




Supply Monitoring Series SM 175

- Compact 17.5 mm wide
- Multi-voltage from 3 x 208 to 3 x 480 V
- Controls correct sequence of three phases & own supply voltage
- LED indication for all faults & for change in settings during run time for better security
- 1 C/O configuration
- Selectable Under voltage / Over voltage / Asymmetry levels
- Adjustable time delay



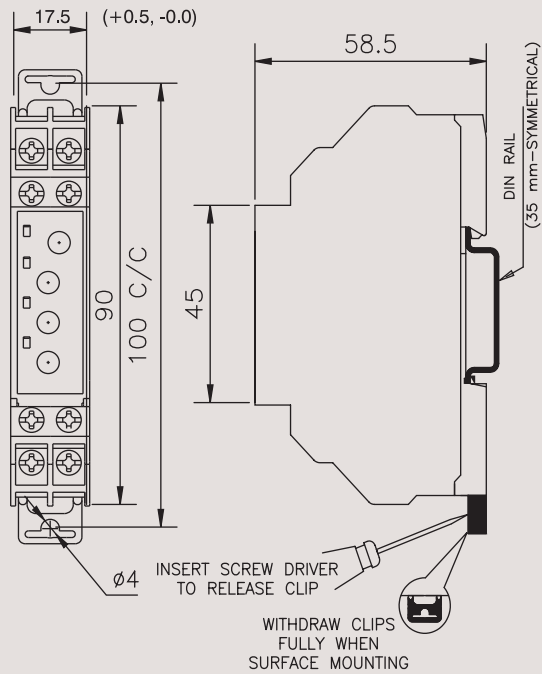
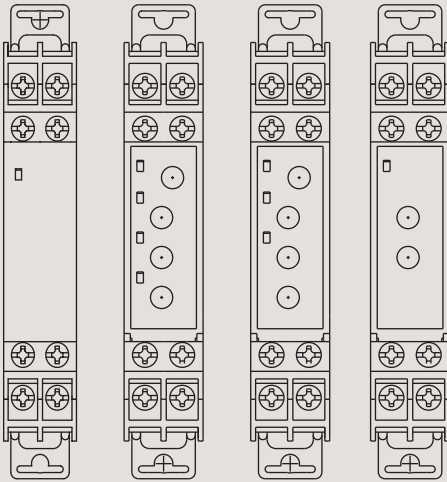
Cat. No.	MK21D5	MC21D5	MA21DN	MD21DF	MG21DH	
Parameters						
Supply Voltage (ϕ)	3 Phase 3 Wire, 208 - 480 VAC, 45 - 65 Hz					
Supply Variation	-12% to + 10% (of ϕ)					
Power Consumption (Max.)	3 VA					
Settable Nominal Voltage (U_n)	N A		208 - 220 - 380 - 400 - 415 - 440 - 480 VAC			
Trip Levels :	Under Voltage	N A		-2% to -20% (U_n)	-5% to -25% (U_n)	
	Over Voltage	N A		+2% to +20% (U_n)	+5% to +25% (U_n)	
	Asymmetry	N A	30% Fixed	5% to 15%	N A	
Setting Accuracy	+/- 5% of full scale					
Time Delay Setting Accuracy: +/- 10% of Full Scale	ON Delay	~ 500 ms		5 s (Fixed)	5 s (Fixed)	
	OFF Delay	~ 100 ms		0.5 to 15 s	0.5 to 15 s	
In the event of phase sequence or phase loss fault, OFF delay is ~100ms						
Relay Output	1 C/O (SPDT)					
Contact Rating	5A (Resistive) @ 250 VAC / 30 VDC					
Mechanical Life	3×10^6					
Electrical Life	1×10^5					
Utilization Category	AC - 15	Rated Voltage (U_e): 120/240 V, Rated Current (I_e): 3.0/1.5 A				
	DC - 13	Rated Voltage (U_e): 24/125/250 V, Rated Current (I_e): 2.0/0.22/0.1 A				
Operating Temperature	- 15° C to +60° C					
Storage Temperature	- 20° C to +70° C					
Humidity (Non Condensing)	Max. 95%					
LED Indications	Relay (R)	Healthy	Relay LED Continuous ON (Red Colour)		Power LED Continuous ON (Green Colour)	
		Phase Reverse	Relay LED Flashing (Red Colour)		Power LED Flashing (Green Colour)	
		Asymmetry	N. A.	Relay LED Off (Red Colour)	N A	
	All LEDs	OV	N. A.			OV - Red Colour LED ON
		UV	N. A.			UV - Red Colour LED ON
		AS	N. A.			AS-Red Colour LED ON
Degree of Protection	OFF	Phase Fail				
	Flashing	N. A.		ϕ / U_n Pot changed in running conditions		
Dimension (W x H x D) (in mm)	18 X 90 X 59					
Weight (unpacked)	70 g					
Mounting	Base / DIN rail					
Certification	  					
EMI/ EMC	CISPR 14-1 Ed. 5.0 (2005-11) Class A					
Radio Interference Suppression	IEC 61000-4-2 Ed. 1.2 (2001-04) Level II					
ESD	IEC 61000-4-4 Ed. 2.0 (2004-07) Level IV					
Electrical Fast Transients	IEC 61000-4-5 Ed. 2.0 (2005-11) Level IV					
Surges	IEC 61000-4-11 Ed. 2.0 (2004-03) All 7 Levels (AC), IEC 61000-4-29 Ed. 1.0 (2000-08) All 5 Levels (DC)					
Voltage Dips, Interruptions	Test voltage between input & output - IEC 60255-5, 2kV					
Isolation						

ORDERING INFORMATION

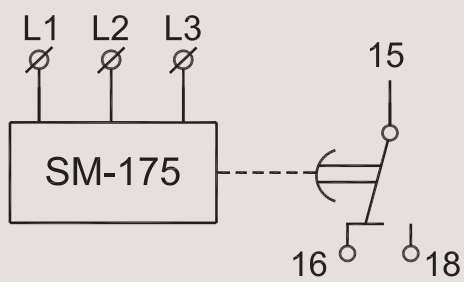
Cat. No.	Description
MC21D5	Phase Sequence, Asymmetry & Phase Loss Monitoring, 1 C/O
MK21D5	Phase Sequence, 1 C/O
MA21DN	Phase Sequence & Asymmetry Monitoring, 1 C/O
MD21DF	Phase Sequence, Under Voltage & Over Voltage Monitoring, 1 C/O
MG21DH	Phase Sequence, Asymmetry & Voltage Monitoring with Fixed OFF Delay (5 s), 1 C/O
MG21DF	Phase Sequence, Asymmetry & Voltage Monitoring with Fixed ON Delay (5 s), 1 C/O





MOUNTING DIMENSION (mm)



CONNECTION DIAGRAM



TERMINAL TORQUE & CAPACITY

 Ø3.5.....5.0mm	1.1 Nm(10 lb.in) Terminal screw - M3.5
	2 x 0.2...2.5 mm ² solid wire/single wire ferrule
AWG	1 x 24 to 10