kA)	Icu	L/R ≤ 15 ms	100	50	
Service breaking capacity	Ics	(% Icu)	100%	100%	
Suitability for isolation		As per IEC 947-2 standard	Yes	Yes	
Utilization category			B	B	
Short-time withstand current	Icw	(kA, 1s)	100	50	
Endurance (C-O cycles)	Mechanical	Without maintenance	10000	10000	
		With maintenance	15000	15000	
	Electrical (at Ue)	No maintenance	10000	1600	
Operating time	Total max. breaking time		30 to 75 ms		
	Closing time		60 ms		
Protection			D or H	E, F, H or J	
Function	DINA	Adjustable magnetic trip unit (kA)	1.5–3, 3–6, 6–12, 10–20	1.5–3, 3–6, 6–12, 10–20	
	STR 08I	Non-automatic switch	Yes	Yes	
Rated operational voltage (Vdc)			250/500	750	1000
Distribution system	Ungrounded		D	E	E
	Center point grounded		D	E	E
	Negative point grounded	Alternative #1	D	F	–
		Alternative #2	H	H	J
Pole connections					

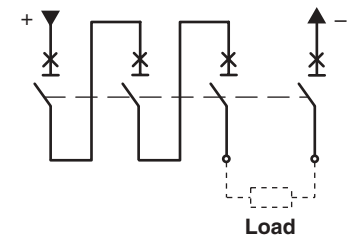
**Type D**  
3P circuit breaker



**Type E**  
4P circuit breaker  
U > 750 V: mandatory supply  
via upper terminals



**Type F**  
4P circuit breaker



## Dimensions and Weights

Dimensions H x W x D (in/mm)	Drawout circuit breaker	17.3 x 17.1 x 21.1/ 439 x 435 x 536	404 x 21.7 x 21.1/ 439 x 550 x 536
	Fixed circuit breaker	15.9 x 17.2 x 15.5/ 404 x 438 x 393	15.9 x 17.2 x 15.5/ 404 x 553 x 393
Weight (lb/kg)	Drawout circuit breaker	276/125	353/160
	Fixed circuit breaker	143/65	176/80
	Chassis only	176/80	221/100

① Type H: Do not exceed 3600 A for an ambient temperature of 40°C.

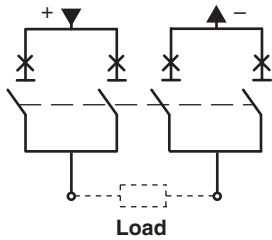
② Type J: Do not exceed 3500 A for an ambient temperature of 40°C.

Refer to catalog no.: AC0452E

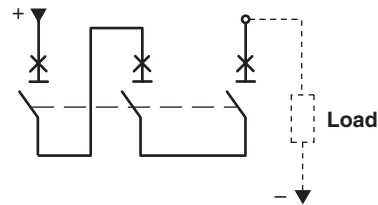
M20DC		M40DC		M60DC	M80DC
3	4	3	4	2	2
250/500	750/1000	250/500	750/1000	250	250
2000	2000	4000 ①	4000 ②	6000	8000
1000	1000	1000	1000	1000	1000
8	8	8	8	8	8
100	50	100	50	100	100
100%	100%	100%	100%	100%	100%
Yes	Yes	Yes	Yes	Yes	Yes
B	B	B	B	B	B
100	50	100	50	100	100
10000	10000	5000	5000	5000	5000
15000	15000	10000	10000	10000	10000
8500	1600	4000	1600	1600	1600

D or H	E, F, H or J		D or H	E, F, H or J		G	G
1.5-3, 3-6, 6-12, 10-20	1.5-3, 3-6, 6-12, 10-20		1.5-3, 3-6, 6-12, 10-20	1.5-3, 3-6, 6-12, 10-20		9-18, 10-24, 24-40	9-18, 10-24, 24-40
Yes	Yes		Yes	Yes		Yes	Yes
250/500	750	1000	250/500	750	1000	250	250
D	E	E	D	E	E	G	G
D	E	E	D	E	E	G	G
D	F	-	D	F	-	G	G
H	H	J	H	H	J	G	G

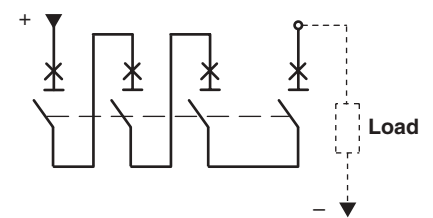
**Type G**  
2P circuit breaker



**Type H** ①  
3P circuit breaker

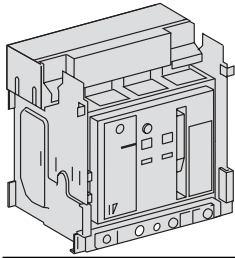


**Version J** ②  
4P circuit breaker



17.3 x 17.1 x 21.1/ 439 x 435 x 536	17.3 x 21.7 x 21.1/ 439 x 550 x 536	17.3 x 17.1 x 25.2/ 439 x 435 x 641	17.3 x 21.7 x 25.2/ 439 x 550 x 641	17.3 x 21.7 x 19.1/ 439 x 550 x 484	17.3 x 21.7 x 19.1/ 439 x 550 x 484
15.9 x 17.2 15.5/ 404 x 438 x 393	15.9 x 21.8 x 15.5/ 404 x 553 x 393	15.9 x 17.2 x 20.9/ 404 x 438 x 530	15.9 x 21.8 x 20.9/ 404 x 553x530		
276/125	353/160	298/135	375/170	331/150	331/150
143/65	176/80	143/65	176/80	176/80	176/80
176/80	221/100	198/90	243/110	198/90	198/90

# IEC Rated Masterpact® Circuit Breakers



## To order a complete circuit breaker, order:

- |                                     |                          |
|-------------------------------------|--------------------------|
| <b>1</b> Circuit breaker frame      | page <a href="#">132</a> |
| or cradle only                      | page <a href="#">132</a> |
| or circuit breaker without cradle   | page <a href="#">132</a> |
| <b>2</b> Protection                 | page <a href="#">132</a> |
| <b>3</b> Optional Connections       | page <a href="#">132</a> |
| <b>4</b> Accessories                | page <a href="#">112</a> |
| <b>5</b> Request for quotation form | page <a href="#">137</a> |

## Additional information:

- Catalog no. AC0452E
- Installation Guide no. ABTED296010V1EN

## IEC Rated Masterpact Circuit Breaker Frame

- Basic circuit breaker including poles in series, safety shutters and arc chute in drawout version.

	Rating 40°C	Poles connection	Fixed ①			Drawout		
			2P	3P	4P	2P	3P	4P
<b>M10 to M40 DC—250 Vdc to 500 Vdc—100 kA</b>								
M10 DC	1000	D, H		\$ 9839		\$ 12793		
M20 DC	2000	D, H		15916		19795		
M40 DC	4000	D, H		33201		40669		
<b>M10 to M40 DC—750 Vdc to 1000 Vdc—50 kA</b>								
M10 DC	1000	E, F, J		13766			\$ 17233	
M20 DC	2000	E, F, J		21335			26321	
M40 DC	4000	E, F, J		46523			55239	
<b>M60 to M80 DC—250 Vdc—100 kA</b>								
M60 DC	6000	G				\$ 113935		
M80 DC	8000	G				130775		

## Protection

STR 08I control unit for non-automatic switch	No charge
DINA control switch for magnetic only circuit breaker with adjustable instantaneous pickup	1528

## Connections

- Extra prices are for optional top and bottom vertical connections (CC). When only either top or bottom connections are requested, prices must be divided by 2.

	Rating	Poles	Fixed		Drawout	
			2P	3P	2P	3P
M10 DC	1000	Horizontal	No charge	No charge	No charge	No charge
			653	872	291	388
M20 DC	2000	Horizontal	No charge	No charge	No charge	No charge
			1188	1584	587	783
M40 DC	4000	Vertical	No charge	No charge	No charge	No charge
M60 DC	6000	Vertical			No charge	
M80 DC	8000	Vertical			No charge	

## Cradle only

- Including poles in series, arc chute and safety shutters

	Rating	Price	Price
		2P	3P
M10 DC	1000		3941 5004
M20 DC	2000		4867 6530
M40 DC	4000		9164 11700
M60 DC	6000	15482	
M80 DC	8000	17797	

## Accessories—see page [112](#)

- CT (test position switches), CD (disconnected position switches), CE (connected position switches) are not available with this dc version.
- Safety shutters or drawout version are standard.
- SDE overcurrent trip switch is not available on STR 08I control unit.

① Consult factory for availability.

# Request for Quote Form UL 489 Listed Masterpact® Circuit Breakers

For faster quote processing, please use the following request for quotation form. For each section, check the applicable box or enter value corresponding to your choice. **Note:** This request for quotation form does not take into account incompatibilities. Orders to be placed on Q2C.

## Square D:

Date \_\_\_\_\_  
 From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Phone No. \_\_\_\_\_  
 Fax No. \_\_\_\_\_  
 Messages \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## Customer:

Customer Name \_\_\_\_\_  
 Account No. \_\_\_\_\_  
 Contact Name \_\_\_\_\_  
 Location \_\_\_\_\_  
 Phone No. \_\_\_\_\_  
 Fax No. \_\_\_\_\_  
 RFQ No. \_\_\_\_\_  
 Q2C No. \_\_\_\_\_

## 1—Circuit Breaker Frame

<b>Brand</b>	Merlin Gerin		
	Square D		
<b>Quantity</b>			
<b>Rating (08-63)</b>	UL 489	P	
	UL 1066/ANSI	C	
<b>Type</b>	N1, H1, H2, NA		
<b>Version</b>	Fixed	F	
	Complete drawout	D	
	Drawout circuit breaker alone	A	
	Chassis alone	C	
<b>Connection</b>	Top	Horizontal P08-P12, C08	P
		Vertical P16-P63, C16-C50	C
	Bottom	Horizontal P08-P12, C08	P
		Vertical P16-P63, C16-C50	C
<b>Sensor Rating</b>	Circuit breaker CT ratings (amperes)		
	External neutral sensor (3Ø4W) (Amperes)	TCE	

## 2—Control Unit

<b>STR 08I</b>	Non-automatic switch	STR 08I	
<b>STR 18M</b>	Instantaneous only	STR 18M	
<b>STR 28D</b>	Long-time, instantaneous	STR 28D	
	Ammeter	I	
	Pre-trip overload switch	ALR	Standard
<b>STR 38S</b>	Long-time, short-time, instantaneous	STR 38S	
	Residual ground-fault protection	T	
	Source ground return protection	W	
	Ammeter	I	
	Pre-trip overload switch	ALR	Standard
	Fault indicator	F	
	Safeguard battery module	BAT	
	Power supply with battery	PIL	
<b>STR 58U</b>	Long-time, short-time, instantaneous	STR 58U	
	Residual ground-fault protection	T	
	Source ground return protection	W	
	Ammeter	I	
	Pre-trip overload switch	ALR	Standard
	Fault indicator	F	
	Safeguard battery module	BAT	
	Power supply with battery	PIL	
	Zone-selective interlocking	Z	
	Load monitoring	R	
	Segregated alarm switch (fault indicator [F] included)	FV	
	Communication	C	
<b>Rating Plug (Amperes)</b>	Required only on STRxxDP, SP and UP Trip Units	PL	
<b>Control Unit Accessories</b>	Power supply module	AD	
	Sealable cover	PBD	Standard
	Automatic reset	RAR	

**Manufacturing no. provided with quotation**

\_\_\_\_\_

# Request for Quotation Form UL 489 Listed Masterpact® Circuit Breakers

For faster quote processing, please use the following request for quotation form. For each section, check the applicable box or enter value corresponding to your choice. **Note:** This request for quotation form does not take into account incompatibilities. Orders to be placed on Q2C.

### 3—Electrical Accessories

<b>Electrical Operating Mechanism</b>	Spring charging motor (specify volts)	MCH	
	Operations counter (with motor only)	CDM	
	Closing coil release (specify volts)	XF	
<b>Voltage Release</b>	Shunt trip (specify volts)	MX	
	Undervoltage release (specify volts)	MN	
	Time delayed undervoltage (not UL) (specify volts)	MNR	
	With instantaneous wiring (specify volts)	MNRI	
<b>Auxiliary Switch</b>	2a+2b aux. switches		Standard
	Overcurrent trip switch	SDE	Standard
	4 SPDT aux. switches	OF	
	Ready to close switch	PF	
	4 connected position switches (drawout only)	CE	
	2 disconnected position switches (drawout only)	CD	
	1 test position switch (drawout only)	CT	

① Please note that Kirk® key locks are ordered from an outside vendor and are registered keys. The following information is required before the order can be processed.

Ultimate customer's name and address:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Contact person and phone number:

\_\_\_\_\_

### 4—Mechanical/Installation Accessories

<b>Push Button Locking Device</b>	VBP		
<b>Locking In "Open" Position</b>	Provision for key interlock only	VKA	
	1 Kirk® key lock with provision ①②	VSKA1	
	2 Kirk® key locks with provision ①②	VSKA2	
	1 Ronis key lock with provision	VSRA1	
<b>Disconnect- ed Position Locking</b>	2 Ronis key locks with provision	VSRA2	
	Padlocking provision	VEC	Standard
	Provision for Kirk® key interlock only	VKC	
	1 Kirk® key lock with provision ①②	VSKC1	
	2 Kirk® key locks with provision ①②	VSKC2	
	1 Ronis key lock with provision	VSRC1	
	2 Ronis key locks with provision	VSRC2	
	<b>Installation Accessories</b>	Right-hand door interlock	VPECD
Left-hand door interlock		VPECG	
Racking interlock in open position door		VPOC	
Withdrawal/spring charged interlock (required for UL 1066/ANSI) (non-compatible with undervoltage release)		VEAA	
Safety shutters		VO	
Shutter lock (1 or 2)		VVC	
Arc chute cover		CC	Standard
Terminal cover		CB	Standard
Interphase barriers		EIP	
Door escutcheon (frame—IP405)		CDP	
Door escutcheon with transparent cover (frame—IP549)		CCP	
Rejection feature mismatch protection	VDC	Standard	

② Kirk® key lock configuration:

If order quantity is more than one, please check appropriate box.

All locks keyed alike	
All locks keyed differently	

If locks are to be keyed like another current or previous order, indicate factory order number and MP number below.

	1	2	3	4
Order number				
MP number				
Quantity				

Masterpact is a registered trademark of Schneider Electric.  
Square D is a registered trademark of Square D Company.  
Kirk is a registered trademark of Brown Boveri Electric Inc.

<b>Catalog description</b>	<b>Manufacturing no. provided with quotation</b>	<b>List price</b>	<b>Delivery</b>
_____	_____	\$ _____	_____ From receipt of order
Square D standard conditions of sale apply.			

# Request for Quotation Form IEC 947-2 Rated Masterpact® Circuit Breakers

For faster quote processing, please use the following request for quotation form. For each section, check the applicable box or enter value corresponding to your choice. **Note:** This request for quotation form does not take into account incompatibilities. Orders to be placed on Q2C.

## Square D:

Date	
From	
Location	
Phone No.	
Fax No.	
Messages	

## Customer:

Customer Name	
Account No.	
Contact Name	
Location	
Phone No.	
Fax No.	
RFQ No.	
Q2C No.	

## 1—Circuit Breaker Frame

<b>Quantity</b>				
<b>Rating (08—63)</b>	IEC 947-2	M		
<b>Type</b>	N, H, L or 1000 Vac type			
<b>Number of poles</b>				
<b>Version</b>	Fixed	F		
	Complete drawout	D		
	Drawout circuit breaker alone	A		
	Chassis alone	C		
<b>Connection</b>	Top	Horizontal	P	Standard
		Vertical	C	
		Front	A	
	Bottom	Horizontal	P	Standard
		Vertical	C	
		Front	A	
<b>Sensor Rating</b>	Internal	IN		
	External	TCE		
<b>Neutral Protection For 4-pole</b>	No protection	None		
	Full	N		
	Reduced	N/2		
<b>Neutral on Right-hand</b>				

## 2—Control Unit

<b>STR 08I</b>	Non-automatic switch	STR 08I		
<b>STR 18M</b>	Instantaneous only	STR 18M		
<b>STR 28D</b>	Long-time, instantaneous	STR 28D		
	Ammeter	I		
	Pre-trip overload switch	ALR	Standard	
<b>STR 38S</b>	Long-time, short-time, instantaneous	STR 38S		
	Residual ground-fault protection	T		
	Source ground return protection	W		
	Ammeter	I		
	Pre-trip overload switch	ALR	Standard	
	Fault indicator	F		
	Safeguard battery module	BAT		
	Power supply with battery	PIL		
<b>STR 58U</b>	Long-time, short-time, instantaneous	STR 58U		
	Residual ground-fault protection	T		
	Source ground return protection	W		
	Ammeter	I		
	Pre-trip overload switch	ALR	Standard	
	Fault indicator	F		
	Safeguard battery module	BAT		
	Power supply with battery	PIL		
	Zone-selective interlocking	Z		
	Load monitoring	R		
	Segregated alarm switch (fault indicator [F] included)	FV		
	Communication	C		
<b>Control Unit</b>	Power supply module	AD		
<b>Accessories</b>	Sealable cover	PBD	Standard	
	Automatic reset	RAR		

<b>Manufacturing No. Provided With Quotation</b>
_____

# Request for Quotation Form IEC 947-2 Rated Masterpact® Circuit Breakers

For faster quote processing, please use the following request for quotation form. For each section, check the applicable box or enter value corresponding to your choice. **Note:** This request for quotation form does not take into account incompatibilities. Orders to be placed on Q2C.

### 3—Electrical Accessories

<b>Electrical Operating Mechanism</b>	Spring charging motor (specify volts)	MCH	
	Operations counter (with motor only)	CDM	
	Closing coil release (specify volts)	XF	
<b>Voltage Release</b>	Shunt trip (specify volts)	MX	
	Undervoltage release (specify volts)	MN	
	Time delayed undervoltage (not UL) (specify volts)	MNR	
	With instantaneous wiring (specify volts)	MNRI	
<b>Auxiliary Switch</b>	2a+2b aux. switches		Standard
	Overcurrent trip switch	SDE	Standard
	4 SPDT aux. switches	OF	
	Ready to close switch	PF	
	4 connected position switches (drawout only)	CE	
	2 disconnected position switches (drawout only)	CD	
	1 test position switch (drawout only)	CT	

① Please note that Kirk® key locks are ordered from an outside vendor and are registered keys. The following information is required before the order can be processed.

Ultimate customer's name and address:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Contact person and phone number:

\_\_\_\_\_

### 4—Mechanical/Installation Accessories

<b>Push button locking device</b>	VBP		
<b>Locking in "Open" Position</b>	Provision for key interlock only	VKA	
	1 Kirk key lock with provision ①②	VSKA1	
	2 Kirk key locks with provision ①②	VSKA2	
	1 Ronis key lock with provision	VSRA1	
	2 Ronis key locks with provision	VSRA2	
<b>Disconnect- ed Position Locking</b>	Padlocking provision	VEC	Standard
	Provision for Kirk key interlock only	VKC	
	1 Kirk key lock with provision ①②	VSKC1	
	2 Kirk key locks with provision ①②	VSKC2	
	1 Ronis key lock with provision	VSRC1	
	2 Ronis key locks with provision	VSRC2	
<b>Installation Accessories</b>	Right-hand door interlock	VPECD	
	Left-hand door interlock	VPECG	
	Racking interlock in open position door	VPOC	
	Withdrawal/spring charged interlock (required for UL 1066/ANSI) (non-compatible with undervoltage release)	VEAA	
	Safety shutters	VO	
	Shutter lock (1 or 2)	VVC	
	Arc chute cover	CC	Standard
	Terminal cover	CB	Standard
	Interphase barriers	EIP	
	Door escutcheon (frame—IP405)	CDP	
	Door escutcheon with transparent cover (frame—IP549)	CCP	
	Rejection feature mismatch protection	VDC	Standard

② Kirk key lock configuration:

If order quantity is more than one, please check appropriate box.

All locks keyed alike	
All locks keyed differently	

If locks are to be keyed like another current or previous order, indicate factory order number and MP number below.

	1	2	3	4
Order number				
MP number				
Quantity				

<b>Catalog Description</b>	<b>Manufacturing No. Provided With Quotation</b>	<b>List price</b>	<b>Delivery</b>
_____	_____	\$ _____	_____ From receipt of order

Square D standard conditions of sale apply.



For faster quote processing, please use the following request for quotation form. For each section, check the applicable box or enter value corresponding to your choice. **Note:** This request for quotation form does not take into account incompatibilities. Orders to be placed on Q2C.

### Square D:

Date \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Phone No. \_\_\_\_\_

Fax No. \_\_\_\_\_

Messages \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Customer:

Customer Name \_\_\_\_\_

Account No. \_\_\_\_\_

Contact Name \_\_\_\_\_

Location \_\_\_\_\_

Phone No. \_\_\_\_\_

Fax No. \_\_\_\_\_

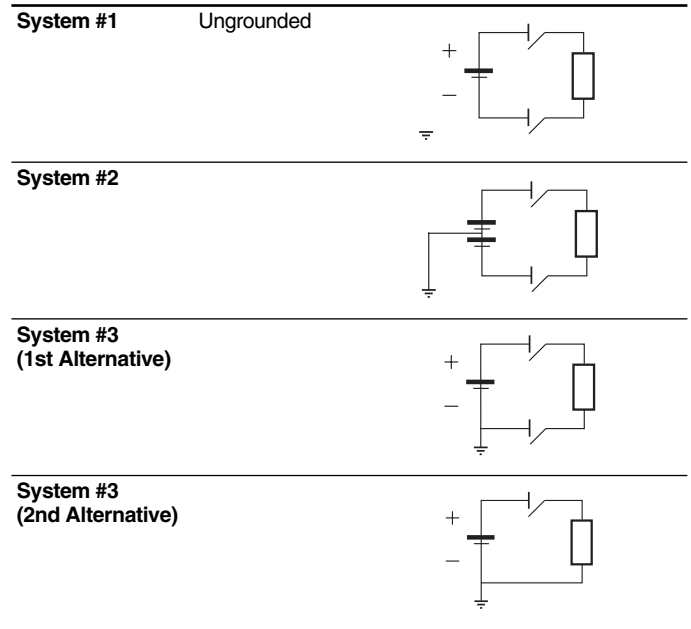
RFQ No. \_\_\_\_\_

Q2C No. \_\_\_\_\_

### 1—Circuit Breaker Frame

Quantity				
Rating	1000 A		M10DC	
	2000 A		M20DC	
	4000 A		M40DC	
	6000 A		M60DC	
	8000 A		M80DC	
Maximum Voltage	500 V	Up to 4000 A	500 V	
	750 V	Up to 4000 A	750 V	
	1000 V	Up to 4000 A	1000 V	
	250 V	6000–8000 A	250 V	
Type	(For distribution system selection, see diagrams opposite)			
	<b>Up to 4000 A</b>			
	All systems (#1-2-3/1st alt.)	3 poles 500 V max.	D	
	Isolated system (#1)	4 poles 1000 V max.	E	
	Grounded middle point (#2)	4 poles 1000 V max.	E	
	Grounded negative polarity (#3/2nd alt.)	3 poles 750 V max.	H	
	Grounded negative polarity (#3/1st alt.)	4 poles 750 V max.	F	
	Grounded negative polarity (#3/2nd alt.)	4 poles 1000 V max.	J	
	<b>6000 A—8000 A</b>			
	All systems (#1-2-3)	2 poles 250 V max.	G	
	Version	Fixed	Up to 4000 A	F
		Drawout		D
		Drawout without chassis		A
Chassis only			C	
Connection	Top	Horizontal (up to 2000 A)	P	
		Vertical	C	
	Bottom	Horizontal (up to 2000 A)	P	
		Vertical	C	

### Diagrams



**Manufacturing no. provided with quotation**

\_\_\_\_\_

# Request for Quotation Form IEC 947-2 Rated Masterpact® DC Circuit Breakers

For faster quote processing, please use the following request for quotation form. For each section, check the applicable box or enter value corresponding to your choice. **Note:** This request for quotation form does not take into account incompatibilities. Orders to be placed on Q2C.

## 2—Protection

<b>Type</b>	Switch		STR 08I	
	Or instantaneous DINA for M10—M20—M40	1.5 kA—3 kA	1.5/3K	
		3 kA—6 kA	03/06K	
		6 kA—12 kA	06/12K	
		10 kA—20 kA	10/20K	
	Or instantaneous DINA for M60—M80	9 kA—18 kA	9/18K	
12 kA—24 kA		12/24K		
20 kA—40 kA		20/40K		
<b>Accessories</b>	Sealable cover		PBC	

## 3—Electrical Accessories

<b>Electrical Operating Mechanism</b>	Spring charging motor (specify volts)	MCH	
	Operations counter (with motor only)	CDM	
	Closing coil release (specify volts)	XF	
<b>Voltage Release</b>	Shunt trip (specify volts)	MX	
	Undervoltage release (specify volts)	MN	
	Time delayed undervoltage (not UL) (specify volts)	MNR	
	With instantaneous wiring (specify volts)	MNRI	
<b>Auxiliary Switch</b>	4 SPDT aux. switches	OF	
	Ready to close switch	PF	
<b>Plug</b>	Disconnectable plug (1 or 2)	DP	Standard

① Please note that Kirk® key locks are ordered from an outside vendor and are registered keys. The following information is required before the order can be processed.

Ultimate customer's name and address:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Contact person and phone number:

\_\_\_\_\_

## 4—Mechanical/Installation Accessories

<b>Push button locking device</b>	VBP			
<b>Locking in "Open" Position</b>	Provision for key interlock only	VKA		
	1 Kirk key lock with provision ①②	VSKA1		
	2 Kirk key locks with provision ①②	VSKA2		
	1 Ronis key lock with provision	VSRA1		
	2 Ronis key locks with provision	VSRA2		
<b>Disconnect- ed Position Locking</b>	Padlocking provision	VEC	Standard	
	Provision for Kirk key interlock only	VKC		
	1 Kirk key lock with provision ①②	VSKC1		
	2 Kirk key locks with provision ①②	VSKC2		
	1 Ronis key lock with provision	VSRC1		
	2 Ronis key locks with provision	VSRC2		
	<b>Installation Accessories</b>	Right-hand door interlock	VPECD	
		Left-hand door interlock	VPECG	
Racking interlock in open position door		VPOC		
Withdrawal/spring charged interlock (required for UL 1066/ANSI) (non-compatible with undervoltage release)		VEAA		
Safety shutters		VO	Standard	
Shutter lock (1 or 2)		VVC	Standard	
Arc chute cover		CC	Standard	
Door escutcheon (frame—IP405)		CDP		
Door escutcheon with transparent cover (frame—IP549)		CCP		
Rejection feature mismatch protection		VDC	Standard	

② Kirk key lock configuration:

If order quantity is more than one, please check appropriate box.

All locks keyed alike	
All locks keyed differently	

If locks are to be keyed like another current or previous order, indicate factory order number and MP number below.

	1	2	3	4
Order number				
MP number				
Quantity				

<b>Catalog Description</b>	<b>Manufacturing No. Provided With Quotation</b>	<b>List price</b>	<b>Delivery</b>
_____	_____	\$ _____	_____ From receipt of order

Square D standard conditions of sale apply.

# UL Listed Interpact™ Switches

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	<b>Page</b>
<b>UL Listed Interpact™ Switches</b>	<a href="#">140</a>
Selection Table for IEC 947-3 Rated Interpact Switches	<a href="#">140</a>
Interpact INS and IN Switches	<a href="#">142</a>

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## **UL Listed Interpact Switches**

A range of UL Listed Interpact Disconnect switches is scheduled to be available 4th quarter 2004.

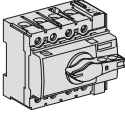
These include three amperages in the INSE80 range: 40 A, 60 A and 80 A.

Also, two amperages in the INSJ400 range: 250 A and 400A.

Consult your nearest Square D/Schneider Electric sales office for availability.

Interpact™ Switches  
**UL Listed Interpact Switches**

**Selection Table**

			<b>INSE80</b>		
					

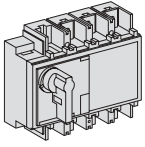
**Ratings as per UL 489 and CSA C22.2 No. 5.2**

Number of poles			3, 4	3, 4	3, 4	
Conventional thermal current (A)	Ith	At 60°C	40	60	80	
Rated insulation level (V)	Ui	AC 50/60 Hz	690	690	690	
Impulse-withstand voltage (kV)	Uimp		8	8	8	
Rated operational voltage (V)	Ue	AC 50/60 Hz	600	600	600	
		DC	—	—	—	
Rated operational current (A)	Ie	AC 50/60 Hz				
		220/240 V	40	60	80	
		380/415 V	40	60	80	
		440/480 V	40	60	80	
		500 V	40	60	80	
		660/690 V				
		DC				
Short-circuit making capacity (kA peak)	Icm	min. (protected by any protection device)	10	10	10	
		max. (with Class T or RK fuse)	50	50	50	
Short-time withstand current (A RMS)	Icw	1 s	3000	3000	3000	
		3 s	1730	1730	1730	
		20 s	670	670	670	
Suitability for isolation			Yes	Yes	Yes	
Endurance (category A) (CO cycles)		Mechanical	20000	20000	20000	
		Electrical AC	AC22A 500 V	1500	1500	1500
			AC22A 690 V	—	—	—
			AC23A 440 V	1500	1500	1500
			AC23A 500 V	1500	1500	1500
			AC23A 690 V	—	—	—
		Electrical DC	DC23A 250 V	1500	1500	1500
Positive contact indication			Yes	Yes	Yes	

**Dimensions and Weights**

Dimensions W x H x D (in./mm)	3P	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5
	4P	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5
Weight (lb/kg)	3P	1.10/0.5	1.10/0.5	1.10/0.5
	4P	1.32/0.6	1.32/0.6	1.32/0.6
When protected by a Merlin Gerin circuit breaker type NSE 100 A rating or Square D type GJL 100 A rating		100 kA rms		
		65 kA rms		
		18 kA rms		
When protected by a Merlin Gerin circuit breaker type NSJ 400 A rating				

**INS400**

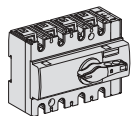


3, 4	3, 4
250	400
750	750
8	8
690	690
250	250
AC 22 A	AC 22 A
400	400
400	400
400	400
400	400
400	400
DC 22 A	DC 22 A
400	400
400	400
20	20
50	50
20000	20000
11500	11500
4900	4900
Yes	Yes
10000	10000
1500	1500
1500	1500
1500	1500
1500	1500
1500	1500
1500	1500
1500	1500
Yes	Yes

8.1 x 7.3 x 4.7/ 205 x 185 x 120
8.1 x 7.3 x 4.7/ 205 x 185 x 120
10.1/4.6
10.8/4.9

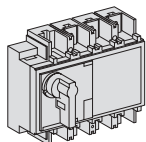
150 kA rms
100 kA rms
25 kA rms

Interpact™ INSE and INSJ Switches  
**UL Listed Interpact Switches**



**Interpact INSE 40 to 80 A Switches**

		3P		4P	
Rating (A)		Catalog No.	List Price	Catalog No.	List Price
<b>With Black Handle</b>					
INSE80	40	28994	\$ 229	28995	\$ 263
	60	28996	259	28997	294
	80	28998	289	28999	332



**Interpact INSJ 250 to 400 A Switches**

INSJ400	250	31118	536	31119	616
	400	31136	966	31137	1110

Scheduled for 4th quarter 2004.  
 Consult your nearest Square D/Schneider Electric sales office  
 for availability.

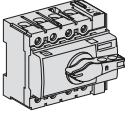
# IEC 947-3 Rated Interpact™ Switches

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	<b>Page</b>
<b>IEC 947-3 Rated Interpact<sup>®</sup> Switches</b>	<a href="#"><u>144</u></a>
Selection Table for IEC 947-3 Rated Interpact Switches	<a href="#"><u>144</u></a>
Interpact INS and IN Switches	<a href="#"><u>146</u></a>

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**IEC 947-3 Rated Interpact Switches—Not UL Listed****Selection Table**

			INS40	INS63	INS80
					

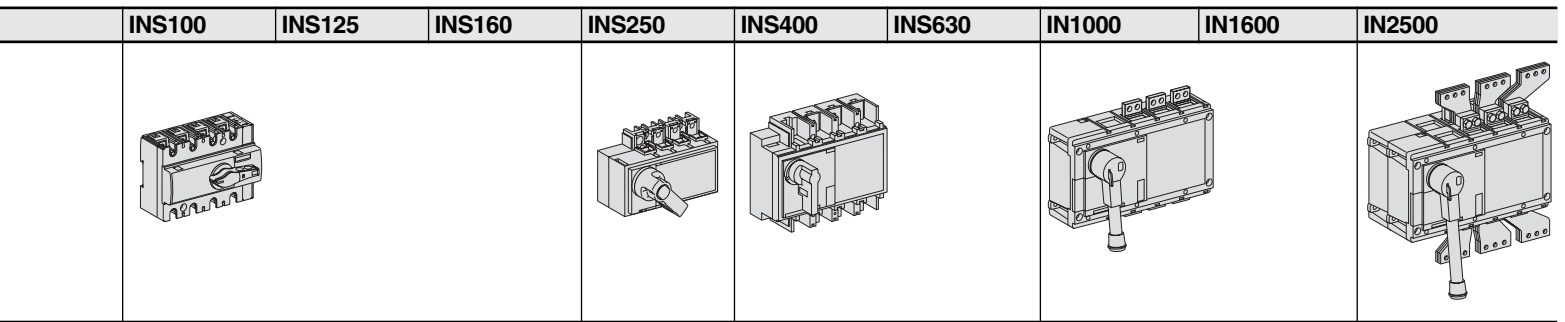
**Ratings as per IEC 60947-1/IEC 60947-3 and EN 60947-1/EN 60947-3**

Number of poles			3, 4	3, 4	3, 4			
Conventional thermal current (A)	I <sub>th</sub>	At 60°C	40	63	80			
Rated insulation level (V)	U <sub>i</sub>	AC 50/60 Hz	690	690	690			
Impulse-withstand voltage (kV)	U <sub>imp</sub>		8	8	8			
Rated operational voltage (V)	U <sub>e</sub>	AC 50/60 Hz	500	500	500			
		DC	250	250	250			
Rated operational current (A)	I <sub>e</sub>	AC 50/60 Hz	AC 22 A	AC 23 A	AC 22 A	AC 23 A		
		220/240 V	40	40	63	63	80	80
		380/415 V	40	40	63	63	80	72
		440/480 V	40	40	63	63	80	63
		500 V	40	32	63	40	80	40
		660/690 V						
		DC	DC 22 A	DC 23 A	DC 22 A	DC 23 A	DC 22 A	DC 23 A
		125V (2P in series)	40	40	63	63	80	80
		250 V (4P in series)	40	40	63	63	80	80
Short-circuit making capacity (kA peak)	I <sub>cm</sub>	min. (Switch-disconnector alone)	15	15	15			
		max. (with upstream protection circuit breaker)	75	75	75			
Short-time withstand current (A RMS)	I <sub>cw</sub>	1 s	3000	3000	3000			
		3 s	1730	1730	1730			
		20 s	670	670	670			
Suitability for isolation			Yes	Yes	Yes			
Endurance (category A) (CO cycles)		Mechanical	20000	20000	20000			
		Electrical AC	AC22A 500 V	1500	1500	1500		
			AC22A 690 V	–	–	–		
			AC23A 440 V	1500	1500	1500		
			AC23A 500 V	1500	1500	1500		
			AC23A 690 V	–	–	–		
		Electrical DC	DC23A 250 V	1500	1500	1500		
Positive contact indication			Yes	Yes	Yes			

**Dimensions and Weights**

Dimensions W x H x D (in./mm)	3P	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5
	4P	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5	3.2 x 3.5 x 2.5/ 81 x 90 x 62.5
Weight (lb/kg)	3P	1.10/0.5	1.10/0.5	1.10/0.5
	4P	1.32/0.6	1.32/0.6	1.32/0.6

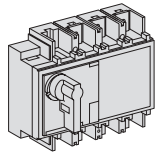
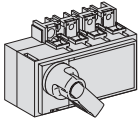
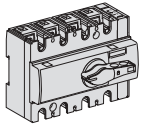
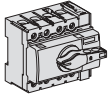




3, 4		3, 4		3, 4		3, 4		3, 4		3, 4		3, 4		3, 4		3, 4	
100		125		160		250		400		630		1000		1600		2500	
750		750		750		750		750		750		690		690		690	
8		8		8		8		8		8		8		8		8	
690		690		690		690		690		690		690		690		690	
250		250		250		250		250		250		250		250		250	
AC 22 A	AC 23 A	AC 22 A	AC 23 A	AC 22 A	AC 23 A	AC 22 A	AC 23 A	AC 22 A	AC 23 A	AC 22 A	AC 23 A	AC 21 A	AC 22 A	AC 21 A	AC 22 A	AC 21 A	AC 22 A
100	100	125	125	160	160	250	250	400	400	630	500	1000	1000	1600	1600	2500	2500
100	100	125	125	160	160	250	250	400	400	630	500	1000	1000	1600	1600	2500	2500
100	100	125	125	160	160	250	250	400	400	630	500	1000	800	1600	1200	2500	–
100	100	125	125	160	160	250	250	400	400	630	500	1000	800	1600	1200	2500	–
100	63	125	80	160	100	250	250	400	400	630	500	1000	–	1600	–	2500	–
DC 22 A	DC 23 A	DC 22 A	DC 23 A	DC 22 A	DC 23 A	DC 22 A	DC 23 A	DC 22 A	DC 23 A	DC 22 A	DC 23 A	DC 22 A	DC 23 A	DC 22 A	DC 23 A	DC 21 A	DC 22 A
100	100	125	125	160	160	250	250	400	400	630	630	1000	1000	1600	1600	2500	–
100	100	125	125	160	160	250	250	400	400	630	630	1000	1000	1600	1600	2500	–
20		20		20		30		50		50		75		75		105	
154		154		154		330		330		330		176		105		105	
5500		5500		5500		8500		20000		20000		35000		35000		50000	
3175		3175		3175		4900		11500		11500		20000		20000		28000	
1230		1230		1230		2200		4900		4900		7800		7800		11000	
Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
15000		15000		15000		15000		10000		10000		3000		3000		3000	
1500		1500		1500		1500		1500		1500		500		500		500	
1500		1500		1500		1500		1500		1500		1000		500		500	
1500		1500		1500		1500		1500		1500		–		–		–	
1500		1500		1500		1500		1500		1500		–		–		–	
1500		1500		1500		1500		1500		1500		–		–		–	
1500		1500		1500		1500		1500		1000		500		500		500 (DC 21 A)	
Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	

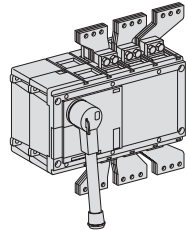
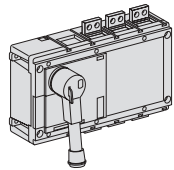
3.9 x 5.3 x 2.5/ 100 x 135 x 62.5	3.9 x 5.3 x 2.5/ 100 x 135 x 62.5	3.9 x 5.3 x 2.5/ 100 x 135 x 62.5	5.4 x 5.5 x 3.4/ 136 x 140 x 86	8.1 x 7.3 x 4.7/ 205 x 185 x 120	8.1 x 7.3 x 4.7/ 205 x 185 x 120	11.8 x 13.4 x 4.6/ 300 x 340 x 118	11.8 x 13.4 x 4.6/ 300 x 340 x 118	17.3 x 13.4 x 7.9/ 440 x 340 x 200
3.9 x 5.3 x 2.5/ 100 x 135 x 62.5	3.9 x 5.3 x 2.5/ 100 x 135 x 62.5	3.9 x 5.3 x 2.5/ 100 x 135 x 62.5	5.4 x 5.5 x 3.4/ 136 x 140 x 86	8.1 x 7.3 x 4.7/ 205 x 185 x 120	8.1 x 7.3 x 4.7/ 205 x 185 x 120	11.8 x 16.1 x 4.6/ 300 x 410 x 118	11.8 x 16.1 x 4.6/ 300 x 410 x 118	17.3 x 16.1 x 7.9/ 440 x 410 x 200
1.76/0.8	1.76/0.8	1.76/0.8	4.4/2	10.1/4.6	10.1/4.6	26.5/12	33/15	77/35
1.98/0.9	1.98/0.9	1.98/0.9	4.9/2.2	10.8/4.9	10.8/4.9	33/15	40/18	99/45

# IEC 947-3 Rated Interpact Switches—Not UL Listed



## Interpact INS40 to INS630 Switches

COMPLETE DEVICE		3P		4P	
	Rating (A)	Catalog No.	List Price	Catalog No.	List Price
<b>With Black Handle</b>					
INS40	40	28900	\$ 179	28901	\$ 193
INS63	63	28902	207	28903	227
INS80	80	28904	228	28905	261
INS100	100	28908	293	28909	327
INS125	125	28910	319	28911	351
INS160	160	28912	357	28913	385
INS250	250	31106	375	31107	410
INS400	400	31110	677	31111	800
INS630	630	31114	1090	31115	1261
<b>With Red Handle and Yellow Front</b>					
INS40	40	28916	187	28917	203
INS63	63	28918	217	28919	238
INS80	80	28920	246	28921	274
INS100	100	28924	308	28925	343
INS125	125	28926	335	28927	369
INS160	160	28928	375	28929	404
INS250	250	31126	393	31127	427
INS400	400	31130	677	31131	800
INS630	630	31134	1090	31135	1261

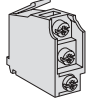
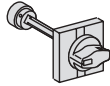


## Interpact IN1000 to IN2500 Switches

IN1000	1000	47775	2615	47751	3007
IN1600	1600	47776	3359	47851	3863
IN2500	2500	47777	6510	47855	7487

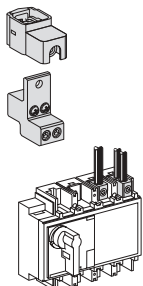
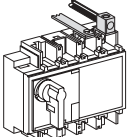
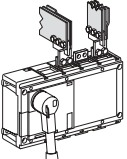
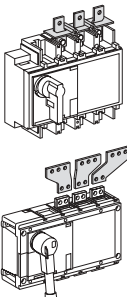
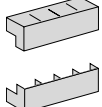

Additional information:  
 ■ Catalog no. ART25605

**Accessories**

Electrical Accessories	Auxiliary Switch			Catalog No.	List Price	
		1 OF / CAF / CAO (indifferently)	INS40 to INS160	29450	\$ 198	
		1 OF / CAF / CAO (low level)	INS40 to INS160	29452	248	
		1 early make/early break switch (depending on mounting)	IN1000 to IN2500	42906	90	
		2 auxiliary switches	IN1000 to IN2500	47757	107	
	<b>Conversion Accessories for Extended Rotary Handle</b>					
		Front Handle	With black handle	INS40 to INS160	28941	158
				INS250	31050	128
				INS400/630	31052	174
			With red handle and yellow bezel	INS40 to INS160	28942	158
				INS250	31051	128
INS400/630				31053	174	
Side Handle		With black handle	INS40 to INS160	28943	79	
			INS250	31057	105	
			With red handle and yellow bezel	INS40 to INS160	28944	79
Spare handle		Black handle	INS250	31082	74	
	INS400/630		31084	83		
	Red handle		INS250	31803	74	
		INS400/630	31085	83		
<b>Locks, Interlocking</b>	<b>Handle Lock</b>	By up to 3 padlocks		Built-in		
		By key lock (in "open" or "closed" position) for IN1000 to IN2500				
		1 key lock	Ronis 135.500	41940	97	
	Profalux KS5B24D4Z		42888	97		
	<b>Door Interlock in "Closed" Position (for devices with extended rotary handle)</b>					
			IN1000 to IN2500	47754	39	
	<b>Mechanical Interlocking</b>					
			INS40 to INS160 (for devices with extended rotary handle)	28953	234	
			INS250 (for devices with direct or extended rotary handle)	31073	423	
			INS400/630 (for devices with direct or extended rotary handle)	31074	423	
<b>Key Locks Interlocking</b>						
		IN1000 to IN2500	Ronis 135.500	41950	122	
		1 set of 2 key locks (1 key only)	Profalux KS5B24D4Z	42878	122	

Continued on next page

**Accessories—Continued**

		Catalog No.	List Price	
<b>Connection Accessories</b> 	<b>Cable Connection</b>			
	INS40 to INS80	1 cable, 2.5–50mm <sup>2</sup>	Standard	
	INS100 to INS160	1 cable, 95mm <sup>2</sup>	(Set of 3) 28947 <b>\$ 39.90</b> (Set of 4) 28948 <b>54</b>	
	INS100 to INS160	Distribution lugs for (2) 25 + (2) 16mm <sup>2</sup>	(Set of 3) 28949 <b>197</b> (Set of 4) 28950 <b>264</b>	
	INS250	95mm <sup>2</sup> to 185mm <sup>2</sup>	(Set of 3) 29259 <b>75</b>	
	INS400/630	1 cable 300mm <sup>2</sup>	(Set of 3) 32479 <b>95</b>	
		2 cables 240mm <sup>2</sup>	(Set of 3) 32481 <b>126</b>	
	<b>Rear Connections</b>			
		INS250	(Set of 2) 29236 <b>70</b>	
		INS400/630	(Set of 2) 32476 <b>174</b>	
<b>Angular Terminal Extensions (Long Terminal Covers are Mandatory)</b>				
	INS250 (supplied with 2 phase barriers)	(Set of 3) 29261 <b>46.20</b>		
	INS400/630 (supplied with 2 phase barriers)	(Set of 3) 32484 <b>101</b>		
<b>Additional Edgewise Pads for Bars</b>				
	IN1000	(Set of 2) 47758 <b>365</b>		
	IN1600	(Set of 2) 47858 <b>729</b>		
<b>Spreaders</b>				
	INS400/630	3P (Set of 3) 32492 <b>195</b> 4P (Set of 4) 32493 <b>259</b>		
	IN1000	3P (Set of 3) 47760 <b>417</b> 4P (Set of 4) 47761 <b>549</b>		
	IN1600	3P (Set of 3) 47760 <b>417</b> 4P (Set of 4) 47761 <b>549</b>		
	IN2500	Supplied <b>No charge</b>		
	<b>Terminal Shields</b>			
		INS40 to INS80	3P/4P Long (1 pair) 28957 <b>47.30</b>	
		INS100 to INS160	3P/4P Long (1 pair) 28958 <b>57</b>	
		INS250	3P/4P Long (1 pair) 29324 <b>86</b>	
		INS250	3P/4P Short (1 pair) 29322 <b>79</b>	
		INS400/630	3P/4P Short (1 pair) 32563 <b>107</b>	
INS400/630		3P/4P Long (1 pair) 32565 <b>146</b>		
<b>Phase Barriers</b>				
	INS100 to INS160	3P/4P (6 pieces) 28959 <b>41</b>		
	IN1000/IN1600	3P/4P (kit for 3P/4P) 47756 <b>323</b>		
	IN2500	3P/4P (kit for 3P/4P) 47860 <b>372</b>		

# UL 1053 Listed Vigirex™ Ground-fault Relays

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# Vigirex™ Ground-fault Relays

## UL 1053 Listed Vigirex Ground-fault Relays

### Selection Table

#### Vigirex Ground-fault Relays

#### Electrical Characteristics

$I_{\Delta n}$ residual operating current	Selector 1		
Time delay (ms)			
Device tests	Local		
	Automatic		
Reset			
Local indication	Insulation fault or detection circuit failure indicator light		
Output contacts	Fault contacts	Number	Changeover (SPDT)
	Rating	AC p.f. = 0.7	380 V
			220 V
		DC L/R = 0 s	220 V
			120 V
			48 V
			24 V
Max. consumption	12 to 48 Vdc		
	110 to 130 Vac and 220 to 240 Vac		
Control voltage operating range			AC
			DC

#### Toroids

Toroids to be used ①

#### Dimensions and Weights

Dimensions H x W x D (in./mm)

Weight (lb/kg) RH-P7

Used in conjunction with a standard Merlin Gerin toroid (type A or OA), this type of relay trips the associated switching device, after the selected time delay, when it detects a residual current above 80% of the setting for operating current ( $I_{\Delta n}$ ).

#### Characteristics

- Green LED indicates presence of control voltage; or normal operation
- Red LED indicates the trip threshold has been exceeded; failure of the detection circuit (connecting cable and toroid), or other malfunction is detected.

#### Advantages




- Protection can be adapted to any installation;
- Vertical coordination possible over a number of levels;
- Can be used with an alarm threshold to provide a warning of a non-critical degradation of the insulation, leaving time to carry out preventive maintenance;
- Control voltage alarm via fail-safe contact

#### Installation

- Live part in a disconnectable, insulating molded case, 72mm wide, with lockable transparent cover;
- Horizontal or vertical flush or surface mounting on a symmetrical rail; also panel mounting
- Connection by tunnel terminals.

Refer to **Instruction Bulletin**: 48049-546-01 (DIN mounted) or 48049-547-01 (panel-mounted)

① By shielded wire or toroid plugged into relay for TA30 and PA50—maximum lengths: refer to catalog 1518066AH

RH10	RH21	RH99
		
300 mA, 100 mA, 300 mA, 500 mA, or 1 A	30 mA or 300 mA (2 settings)	30 mA, 100 mA, 300 mA, 500 mA, 1 A, 3 A, 5 A, 10 A, 30 A
Instantaneous	Instantaneous for 30mA; instantaneous or 60ms for 300mA	9 user-selected time delays: Instantaneous, 60ms, 150ms, 250ms, 310ms, 500ms, 800ms, 1 sec, 4.5 sec
Electronic + indicator light + contact		
Detection circuit		Some models auto-reset
Local, and remote		
By indicator light with latching		
One standard	one standard	One standard
Latched	Latched	Latched or non-latched
3 A	3 A	
5 A	5 A	
0.45 A	0.45 A	
0.65 A	0.65 A	
2.5 A	2.5 A	
10 A	10 A	
4W	4W	
4 VA	4 VA	
55 to 110%		
55 to 120%		
TA30, PA50, IA80, MA120, SA200, GA300, POA, GOA		
RHM 3.2 x 2.8 x 2.6/81 x 63 x 65.5	RHP 2.8 x 2.8 x 3.1/72x72x78	
0.9/0.4	0.7/0.3	

# UL1053 Listed DIN-Mounted Vigirex RH\_\_M Ground-fault Relays



## Vigirex RH10M Ground-fault Relay with Fixed Sensitivity

Sensitivity: Fixed; dependent on model  
 Reset: Manual  
 Latched FAULT output contact: N.O. or N.C.; also ON (operational) status contact  
 Test: With or without trip of equipment

Time Delay	Control Voltage	Sensitivity	Catalog No.	List Price
Instantaneous	12–24 Vac/12–48 Vdc	30 mA	56300	\$ 1325
		100 mA	56302	1325
		300 mA	56305	1325
		500 mA	56306	1325
		1 A	56307	1325
	110–130 Vac	30 mA	56320	1325
		100 mA	56322	1325
		300 mA	56325	1325
		500 mA	56326	1325
		1 A	56327	1325
	220–240 Vac	30 mA	56330	1325
		100 mA	56332	1325
		300 mA	56335	1325
		500 mA	56336	1325
		1 A	56337	1325



## Vigirex RH21M Ground-fault Relay with Three Settings

Sensitivity: adjustable to 30 mA or 300 mA  
 Reset: Manual  
 Latched FAULT output contact: N.O. or N.C.; also ON (operational) status contact  
 Test: With or without trip of equipment

Instantaneous at 30 mA; Instantaneous or 60 mSec at 300 mA (3 settings)	12–24 Vac/12–48 Vdc	30 mA or 300 mA	56360	1575
	110–130 Vac	300 mA	56362	1575
	220–240 Vac	2 settings)	56363	1575



## Vigirex RH99M with Nine Adjustable Sensitivity and Time Delay Settings

### Manual Reset

Sensitivity: Adjustable  
 Time Delay: Adjustable  
 Latched FAULT output contact: N.O. or N.C.; also ON (operational) status contact  
 Test: With or without trip of equipment

Adjustable from Instantaneous to 4.5 Sec (9 settings)	12–24 Vac/12–48 Vdc	Adjustable from 30 mA to 30 A (9 settings)	56370	1800
	110–130 Vac		56372	1800
	220–240 Vac		56373	1800

### Automatic Reset

Sensitivity: Adjustable  
 Time Delay: Adjustable  
 Non-Latched FAULT output contact: N.O. or N.C.; also ON (operational) status contact  
 Test: With or without trip of equipment

Adjustable from instantaneous to 4.5 Sec (9 settings)	12–24 Vac/12–48 Vdc	Adjustable from 30 mA to 30 A (9 settings)	56390	1800
	110–130 Vac		56392	1800
	220–240 Vac		56393	1800



# UL1053 Listed Panel-Mounted Vigirex RH\_\_P Ground-fault Relays



## Vigirex RH10P Ground-fault Relay with Fixed Sensitivity

Sensitivity: Fixed; dependent on model  
 Reset: Manual  
 Latched FAULT output contact: N.O. or N.C.; also ON (operational) status contact  
 Test: With or without trip of equipment

Time Delay	Control Voltage	Sensitivity	Catalog No.	List Price
Instantaneous	12–24 Vac/12–48 Vdc	30 mA	56400	\$ 1375
		100 mA	56402	1375
		300 mA	56405	1375
		500 mA	56406	1375
		1 A	56407	1375
	110–130 Vac	30 mA	56420	1375
		100 mA	56422	1375
		300 mA	56425	1375
		500 mA	56426	1375
		1 A	56427	1375
	220–240 Vac	30 mA	56430	1375
		100 mA	56432	1375
		300 mA	56435	1375
		500 mA	56436	1375
		1 A	56437	1375



## Vigirex RH21P Ground-fault Relay with Three Settings

Sensitivity: adjustable to 30 mA or 300 mA  
 Reset: Manual  
 Latched FAULT output contact: N.O. or N.C.; also ON (operational) status contact  
 Test: With or without trip of equipment

Instantaneous at 30 mA; Instantaneous or 60 mSec at 300 mA (3 settings)	12–24 Vac/12–48 Vdc	30 mA or 300 mA	56460	1625
	110–130 Vac	2 settings)	56462	1625
	220–240 Vac		56463	1625



## Vigirex RH99P Ground-fault Relay with Nine Settings

### Manual Reset

Sensitivity: Adjustable  
 Time Delay: Adjustable  
 Latched FAULT output contact: N.O. or N.C.; also ON (operational) status contact  
 Test: With or without trip of equipment



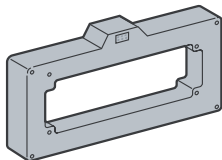
Adjustable from Instantaneous to 4.5 Sec (9 settings)	12–24 Vac/12–48 Vdc	Adjustable from 30 mA to 30 A (9 settings)	56470	1875
	110–130 Vac		56472	1875
	220–240 Vac		56473	1875

### Automatic Reset

Sensitivity: Adjustable  
 Time Delay: Adjustable  
 Non-Latched FAULT output contact: N.O. or N.C.; also ON (operational) status contact  
 Test: With or without trip of equipment

Adjustable from instantaneous to 4.5 Sec (9 settings)	12–24 Vac/12–48 Vdc	Adjustable from 30 mA to 30 A (9 settings)	56490	1875
	110–130 Vac		56492	1875
	220–240 Vac		56493	1875

## Sensors

	Type	Current (A)	Inside Diameter (in./mm)	Catalog No.	List Price
<b>Closed Toroid, Type A</b>					
	TA30	65	1.2/30	50437	\$ 250
	PA50	85	2.0/50	50438	325
	IA80	160	3.2/80	50439	410
	MA120	250	4.7/120	50440	555
	SA200	400	7.9/200	50441	835
	GA300	630	11.8/300	50442	1530
<b>Opening Toroid, Type OAa</b>					
	POA <sup>①</sup>	85	1.8/46	50485	1145
	GOA <sup>①</sup>	250	4.3/110	50486	2010
<b>Rectangular Sensors</b>					
	280 x 115	1600	11x4.5 (280x115)	56053	3555
	470 x 160	4000	18.5x6.3 (470x160)	56054	4725

<sup>①</sup> Not UL Recognized.

# IEC Rated Vigirex™ Ground-fault Relays

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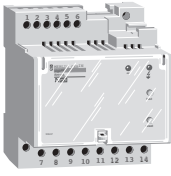
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# Vigirex™ Ground-fault Relays

## IEC Rated Vigirex Ground-fault Relays—Not UL Listed

### Selection Table

Vigirex Ground-fault Relays			RH10A		
					
<b>Electrical Characteristics</b>					
IΔn residual operating current	Selector 1	30 mA or 300 mA			
	Selector 2				
Time delay (ms)	Instantaneous				
Alarm pre-trip	Threshold	—			
	Delay	—			
Device tests	Local	Electronic + indicator light + contact			
	Automatic	Detection circuit			
Reset	Local, and remote by disconnecting the auxiliary power supply				
Local indication	Insulation fault or detection circuit failure indicator light	By indicator light with latching			
	Alarm	—			
Output contacts	Fault contacts	Number	2: one standard + one fail-safe		
		Contact type	Changeover (SPDT)	Latched	
	Pre-trip contact	Number	—		
		Contact type	Changeover (SPDT)	—	
	Rating	AC p.f. = 0.7	380 V	3 A	
			220 V	5 A	
		DC L/R = 0 s	220 V	0.45 A	
120 V			0.65 A		
48 V			2.5 A		
24 V	10 A				
Max. consumption	48 to 240 Vac and 48 to 300 Vdc	4 VA			
	380 to 480 Vac	5 VA/3 W			
Control voltage operating range	AC	−15% / + 10%			
	DC	±20%			
<b>Toroids</b>					
Toroids to be used ①	Type A, OA				
<b>Dimensions and Weights</b>					
Dimensions H x W x D (in./mm)	3.2 x 2.8 x 2.6/81 x 72 x 65.5				
Weight (lb/kg)	0.9/0.4				

Used in conjunction with a standard Merlin Gerin toroid (type A or OA), this type of relay trips the associated switching device, after the selected time delay, when it detects a residual current above the set residual operating current (IΔn/2).

#### Characteristics

- Green LED indicates presence of control voltage;
- Red LED indicates the trip threshold has been exceeded;
- Orange LED indicates the alarm threshold has been exceeded (AP);
- Failure of the detection circuit (connecting cable and toroid) trips the circuit breaker.

#### Advantages

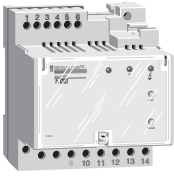

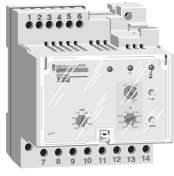
- Protection can be adapted to any installation;
- Vertical coordination possible over a number of levels;
- An alarm threshold provides a warning of a non-critical degradation of the insulation, leaving time to carry out preventive maintenance;
- Control voltage alarm via fail-safe contact

#### Installation

- Live part in a disconnectable, insulating molded case, eight 9mm modules wide, with sealable transparent cover;
- Horizontal or vertical flush or surface mounting on a symmetrical rail;
- Connection by tunnel terminals for wire sizes:
  - 1.5mm<sup>2</sup> for terminals 1 to 6.
  - 2.5mm<sup>2</sup> for terminals 7 to 14.

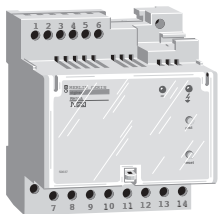
Refer to catalog no.: AC0480EN

① By shielded wire or toroid plugged into relay for TA30 and PA50—maximum lengths: refer to catalog AC0480EN

RH10AP	RH328A	RH328AP
		
300 mA or 1 A	30, 50, 75, 100, 125, 150, 200, 250 mA	
	x 1: 30 to 250 mA x 10: 300 mA to 2.5 A x 100: 3 A to 25 A x 1000: 30 A to 250 A	
Instantaneous	0, 50, 90, 140, 250, 350, 500, 1000	
Auto. set to half the residual operating current	—	Auto. set to half the residual operating current
200 ms	—	200 ms
Electronic + indicator light + contact		
Detection circuit		
Local, and remote by disconnecting the auxiliary power supply		
By indicator light with latching		
By indicator light without latching	—	By indicator light without latching
One standard	2: one standard + one fail-safe	One standard
Latched		
One fail-safe	—	One fail-safe
Non-latched	—	Non-latched
3 A	3 A	
5 A	5 A	
0.45 A	0.45 A	
0.65 A	0.65 A	
2.5 A	2.5 A	
10 A	10 A	
—	4 VA	—
5 VA/3 W	5 VA/3 W	
-15% / + 10%	-15% / + 10%	
—	±20%	—
Type A, OA		
3.2 x 2.8 x 2.6/81 x 72 x 65.5	3.2 x 2.8 x 2.6/81 x 72 x 65.5	
0.9/0.4	0.9/0.4	

# Vigirex™ Ground-fault Relays

## IEC Rated Vigirex Ground-fault Relays—Not UL Listed



### Vigirex RH10A Ground-fault Relay

Sensitivity: 30 or 300 mA (non UL Listed)  
 Instantaneous  
 Output contacts: one standard + one fail-safe fault switch (latched)

<b>Sensitivity I<math>\Delta</math>n = 30 mA</b>		<b>Volts (V)</b>	<b>Catalog No.</b>	<b>List Price</b>
Control voltage (V)	AC 50/60 Hz	48	50733	\$ 1213
		115/127	50732	1213
		230	50734	1213
		400	50638	1213
		440/480	50639	1297
		DC	48/120	50733
<b>Sensitivity I<math>\Delta</math>n = 300 mA</b>				
Control voltage (V)	AC 50/60 Hz	48	50736	1213
		115/127	50735	1213
		230	50737	1213
		400	50641	1213
		440/480	50642	1297
		DC	48/120	50736

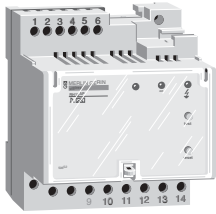


### Vigirex RH328A Ground-fault Relay

Sensitivity: 30 mA to 250 A (non UL Listed)  
 Delay: Instantaneous to 1000 ms  
 Output contacts: one standard + one fail-safe fault switch (latched or non-latched)

<b>One Standard Latched + One Fail Safe Latched Fault Switch</b>			<b>Catalog No.</b>	<b>List Price</b>
Control voltage (V)	AC 50/60 Hz	48	50743	\$ 1896
		115/127	50742	1896
		230	50744	1896
		400	50653	1896
		440/480	50654	1980
		500/525	50655	1980
DC		12	50661	1980
		24	50662	1980
		48/120	50743	1896
<b>One Standard Non-latched + One Fail Safe Non-latched Fault Switch</b>				
Control voltage (V)	AC 50/60 Hz	48	50746	2064
		115/127	50745	2064
		230	50747	2064
		400	50657	2064
		440/480	50658	2148
		DC	48/120	50746

**Additional information:**  
 ■ Catalog no. AC0480EN

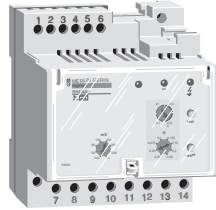


### Vigirex RH10AP Ground-fault Relay

Sensitivity: 300 mA or 1 A (non UL Listed)  
 AC 50/60/400 Hz  
 Delay: 200 ms  
 Output contacts: one standard fault switch latched + one pre-trip switch (fail safe–non latched)

<b>Sensitivity IΔn = 300 mA</b>		<b>Volts (V)</b>	<b>Catalog No.</b>	<b>List Price</b>
Control voltage (V)	AC 50/60 Hz	230	50663	\$ 1802
		400	50664	1802
		440/480	50665	1886

<b>Sensitivity IΔn = 1 A</b>		<b>Volts (V)</b>	<b>Catalog No.</b>	<b>List Price</b>
Control voltage (V)	AC 50/60 Hz	230	50666	1802
		400	50667	1802
		440/480	50668	1886



### Vigirex RH328AP Ground-fault Relay

Sensitivity: 30 mA to 250 A (non UL Listed)  
 Delay: Instantaneous to 1000 ms  
 Output contacts: One standard fault switch (latched or non-latched) + one pre-trip switch (fail safe, non-latched)  
 One standard latched fault switch + one fail safe, non-latched pre-trip switch

<b>One Standard Latched Fault Switch + One Fail Safe Non-latched Pre-trip Switch</b>		<b>Volts (V)</b>	<b>Catalog No.</b>	<b>List Price</b>
Control voltage (V)	AC 50/60 Hz	230	50679	\$ 2485
		400	50680	2485
		440/480	50681	2569
		500/525	50682	2569

<b>One Standard Non-latched Fault Switch + One Fail Safe Non-latched Pre-trip Switch</b>		<b>Volts (V)</b>	<b>Catalog No.</b>	<b>List Price</b>
Control voltage (V)	AC 50/60 Hz	230	50683	2064
		400	50684	2064
		440/480	50685	2148
		500/525	50686	2148

### Sensors

	<b>Current</b>	<b>Diameter (in./mm)</b>			
<b>Closed Toroid, Type A</b>					
	TA	65	1.2/30	50437	250
	PA	85	2.0/50	50438	325
	IA	160	3.2/80	50439	410
	MA	250	4.7/120	50440	555
	SA	400	7.9/200	50441	835
	GA	630	11.8/300	50442	1530

<b>Opening Toroid, Type OA</b>					
	POA	85	1.8/46	50485	1145
	GOA	250	4.3/110	50486	2010

<b>Rectangular Sensors</b>				
	1600	11x4.5 (280x115)	56053	3555
	4000	18.5x6.3 (470x160)	56054	4725

Additional information:  
 ■ Catalog no. AC0480EN

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12720M		35	15023		37	18442		32
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12723		35	15060		37	18447		32
12723M		35	15090		37	18448		32
12724		35	15091		37	18449		32
12724M		35	15092		37	18450		32
12725		35	15093		37	18451		32
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