

# Voltage Monitoring Series SM 800

- LCD Display with Green backlight
- Multi-Voltage: Three Phase 4 Wire & Three Phase 3 Wire @ 145-500 VAC
- Protection against Phase loss, Phase Sequence, Phase Asymmetry, Under Voltage, Over Voltage, Neutral Open, Over Frequency and Under Frequency
- Can be configured for 3 Phase 3 Wire or 3 Phase 4 Wire system
- Selectable Over Voltage/ Under Voltage, Asymmetry, Phase Loss, Phase Sequence, Over Frequency/ Under Frequency
- Adjustable ON/OFF Time Delay in seconds/ minutes
- 5A Single and Dual relay outputs
- Two Separate Relay outputs with independent Programming
- Password protection
- Log of 5 previous faults for better monitoring
- Fail safe/ Non-Fail safe relay output
- Latch (Manual) and Non-Latch (Auto) Modes





## Ordering Information

Cat. No.	Description
DMS110	145-500 VAC, Digital Voltage Monitoring Relay, 1C/O
DMS120	145-500 VAC, Digital Voltage Monitoring Relay, 1C/O + 1C/O
DMA220	85- 300 VAC/DC, Digital Voltage Monitoring Relay with Auxiliary supply, 1C/O + 1C/O

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Cat. No.	DMS110	DMS120	DMA220	
<b>Parameters</b>				
Supply Voltage (Φ)	145 - 500 VAC		85 - 300 VAC/DC	
Frequency	45 to 65 Hz			
Trip Settings	Phase Loss	Configurable (Enable/Disable) (Default : Enable)		
	Phase Reverse	Configurable (Enable/Disable) (Default : Enable)		
	Phase Asymmetry	2 to 50%		
	Under Voltage	Phase voltage : 90 to 288 VAC Line voltage : 155 to 500 VAC	Phase voltage : 50 to 288 VAC Line voltage : 85 to 500 VAC	
	Under Voltage Hysteresis	3 to 20VAC +/- 2V (7V Default)		
	Over Voltage	Phase voltage : 90 to 288 VAC Line voltage : 155 to 500 VAC	Phase voltage : 50 to 288 VAC Line voltage : 85 to 500 VAC	
	Over Voltage Hysteresis	3 to 20VAC +/- 2V (7V Default)		
	Under Frequency	45 to 65 Hz		
	Over Frequency	45 to 65 Hz		
	Frequency Hysteresis	0.1 to 5 Hz		
Asymmetry	Voltage : 5 to 99 VAC (Default 60V) Percentage : 2 to 50%			
	Hysteresis for Asymmetry Voltage : 3 to 99 VAC +/- 2V (Default 7V) Percentage : 2 to 15%			
Power Consumption (Max.)	5 VA			
Time Delay	ON Delay	2sec to 999sec (Default : 5sec)		
	Trip Time (OFF Delay)	0.1 to 999sec (Phase loss & Phase reverse : <100ms) Default : Neutral Loss is <500ms & UV, OV, Asymmetry fault 5sec.		
Output	Relay Output	1 C/O	1 C/O + 1 C/O	1 C/O + 1 C/O
	Contact Rating	5A (Resistive) @ 240 VAC / 30 VDC		
	Electrical Life	1X10 <sup>5</sup> Operations		
	Mechanical Life	1X10 <sup>7</sup> Operations		
Utilization Category	AC-15 (V)	120/240 V		
	AC-15 (A)	3/1.5 A		
	DC-13 (V)	24/125/250 V		
	DC-13 (A)	2/0.22/0.1 A		
Operating Temperature	-10°C to + 60°C			
Storage Temperature	-20°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 67			
Weight	100 g			
Mounting	Base / DIN			
Degree of Protection	IP-20 for Enclosure & Terminals, IP-40 with Front Facia for Dust cover			
Certification	 			

## EMI / EMC

Harmonic Current Emissions	IEC 61000-3-2
Voltage Flicker and Fluctuations	IEC 61000-3-3
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
Voltage Dips & Interruptions (DC)	IEC 61000-4-29
Conducted Emission	CISPR 11
Radiated Emission	CISPR 11
Swell	As per GTS Standard's

## Environmental

Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Vibration	IEC 60068-2-6

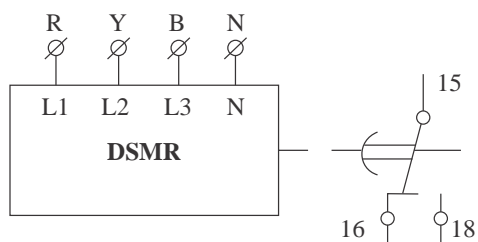
## Safety:

Test Voltage Between I/P & O/P	IEC 60947-5-1 / UL 508
Test Voltage Between all Terminals & Enclosure	IEC 60947-5-1 / UL 508
Impulse Voltage Between I/P & O/P	IEC 60947-5-1

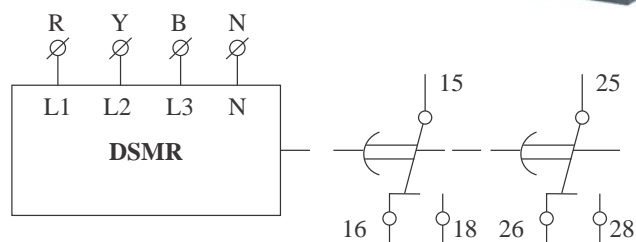
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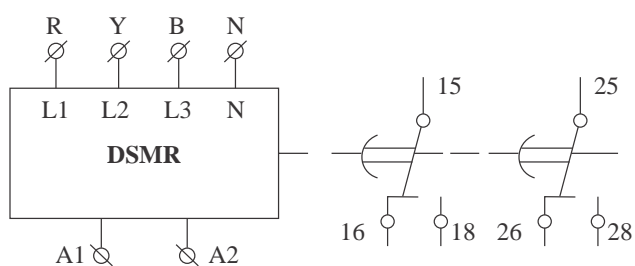
## CONNECTION DIAGRAM



DMS110

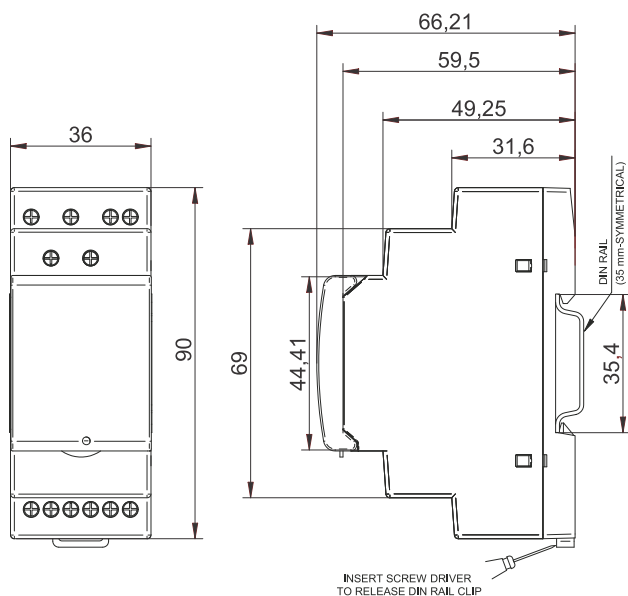


DMS120





DMA220

## MOUNTING DIMENSION (mm)



## TERMINAL TORQUE & CAPACITY

 Ø 4.5mm	0.5 N.m (4.4 lb.in)
	1 x 4mm Solid / Standard Wire
AWG	26 to 10