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
Parameters					
Supply Voltage (⏚)			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		Phase voltage : 50 to 288 VAC
			Line voltage : 155 to 500 VAC		Line voltage : 85 to 500 VAC
	Under Voltage Hysteresis		3 to 20VAC +/- 2V (7V Default)		
	Over Voltage		Phase voltage : 90 to 288 VAC		Phase voltage : 50 to 288 VAC
			Line voltage : 155 to 500 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		$1X10^5$ Operations		
	Mechanical Life		$1X10^7$ Operations		
Utilization Category	AC-15	(V)	120/240 V		
		(A)	3/1.5 A		
	DC-13	(V)	24/125/250 V		
		(A)	2/0.22/0.1 A		
Operating Temperature Storage Temperature			-10°C to + 60°C -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			CE RoHS Compliant		

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

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

Environmental

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

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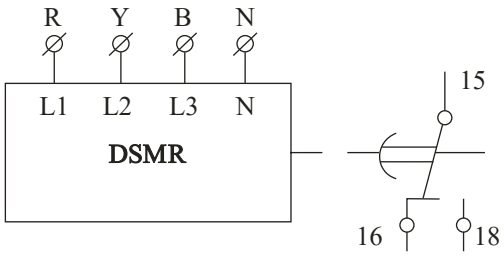
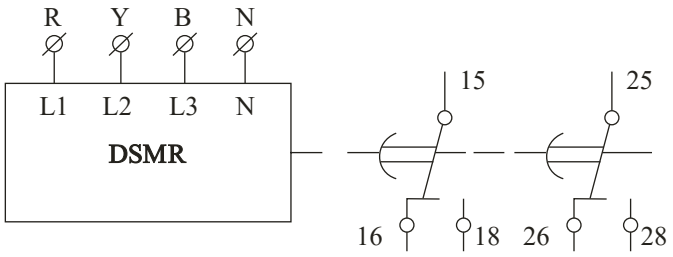
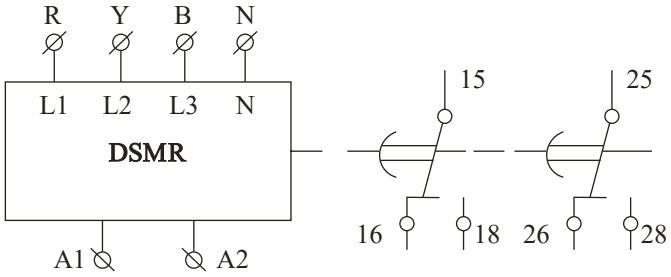
CONNECTION DIAGRAM



DMS110

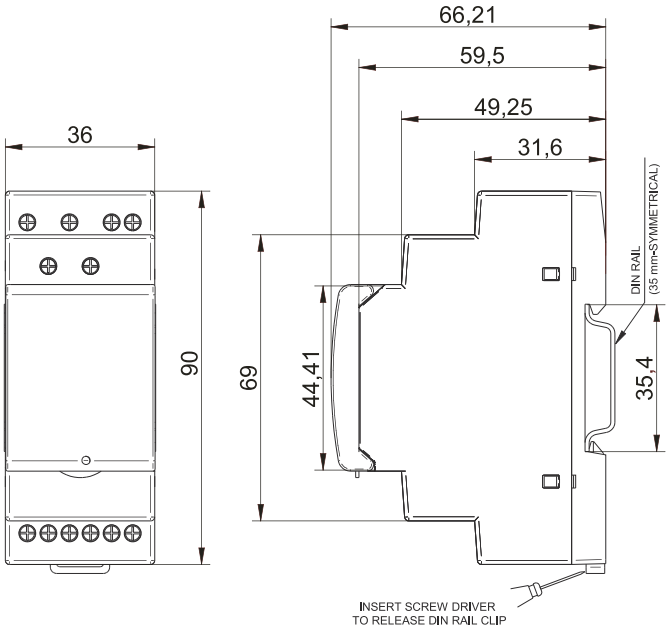


DMS120



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