

CATALOG

DME100 M

eRCBO 1P+N 1M with flying neutral leads



- Electronic RCBO 1P+N in 1M
- Supply from the bottom, load from the top
- Presence of flying neutral leads (black and blue color)
- 10kA breaking capacity up to 40A

ABB is the world's leading provider of products for electrical installation in buildings.

A comprehensive domain knowledge, global experience and continuous innovation enable us to provide optimal solutions for residential, commercial as well as industrial environments. Our solutions help to make your buildings safer, more energy efficient and equipped for the future.

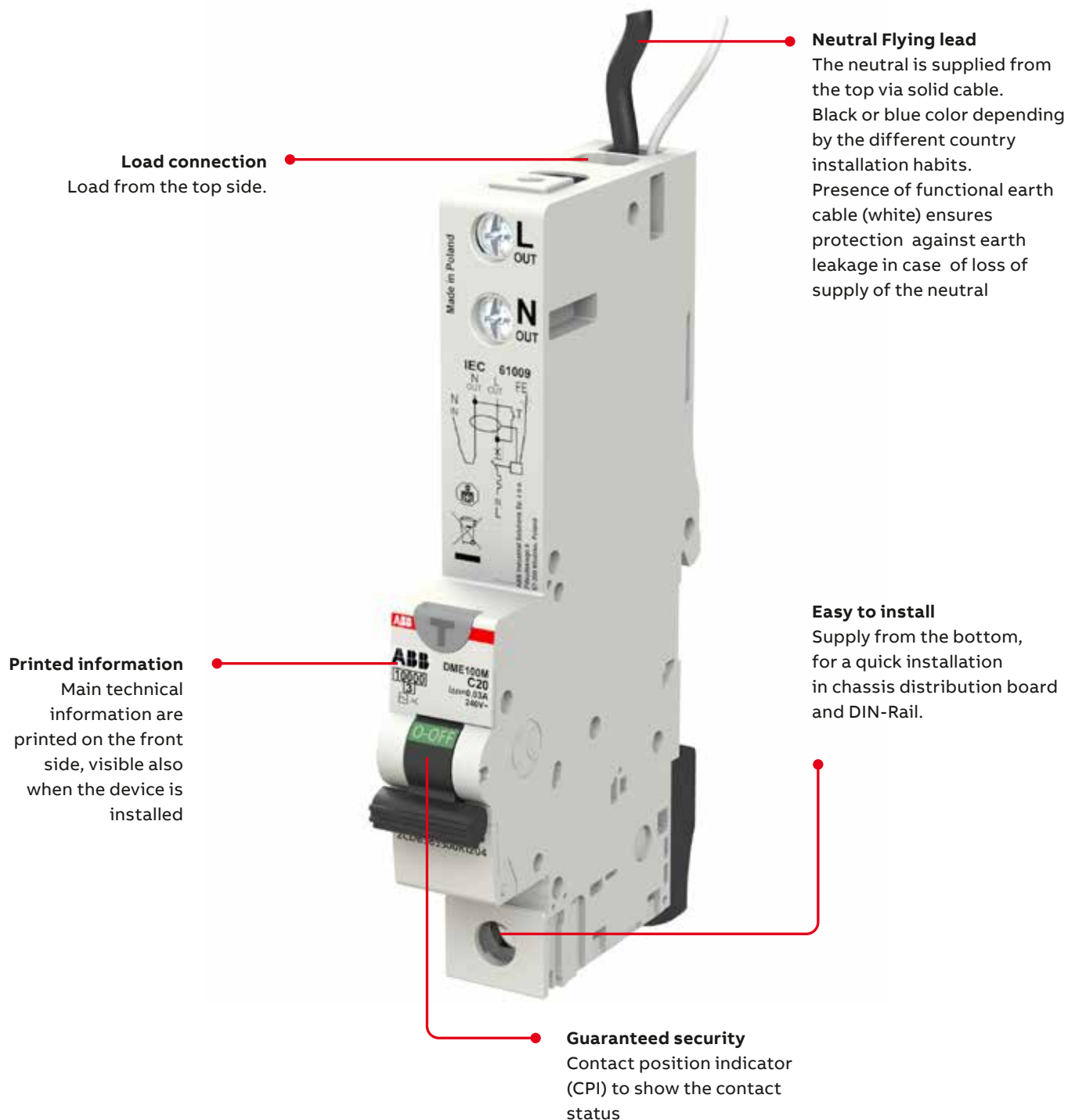
Table of contents

04	The details make the difference A range designed to ensure efficiency and protection
06	Ordering codes
08	Technical datasheet
09	Additional technical information
10	Let-trough energy for B tripping characteristic
12	Tripping characteristics
13	Dimensions
14	Coordination tables
15	Selectivity tables

DME100 M

The details make the difference.

A range designed to ensure efficiency and protection.



DME100 M is specifically designed
to protect people and sites,
both commercial and industrial,
from overloads, short-circuits
and earth-fault currents.



DME100 M

Ordering codes



DME100 M

Function: protection and control of the circuits against overloads and short-circuits; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contact and additional protection against direct contact ($I\Delta n = 30 \text{ mA}$). The neutral is unswitched.

Available with neutral cable in blue and black color.

Applications: residential, commercial, industrial in DIN-Rail and chassis distribution board.

Standard: IEC 61009-1; IEC 61009-2-2; AS/NZS 61009.1

Black neutral cable codes

N. poles	Breaking capacity	Type	Sensitivity $I\Delta n \text{ mA}$	Tripping Char.	Rated Current $I_n \text{ A}$	EAN	Type code	Order code	Weight 1 piece kg	Weight 1 piece kg
1+N	10kA	A	30	B	6	4022903029274	DME100 M B6 A30	2CDB363501R1065	0.235	1
					10	4022903029281	DME100 M B10 A30	2CDB363501R1105	0.235	1
					16	4022903029298	DME100 M B16 A30	2CDB363501R1165	0.235	1
					20	4022903029304	DME100 M B20 A30	2CDB363501R1205	0.235	1
					25	4022903029311	DME100 M B25 A30	2CDB363501R1255	0.235	1
					32	4022903029328	DME100 M B32 A30	2CDB363501R1325	0.235	1
					40	4022903029335	DME100 M B40 A30	2CDB363501R1405	0.235	1
				C	6	4022903029342	DME100 M C6 A30	2CDB363501R1064	0.235	1
					10	4022903029359	DME100 M C10 A30	2CDB363501R1104	0.235	1
					16	4022903029366	DME100 M C16 A30	2CDB363501R1164	0.235	1
					20	4022903029373	DME100 M C20 A30	2CDB363501R1204	0.235	1
					25	4022903029380	DME100 M C25 A30	2CDB363501R1254	0.235	1
					32	4022903029397	DME100 M C32 A30	2CDB363501R1324	0.235	1
					40	4022903029403	DME100 M C40 A30	2CDB363501R1404	0.235	1
		AC	30	B	6	4022903029410	DME100 M B6 AC30	2CDB363500R1065	0.235	1
					10	4022903029427	DME100 M B10 AC30	2CDB363500R1105	0.235	1
					16	4022903029434	DME100 M B16 AC30	2CDB363500R1165	0.235	1
					20	4022903029441	DME100 M B20 AC30	2CDB363500R1205	0.235	1
					25	4022903029458	DME100 M B25 AC30	2CDB363500R1255	0.235	1
					32	4022903029465	DME100 M B32 AC30	2CDB363500R1325	0.235	1
					40	4022903029472	DME100 M B40 AC30	2CDB363500R1405	0.235	1
				C	6	4022903029489	DME100 M C6 AC30	2CDB363500R1064	0.235	1
					10	4022903029496	DME100 M C10 AC30	2CDB363500R1104	0.235	1
					16	4022903029502	DME100 M C16 AC30	2CDB363500R1164	0.235	1
					20	4022903029519	DME100 M C20 AC30	2CDB363500R1204	0.235	1
					25	4022903029526	DME100 M C25 AC30	2CDB363500R1254	0.235	1
					32	4022903029533	DME100 M C32 AC30	2CDB363500R1324	0.235	1
					40	4022903029540	DME100 M C40 AC30	2CDB363500R1404	0.235	1

DME100 M

Ordering codes

Blue neutral cable codes

N. poles	Breaking capacity	Type	Sensitivity I Δ n mA	Tripping Char.	Rated Current In A	EAN	Type code	Order code	Weight 1 piece kg	Weight 1 piece kg
1+N	10kA	A	30	B	6	4022903030317	DME100 M B6 A30	2CDB373501R1065	0.235	1
					10	4022903030324	DME100 M B10 A30	2CDB373501R1105	0.235	1
					16	4022903030331	DME100 M B16 A30	2CDB373501R1165	0.235	1
					20	4022903030348	DME100 M B20 A30	2CDB373501R1205	0.235	1
					25	4022903030355	DME100 M B25 A30	2CDB373501R1255	0.235	1
					32	4022903030362	DME100 M B32 A30	2CDB373501R1325	0.235	1
					40	4022903030379	DME100 M B40 A30	2CDB373501R1405	0.235	1
				C	6	4022903030386	DME100 M C6 A30	2CDB373501R1064	0.235	1
					10	4022903030393	DME100 M C10 A30	2CDB373501R1104	0.235	1
					16	4022903030409	DME100 M C16 A30	2CDB373501R1164	0.235	1
					20	4022903030416	DME100 M C20 A30	2CDB373501R1204	0.235	1
					25	4022903030423	DME100 M C25 A30	2CDB373501R1254	0.235	1
					32	4022903030430	DME100 M C32 A30	2CDB373501R1324	0.235	1
					40	4022903030447	DME100 M C40 A30	2CDB373501R1404	0.235	1

DME100 M

Technical datasheet

				DME100 M
Electrical features	Standards			IEC 61009-1; IEC 61009-2-2; AS/NZS 61009.1
	Type (wave form of the earth leakage sensed)			A, AC
	Number of poles			1P+N
	Number of modules			1M
	Rated sensitivity I Δ n	mA		30
	Tripping Characteristic			B, C
	Rated current I _n	A		6 ≤ I _n ≤ 40
	Rated voltage U _e	V AC		230/240
	Insulation voltage U _i	V		440
	Overvoltage category			III
	Pollution degree			2
	Rated frequency	Hz		50/60
	Min. operating voltage for protection against I Δ n residual sinusoidal alternating currents	V AC		100
	Max operating voltage	V AC		264
	Operating voltage of circuit test	V AC		195-264
	Rated breaking capacity acc. to IEC 61009-1	I _{cn}	A	10000
	Rated breaking capacity acc. to IEC 60947-2 (only referring to internal short circuit test)	ultimate I _{cu}	A	10000
		service I _{cs}	A	7500
	Rated residual breaking capacity I Δ m to IEC 61009-1	I Δ m	A	10000
	Rated impulse withstand voltage (1.2/50) U _{imp}			kV 6 kV (test voltage 6.2 kV at sea level, 5 kV at 2000 m)
	Dielectric test voltage at ind. freq. for 1 min.			kV 2.5 kV (50 / 60Hz, 1 min.)
	Energy limiting class			3
Mechanical features	Thermomagnetic release - characteristic	B: 3 I _n ≤ I _m ≤ 5 I _n		■
		C: 5 I _n ≤ I _m ≤ 10 I _n		■
	Housing			Insulation group II, RAL 7035
	Toggle			Insulation group II, Black RAL 7024
	Contact position indicator			Green/Red on toggle
	Electrical life	operations		10000
	Mechanical life	operations		20000
	Protection degree acc. to EN 60529	housing		IP40
		terminals		IP20
	"Environmental conditions (damp heat) acc. to IEC/EN 60068-2-30"	°C/RH		28 cycles with 55°C/90-96% and 25°C/95-100%
	Reference temperature for setting of thermal element	°C		30
	Ambient temperature (with daily average ≤ +35 °C)	°C		-5...+55
	Storage temperature	°C		-25...+70
Installation	Terminal type			Bottom with failsafe; top without failsafe
	Terminal size for cables	top / bottom	mm ²	16/25 flexible; 25/35 rigid
	Terminal size for busbars	top	mm ²	only for wire connection
		bottom	mm ²	10
	Tightening torque (Maximum)	top / bottom	Nm	3/4.5
	Stripping length of the cable	top / bottom	mm	13/13
	Mounting			on DIN rail EN 60715 (35mm) by means of mounting clip and on distribution board
	Neutral Cable	Lenght	mm	1200
		Section	mm ²	4mm ² up to 25A; 6mm ² 32A and 40A
		Color		Black / Blue
				Vertical & Horizontal
	Supply from			Bottom terminal (Phase) and Neutral wire
Dimensions and weight	Dimensions (H x D x W)			mm 125 x 70 x 17.8
	Weight			g 235

DME100 M

Additional technical information



DME100 M

Derating in temperature

Max operating current depending on the ambient temperature of an RCBO in load circuit of characteristics type B, C. Daily average ambient temperature is intended to be $\leq +35\text{ }^{\circ}\text{C}$.

	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	55 °C
6 A	6,8	6,7	6,3	6,0	5,7	5,5	5,3
10 A	12,3	11,6	10,8	10,0	9,2	8,5	8,1
16 A	18,7	17,8	16,9	16,0	15,1	14,2	13,8
20 A	23,3	22,2	21,1	20,0	18,9	17,8	17,2
25 A	29,2	27,8	26,4	25,0	23,6	22,2	21,5
32 A	37,3	35,6	33,8	32,0	30,2	28,5	27,6
40 A	46,7	44,4	42,2	40,0	37,8	35,6	34,5

Power loss, internal resistance and voltage drop

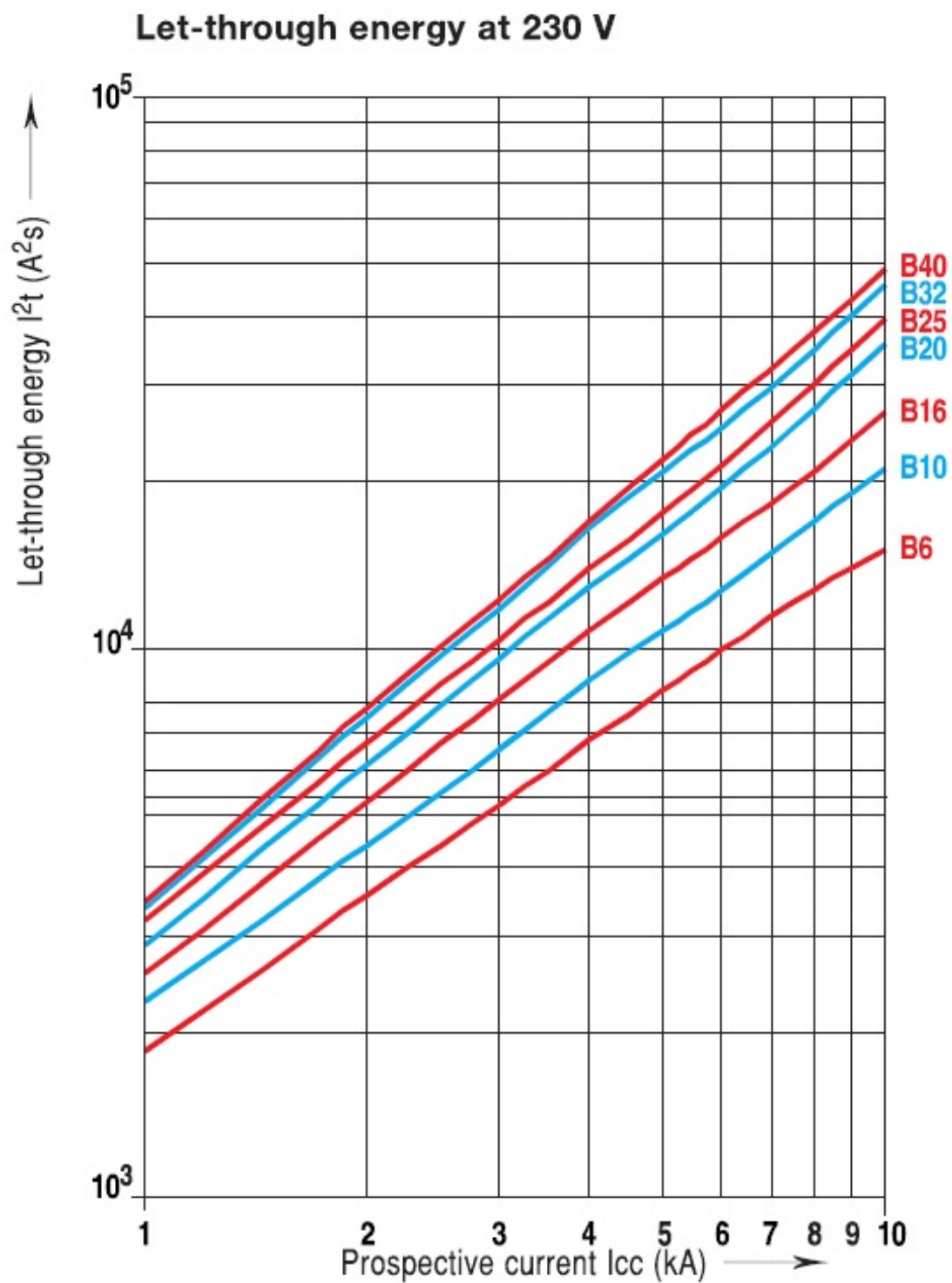
Rated current I_n [A]	Power loss [W]	Internal resistance [mΩ]	Voltage drop [V]
6 A	1,57	43,6	0,26
10 A	1,56	15,6	0,16
16 A	2,57	10,1	0,16
20 A	2,76	6,9	0,14
25 A	3,19	5,1	0,13
32 A	3,19	3	0,1
40 A	4	2,5	0,1

Influence of adjacent devices

Number of devices	Correction factor
2 and 3	0,9
4 and 5	0,8
6 to 9	0,7
10 and above	0,6

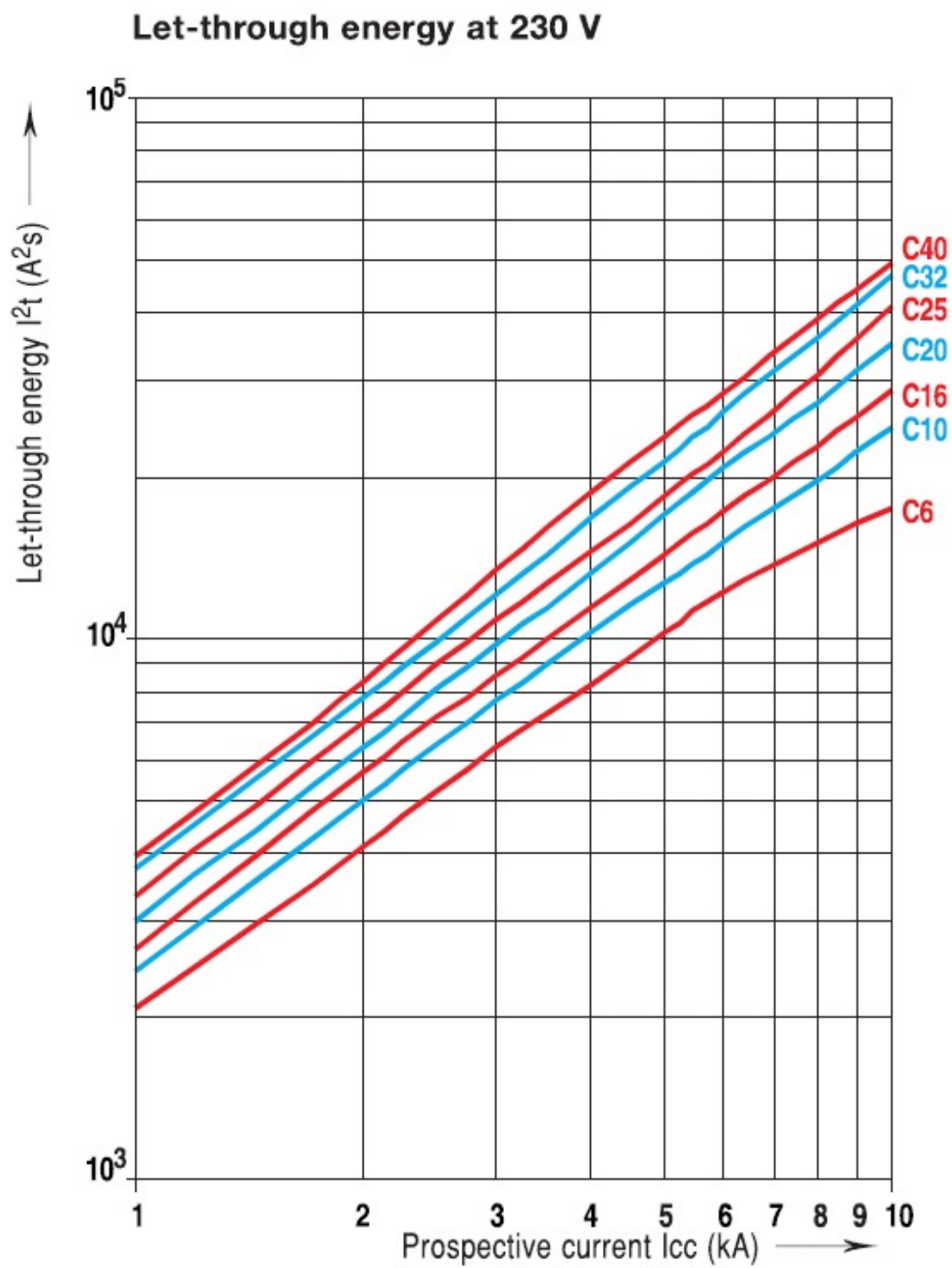
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Let-through energy for B tripping characteristic



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Let-through energy for C tripping characteristic



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Tripping characteristics

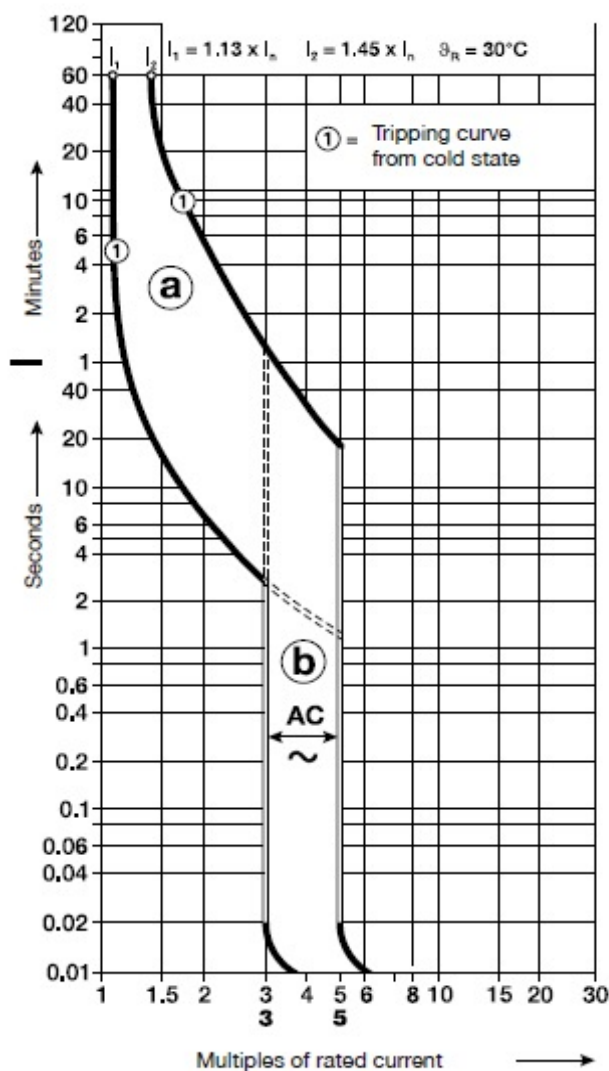
Acc.to	Tripping characteristic and rated current	Thermal release ②			Electromagnetic release ①		
		Current:		Tripping time	Currents:		Tripping time
		conventional non-tripping current	conventional tripping current		hold current surges	trip at least at	
IEC/EN 61009-1	B	6 to 40 A	1.13 - I_n	-	3 - I_n	-	> 0.1 s
			-	1.45 - I_n	-	5 - I_n	> 0.1 s
	C	2 to 40 A	1.13 - I_n	-	5 - I_n	-	> 0.1 s
			-	1.45 - I_n	-	10 - I_n	> 0.1 s

① The indicated electromagnetic tripping values apply to a frequency range of 16 2/3...60 Hz. For different network frequencies or direct current the values change according to the multiplier in the table below.

② The thermal releases are calibrated to a nominal reference ambient temperature; for Z and K, the value is 20°C, for B and C = 30°C. In the case of higher ambient temperatures, the current values fall by ca. 6% for each 10 K temperature rise.

Characteristic B

IEC/EN 61009-1

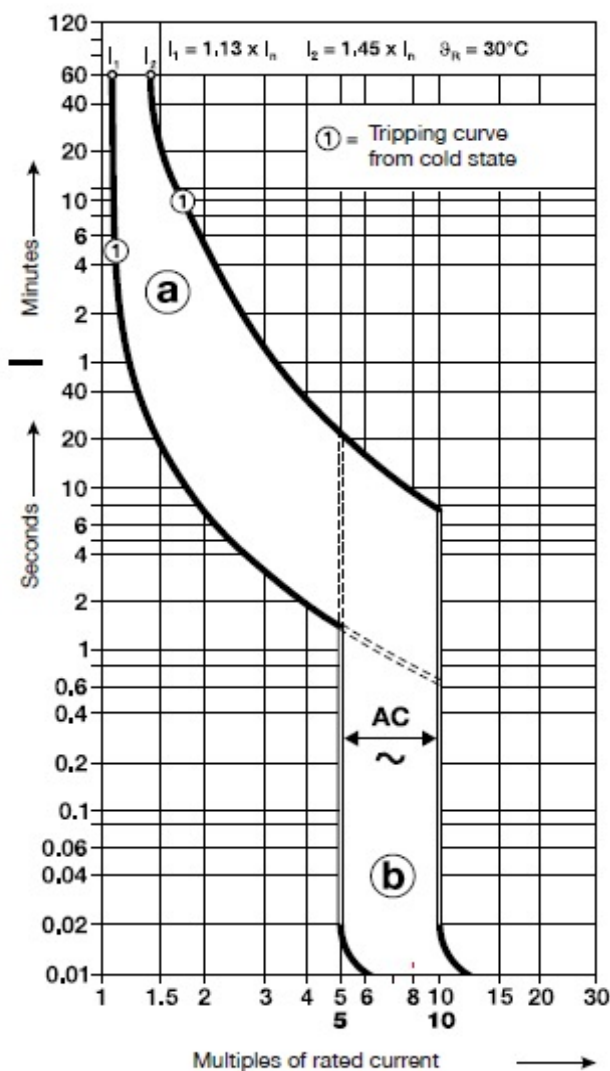


Ⓐ Thermal trip.

Ⓑ Electromagnetic trip.

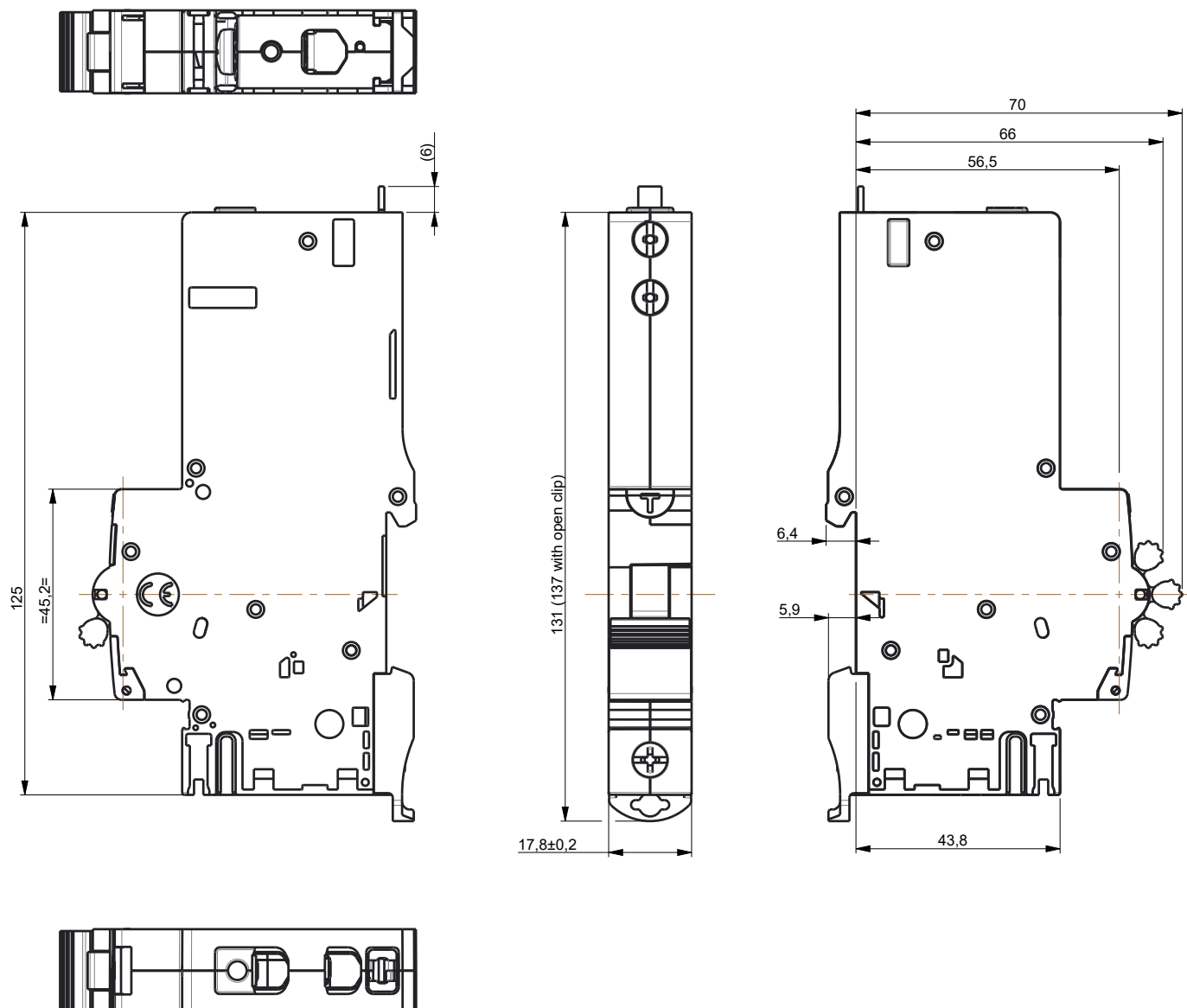
Characteristic C

IEC/EN 61009-1



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Dimensions



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Coordination tables

Technology	Technology				Technology			
	PR				S800			
	Series	Series			S800B	S800C	S800N	S800S
		Char	Char		B,C,D,K		B,C,D	B,C,D,K
			Icu (kA)	Icu (kA) In (A)	16 32	25 25	36 25	50 25
RCD	DME100M	C, B	10	6...40	16	25	36	50

Technology	Technology				MCCB														
	PR				Tmax XT														
	Series	Series			XT1					XT2					XT4				
		Char	Version		B	C	N	S	H	N	S	H	L	V	N	S	H	L	V
RCD	DME100M	C, B	Icu (kA)	Icu (kA)	18	25	36	50	70	36	50	70	120	150	36	50	70	120	150
			In(A)		16.160	16.160	16.160	16.160	16.160	63.160	63.160	63.160	63.160	63.160	16.250	16.250	16.250	16.250	16.250
		C, B	10	6...40	18	22	25			30	30	36	36	36	30	30	30	30	30

Icc max. 100 kA (80 kA, 400V with 10x38 cartridge fuses)				
Load side		Supply side		
		Char	Icu [kA]	Fuse gG
				In[A]
DME100M		C, B	10	6...16
				20...40
				80
				100



DME100 M

Selectivity tables

Technology	Technology			MCCB																							
	PR			Tmax XT																							
	Series	Char	Series	XT1												XT1											
			Version	B,C												N,S,H											
			Release	TM												TM											
			Icu (kA) In (A)	18,25												36,50,70											
RCD	DME100M	C, B	10	16	20	25	32	40	50	63	80	100	125	160	16	20	25	32	40	50	63	80	100	125	160		
				6	0,16	0,2	0,25	0,32	0,6	2,5	6	6	T	T	T	T	0,16	0,2	0,25	0,32	T	T	T	T	T	T	T
				10	--	0,2	0,25	0,32	0,6	2,5	6	6	T	T	T	T	--	0,2	0,25	0,32	T	T	T	T	T	T	T
				16	--	--	--	0,32	0,6	2,5	6	6	T	T	T	T	--	--	--	0,32	T	T	T	T	T	T	T
				20	--	--	--	--	0,6	2,5	3	6	8	T	T	T	--	--	--	--	3,5	T	T	T	T	T	T
				25	--	--	--	--	--	0,8	1,2	6	6	T	T	T	--	--	--	--	1,6	3,5	T	T	T	T	T
				32	--	--	--	--	--	--	1,2	3	6	8	8	8	--	--	--	--	--	--	6	T	T	T	T
				40	--	--	--	--	--	--	--	3	4	6	6	6	--	--	--	--	--	--	--	T	T	T	T

Technology	Technology					MCCB																								
	PR					Tmx XT																								
	Series	Series				XT2																XT4								
		Version		N,S,H,L				N,S,H,L,V												N,S,H,L,V										
		Release		EL				TM												TM										
		Char	(kA)	Icu (kA)	In (A)	36,50,70,120				36,50,70,120,150												36,50,70,120,150								
25						63	100	160	25	32	40	50	63	80	100	125	160	25	32	40	50	63	80	100	125	160	250			
RCD	DME100M	C, B	10	6	6	T	T	T	0,2	0,26	0,32	0,5	6	6	T	T	T	T	0,2	0,26	0,32	0,5	6	6	T	T	T	T		
				10	6	T	T	T	0,2	0,26	0,32	0,5	6	6	T	T	T	T	0,2	0,26	0,32	0,5	6	6	T	T	T	T		
				16	6	T	T	T	--	0,26	0,32	0,5	6	6	T	T	T	--	0,26	0,32	0,5	6	6	T	T	T	T			
				20	--	T	T	T	--	--	0,32	0,5	6	6	T	T	T	--	--	0,32	0,5	6	6	T	T	T	T			
				25	--	T	T	T	--	--	--	0,5	1,2	6	T	T	T	--	--	--	0,5	1,2	6	T	T	T	T			
				32	--	T	T	T	--	--	--	--	1,2	6	T	T	T	--	--	--	--	1,2	6	T	T	T	T			
				40	--	T	T	T	--	--	--	--	1,2	6	T	T	T	--	--	--	--	1,2	6	T	T	T	T			

Technology	Technology		Fuse									
	PR		NH									
	Series	Series	0									
		Version	gG									
		Char	Icu (kA)	In (A)	25	32	50	63	80	100	125	160
RCD	DME100M	C, B	10	6	0,6	1,5	2,9	4,6	7,5	T	T	T
				10	--	1,4	2,5	4	6,2	T	T	T
				16	--	--	2,3	3,6	5,4	7,3	T	T
				20	--	--	--	3,2	4,6	6,8	T	T
				25	--	--	--	--	4,3	5,8	T	T
				32	--	--	--	--	3,7	5,1	9	T
				40	--	--	--	--	--	--	8,5	T



ABB Group

Electrification business

Smart Buildings business line

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