



# Supply Monitoring Series SM 301

- Protects against Phase Loss, Phase Reversal & Phase Asymmetry
- No Auxiliary Supply needed
- Voltage Sensing principle
- 1 C/O
- Designed to meet Industrial and Agricultural segment applications



<b>Cat. No.</b>		<b>MA51BC</b>	
<b>Parameters</b>			
Supply Voltage (φ)			
Frequency			
Power Consumption (Max.)			
<b>Trip Settings</b>	Phase Loss	Yes	
	Phase Sequence	Yes	
	Phase Asymmetry	65 V (± 10V)	
	Hysteresis	10 to 18 V	
<b>Time Delay</b>	ON Delay	2 s (± 2 s)	
	Trip Time (OFF Delay)	7 s (± 2 s)	
<b>Output</b>	Relay Output	1 C/O	
	Contact Rating	5A (For 'NO') & 3A (For 'NC') @ 250 VAC / 28 VDC (Resistive)	
	Electrical Life	1X10 <sup>5</sup>	
	Mechanical Life	3X10 <sup>6</sup>	
<b>Utilization Category</b>	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	
<b>LED Indication</b>	Red → Relay ON (Healthy)		
<b>Operating Temperature</b>	- 10° C to + 50° C		
<b>Storage Temperature</b>	- 20° C to + 65° C		
<b>Humidity (Non Condensing)</b>	95% (Rh)		
<b>Enclosure</b>	Flame Retardant UL 94-V0		
<b>Dimension (W x H x D) (in mm)</b>	36 X 90 X 60		
<b>Weight (unpacked)</b>	120 g		
<b>Mounting</b>	Base / DIN rail		
<b>Degree of Protection</b>	IP20 for Terminals, IP 40 for Enclosure		
<b>Certification</b>	 		
<b>EMI / EMC</b>			
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	
<b>Environmental</b>			
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	

## ORDERING INFORMATION

Cat. No.	Description
MA51BC	415 VAC, Single Phasing Preventor with 65 VAC Asymmetry, 1 C/O

Note 1:- ON: Relay ON, OFF: Phase Loss, Blinking: Asymmetry (200 ms, On/Off), Flashing: Phase Sequence (1 s, On/Off)