

## MODULAR CIRCUIT BREAKERS FOR CIRCUIT PROTECTION

### MCB - MTC - MT - MTHP

#### Technical data

TYPE		MTC			MT			
		MTC45	MTC60	MTC100	MT 45	MT 60		
Rated current (In)	(A)	2-32	6-32	6-32	6-40	1-63		
Utilization category		A	A	A	A	A		
Rated operational voltage (Ue)	(V)	230/400 - 240/415	230/400 - 240/415	230 - 240	230/400 - 240/415	230/400 - 240/415		
Minimum operating voltage (Ue min)	(V)	12 AC/DC	12 AC/DC	12 AC/DC	12 AC/DC	12 AC/DC		
Maximum operating voltage (Ue max)	(V)	440 AC/ 220 DC	440 AC/ 220 DC	253 AC/ 110 DC	440 AC/ 220 DC	440 AC/ 220 DC		
Insulation voltage (Ui)	(V)	500	500	500	500	500		
Rated frequency	(Hz)	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60		
Rated impulse withstand voltage (Uimp)	(kV)	4	4	4	4	4		
Overvoltage category:		III	III	III	III	III		
Number of poles		1 1+N,2 3,4	1+N,2 3,4	1+N,2	1,1+N 2,3,4	1,1+N 2,3,4		
Energy limiting class (B and C curve):		3 3 3	3 3	3 3 (≤16A) 1 (>16A)	3 3	3 3		
<b>Breaking capacity</b>								
Alternating current	IEC/EN 60898-1	Icn (A)	4500	6000 <sup>(1)</sup> 6000	10000 <sup>(1)</sup>	4500	6000	
		Ics (A)	1 Icn	1 Icn	0.75 Icn	1 Icn	1 Icn	
		Icu 230/240 V (kA)	4.5 6 6	7.5 7.5	10	4.5 6	10 20	
	IEC/EN 60947-2	Icu 400/415 V (kA)	- - 4.5	- 6	-	- 6	- 10	
		Ics (kA)	100% Icu	100% Icu	75% Icu	100% Icu	75% Icu	
Direct current	IEC/EN 60947-2	Icu (1 pole) 50 V (kA)	6	10	-	6	10	
		Ics (kA)	6	10	-	6	10	
		Icu (2 poles in series) 110 V (kA)	6	10	10 (15 at 50V)	6	10	
		Ics (kA)	6	10	10 (15 at 50V)	6	6	
		Icu (4 poles in series) 220 V (kA)	4.5	6	-	4.5	10	
		Ics (kA)	4.5	6	-	4.5	10	
Wiring		cable section (mm <sup>2</sup> )	rigid	≤ 1x16 - ≤ 1x10+1x6	≤ 1x16 - ≤ 1x10+1x6	≤ 1x16 - ≤ 1x10+1x6	≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10	≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10
		flexible	≤ 1x10 - ≤ 2x6	≤ 1x10 - ≤ 2x6	≤ 1x10 - ≤ 2x6	≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10	≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10	
Screwdriver suggested:			PZ2	PZ2	PZ2	PZ2	PZ2	
Electrical endurance:			10000	10000	10000	10000	10000	
Mechanical endurance:			20000	20000	20000	20000	20000	
Max. no. of usable modular accessories:			2	2	2	2	2	
Upline/downline power supply:			yes	yes	yes	yes	yes	
ON/OFF status displayed:			yes	yes	yes	yes	yes	
Mounting position:			any	any	any	any	any	
Type of residual current device:			-	-	-	Add-on RCD BD	Add-on RCD BD	
Rated tightening torque:	(Nm)		1.2	1.2	1.2	2	2	
Degree of protection:	terminals		IP20	IP20	IP20	IP20	IP20	
	front		IP40	IP40	IP40	IP40	IP40	
Pollution degree:			2	2	2	2	2	
Tropicalization:			55°C - RH 95%	55°C - RH 95%	55°C - RH 95%	55°C - RH 95%	55°C - RH 95%	
Reference temperature:	(°C)		30	30	30	30	30	
Operating temperature:	(°C)		-25 +60	-25 +60	-25 +60	-25 +60	-25 +60	
Stocking temperature:	(°C)		-40 +70	-40 +70	-40 +70	-40 +70	-40 +70	
Double connection (cable+fork busbar)			no	no	no	yes (only downstream)	yes (only downstream)	
Weight:	(g)		135 (per module)	135 (per module)	135 (per module)	145 (per pole)	145 (per pole)	
Tripping characteristic			C	C B	C	C B	C B D	
Rated currents available In:	(A)		-	-	-	-	1 - -	
			2	-	-	-	2 - -	
			-	-	-	-	3 - -	
			-	-	-	-	4 - -	
			6	6 6	6	6 6	6 6 6	
			10	10 10	10	10 10	10 10 10	
			13	13 13	13	13 13	13 13 13	
			16	16 16	16	16 16	16 16 16	
			20	20 20	20	20 20	20 20 20	
			25	25 25	25	25 25	25 25 25	
			32	32 32	32	32 32	32 32 32	
			-	-	-	40 40	40 40 40	
			-	-	-	-	50 50 -	
			-	-	-	-	63 63 -	
			-	-	-	-	- - -	

<sup>(1)</sup> Breaking capacity of the single pole Icn=4500A <sup>(2)</sup> ≤95mm<sup>2</sup> with reduced connection terminal (width connection < 17mm)

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MT												MTHP														
MT 100						MT 250						MTHP 160				MTHP 250										
1-25			32-63			6-20			25			32-40			50-63				63-125				20-63			
A			A			A			A			A			A				A							
230/400 - 240/415			230/400 - 240/415			230/400 - 240/415			230/400 - 240/415			230/400 - 240/415			230/400 - 240/415				230/400							
12 AC/DC			12 AC/DC			12 AC/DC			12 AC/DC			12 AC/DC			12 AC/DC				12 AC/DC							
440 AC/220 DC			440 AC/220 DC			440 AC/220 DC			440 AC/220 DC			440 AC/220 DC			440 AC/220 DC				440 AC/220 DC							
500			500			500			500			500			500				500							
50/60			50/60			50/60			50/60			50/60			50/60				50/60							
4			4			4			4			4			4				6							
III			III			III			III			III			III				IV							
1	2	3,4	1	2	3,4	1	2	3,4	1	2	3,4	1	2	3,4	1	2	3,4	1	2,3,4	1	2	3,4				
3	3	3	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
10000			10000			25000			20000			15000			12500				10000				25000			
0.75 Icn			0.75 Icn			0.75 Icn			0.75 Icn			0.75 Icn			0.75 Icn				0.75 Icn							
15	30	25	12.5	25	20	25	50	40	20	40	30	15	30	25	15	25	20	16	20	25	50	30				
-	20	15	-	15	12.5	-	30	25	-	25	20	-	20	15	-	15	15	4.5	16	6	25	25				
50% Icu			50% Icu			50% Icu			50% Icu			50% Icu			50% Icu				75% Icu							
10			10			20			20			20			20				25							
10			10			15			15			15			15				20							
15			15			25			25			25			25				30							
15			15			20			20			20			20				25							
15			15			25			25			25			25				25							
12			12			20			20			20			20				20							
1x35 - . 2x16 - . 1x16+2x10			≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10			≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10			≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10			≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10			≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10				≤ 1x70 - ≤ 2x25 - ≤ 2x25+1x10							
1x35 - . 2x16 - . 1x16+2x10			≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10			≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10			≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10			≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10			≤ 1x35 - ≤ 2x16 - ≤ 1x16+2x10				≤ 1x50 <sup>(2)</sup> - ≤ 2x25 - ≤ 3x16							
PZ2			PZ2			PZ2			PZ2			PZ2			PZ2				PZ2							
10000			10000			10000			10000			10000			10000				10000							
20000			20000			20000			20000			20000			20000				20000							
2			2			2			2			2			2				2							
yes			yes			yes			yes			yes			yes				yes							
yes			yes			yes			yes			yes			yes				yes							
any			any			any			any			any			any				any							
Add-on RCD BD			Add-on RCD BD			Add-on RCD BD			Add-on RCD BD			Add-on RCD BD			Add-on RCD BD				Add-on RCD BDHP							
2			2			2			2			2			2				3.5 / 3 (terminal)							
IP20			IP20			IP20			IP20			IP20			IP20				IP20							
IP40			IP40			IP40			IP40			IP40			IP40				IP40							
2			2			2			2			2			2				2							
55°C - RH 95%			55°C - RH 95%			55°C - RH 95%			55°C - RH 95%			55°C - RH 95%			55°C - RH 95%				55°C - RH 95%							
30			30			30			30			30			30				30							
-25 +60			-25 +60			-25 +60			-25 +60			-25 +60			-25 +60				-25 +60							
-40 +70			-40 +70			-40 +70			-40 +70			-40 +70			-40 +70				-40 +70							
yes (only downstream)			yes (only downstream)			yes (only downstream)			yes (only downstream)			yes (only downstream)			yes (only downstream)				no							
145 (per pole)			145 (per pole)			145 (per pole)			145 (per pole)			145 (per pole)			145 (per pole)				250 (per pole)							
C		B		D		C						C		D		C										
-		-		1		-						-		-		-										
-		-		2		-						-		-		-										
-		-		3		-						-		-		-										
-		-		4		-						-		-		-										
6		6		6		6						6		6		6										
10		10		10		10						10		10		10										
13		13		13		-						-		-		-										
16		16		16		16						16		16		16										
20		20		20		20						20		20		20										
25		25		25		25						25		25		25										
32		32		32		32						32		32		32										
40		40		40		40						40		40		40										
50		50		-		50						50		50		50										
63		63		-		63						63		63		63										
-		-		-		-						-		80		-										
-		-		-		-						-		100		100										
-		-		-		-						-		125		-										