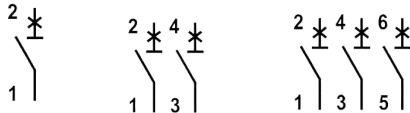




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E10 series 10kA MCB

Thermal magnetic miniature circuit breaker



Ordering Codes								
Current rating	B Type		C Type			D Type		
	1 pole	3 poles	1 pole	2 poles	3 poles	1 pole	2 poles	3 poles
6A	E10-1B06	E10-3B06	E10-1C06	E10-2C06	E10-3C06	E10-1D06	E10-2D06	E10-3D06
10A	E10-1B10	E10-3B10	E10-1C10	E10-2C10	E10-3C10	E10-1D10	E10-2D10	E10-3D10
16A	E10-1B16	E10-3B16	E10-1C16	E10-2C16	E10-3C16	E10-1D16	E10-2D16	E10-3D16
20A	E10-1B20	E10-3B20	E10-1C20	E10-2C20	E10-3C20	E10-1D20	E10-2D20	E10-3D20
25A	E10-1B25	E10-3B25	E10-1C25	E10-2C25	E10-3C25	E10-1D25	E10-2D25	E10-3D25
32A	E10-1B32	E10-3B32	E10-1C32	E10-2C32	E10-3C32	E10-1D32	E10-2D32	E10-3D32
40A	E10-1B40	E10-3B40	E10-1C40	E10-2C40	E10-3C40	—	—	—
50A	E10-1B50	E10-3B50	E10-1C50	E10-2C50	E10-3C50	—	—	—
63A	E10-1B63	E10-3B63	E10-1C63	E10-2C63	E10-3C63	—	—	—

General Information

The Lewden range of circuit protection devices are designed and tested for use with Lewden branded distribution boards.
This device must be installed by a qualified electrician in accordance with the latest edition of the IET wiring regulations for electrical installations BS7671

Tripping Characteristics			
Trip curve	Test current	Tripping time	Result
B C D	1.13 In	$t \geq 1h$	No Trip
B C D	1.45 In	$t < 1h$	Trip
B C D	2.55 In	$1s < t < 60s$	Trip
B	3.00 In	$t \leq 0.1s$	No Trip
C	5.00 In	$t \leq 0.1s$	No Trip
D	10.00 In	$t \leq 0.1s$	No Trip
B	5.00 In	$t \leq 0.1s$	Trip
C	10.00 In	$t \leq 0.1s$	Trip
D	20.00 In	$t \leq 0.1s$	Trip

Trip Curve	Multiple of rated current
B	3-5x In
C	5-10x In
D	10-20x In

Technical Data	
Reference standard	IEC /BS EN60898-1 IEC60947-2
Rated Voltage (Ue)	230-400V ac
Rated Current (In)	6-63A
Rated Frequency (Fn)	50/60Hz
Rated short circuit capacity	10kA
Energy limiting class	3 (B,C)
Overvoltage category	III
Tripping Characteristic	B, C, D
Terminals line/load	1-25mm ²
Terminal tightening torque	2.5Nm
Width Dimension	18mm per pole
Operating temperature	-25 to +55°C
Storage temperature	-40°C to +70°C
Connection to mains supply	Top or Bottom
Mounting	Din rail EN60715

Rated Diversity Factor

Adjacent thermal magnetic MCBs/RCBOs should not be continuously loaded at their nominal rated currents when mounted in enclosures. We recommend a diversity factor (RDF) is applied to the MCB/RCBO nominal rated current where it is intended to load circuits continuously and simultaneously

Consumer unit ways	RDF	Consumer unit ways	RDF
1 way	1	6-9 ways	0.6
2-3 ways	0.8	10 ways +	0.5
4-5 ways	0.7		

Testing of the installation

After completion of the installation, it is essential that it is tested in accordance with the latest edition of the IET wiring regulations for electrical installations (BS7671)

What to do if an MCB trips

Reset tripped MCB/RCBO to the ON position. If device trips again, disconnect all appliances connected to this circuit. Switch MCB ON and safely connect appliances one at a time to identify which one trips the device.

In all cases, once the faulty appliance has been identified, do not continue to use the item until it has been checked.

Current rating (A)	Trip curve	Resistance mΩ	Power Loss per pole (W)	Maximum Loop Impedance Zs (ohms)					
				B Curve		C Curve		D Curve	
				t=0.4s	t=5s	t=0.4s	t=5s	t=0.4s	t=5s
6	B C D	28.3	1.7	10.95	12.78	6.39	12.78	3.48	12.78
10	B C D	21.0	2.1	6.57	7.67	3.83	7.67	2.09	7.67
16	B C D	15.6	2.5	4.11	4.79	2.40	4.79	1.31	4.79
20	B C D	12.4	2.7	3.29	3.83	1.92	3.83	1.05	3.83
25	B C D	12.4	3.1	2.63	3.07	1.53	3.07	0.84	3.07
32	B C D	10.0	3.2	2.05	2.40	1.20	2.40	0.65	2.40
40	B C D	9.5	3.8	1.64	1.92	0.96	1.92	0.52	1.92
50	B C D	8.6	4.3	1.31	1.53	0.77	1.53	0.42	1.53
63	B C D	9.5	5.0	1.04	1.22	0.61	1.22	0.33	1.22

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Effect of ambient temperature on the tripping characteristic

Correction factor is valid for current with times over 30s

I(X°C) - Test current at X ambient temperature

I (30°C) - Test current at 30°C ambient temperature

Ambient Temperature T/°C												
In (A)	-40	-30	-20	-10	0	+10	+20	+30	+40	+50	+60	+70
6	7.32	7.2	7.09	6.91	6.73	6.54	6.31	6	5.66	5.33	4.94	4.5
10	12.2	12	11.8	11.5	11.2	10.9	10.5	10	9.44	8.89	8.23	7.5
16	19.5	19.2	18.9	18.4	17.9	17.4	16.8	16	15.1	14.2	13.2	12
20	24.4	24	23.6	23	22.4	21.8	21	20	18.8	17.7	16.5	15
25	30.5	30	29.5	28.8	28	27.2	26.3	25	23.6	22.2	20.6	18.8
32	39	38.4	37.8	36.9	35.9	34.9	33.6	32	30.2	28.4	26.3	24
40	48.8	48	47.8	46.1	44.9	43.6	42	40	37.7	35.5	32.9	30
50	61	60	59.1	57.6	56.1	54.5	52.6	50	47.2	44.4	41.2	37.5
63	76.9	75.6	74.4	72.6	70.7	68.7	66.2	63	59.4	56	51.9	47.3

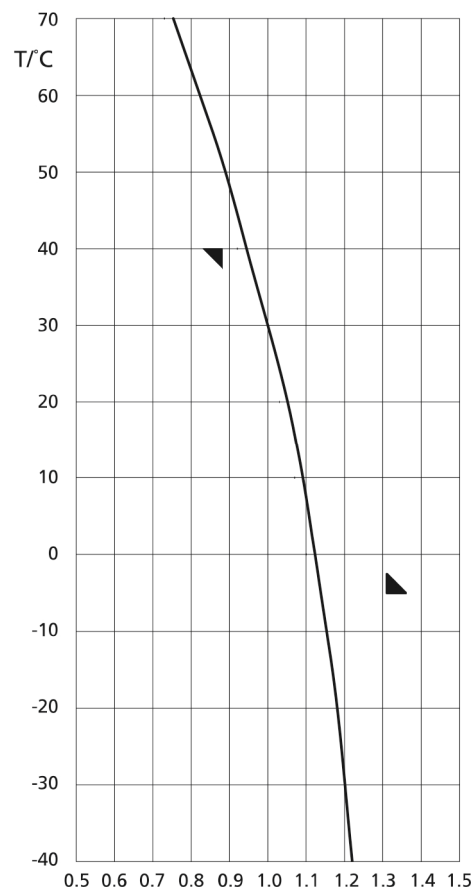
No. of single conductors, rigid single wire CU conductor					
Conductor mm ²	1	2	3	4	5
1.5	✓	✓	✓	✓	✗
2.5	✓	✓	✓	✗	✗
4	✓	✓	✓	✗	✗
6	✓	✓	✗	✗	✗
10	✓	✓	✗	✗	✗
16	✓	✗	✗	✗	✗
25	✓	✗	✗	✗	✗

No. of single conductors, flexible CU wire without cable ferrule						
Conductor mm ²	1	2	3	4	5	6
1.5	✓	✓	✓	✓	✓	✓
2.5	✓	✓	✓	✓	✓	✓
4	✓	✓	✓	✓	✓	✓
6	✓	✓	✓	✗	✗	✗
10	✓	✓	✗	✗	✗	✗
16	✓	✗	✗	✗	✗	✗
25	✓	✗	✗	✗	✗	✗

When using more than 2 cables you have to be careful how those cables are inserted, to insure proper pressure on each cable.
A combination of rigid & flexible conductors is not permitted.

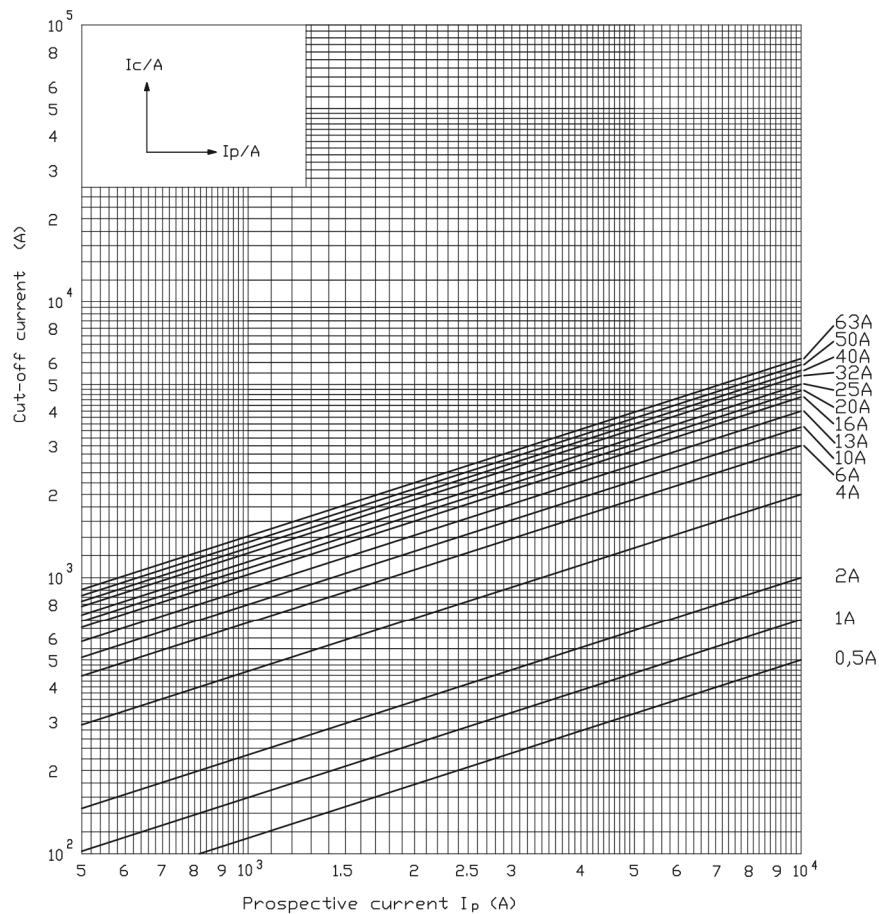
Selectivity: Upstream gG NV fuse (kA)											
Type	20	25	32	35	40	50	63	80	100	125	160
B6	0.5	0.78	1.2	1.4	1.7	2.4	4.6	7.0	10	10	10
B10	0.45	0.65	1.1	1.3	1.6	2.2	4.0	6.5	10	10	10
B16		0.55	1.0	1.2	1.5	2.0	3.6	5.5	9.5	10	10
B20			0.85	1.2	1.5	1.8	3.1	4.6	9.0	10	10
B25				1.1	1.4	1.7	2.9	4.0	8.0	10	10
B32					1.3	1.6	2.5	3.4	5.5	9.0	10
B40						1.5	2.2	3.1	4.9	8.0	10
B50							2.1	2.9	4.0	6.2	10
B63								2.5	3.3	5.1	8.0

Selectivity: Upstream gG NV fuse (kA)											
Type	20	25	32	35	40	50	63	80	100	125	160
C/D6	0.52	0.82	1.3	1.5	2.0	2.7	5.1	9.0	10	10	10
C/D10	0.47	0.70	1.1	1.4	1.8	2.3	4.0	7.0	10	10	10
C/D16		0.61	0.92	1.2	1.5	1.9	3.2	5.0	9.0	10	10
C/D20			0.90	1.1	1.4	1.7	2.9	4.2	8.0	10	10
C/D25				1.1	1.3	1.6	2.7	3.9	6.0	10	10
C/D32					1.2	1.5	2.3	3.4	5.2	9.0	10
C/D40						1.4	2.1	3.0	4.6	8.0	10
C/D50							2.0	2.7	3.8	7.0	10
C/D63								2.3	3.2	5.0	9.0

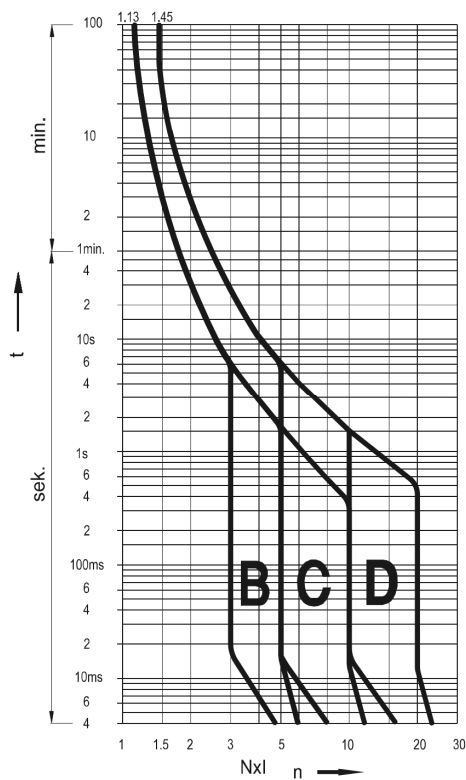


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I/t characteristic at 50 and 60Hz





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