

Supply Monitoring Series SM 500

- Protects against Phase Loss, Phase Reversal & Phase Asymmetry
- Can be configured for 3 Phase 4 Wire or 1 Phase system
- Selectable Over Voltage / Under Voltage Trip level
- Selectable Time Delay
- LED Indications for Power and Fault conditions
- Voltage Sensing principle
- 1 C/O or 2 C/O Configuration



Cat. No.		MD71B9	MD71BH	MD71BF
Parameters				
Supply Voltage (ϕ)		240 VAC (1 Phase & 3 Phase, 4 Wire)		
Frequency		50/60 Hz		
Power Consumption (Max.)		5 VA		
Trip Settings	Under Voltage	55% to 95% (of ϕ)		
	Over Voltage	105% to 125% (of ϕ)		
Time Delay	ON Delay	0 to 15 min (Selectable)	0 to 15 s (Selectable)	5 s
	Trip Time (OFF Delay)	5 s	5 s	0 to 15 s (Selectable)
Output	Relay Output	1 C/O		
	Contact Rating	5A @ 250 VAC / 28 VDC (Resistive)		
	Electrical Life	1X10 ⁵		
	Mechanical Life	3X10 ⁶		
Utilization Category	AC - 15	Rated Voltage (Ue): 120/240 V, Rated Current (Ie): 3.0/1.5 A		
	DC - 13	Rated Voltage (Ue): 24/125/250 V, Rated Current (Ie): 2.0/0.22/0.1 A		
LED Indication		Separate indications for Power ON, UV and OV		
Operating Temperature		-10° C To + 55° C		
Storage Temperature		-25° C To + 70° C		
Humidity (Non Condensing)		95% (Rh)		
Enclosure		Flame Retardant UL 94-V0		
Dimension (W x H x D) (in mm)		36 X 90 X 60		
Weight (unpacked)		120 g		
Mounting		Base / DIN rail		
Degree of Protection		IP 20 for Terminals, IP 40 for Enclosure		
Certification		 		
EMI / EMC				
Harmonic Current Emissions		IEC 61000-3-2	Ed. 3.0 (2005-11) Class A	
ESD		IEC 61000-4-2	Ed. 1.2 (2001-04) Level II	
Radiated Susceptibility		IEC 61000-4-3	Ed. 3.0 (2006-02) Level III	
Electrical Fast Transients		IEC 61000-4-4	Ed. 2.0 (2004-07) Level IV	
Surges		IEC 61000-4-5	Ed. 2.0 (2005-11) Level IV	
Conducted Susceptibility		IEC 61000-4-6	Ed. 2.2 (2006-05) Level III	
Voltage Dips & Interruptions (AC)		IEC 61000-4-11	Ed. 2.0 (2004-03) Level All 7 Levels	
Conducted Emission		CISPR 14-1	Ed. 5.0 (2005-11) Class A	
Radiated Emission		CISPR 14-1	Ed. 5.0 (2005-11) Class A	
Environmental				
Cold Heat		IEC 60068-2-1	Ed. 6.0 (2007-03)	
Dry Heat		IEC 60068-2-2	Ed. 5.0 (2007-07)	
Vibration		IEC 60068-2-6	Ed. 7.0 (2007-12) 5g	
Repetitive Shock		IEC 60068-2-27	Ed. 4.0 (2008-02) 40g, 6ms	
Non-Repetitive Shock		IEC 60068-2-27	Ed. 4.0 (2008-02) 30g, 15ms	

Note: 1) Voltage setting is with respect to Neutral. Voltage Setting Accuracy: $\pm 5\%$ of Full Scale; Time Setting Accuracy: $\pm 10\%$ of Full Scale

ORDERING INFORMATION

Cat. No.	Description
MD71B9	240 VAC, Under Voltage / Over Voltage with Selectable ON Delay (0 to 15 min), 1C/O
MD71BH	240 VAC, Under Voltage / Over Voltage with Selectable ON Delay (0 to 15 sec), 1C/O
MD71BF	240 VAC, Under Voltage / Over Voltage with Selectable OFF Delay (0 to 15 sec), 1C/O

Supply Monitoring Series SM 500

Cat. No.		MG73B9	MG73BH	MG73BF
Parameters				
Supply Voltage (ϕ)		240 VAC (1 Phase & 3 Phase, 4 Wire)		
Frequency		50/60 Hz		
Power Consumption (Max.)		5 VA		
Trip Settings	Phase Loss	Yes		
	Phase Sequence	Yes		
	Phase Asymmetry	10% (of ϕ)		
	Under Voltage	55% to 95% (of ϕ)		
	Over Voltage	105% to 125% (of ϕ)		
	Hysterisis	7 V (\pm 2 V)		
Time Delay	ON Delay	0 to 15 min (Selectable)	0 to 15 s (Selectable)	5 s
	Trip Time (OFF Delay)	5 s	5 s	0 to 15 s (Selectable)
Output	Relay Output	2 C/O		
	Contact Rating	5A @ 250 VAC / 28 VDC (Resistive)		
	Electrical Life	1X10 ⁵		
	Mechanical Life	3X10 ⁶		
Utilization Category	AC - 15	Rated Voltage (Ue): 120/240 V, Rated Current (Ie): 3.0/1.5 A		
	DC - 13	Rated Voltage (Ue): 24/125/250 V, Rated Current (Ie): 2.0/0.22/0.1 A		
LED Indication		Separate indications for Power ON, UV and OV; ON: Phase Reverse; BLINK: Phase Asymmetry		
Operating Temperature		-10° C To + 55° C		
Storage Temperature		-25° C To + 70° C		
Humidity (Non Condensing)		95% (Rh)		
Enclosure		Flame Retardant UL 94-V0		
Dimension (W x H x D) (in mm)		36 X 90 X 60		
Weight (unpacked)		120 g		
Mounting		Base / DIN rail		
Degree of Protection		IP 20 for Terminals, IP 40 for Enclosure		
Certification				
EMI / EMC				
Harmonic Current Emissions		IEC 61000-3-2	Ed. 3.0 (2005-11) Class A	
ESD		IEC 61000-4-2	Ed. 1.2 (2001-04) Level II	
Radiated Susceptibility		IEC 61000-4-3	Ed. 3.0 (2006-02) Level III	
Electrical Fast Transients		IEC 61000-4-4	Ed. 2.0 (2004-07) Level IV	
Surges		IEC 61000-4-5	Ed. 2.0 (2005-11) Level IV	
Conducted Susceptibility		IEC 61000-4-6	Ed. 2.2 (2006-05) Level III	
Voltage Dips & Interruptions (AC)		IEC 61000-4-11	Ed. 2.0 (2004-03) Level All 7 Levels	
Conducted Emission		CISPR 14-1	Ed. 5.0 (2005-11) Class A	
Radiated Emission		CISPR 14-1	Ed. 5.0 (2005-11) Class A	
Environmental				
Cold Heat		IEC 60068-2-1	Ed. 6.0 (2007-03)	
Dry Heat		IEC 60068-2-2	Ed. 5.0 (2007-07)	
Vibration		IEC 60068-2-6	Ed. 7.0 (2007-12) 5g	
Repetitive Shock		IEC 60068-2-27	Ed. 4.0 (2008-02) 40g, 6ms	
Non-Repetitive Shock		IEC 60068-2-27	Ed. 4.0 (2008-02) 30g, 15ms	

Note: 1) Voltage setting is with respect to Neutral. Voltage Setting Accuracy: \pm 5 % of Full Scale; Time Setting Accuracy: \pm 10 % of Full Scale

ORDERING INFORMATION

Cat. No.	Description
MG73B9	240 VAC, Under Voltage / Over Voltage & Single Phasing Preventor with Selectable ON Delay (0 to 15 min), 1C/O
MG73BH	240 VAC, Under Voltage / Over Voltage & Single Phasing Preventor with Selectable ON Delay (0 to 15 sec), 1C/O
MG73BF	240 VAC, Under Voltage / Over Voltage & Single Phasing Preventor with Selectable OFF Delay (0 to 15 sec), 1C/O