

# C60N circuit-breakers

## B, C and D curves

### IEC 898: 6000 A, IEC 947-2: 10 kA

### functions

The circuit-breakers combine the following functions:

- protection of circuits against short-circuit currents,
- protection of circuits against overload currents,
- control,

- isolation,
- protection of persons against indirect contact with TN and IT earthing systems.

C60N circuit-breakers are used in the tertiary and industrial sectors.

### description

#### technical data common to C60N circuit-breakers

- power circuit
- voltage rating: 440 V AC
- breaking capacity according to IEC 947-2, Icu ultimate breaking capacity (O-CO cycle):

rating (A)	type	voltage (V)	breaking capacity Icu (kA)
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0.5...63	1P	230...240	10
		400...415	3 (1)
1P + N, 2P, 3P, 4P	2P, 3P, 4P	230...240	20
		400...415	10

(1) breaking capacity under 1 pole with IT isolated neutral system (case of double fault).

- limitation class (IEC 898): 3
- number of cycles (O-C): 20 000
- environment
- tropicalisation: treatment 2 (relative humidity: 95 % at 55 °C)
- connection: tunnel terminals for the following cables:
  - 16 mm<sup>2</sup> flexible or 25 mm<sup>2</sup> rigid up to 25 A ratings
  - 25 mm<sup>2</sup> flexible or 35 mm<sup>2</sup> rigid for 32 to 63 A ratings.

#### B curve

**utilisation**  
when the short-circuit currents are weak.

- power circuit:
  - ratings: 10 to 63 A set at 30 °C
  - tripping curve: the magnetic trip units operate between 3 and 5 I<sub>n</sub>
  - breaking capacity according to IEC 898, Icn ultimate breaking capacity (O-CO cycle):

rating (A)	type	voltage (V)	breaking capacity Icn (A)
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□ limitation class (IEC 898): 3

#### C curve

**utilisation**  
cables feeding conventional loads.

- power circuit
  - ratings: 0.5 to 63 A set at 30 °C
  - tripping curves: the magnetic trip units operate between 5 and 10 I<sub>n</sub>
  - breaking capacity according to IEC 898, Icn ultimate breaking capacity (O-CO cycle):

rating (A)	type	voltage (V)	breaking capacity Icn (A)
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0.5...63	1P	230...400	6 000	
		1P + N	230	6 000
		2P, 3P, 4P	400	6 000

□ limitation class (IEC 898): 3

#### D curve

**utilisation**  
loads with high inrush current (motors, transformers)

- power circuit
  - rating: 0.5 to 63 A set at 40 °C
  - tripping curve: the magnetic trip units operate between 10 and 14 I<sub>n</sub>
  - fast closing: allows the high inrush currents of some loads to be better held
  - isolation with positive break indication: opening is indicated by a green strip on the device operating handle. This indicator shows opening of all the poles.

### catalogue numbers



23985

type	rating (A)	catalogue number	width in mod. of 9 mm	quantity per batch
<b>B curve C60N</b>				
1P	4	23975	2	12
	6	23976	2	12
	10	23977	2	12
	13	23978	2	12
	15	23933	2	12
	16	23979	2	12
	20	23980	2	12
	25	23981	2	12
	32	23982	2	12
	40	23983	2	12
	50	23984	2	12
	63	23985	2	12

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## B, C and D curves

IEC 898: **6000 A**, IEC 947-2: 10 kA

### catalogue numbers



23996



24007





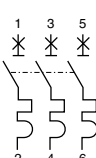
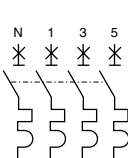
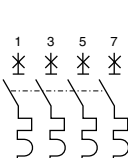
24016



24027



24038

type	rating (A)	catalogue number	width in mod. of 9 mm	quantity per batch
<b>B curve C60N (continued)</b>				
1P+N 	4	<b>23986</b>	4	6
	6	<b>23987</b>	4	6
	10	<b>23988</b>	4	6
	13	<b>23989</b>	4	6
	15	<b>23934</b>	4	6
	16	<b>23990</b>	4	6
	20	<b>23991</b>	4	6
	25	<b>23992</b>	4	6
	32	<b>23993</b>	4	6
	40	<b>23994</b>	4	6
	50	<b>23995</b>	4	6
	63	<b>23996</b>	4	6
2P 	4	<b>23997</b>	4	6
	6	<b>23998</b>	4	6
	10	<b>23999</b>	4	6
	13	<b>24000</b>	4	6
	15	<b>23935</b>	4	6
	16	<b>24001</b>	4	6
	20	<b>24002</b>	4	6
	25	<b>24003</b>	4	6
	32	<b>24004</b>	4	6
	40	<b>24005</b>	4	6
	50	<b>24006</b>	4	6
	63	<b>24007</b>	4	6
3P 	4	<b>24008</b>	6	4
	6	<b>24009</b>	6	4
	10	<b>24010</b>	6	4
	13	<b>24011</b>	6	4
	15	<b>23936</b>	6	4
	16	<b>24012</b>	6	4
	20	<b>24013</b>	6	4
	25	<b>24014</b>	6	4
	32	<b>24015</b>	6	4
	40	<b>24016</b>	6	4
	50	<b>24017</b>	6	4
	63	<b>24018</b>	6	4
3P+N 	4	<b>24019</b>	6	4
	6	<b>24020</b>	6	4
	10	<b>24021</b>	6	4
	13	<b>24022</b>	6	4
	15	<b>23937</b>	6	4
	16	<b>24023</b>	6	4
	20	<b>24024</b>	6	4
	25	<b>24025</b>	6	4
	32	<b>24026</b>	6	4
	40	<b>24027</b>	6	4
	50	<b>24028</b>	6	4
	63	<b>24029</b>	6	4
4P 	4	<b>24030</b>	8	3
	6	<b>24031</b>	8	3
	10	<b>24032</b>	8	3
	13	<b>24033</b>	8	3
	16	<b>24034</b>	8	3
	20	<b>24035</b>	8	3
	25	<b>24036</b>	8	3
	32	<b>24037</b>	8	3
	40	<b>24038</b>	8	3
	50	<b>24039</b>	8	3
	63	<b>24040</b>	8	3

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## B, C and D curves

IEC 898: 6000 A, IEC 947-2: 10 kA

### catalogue numbers



24317

type	rating (A)	catalogue number	width in mod. of 9 mm	quantity per batch
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#### C curve C60N (continued)

1P	rating (A)	catalogue number	width in mod. of 9 mm	quantity per batch
	0.5	24067	2	12
	1	24305	2	12
	2	24306	2	12
	3	24307	2	12
	4	24308	2	12
	6	24309	2	12
	10	24310	2	12
	13	24371	2	12
	15	24411	2	12
	16	24311	2	12
	20	24312	2	12
	25	24313	2	12
	32	24314	2	12
	40	24315	2	12
	50	24316	2	12
	63	24317	2	12



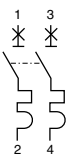
24330

1P + N	rating (A)	catalogue number	width in mod. of 9 mm	quantity per batch
	1	24318	4	6
	2	24319	4	6
	3	24320	4	6
	4	24321	4	6
	6	24322	4	6
	10	24323	4	6
	13	24373	4	6
	15	24412	4	6
	16	24324	4	6
	20	24325	4	6
	25	24326	4	6
	32	24327	4	6
	40	24328	4	6
	50	24329	4	6
	63	24330	4	6



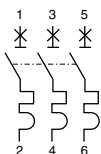
24339

2P	rating (A)	catalogue number	width in mod. of 9 mm	quantity per batch
	0.5	24068	4	6
	1	24331	4	6
	2	24332	4	6
	3	24333	4	6
	4	24334	4	6
	6	24335	4	6
	10	24336	4	6
	13	24375	4	6
	15	24413	4	6
	16	24337	4	6
	20	24338	4	6
	25	24339	4	6
	32	24340	4	6
	40	24341	4	6
	50	24342	4	6
	63	24343	4	6



24351

3P	rating (A)	catalogue number	width in mod. of 9 mm	quantity per batch
	0.5	24069	6	4
	1	24344	6	4
	2	24345	6	4
	3	24346	6	4
	4	24347	6	4
	6	24348	6	4
	10	24349	6	4
	13	24377	6	4
	16	24350	6	4
	20	24351	6	4
	25	24352	6	4
	32	24353	6	4
	40	24354	6	4
	50	24355	6	4
	63	24356	6	4



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B, C and D curves

IEC 898: **6000 A**, IEC 947-2: 10 kA

## catalogue numbers

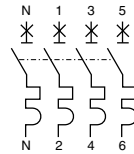


24394

type	rating (A)	catalogue number	width in mod. of 9 mm	quantity per batch
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### C curve C60N (continued)

#### 3P+N

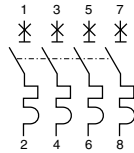


1	24380	8	3
2	24381	8	3
3	24382	8	3
4	24383	8	3
6	24384	8	3
10	24386	8	3
13	24387	8	3
15	24415	8	3
16	24388	8	3
20	24389	8	3
25	24390	8	3
32	24391	8	3
40	24392	8	3
50	24393	8	3
63	24394	8	3



24369

#### 4P



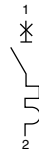
1	24357	8	3
2	24358	8	3
3	24359	8	3
4	24360	8	3
6	24361	8	3
10	24362	8	3
16	24363	8	3
20	24364	8	3
25	24365	8	3
32	24366	8	3
40	24367	8	3
50	24368	8	3
63	24369	8	3



24625

### D curve C60N

#### 1P



0.5	24493	2	12
1	24625	2	12
2	24626	2	12
3	24627	2	12
4	24628	2	12
6	24629	2	12
10	24630	2	12
16	24632	2	12
20	24633	2	12
25	24634	2	12
32	24635	2	12
40	24636	2	12
50	24637	2	12
63	24638	2	12



24664

#### 2P



0.5	24494	4	6
1	24653	4	6
2	24654	4	6
3	24655	4	6
4	24656	4	6
6	24657	4	6
10	24658	4	6
16	24660	4	6
20	24661	4	6
25	24662	4	6
32	24663	4	6
40	24664	4	6
50	24665	4	6
63	24666	4	6

# C60N circuit-breakers

## B, C and D curves

IEC 898: 6000 A, IEC 947-2: 10 kA

### catalogue numbers



24606



24621

type	rating (A)	catalogue number	width in mod. of 9 mm	quantity per batch
<b>D curve C60N</b>				
<b>3P</b> 	0.5	<b>24495</b>	6	4
	1	<b>24667</b>	6	4
	2	<b>24668</b>	6	4
	3	<b>24669</b>	6	4
	4	<b>24670</b>	6	4
	6	<b>24671</b>	6	4
	10	<b>24672</b>	6	4
	16	<b>24674</b>	6	4
	20	<b>24675</b>	6	4
	25	<b>24676</b>	6	4
	32	<b>24677</b>	6	4
	40	<b>24678</b>	6	4
	50	<b>24679</b>	6	4
	63	<b>24680</b>	6	4
<b>4P</b> 	0.5	<b>24496</b>	8	3
	1	<b>24681</b>	8	3
	2	<b>24682</b>	8	3
	3	<b>24683</b>	8	3
	4	<b>24684</b>	8	3
	6	<b>24685</b>	8	3
	10	<b>24686</b>	8	3
	16	<b>24688</b>	8	3
	20	<b>24689</b>	8	3
	25	<b>24690</b>	8	3
	32	<b>24691</b>	8	3
	40	<b>24692</b>	8	3
	50	<b>24693</b>	8	3
	63	<b>24694</b>	8	3

### additional information

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