

**MULTI 9 C60H Circuit Breaker** — IEC 898: 10000A — 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	\$ 79	24725	\$ 170	24738	\$ 247	24751	\$ 326
10	24644	79	24726	170	24739	247	24752	326
13	24645	79						
16	24646	79	24727	170	24740	247	24753	326
20	24647	79	24728	170	24741	247	24754	326
25	24648	79	24729	170	24742	247	24755	326
32	24649	79	24730	170	24743	247	24756	330
40	24650	87	24731	176	24744	264	24757	343
50	24651	91	24732	187	24745	277	24758	343
63	24652	96	24733	198	24746	277	24759	354

<b>C Curve—Magnetic Setting Between 5 and 10 Ampere Rating</b>								
0,5	24900	96	24902	195	24906	283	24908	374
0,75	24901	96	24903	187	24907	270	24909	359
1	24968	79	24981	170	24994	247	25007	326
2	24969	79	24982	170	24995	247	25008	326
3	24970	79	24983	170	24996	247	25009	326
4	24971	79	24984	170	24997	247	25010	326
6	24972	79	24985	170	24998	247	25011	326
10	24973	79	24986	170	24999	247	25012	326
16	24974	79	24987	170	25000	247	25013	326
20	24975	79	24988	170	25001	247	25014	326
25	24976	79	24989	170	25002	247	25015	326
32	24977	79	24990	170	25003	247	25016	326
40	24978	87	24991	176	25004	264	25017	330
50	24979	91	24992	187	25005	277	25018	343
63	24980	96	24993	198	25006	277	25019	354

<b>D Curve—Magnetic Setting Between 10 and 14 Ampere Rating</b>								
0,5	25171	96	25172	195	25173	283	25174	374
1	25152	96	25183	187	25196	270	25211	359
2	25155	79	25184	170	25197	247	25212	326
3	25157	79	25185	170	25198	247	25213	326
4	25158	79	25186	170	25199	247	25214	326
6	25159	79	25187	170	25200	247	25215	326
10	25160	79	25188	170	25201	247	25216	326
16	25161	79	25189	170	25202	247	25217	326
20	25164	79	25190	170	25203	247	25218	326
25	25165	79	25191	170	25205	247	25219	326
32	25166	79	25192	170	25207	247	25220	326
40	25167	87	25193	176	25208	266	25221	330
50	25168	91	25194	187	25209	277	25222	343
63	25169	96	25195	198	25210	277	25223	354

① 4th Pole protected

**Ratings and Interrupting ratings** : page 12

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

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

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

**Width in module of 9mm** : 1P: (2) 9mm, 2P: (4) 9mm, 3P: (6) 9mm, 4P: (8) 9mm



**Additional information:**

■ **Catalog no.** 0860CT9501R10/98

# MULTI 9™ Miniature Circuit Breakers

## IEC 947-2 Rated MULTI 9™ Miniature Circuit Breakers

### Selection Table

			DPN	C60							
											
Ratings as per IEC 898 and IEC 947-2 Standards			DPN	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 50/60Hz	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									
		127 V	–								
		250 V	–								
Service breaking capacity	Ics (% Icu)		50%	75%	75%	50%	50%	50%	50%		
Ultimate breaking capacity as per IEC 898 Standards (Amp)	Icn AC 50/60Hz	230-400 V	6000 at 230 V	6000		10000					
		415 V	–		6000		10000				
Limitation class as per IEC 898			3	3							
Trip Units											
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			
Dimensions and Weights											
Dimensions H x W x D (in./mm)	1P		3.03 x 0.71 x 3.00/ 77x18x76	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)

## IEC RATED C60 MINIATURE CIRCUIT BREAKERS

### Overview

The C60 family of MULTI 9™ circuit breakers meeting IEC 60947-2 is available primarily for equipment for export from the United States to countries not requiring UL Ratings.

As shown in the table below, three types of IEC Rated C60 devices are available: C60N, C60H, and C60L circuit breaker. These model numbers refer to the maximum current interrupting rating.

The relative interrupting ratings per IEC 60947-2 are listed below; for other ratings, see the table on the next page.

**Table 20: Ratings Overview**

Circuit Breaker	Rating	Curves
C60N	10 kA at 415 Vac	B, C and D
C60H	15 kA at 415 Vac	B, C and D
C60L	25 kA at 415 Vac	B, C, K and MA

Each of these devices is available in several trip curves, as listed in the tables with catalog numbers. They include devices ranging from 0.5 to 63 A. (For higher current ratings, select devices from the higher current NC100 series.)

### Standard Features

- Fast closing: Allows increased withstand to the high inrush currents of some loads
- Trip-free mechanism: Contacts cannot be held in the on position when the C60 device is tripped automatically.
- Positive indication of contact disconnect. Green mechanical indication on front face of device shows that all poles are open.
- Suitable for reverse feeding.
- B curve: Overcurrent protection for sensitive equipment (computers, electronic devices, etc.):
  - C60N/H: The magnetic operates between 3 and 5 times ampere rating.
- C curve: Overcurrent protection for all application types:
  - C60N/H: The magnetic operates between 5 and 10 times ampere rating.
  - C60L: The magnetic operates between 7 and 10 times ampere rating.
- D and K curves: Overcurrent protection for loads with high inrush currents (motors, transformers):
  - C60N/H/L: The magnetic release operates between 10 and 14 times ampere rating.
- MA curve: C60L-MA circuit breakers are designed for motor circuit protection against short circuits. These circuit breakers are equipped with magnetic-only trip units at 12 times ampere rating. Therefore they must be combined with a suitable thermal protection device (see the coordination table at the end of this section).

### Specifications

**Table 21: MULTI 9 C60 Circuit Breakers with IEC 60947-2 Rating**

<ul style="list-style-type: none"> <li>• Package size: Two 9 mm modules; 18 mm width per pole</li> <li>• High voltage withstand: 6 kV</li> <li>• Connections for C60N/H/L except L-MH (box lug—Use with copper wire only)               <ul style="list-style-type: none"> <li>— Ring tongue terminal is optional</li> <li>— 0.5–25 A, #18–#4 AWG (1–25 mm<sup>2</sup>) cables; torque 22 lb-in. (2.48 N•m)</li> <li>— 30–63 A, #18–#2 AWG (1–35 mm<sup>2</sup>) cables; torque 31 lb-in. (3.50 N•m)</li> </ul> </li> <li>• Connections for C60L-MA:               <ul style="list-style-type: none"> <li>— 1.5–10 stranded #6 AWG (16 mm<sup>2</sup>)</li> <li>— 1.5–10 solid #4 AWG (25 mm<sup>2</sup>)</li> <li>— 12.5–40 stranded #4 AWG (25 mm<sup>2</sup>)</li> <li>— 12.5–40 solid #2 AWG (35 mm<sup>2</sup>)</li> </ul> </li> <li>• Mounting: 35 mm DIN rail</li> <li>• Time-current curves: B, C, D, K, and MA</li> </ul>	<ul style="list-style-type: none"> <li>• Degree of protection:               <ul style="list-style-type: none"> <li>— Case: IP40 as per IEC 529</li> <li>— Terminals: IP20</li> </ul> </li> <li>• Temperature:               <ul style="list-style-type: none"> <li>— Calibration temperature: 86°F (30°C); C60L rated at 104°F (40°C)</li> <li>— Storage temperature: -40 to 176°F (-40 to 80°C)</li> <li>— Operating temperature: -22 to 158°F (-30 to 70°C)</li> </ul> </li> <li>• Tropicalization: Treatment 2—Relative humidity: 95% at 131°F (55°C) per IEC68-2-30</li> <li>• Number of operating cycles:               <ul style="list-style-type: none"> <li>— Mechanical (O-C) 20,000</li> <li>— Electrical (O-C) 10,000</li> </ul> </li> <li>• See selection table for weights and interrupting ratings</li> </ul>
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### Standards

- IEC 60947-2
- VDE 0660, CE Marked

**MULTI 9™ System Catalog**  
**Section 3—IEC 60947-2 Rated Protection Devices**

**Table 22: Catalog Numbers for IEC 60947-2 Rated C60N Miniature Circuit Breakers**

Rating (A)	B Curve				C Curve				D Curve			
	1-pole 2 Modules	2-pole 4 Modules	3-pole 6 Modules	4-pole 8 Modules	1-pole 2 Modules	2-pole 4 Modules	3-pole 6 Modules	4-pole 8 Modules	1-pole 2 Modules	2-pole 4 Modules	3-pole 6 Modules	4-pole 8 Modules
0.5	—	—	—	—	24067	24068	24069	24070	—	—	—	—
1	24045	24071	24084	24097	24395	24331	24344	24357	24625	24653	24667	24681
2	24046	24072	24085	24098	24396	24332	24345	24358	24626	24654	24668	24682
3	24047	24073	24086	24099	24397	24333	24346	24359	24627	24655	24669	24683
4	24048	24074	24087	24100	24398	24334	24348	24360	24628	24656	24670	24684
6	24049	24075	24088	24101	24399	24335	24348	24361	24629	24657	24671	24685
10	24050	24076	24089	24102	24401	24336	24349	24362	24630	24658	24672	24686
16	24051	24077	24090	24103	24403	24337	24350	24363	24632	24660	24674	24688
20	24052	24078	24091	24104	24404	24338	24351	24364	24633	24661	24675	24689
25	24053	24079	24092	24105	24405	24339	24352	24365	24634	24662	24676	24690
32	24054	24080	24093	24106	24406	24340	24353	24366	24635	24663	24677	24691
40	24055	24081	24094	24107	24407	24341	24354	24367	24636	24664	24678	24692
50	24056	24082	24095	24108	24408	24342	24355	24368	24637	24665	24679	24693
63	24057	24083	24096	24109	24409	24343	24356	24369	24638	24666	24680	24694

**Table 23: Catalog Numbers for IEC 60947-2 Rated C60H Miniature Circuit Breakers**

Rating (A)	B Curve				C Curve				D Curve			
	1-pole 2 Modules	2-pole 4 Modules	3-pole 6 Modules	4-pole 8 Modules	1-pole 2 Modules	2-pole 4 Modules	3-pole 6 Modules	4-pole 8 Modules	1-pole 2 Modules	2-pole 4 Modules	3-pole 6 Modules	4-pole 8 Modules
0.5	—	—	—	—	24900	24902	24906	24908	25171	25172	25173	25174
0.75	—	—	—	—	24901	24903	24907	24909	—	—	—	—
1	—	—	—	—	24968	24981	24994	25007	25152	25183	25196	25211
2	—	—	—	—	24969	24982	24995	25008	25155	25184	25197	25212
3	—	—	—	—	24970	24983	24996	25009	25157	25185	25198	25213
4	—	—	—	—	24971	24984	24997	25010	25158	25186	25199	25214
6	24643	24725	24738	24751	24972	24985	24998	25011	25159	25187	25200	25215
10	24644	24726	24739	24752	24973	24986	24999	25012	25160	25188	25201	25216
13	24645	—	—	—	—	—	—	—	—	—	—	—
16	24646	24727	24740	24753	24974	24987	25000	25013	25161	25189	25202	25217
20	24647	24728	24741	24754	24975	24988	25001	25014	25164	25190	25203	25218
25	24648	24729	24742	24755	24976	24989	25002	25015	25165	25191	25204	25219
32	24649	24730	24743	24756	24977	24990	25003	25016	25166	25192	25205	25220
40	24650	24731	24744	24757	24978	24991	25004	25017	25167	25193	25206	25221
50	24651	24732	24745	24758	24979	24992	25005	25018	25168	25194	25207	25222
63	24652	24733	24746	24759	24980	24993	25006	25019	25169	25195	25208	25223

**Table 24: Catalog Numbers for IEC 60947-2 Rated C60L Miniature Circuit Breakers**

Rating (A)	B Curve				C Curve				K Curve			
	1-pole 2 Modules	2-pole 4 Modules	3-pole 6 Modules	4-pole 8 Modules	1-pole 2 Modules	2-pole 4 Modules	3-pole 6 Modules	4-pole 8 Modules	1-pole 2 Modules	2-pole 4 Modules	3-pole 6 Modules	4-pole 8 Modules
0.5	—	—	—	—	25406	25407	25408	25409	—	—	—	—
1	—	—	—	—	25392	25418	25431	25444	25460	25478	25496	25514
1.6	—	—	—	—	—	—	—	—	25461	25479	25497	25515
2	—	—	—	—	25393	25419	25432	25445	25462	25480	25498	25516
3	—	—	—	—	25394	25420	25433	25446	25463	25481	25499	25517
4	—	—	—	—	25395	25421	25434	25447	25464	25482	25500	25518
6	25331	25357	25370	25383	25396	25422	25435	25448	25465	25483	25501	25519
10	25332	25358	25371	25384	25397	25423	25436	25449	25467	25485	25503	25521
16	25333	25359	25372	25385	25398	25424	25437	25450	25468	25486	25504	25522
20	25334	25360	25373	25386	25399	25425	25438	25451	25469	25487	25505	25523
25	25335	25361	25374	25387	25400	25426	25439	25452	25470	25488	25506	25524
32	25336	25362	25375	25388	25401	25427	25440	25453	25471	25489	25507	25525
40	25337	25363	25376	25389	25402	25428	25441	25454	25472	25490	25508	25526
50	25338	25364	25377	25390	25403	25429	25442	25455	—	—	—	—
63	25339	25365	25378	25391	25404	25430	25443	25456	—	—	—	—