



Manual Motor Starter

Under voltage & shunt release modules
Enclosure for MMS

Manual motor starters are electromechanical protection devices for the main circuit. They are used mainly to switch motors manually ON or OFF and to provide fuse-less protection against overloads, short-circuit, and loss of phase(s) . Fuse less protection saves costs, space and ensures a quick reaction under short-circuit condition by switching off the motor within milliseconds. Starter combinations are setup together with contactors.

Key Features & Benefits

- ▶ Full range of main accessories auxiliary contacts (both side and front mounting), shunt trips and under-voltage releases
- ▶ Compact design
- ▶ Manual push button control / short-circuit current and overload protection
- ▶ Range of NEMA4 (IP65) enclosures and accessories
- ▶ Adjustable current setting for overload protection and magnetic trip indication
- ▶ Disconnection function
- ▶ Temperature compensated
- ▶ Remote control via under-voltage release or shunt trip modules
- ▶ Short-circuit service breaking capacity up to 100 kA

Qualifications



Item Code	Product Code	Full Load AMPs
8787	GMM0.16	0.01 - 0.16
8788	GMM0.25	0.16 - 0.25
8789	GMM0.4	0.25 - 0.4
8790	GMM0.63	0.41 - 0.63
8791	GMM1.0	0.63 - 1.0
8792	GMM1.6	1.0 - 1.6
8793	GMM2.5	1.6 - 2.5
8794	GMM4	2.5 - 4
8795	GMM6.3	4 - 6.3
8796	GMM10	6.3 - 10
8797	GMM14	10 - 14
8798	GMM18	14 - 18
8799	GMM23	18 - 23
8800	GMM27	23 - 27
8801	GMM32	27 - 32

MAIN CIRCUIT DATA

Designation of connection terminals	-	-	1 - L1 : 3 - L2 : 5 - L3 : 2 - T1 : 4 - T2 : 6 - T3
Terminal capacity	Solid	AWG	18 - 8
	Flex	AWG	18 - 10
Connection type	-	-	PZ2 self rising clamp
Tightening torque	-	lbf/Nm	1.475 / 2.0
Maximum operating voltage	-	Ue / V	690
Setting Range	-	A	0.1 - 0.16 ; 0.16 - 0.25 ; 0.25 - 0.4 ; 0.4 - 0.63 ; 0.63 - 1.0 ; 1 - 1.6 ; 1.6 - 2.5 ; 2.5 - 4 ; 4 - 6.3 ; 6.3 - 10 ; 10 - 14 ; 13 - 18 ; 17 - 23 ; 20 - 27 ; 25 - 32.
Number of poles	-	-	3
Operating current of thermal overload release	-	I	$1.05 I_r < I = 1.20 I_r$ where I_r = set value
Sensitivity to phase failure	-	-	Yes
Operating current of magnetic overload release	-	I	$11 I_n < I = 13 \pm I_n 20\%$ where I_n is the upper setting limit
Power dissipation on pole at I_n	-	W	2 - 2.5
Utilization category	According to IEC/EN 60947-4-1		AC-3
	According to IEC/EN 60947-2		A
Trip Class	According to IEC/EN 60947-4-1		10

Rated Insulation voltage	-	Ui	V	500
Thermal current	-	Ith	A	5
Electrical rating according to IEC/EN 60947-5-1	B300 AC15	Ue	V	240
	Ie	-	A	1.5
	R300 DC13	Ue	V	250
	Ie	-	A	0.1
Terminal capacity	-	-	AWG	18 - 14
Tightening torque	-	-	ibf / Nm	0.74 / 1.0

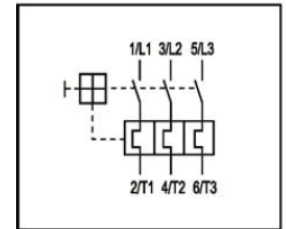
AUXILLIARY CIRCUIT DATA - Front Mount

Rated Insulation voltage	-	Ui	V	300
Thermal current	-	Ith	A	1
Electrical rating according to IEC/EN 60947-5-1	B300 AC15	Ue	V	240
	Ie	-	A	1.5
	R300 DC13	Ue	V	125
	Ie	-	A	0.22
Terminal capacity	-	-	AWG	18 - 14
Tightening torque	-	-	ibf / Nm	0.74 / 1.0

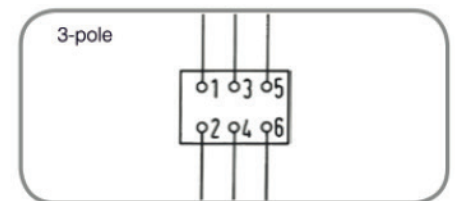
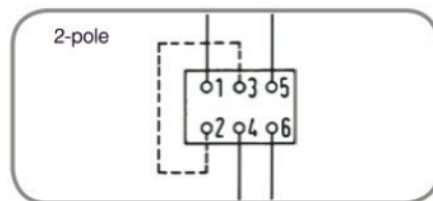
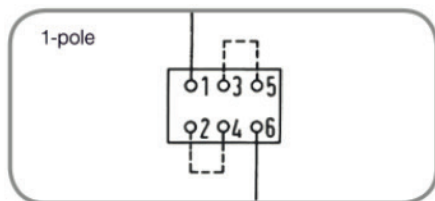
UNDER VOLTAGE & SHUNT RELEASE MODULES

Control Voltages	-	Uc	VAC	24 / 110 / 240 VAC
Rated frequency	-	-	HZ	50 / 60 HZ
Terminal capacity	-	-	AWG	18 - 14

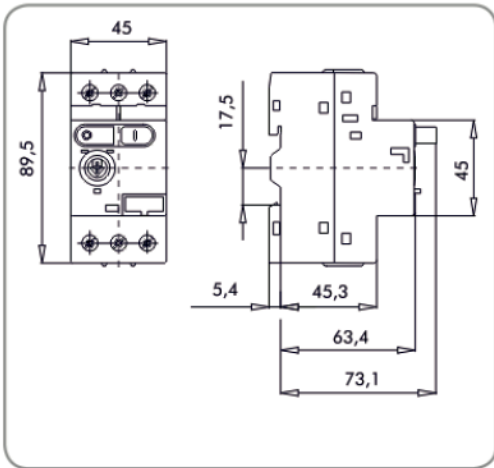
Product Code	Operating current of short circuit release Amps	Rated ultimate short circuit breaking capacity I _{cu} (kA)				Maximum back up fuse if I _{cc} > I _{cu} (gL) (A)			
		230V	400V	500V	600V	230V	400V	500V	600V
		I	I	I	I				
		CU	CU	CU	CU				
GMM0.16	2	100	100	100	100	No back-up fuse required			
GMM0.25	3	100	100	100	100				
GMM0.4	5	100	100	100	100				
GMM0.63	8	100	100	100	100				
GMM1.0	12	100	100	100	100				
GMM1.6	20	100	100	100	100				
GMM2.5	33	100	100	100	5				
GMM4	44	100	100	100	3				
GMM6.3	75	100	100	6	3				
GMM10	120	100	100	6	3				
GMM14	160	25	25	6	3	80	63	50	50
GMM18	230	25	25	6	3	80	63	50	50
GMM23	270	25	25	4	3	80	80	50	50
GMM27	360	25	25	4	3	80	80	50	50
GMM32	400	25	25	4	3	80	80	50	50



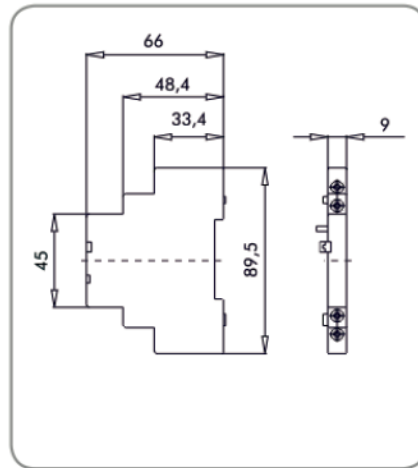
WIRING SCHEMATICS



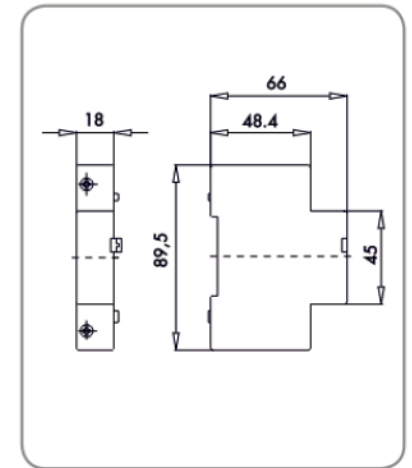
Manual Motor Starter
Product #'s: GMM0.16 - GMM32



Side Mount Auxiliary
Product #'s: GMMAC**



Shunt Trip / Under Voltage Module
Product #'s: GMMUR* - GMMAR*



ENCLOSURE FOR MMS

Product #'s: GMMFP

