PPRA-4M-1-230V

Pump Protection Relay



DIN 70mm

Features :

- 1Ø - 2 Wire Input
- Monitors Over Load (As per NEMA Curve), Over Current, Under Current / Dry Run , Locked Current, Over Voltage, Under Voltage,Phase Failure
- Direct current measurement up to 32A
- LED Indication : Power ON, Trip Relay
- 4 Knob for Variable Setting
- Manual, Auto Reset
- Test & Reset Function Via Front / Remote
- Settable Rated Currentt

Display Specifications

No of LED	3 1 Green LED for Power on Indication 1st Red LED for Current indication 2nd Red LED for Voltage indication
No of Knobs	4 NEMA : NEMA Class Selection Δ T : Trip Time Setting OC : Over Current Setting DR : Dry Run Current
Keys	2 Key's 1 - Test 2 - Reset (Press 3 sec to set rated current)

LED Indication Chart

Conditions	Power ON (Green)	Current (1st Red LED)	Voltage (2nd Red LED)
Healthy	ON	OFF	OFF
Over Voltage	ON	OFF	BLINKING
Under Voltage	ON	OFF	ON
Over Current	ON	BLINKING	OFF
Under Current	ON	ON	OFF
Phase Loss	ON	BLINKING	BLINKING
Locked Current	ON	BLINKING	ON
Overload	ON	ON	ON

Input Specifications

Measuring Range

A) Motor Rated Current Measuring	1A to 30A
B) Voltage Measuring Range	180 to 300V AC (L - N)

Time Setting

Power ON Delay	1sec (Fixed)
Trip Time Delay (Current & Voltage parameters)	0, 2, 4, 6, 8 & 10 sec
Auto Reset Time (Current & Voltage parameters)	15min
Phase Loss Trip Time	Instantaneous (<120ms)
Auto Restart Attempts	3 (Fixed)
Restart Attempt Time Frame	Over an interval of 60 min

Hysterersis

Voltage	Fixed (6V)

(Not applicable for current parameters)

Accuracy	
Current Accuracy	±5% of rated current
Voltage Accuracy	±1% of 300V
Time Accuracy	±5% ±100msec
Functional Specification	
Over Load	NEMA class 5, 10, 15, 20, 30
Over Current Ranges	10% - 70% of Ir (Rated Current)
Under Current	20% - 80% of Ir (Rated Current)
Locked Current / Stall Current	Fixed : 300% of Ir (Rated Current)
Over Voltage	Fixed (280V)
Under Voltage	Fixed (180V)
Phase Loss	Yes (<160V)

Output Specifications

Control Output	1 NO Relay
Relay Rating	30A@277V AC

Auxiliary Supply Specifications

Operating Voltage Range	180 to 300V AC (L - N)
Power Consumption	40VA (max)
Frequency	50 - 60Hz

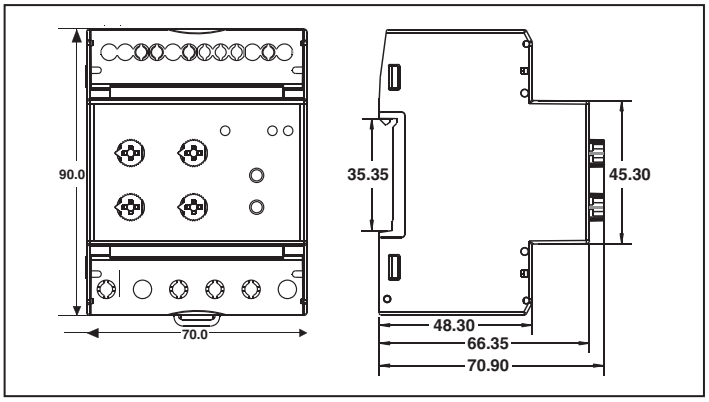
Environmental Specifications

Temperature	Operating Temperature : 0°C to 55°C Storage Temperature : -20°C to +70°C
Humidity (non Condensing)	Up to 95% RH

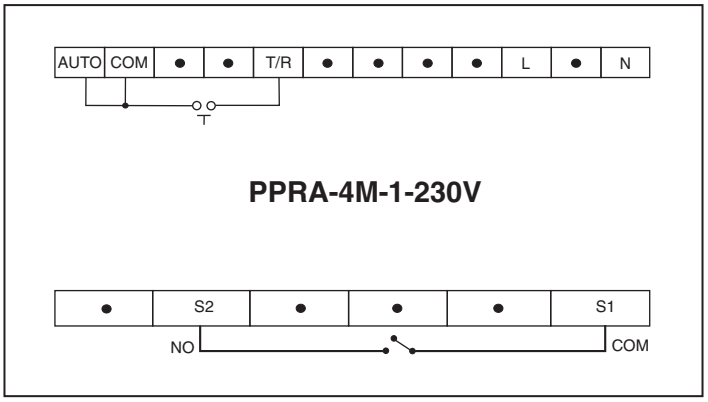
Mechanical Specifications

Mounting	DIN Rail Mount
Wire Size (max)	4 sq.mm
Size	66.50 x 70 x 90 (H x W x L)
Screw tightening torque	0.5 N-M
Weight	190gms approx

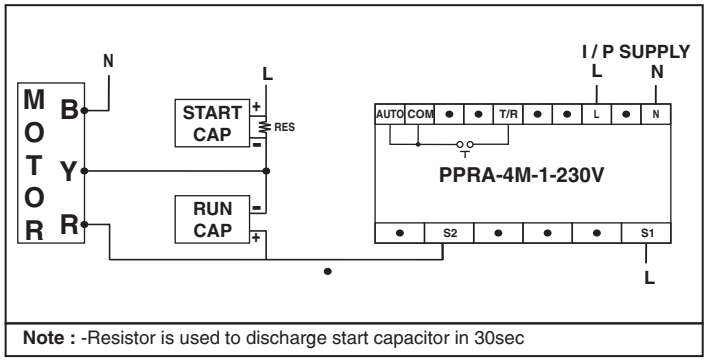
Dimensions (All are in mm)



Terminal Connections



Connection Diagram



Note : -Resistor is used to discharge start capacitor in 30sec

Recommended resistor value as per different motor rating	
Start Capacitor Value	**Resistor Value**
Upto 200uF/300VAC	100kOhm/2W

(Minimum 30sec delay required between two consecutive starts.)

Ordering Information

Product Code	Supply Voltage	Certification
PPRA-4M-1-230V	180 to 300V AC (L - N)	---