



# Voltage Monitoring Series SM500 - Neutral Loss Protection



<b>Cat. No.</b>		<b>MAC04D0100</b>			
<b>Parameters</b>					
Supply Voltage ( $\phi$ )		415 VAC (Ph-Ph); 3 Phase, 4 Wire			
Frequency		47 to 53 Hz			
Power Consumption (Max.)		10 VA (max)			
Trip Settings	Phase Loss	Yes			
	Phase Sequence	Yes			
	Phase Asymmetry	94V $\pm$ 4V (Ph-Ph)			
	Under Voltage	55% to 95% (of $\phi$ )			
	Over Voltage	105% to 125% (of $\phi$ )			
	Hysteresis	7 V ( $\pm$ 2 V)			
Time Delay	ON Delay	5 s $\pm$ 1 s (Fixed)			
	Trip Time (OFF Delay)	For Phase failure phase Imbalance Under voltage / Over Voltage	5 s $\pm$ 1 s (Fixed)		
		For Neutral Fail	500 ms -1s		
Output	Relay Output	2 C/O			
	Contact Rating	5A @ 240 VAC / 28 VDC (Resistive)			
	Electrical Life	1X10 <sup>5</sup>			
	Mechanical Life	1X10 <sup>7</sup>			
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 Indications on front plate	Respective fault condition will be indicated by LED immediately & Relay will be tripped after specified trip time only.				
		GREEN	UV	OV	Blink: ASY, ON: REV
	Power ON	ON	OFF	OFF	OFF
	Phase reverse	ON	OFF	OFF	ON
	Asymmetry	ON	OFF	OFF	BLINK
	UV	ON	ON	OFF	OFF
	OV	ON	OFF	ON	OFF
	Phase Fail	BLINK	OFF	OFF	OFF
	Phase Fail *	BLINK	ON	OFF	BLINK
Neutral Fail	ON	BLINK	BLINK	BLINK	
* Phase fail indications when I/P voltages are below UV set point and below asymmetry					
Operating Temperature		-10° C To + 60° C			
Storage Temperature		-10° 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