Data Sheet for Article: MC340343--

Moulded Case Circuit Breaker Type VE, 4-pole, 150kA, 400A

Size type 3, Rated current 400A, Poles 4, IP Rating IP20, Short circuit switching capacity 150kA, Tripping Unit VE electronic protection for system, line, selective and generator

Technical Data

Net width (mm)	185,00
Net height (mm)	275,00
Net weight (kg)	7,50
EAN	9004840386356
Power loss (W)	48,00
Min. ambient temperature (°C)	-25
Max. ambient temperature (°C)	60
Standard	IEC EN 60947 VDE 0660
Device category	circuit breaker
Rated current (A)	400
Rated voltage	< 690VAC
Short circuit switching capacity (kA)	150
Size type	3
Tripping Unit	VE electronic protection for system, line, selective and generator
Poles	4

Technical Data - continued

Short circuit current	400A
Protection against direct contact	finger- und handrückensicher nach VDE 0106 Teil 100
Climatic proofing	Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Mech. shock resistance Half-sinusoidal shock 10ms	20 (Halbsinusstoß 20 ms)
IP Rating	IP20
Rated insulation voltage [Ui] (V)	1000
Mechanical durability	20000 operation cycles
Electrical endurance (Operation cycle)	10000
Terminal type	Screw terminal
Rated short-time withstand current Icw	3,3kA

GENERAL DATA - MC2, MC3, MC4

Standards and regulations		IEC/EN 60947, VDE 0660
Protection against accidental contact		Finger and back-of-hand proof to VDE 0106 Part 100
Climate resistance		Damp heat, constant to IEC 60068-2-78
		Damp heat, ciclical to IEC 60068-2-30
Ambient temperature		
	Storage	-25...+70°C
	Operation	-25...+70°C
Impact resistance (IEC/EN 60068-2-27)		20 (half-sinusidal shock 20 ms)
Safe isolation to EN 61140		
	between auxiliary contacts and main circuits	500V AC
	between auxiliary contacts	300V AC

Datei Tabelle: Moulded Case Circuit Breaker Type VE, 4-pole, 150kA, 400A

Mounting position		vertical and 90° in all directions

Direction of power supply		any
Degree of protection		
	Device	in region of component patts: IP20 (basic degree of protection)
	Housing	with insulating surround: IP40
		with door coupling roatry handle: IP66
	Connectors	Tunnel terminal: IP10
		Phase isolator and strip terminal: IP00

DIELECTIC STRENGH OF MCCB - MC3

	Max. rated uninterruped current 630A		
	MC3 - 36kA	**MC3 - 50kA**	**MC3 - 150kA**
Rated impulse withstand voltage U_{imp}			
Main circuits	8000V	8000V	8000V
Auxiliary circuits	6000V	6000V	6000V
Rated operational voltage U_e	690V AC	690V AC	690V AC
Rated operational voltage breaking via 3 conductors	-	750V DC[1)]	750V DC[1)]
Surge protection/ pollution degree	III/3	III/3	III/3
Rated insulation voltage U_i	1000V[2)]	1000V	1000V
Range of application in IT networks	690V	690V	690V

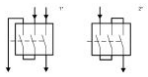
Notes:

[1)] For rated operational voltage breaking via 3 conductors, the following applies: DC correction factor for instaneous release response value:

MC3: 1,35

Setting for I_i at DC = setting I_i AC/correction factor DC

Value applies to 3-pole protection devices with thermomagnetic release MC3



1* Breaking one pole via two circuits in series

2* Breaking one pole via three circuits in series

[2)] For 3-pole protection devices, the following apllies: 690V

BREAKING CAPACITY - MC3

			Max. rated uninterrupted current 630A		
			MC3 - 36kA	**MC3 - 50kA**	**MC3 - 150kA**
Rated short-circuit breaking capacity values I_{cm}					
240V			121kA	187kA	330kA
400/415V			76kA	105kA	330kA
440V			63kA	74kA	286kA
525V			24kA	53kA	143kA
690V			14kA	40kA	40kA
Rated short-circuit breaking capacity value I_{cn}/I_{cs}					
I_{cu} meets IEC/EN 60947	240V 50/60 Hz		55kA	85kA	150kA
Breaking sequence O-t-CO	400/415V 50/60Hz		36kA	50kA	150kA
	440V 50/60Hz		30kA	35kA	130kA
	525V 50/60Hz		12kA	25kA	65kA
	690V 50/60Hz		8kA	20kA	35kA
	500V DC		-	30kA	70kA
	750V DC		-	30kA	70kA
I_{cs} meets IEC/EN 60947	240V 50/60Hz		55kA	50kA	150kA
Breaking sequence O-t-CO-t-CO	400/415V 50/60Hz		36kA	50kA	50kA
	440V 50/60Hz		22,5kA	35kA	130kA
	525V 50/60Hz		9kA	13kA	33kA
	690V 50/60Hz		4kA	5kA	9kA
Maximum HBC fuse ≤1600A				MC3-...250, 400: 400A gG/gL MC3-...630: 630A gG/gL	
Utilization category to IEC/EN 60947-2			A	A	A
Rated short-time withstand current I_{cw}					
t = 0,3s			3,3kA	3,3kA	3,3kA
t = 1s			3,3kA	3,3kA	3,3kA
Rated making and breaking capacity I_e					
Rated operating current	AC-1	400/415V 50/60Hz	500A	630A	630A
		690V 50/60Hz	500A	630A	630A
	AC-3	400/415V 50/60Hz	450A	450A	450A
		690V 50/60Hz	450A	450A	450A
	DC-1	500V DC with termal release	-	500A	500A
		750V DC with termal release	-	500A	500A
	DC-3	500V DC with termal release	-	500A	500A
		750V DC with termal release	-	500A	500A

LIFETIME - MC3

			Max. rated uninterrupeted current 630A		
			MC3 - 36kA	**MC3 - 50kA**	**MC3 - 150kA**
Service life, mechanical (operations)			15000	15000	15000
Maximum operating cycles			60 S/h	60 S/h	60 S/h
Service life, electrical					
	AC-1	400/415V 50/60Hz	5000	5000	5000
		690V 50/60Hz	3000	3000	3000
	AC-3	400/415V 50/60Hz	2000	2000	2000
		690V 50/60Hz	2000	2000	2000
	DC-1	500V with thermal release	-	5000	5000
		750V with thermal release	-	5000	5000
	DC-3	500V with thermal release	-	2000	2000
		750V with thermal release	-	2000	2000
Current heat loss per pole at I_u [1)]			31W	31W	31W
Total disconnecting time at short-circuit			<10ms	<10ms	<10ms

[1)] The current heat loss per pole ratings refer to the maximum current rating for the particular frame size.

CONNECTION CROSS SECTIONS

			MC3	I_n [1]
Standard equipment			Screw connection	-
Accessories			Box terminal	
			Tunnel terminals	
			Rear-side connection	
Cu-conductors, Cu-cable				
Box terminal	solid		2 x 16mm²	500A
	stranded		1 x (35 - 240)mm²	
			2 x (25 - 120)mm²	
Tunnel terminal	solid		-	-
	stranded	1-hole	1 x (25-185)mm²	350A
		2-hole	1 x (50 - 240)mm²	630A
			2 x (50 - 240)mm²	2 x 185A
		4-hole	-	-
Screw connection and Rear-side connection				
directly on switch	solid		1 x 16mm²	630A2 x 185A
			2 x 16mm²	
	stranded		1 x (25 - 240)mm²	
			2 x (25 - 240)mm²	
Module plate	1-hole	min.	-	-
		max.	-	-
Module plate	2-hole	min.	-	-
		max.	-	-
Connection extension			2 x 300mm²	630A2x185
Al-conductors, Al-cable				
Tunnel terminal	solid		1 x 16mm²	350A
	stranded	1-hole	1 x (25 - 185)[2]mm²	
		2-hole	1 x (50 - 240)mm²	630A
			2 x (50-240)mm²	
		4-hole	-	-
Screw connection and Rear-side connection				
directly on switch	solid		1 x 16mm²	400A
			2 x (10 - 16)mm²	
	stranded		1 x (25 - 120)mm²	
			2 x (25 - 120)mm²	
Module plate	1-hole	min.	-	-
		max.	-	-
Module plate	2-hole		-	-
Connection extension			-	-
Cu-strip (number of segments x width x segment thickness)				
Box terminal		min.	6 x 16 x 0,8mm	630A
		max.	10 x 24 x 1,0mm	
			+5 x 24 x 1,0mm	
			(2x) 8 x 24 x1,0mm	
Flat conductor terminal, basic		min.	-	-
		max.	-	-

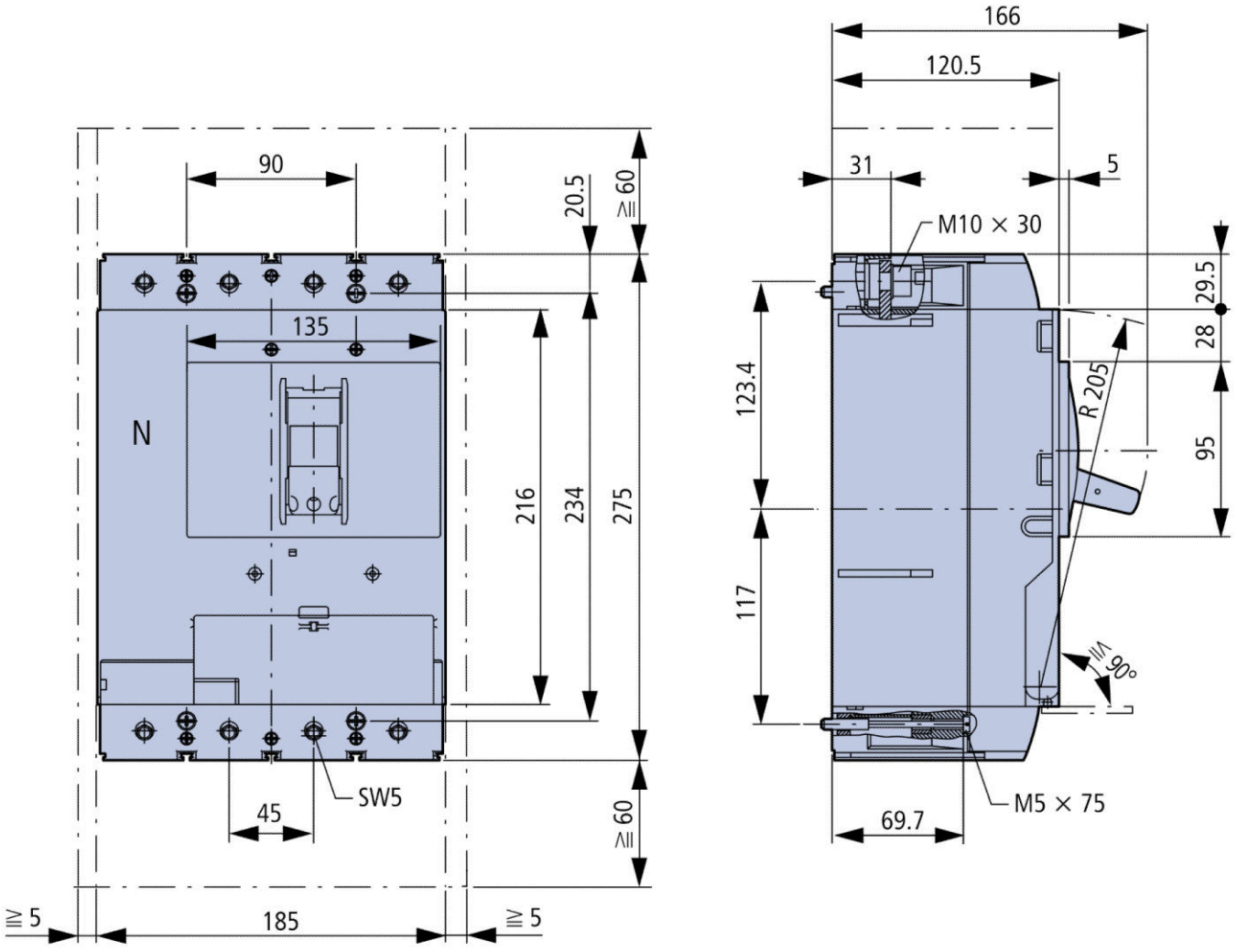
Moudle plate	1-hole		-	-
Screw connection and Rear-side connection				
Cu-strip, with holes		min.	6 x 16 x 0,8mm	630A
		max.	10 x 32 x 1,0mm	
			+5 x 32 x 1,0mm	
Connection extension			(2x) 10 x 50 x 1,0mm	
Cu-rail (width x thickness)				
Screw connection and Rear-side connection				
Screw connection			M10	-
directly on switch		min.	20 x 5mm	630A
		max.	30 x 10mm	
			+30 x 5mm	
Module plate	1-hole	min.	-	-
		max.	-	-
Module plate	2-hole		-	-
Connection extension		min.	-	630A10 x 40
		max.	2 x (10 x 50)	

Notes:

[1] The rated currents In have been calcukated in accordance with IEC/EN 60947 (protection devices standard) and generally relate to the max. specified cross-sections and are used here for the purpose of orientation. The design standards which apply in each case must be observed.

2) Depending on the cable manufacturer up to 240mm² can be connected.

Dimensioned drawing: Moulded Case Circuit Breaker Type VE, 4-pole, 150kA, 400A



DESCRIPTION	Order No.
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Size type 3, Rated current 400A, Poles 4, IP Rating IP20, Short circuit switching capacity 150kA, Tripping Unit VE electronic protection for system, line, selective and generator	MC340343