TECHNICAL SPECIFICATIONS

			VMR01	VMR02	VMR03
Function			Phase and Voltage Control	Phase Control	
Supply Voltage (⏚)			208 to 480 VAC, 3P3W (-12% to +10% of ⏚)		
Frequency			47 to 63 Hz		
Power Consumption			4.5 VA (Max.)		
Adjustable Nominal Voltage (⏚)			208 - 220 - 380 - 400 - 415 - 440 - 480 VAC	N/A	
Trip Levels		**Under Voltage**	-5 to -25% of ⏚	N/A	
		Over Voltage	5 to 25% of ⏚	N/A	
		Asymmmetry	10% fixed	N/A	5 to 15%
Setting Accuracy			+/- 5% of full scale		
Setting Accuracy (±10% of full scale)	**Power ON Delay**		5 s fixed	<1.5 sec	5 s fixed
	Operate Time		5 s fixed	<750 ms	5 s fixed
	Release Time	**UV, OV and Asymmetry**	<0.55 to 100 s	~ 550 ms	<0.55 to 15 s
		Phase reverse	<65 ms.		
		Phase Loss	For Phase Loss Fault in the absence of Motor load Release Time is <65 ms.		
LED Indications	**R/⏚**	**Healthy**	⏚ Continuous ON	R Continuous ON	
		Ph Reverse	⏚ Flashing	R Flashing	
		Asymmetry	N.A.		R OFF
	OV		Over Voltage	N/A	
	UV		Under Voltage	N/A	
	AS		Asymmetry	N/A	
	ALL LEDS	**OFF**	Phase Fail or Higher Cut OFF(> 560 VAC) or lower cut off (<175 VAC) (for VMR02 Lower Cut Off is < 138 VAC)		
		Flashing	⏚ Ref. Pot changed during running conditions	N/A	
Relay Output	**Contact Rating**		1 C/O, 5A (Res.) @ 250 VAC / 30 VDC		
	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		
	Contact Material		Ag Alloy		
Mechanical Life Expectancy			3×10^6 Operations		
Electrical Life Expectancy			1×10^5 Operartions		
Operating Temperature			-15˚C to +60˚C		
Storage Temperature			-20˚C to +80˚C		
Humidity (Non-Condensing)			5 to 95% (Non-Condensing)		
Max. Operating Altitude			2000 m		
Degree of Protection			IP-20 for Terminals; IP-30 for Housing		
Pollution Degree			II		
Housing			Flame Retardant UL 94-V0		
Mounting			Base / Din-Rail (35 mm Symmetrical)		
Dimensions in mm (W x H x L)			18 x 59 x 90		
Weight (Unpacked)			70 g Approx.		
Certifications			CE, ROHS, UL		

trumeter
innovation by design

VMR01, VMR02, VMR03

SUPPLY MONITORING DEVICE SERIES

039390-01 05/2025

⚠ Caution:

1. Do not touch the terminals while power is being supplied.
2. Tighten terminal screws with the specified torque.
3. Always follow instructions stated in product leaflet.
4. Before installation, check to ensure that specifications agree with intended application.
5. Installation to be done by skilled electrician
6. Suitable dampers should be provided in the event of excessive vibrations.

Suitability for use:

These are products with Auto reset and Auto Switch On, hence never use the products for an application involving significant risk to life without ensuring that the system as a whole has been designed to address the risks and that our products are properly rated and installed for the intended use within the entire system or equipment.

Notice:

Product innovation being a continuous process, we reserve the right to alter specifications without any prior notice.

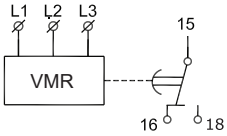
VMR01, VMR02, VMR03

SUPPLY MONITORING DEVICE SERIES

Features

- Controls own supply voltage.
- Multi-voltage from 3x208 to 3x480 V
- LED status indication.
- SPDT Relay output (5A resistive).
- 30 to 40ms instant tripping for 2 & 3-phase interruption.
- Din Rail & Base mounting.

Connection Diagram



Functional Description

VMR01
Controls:-
1. Correct sequence of the three phases.
2. Failure of any of the three phases.
3. Under & Over Voltage adjustable from 5 to 25% of Un
   - Up to - 12% across 3x208 V Range;
   - Up to - 16% across 3x220 V Range;
   - Up to +20% across 3x440 V Range;
   - Up to + 10% across 3x480 V Range
4. Failure due to Asymmetry fixed at 10%.

VMR02
Controls:-
1. Correct sequence of three phases.
2. Failure of any of three phases when voltage falls below rated minimum of threshold.

VMR03
Controls:-
1. Correct sequence of the three phases.
2. Failure of any of the three phases.
3. Failure due to Asymmetry adjustable from 5% to 15%.

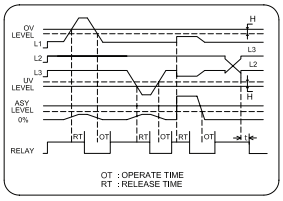
Note

In case of VMR01, phase imbalance levels are fixed. So, for very large motors with excessive back EMF relay suitability to be checked by the user.

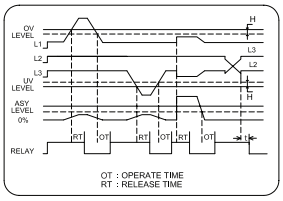
Minimum threshold supply voltage of tripping is 140 VAC for VMR02.

Functional Diagram

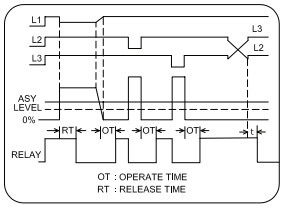
VMR01



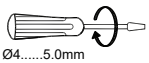
VMR02



VMR03



Terminal Details :

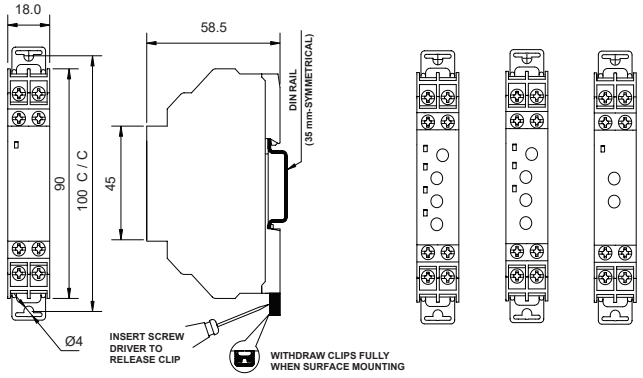
 Ø4.....5.0mm Combi Head Bit./Flat	0.5 N.m (4.4lb.in) to 0.7N.m (6.2lb.in)
	2 x 2.5 mm² Solid / Standard Wire
AWG	20 to 12

Certification

EMI/EMC		
Harmonic Current Emissions	IEC 61000-3-2	Class A
ESD	IEC 61000-4-2	Level II
Radiated Susceptibility	IEC 61000-4-3	Level III
Electrical Fast Transient	IEC 61000-4-4	Level IV
Surge	IEC 61000-4-5	Level III
Conducted Susceptibility	IEC 61000-4-6	Level III
Voltage Dips & Interruptions(AC)	IEC 61000-4-1 1	
Radiated Emission	CISPR 11	Class A
Conducted Emission	CISPR 11	Class A
Safety		
Test Voltage between I/P and O/P	IEC 60947-5-1	2KV
Impulse voltage between I/P and O/P	IEC 60947-5-1	2.5KV
Single Fault	IEC 61010-1	Level IV
Insulation Resistance	UL508	> 50k Ω
Leakage Current	UL508	< 3.5 mA
Environmental		
Cold Heat	IEC 60068-2-1	
Dry Heat	IEC 60068-2-2	

E-Waste Regulatory notice:
Kindly treat, recycle or dispose of this equipment in an environmentally sound manner after End of Life, as per WEEE (Waste Electrical and Electronic Equipment) regulations or as per local norms.

Overall Product Dimensions



All dimensions are in mm