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Manual Motor Starters

Thermal Overload Release Setting Range A	Ratings AC3 at **400V** **kW**	690V kW	Magnetic short circuit trip A	**Type**	Pack pcs.	Weight kg/pc.
0,1 - **0,16**	**0,02**	0,06	1,92	**MU25A-0,16**	2	0,25
0,16 - **0,25**	**0,06**	0,12	3,0	**MU25A-0,25**	2	0,25
0,25 - **0,4**	**0,09**	0,18	4,8	**MU25A-0,4**	2	0,25
0,4 - **0,63**	**0,12**	0,25	7,6	**MU25A-0,63**	2	0,25
0,63 - **1**	**0,25**	0,55	12,0	**MU25A-1**	2	0,25
1 - **1,6**	**0,55**	1,1	19,2	**MU25A-1,6**	2	0,25
1,6 - **2,5**	**0,75**	1,5	30	**MU25A-2,5**	2	0,25
2,5 - **4**	**1,5**	3	48	**MU25A-4**	2	0,25
4 - **6,3**	**2,5**	4	75,6	**MU25A-6,3**	2	0,25
6,3 - **10**	**4**	7,5	120	**MU25A-10**	2	0,25
10 - **16**	**7,5**	11	192	**MU25A-16**	2	0,25
16 - **20**	**9**	12	240	**MU25A-20**	2	0,25
20 - **25**	**12,5**	22	300	**MU25A-25**	2	0,25
25 - **32**	**15**		384	**MU25A-32**	2	0,25

Auxiliary Contact Blocks, for side mounting, max. 2 pieces

Contacts NO	NC	EM [1]	Rated Operational Current **AC15** **230V** A	400V A	AC1 500V A	**Type**	Pack pcs.	Weight kg/pc.
1	-	-	**3,5**	2	6	**MU25A-PS10**	10	0,03
-	1	-	**3,5**	2	6	**MU25A-PS01**	10	0,03
2	-	-	**3,5**	2	6	**MU25A-PS20**	10	0,03
1	1	-	**3,5**	2	6	**MU25A-PS11**	10	0,03
-	2	-	**3,5**	2	6	**MU25A-PS02**	10	0,03
-	1	1	**3,5**	2	6	**MU25A-PV11**	10	0,03
-	-	2	**3,5**	2	6	**MU25A-PV20**	10	0,03

Transverse Auxiliary Contact Block, max. 1 piece

Contacts NO	NC	EM [1]	Rated Operational Current **AC15** **230V** A	AC1 230V A	**Type**	Pack pcs.	Weight kg/pc.
1	1	-	**1**	5	**MU25A-PA11**	10	0,02

Auxiliary Contact Blocks for mounting under the cover, max. 1 piece

Contacts NO	NC	EM [1]	Rated Operational Current **AC15** **230V** A	400V A	AC1 500V A	**Type**	Pack pcs.	Weight kg/pc.
1	1	-	**3,5**	2	6	**MU25A-PE11**	10	0,02

Trip Alarm Auxiliary Switch for mounting under the cover, max. 1 piece

Contacts NO	NC	EM [1]	Rated Operational Current **AC15** **230V** A	400V A	AC1 500V A	**Type**	Pack pcs.	Weight kg/pc.
1	-	-	**3,5**	2	6	**MU25A-PM10**	10	0,02
-	1	-	**3,5**	2	6	**MU25A-PM01**	10	0,02

1) early make

Shunt Release for mounting under the cover

Rated Control Voltage and Frequency V	Power Consumption VA	W	Type	Pack pcs.	Weight kg/pc.
24V 50/60Hz	2,7	1,8	**MU25A-A24**	10	0,06
110V 50Hz, 110-120V 60Hz	2,7	1,8	**MU25A-A110**	10	0,06
220-230V 50Hz, 240V 60Hz	2,7	1,8	**MU25A-A230**	10	0,06
380-415V 50Hz, 440V 60Hz	2,7	1,8	**MU25A-A400**	10	0,06

Under-voltage Release for mounting under the cover

Rated Control Voltage and Frequency V	Power Consumption VA	W	Type	Pack pcs.	Weight kg/pc.
24V 50/60Hz	2,7	1,8	**MU25A-U24**	10	0,06
110V 50Hz, 110-120V 60Hz	2,7	1,8	**MU25A-U110**	10	0,06
220-230V 50Hz, 240V 60Hz	2,7	1,8	**MU25A-U230**	10	0,06
380-415V 50Hz, 440V 60Hz	2,7	1,8	**MU25A-U400**	10	0,06

Accessories

Description	Specification	Type	Pack pcs.	Weight kg/pc.
Busbar Connector Fully Isolated, U_i 690V, I_u 63A				
Busbar	For 2 units 3-pole, 99mm long	**MU25A-D99**	10	0,036
Busbar	For 3 units 3-pole, 154mm long	**MU25A-D154**	10	0,060
Busbar	For 4 units 3-pole, 208mm long	**MU25A-D208**	10	0,084
Busbar	For 5 units 3-pole, 262mm long	**MU25A-D262**	10	0,107
Supply Block	3-pole for use with busbar connector	**MU25A-DB**	10	0,034
Protection Cover	for unused busbar terminations	**MU25A-BS**	10	0,003
Spacing piece ½TE	for ambient temperature >40°C	**P730**	10	0,013
Current Limiter	For increasing the fault breaking capacity of single unit or group back-up to 50kA at 3~415V, above setting range 6,3-10A U_i = 690V, I_u = 32A	**MU25A-ID50**	1	0,172
Starter Carrier	For snap-on mounting contactor and manual motor starter on 35mm DIN-rail acc. DIN EN 50022	**MU25A-PL54**	1	0,06
Enclosures				
Moulded Enclosure	Protection to IP55	**MU25A-O55**	1	0,24
Moulded Front Plate	Protection to IP55	**MU25A-C55**	1	0,16
Locking Bracket	Suitable for 3 padlocks in "OFF"-position, stirrup diameter of the padlock max. 8 mm	**MU25A-Z**	1	0,10
Stop Button	Mushroom head	**MU25A-NAT**	1	0,04
Emergency Stop Button	latch, release by turning	**MU25A-NAV**	1	0,04
Emergency Stop Button	latch, release by key	**MU25A-NAS**	1	0,04
Indicator	green, for 220-240V~/=	**MU25A-SG230**	10	0,01
Indicator	red, for 220-240V~/=	**MU25A-SR230**	10	0,01
Indicator	white, for 220-240V~/=	**MU25A-SW230**	10	0,01
Indicator	green, for 380-440V~/=	**MU25A-SG400**	10	0,01
Indicator	red, for 380-440V~/=	**MU25A-SR400**	10	0,01
Indicator	white, for 380-440V~/=	**MU25A-SW400**	10	0,01
Neutral Conductor Block	for mounting in enclosure and front plate Wiring cross section 0,75 - 2,5mm²	**MU25A-NL**	10	0,01
Moulded Enclosure for 5-pole CEE-plug	Protection to IP54 with phase changing	**MU25A-GC1**	1	0,40

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Data according to IEC 947, IEC 204, EN 60947, EN 60204, VDE 0660, VDE 0113

Type			MU25A			
Main Contacts						
Rated insulation voltage U_i		V~ [1]	690			
Rated operational current I_e (=I_{th}) open, at 50°C		A	25			
Mechanical life		S x 10^6	0,1			
Contact life at I_e /AC3		S x 10^6	0,1			
Rated ultimate short-circuit breaking capacity I_{cu}			220-240V AC	380-415V AC	500V AC	660-690V AC
Values for open unit, when incoming supply on upper terminals						
Setting range	to 1A	kA	100	100	100	100
	1 - 1,6A	kA	100	100	100	100
	1,6 - 2,5A	kA	100	100	3	2,5
	2,5 - 4A	kA	100	100	3	2,5
	4 - 6,3A	kA	100	100	3	2,5
	6,3 - 10A	kA	100	6/50 [2]	3	2,5
	10 - 16A	kA	10/100 [2]	6/50 [2]	2,5	2
	16 - 20A	kA	10/100 [2]	6/50 [2]	2,5	2
	20 - 25A	kA	10/100 [2]	6/50 [2]	2,5	2
	25 - 32A	kA	10/100 [2]	6/50 [2]	2,5	2
Short circuit protection			220-240V AC	380-415V AC	500V AC	660-690V AC
Setting range	to 1A	A	-	-	-	-
	1 - 1,6A	A	-	-	-	-
	1,6 - 2,5A	A	-	-	25	20
Fuse gL(gG) only necessary if the short circuit current could be greater than the rated ultimate short-circuit breaking capacity	2,5 - 4A	A	-	-	35	25
	4 - 6,3A	A	-	-	50	35
	6,3 - 10A	A	-	80	50	35
	10 - 16A	A	80	80	63	35
	16 - 20A	A	80	80	63	50
	20 - 25A	A	80	80	63	50
	25 - 32A	A	80	80	63	50
Maximum ambient temperature						
Operation	open	°C		-25 to +55		
	enclosed	°C		-25 to +40		
Temperature compensation		°C		-20 to +55		
Power loss						
at rated current, warm condition		W	6 - 8			
Auxiliary Contacts						
Rated insulation voltage U_i		V~	500			
Thermal rated current I_{th} up to 500V						
Ambient temperature	50°C	A	6			
Utilization category AC15						
Rated operational current I_e	220-240V	A	3,5			
	380-415V	A	2			
	500V	A	1			
Short circuit protection						
max. fuse size	gL (gG)	A	6			
Cable cross-section						
Main connector	solid or stranded	mm²	0,75 - 4			
	flexible	mm²	0,75 - 2,5			
	flexible with multicore cable end	mm²	0,75 - 2,5			
Cables per clamp			2			
Auxiliary connector	solid or stranded	mm²	0,75 - 2,5			
	flexible	mm²	0,75 - 1,5			
	flexible with multicore cable end	mm²	0,75 - 1,5			
Cables per clamp			2			
Resistance to shock according to IEC 68-2-27	Operation	g / ms	4 / 11			
	Solidity	g / ms	30 / 18			

1) Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): Uimp = 6kV.
2) with current limiter MBS25-ID50 up to 415V AC

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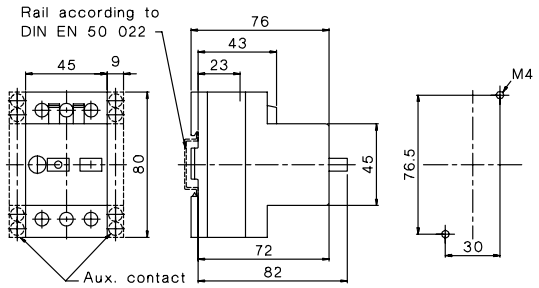
Dimensions

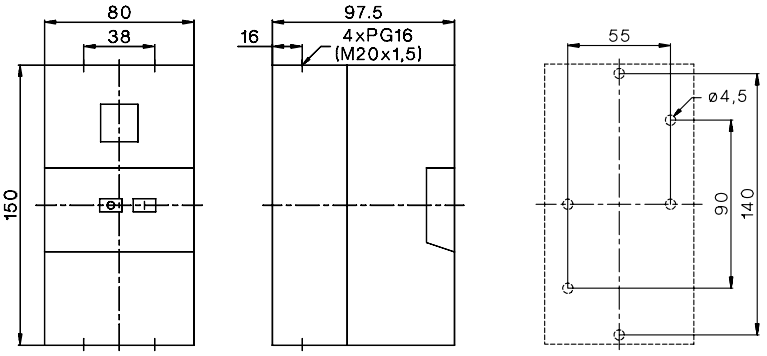
Manual Motor Starter

MU25A



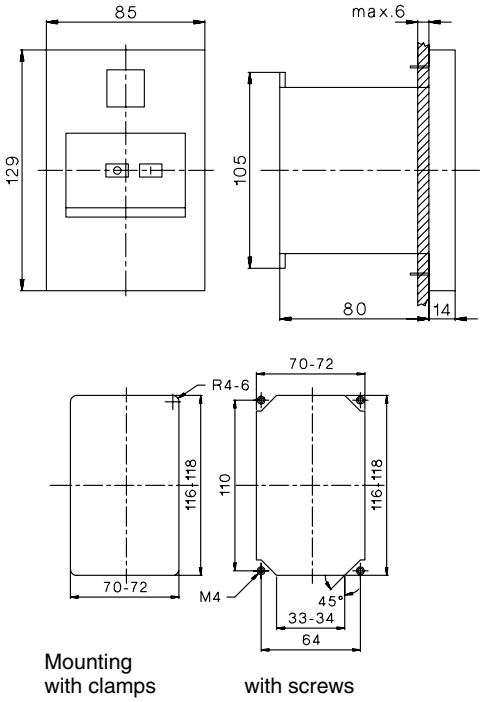
Moulded Enclosure

MU25A-O55



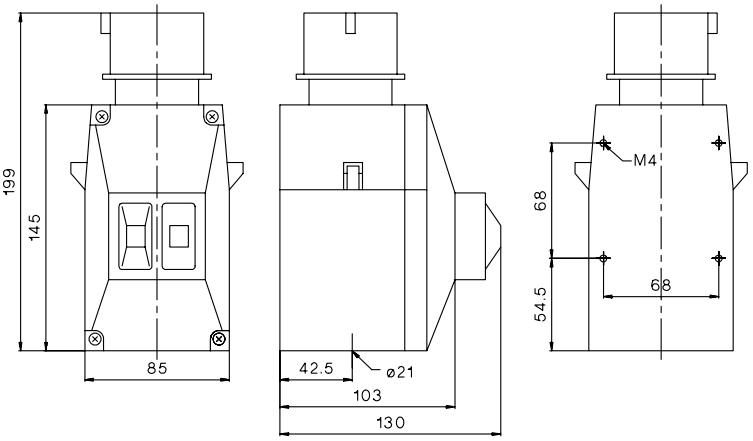
Moulded Front Plate

MU25A-C55

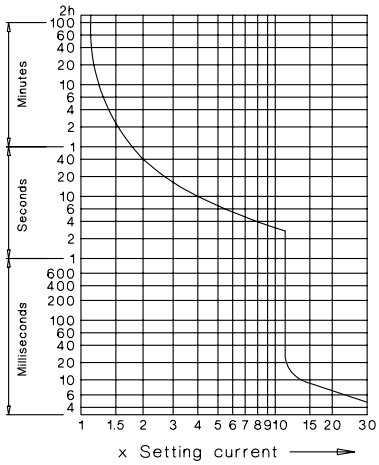


Moulded Enclosure for 5-pole CEE-plug

MU25A-GC1



Tripping Charactaristic



Average value of typical tolerance curves from cold condition

Temperature Compensation

In case of higher ambient temperature use the following formula: (Ambient temperature - 20) x 0,3 = correction factor in % of the full load motor current

Example: Ambient temperature 60°C, full load motor current 5A
(60 - 20) x 0,3 = 12%
Setting value: 5A + 12% = 5,6A