

Voltage 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





Ordering Information

Cat. No.	Description
MD71BH	240 VAC, UV / OV with Selectable ON Delay (0.5 to 15 sec), 1 C/O
MD71BF	240 VAC, UV / OV with Selectable OFF Delay (0.5 to 15 sec), 1 C/O
MD71B9	240 VAC, UV / OV with Selectable ON Delay (0.5 s to 15 min), 1 C/O

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Cat. No.		MD71BH	MD71BF	MD71B9
Parameters				
Supply Voltage (ϕ)		240 VAC (1 Phase & 3 Phase, 4 Wire)		
Frequency		50/60 Hz		
Power Consumption (Max.)		4 VA		
Trip Settings	Phase Loss	Yes	Yes	Yes
	Phase Sequence	N.A	N.A	N.A
	Phase Asymmetry	N.A	N.A	N.A
	Under Voltage	55% to 95% (of ϕ)		
	Over Voltage	105% to 125% (of ϕ)		
Time Delay	ON Delay	0.5 to 15 s (Selectable)	5 s	0.5 s to 15 min (Selectable)
	Trip Time (OFF Delay)	5 s	0.5 to 15 s (Selectable)	5 s
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		-15° 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) Approx.		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
ESD	IEC 61000-4-2
Radiated Susceptibility	IEC 61000-4-3
Electrical Fast Transients	IEC 61000-4-4
Surges	IEC 61000-4-5
Conducted Susceptibility	IEC 61000-4-6
Voltage Dips & Interruptions (AC)	IEC 61000-4-11
Conducted Emission	CISPR 14-1
Radiated Emission	CISPR 14-1

Environmental

Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Vibration	IEC 60068-2-6
Repetitive Shock	IEC 60068-2-27
Non-Repetitive Shock	IEC 60068-2-27

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

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Ordering Information

Cat. No.	Description
MG73B9	240 VAC, UV / OV & Single Phasing Preventor (SPP) with Selectable ON Delay (0.5 s to 15 min), 2 C/O
MG73BH	240 VAC, UV / OV & SPP with Selectable ON Delay (0.5 to 15 sec), 2 C/O
MG73BF	240 VAC, UV / OV & SPP with Selectable OFF Delay (0.5 to 15 sec), 2 C/O
MG73BQ	120 - 240 VAC Selectable, UV / Selectable OV & SPP with Selectable OFF Delay (0.5 to 15 sec), 2 C/O
MG73BR	240 VAC, Fixed UV / OV & SPP, 20% Asymmetry with Fixed ON (10 sec) & OFF (5 sec) Delay, 2 C/O
MGH3BH	220 VAC, UV / OV & SPP with Selectable ON Delay (0.5 to 15 sec), 2 C/O
MGH3BF	220 VAC, UV / OV & SPP with Selectable OFF Delay (0.5 to 15 sec), 2 C/O
MG13BF	230 VAC, UV / OV & SPP with Selectable OFF Delay (0.5 to 15 sec), 2 C/O

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Cat. No.		MG73BH	MG73BF	MG73B9
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)		
	Hysteresis	7 V (\pm 2 V)		
Time Delay	ON Delay	0.5 to 15 s (Selectable)	5 s	0.5 s to 15 min (Selectable)
	Trip Time (OFF Delay)	5 s	0.5 to 15 s (Selectable)	5 s
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		-15° 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
ESD	IEC 61000-4-2
Radiated Susceptibility	IEC 61000-4-3
Electrical Fast Transients	IEC 61000-4-4
Surges	IEC 61000-4-5
Conducted Susceptibility	IEC 61000-4-6
Voltage Dips & Interruptions (AC)	IEC 61000-4-11
Conducted Emission	CISPR 14-1
Radiated Emission	CISPR 14-1

Environmental

Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Vibration	IEC 60068-2-6
Repetitive Shock	IEC 60068-2-27
Non-Repetitive Shock	IEC 60068-2-27

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