

# DIGITAL MOTOR PROTECTION RELAY

MOTOR PROTECTION RELAY FOR SUBMERSIBLE PUMP STARTER CONTROL PANELS



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## PRODUCT DESCRIPTION

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The Motor Protection Relay is an advanced device engineered to safeguard submersible pumps in starter control panels. It measures critical electrical parameters and offers versatile, reliable protection against pump failures caused by various electrical and mechanical faults.

## KEY FEATURES

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- ◆ **Supply Voltage Monitoring:** Continuously monitors input voltage to prevent damage from over-voltage and under-voltage conditions.
- ◆ **Current Measurement:** Real-time tracking of motor current consumption helps identify overload and abnormal conditions.
- ◆ **Configurable Protection Levels:** Allows users to set customized protection thresholds based on the pump's capacity, ensuring compatibility across a wide range of motor ratings
- ◆ **Dry Run Protection Using Power Factor:** Detects dry-running conditions by monitoring power factor, providing more accurate protection compared to conventional current-based systems.
- ◆ **Overload Protection Using Power Factor:** Monitors power factor to identify overload conditions, delivering precise protection without relying solely on current measurements.
- ◆ **Short Circuit Protection:** Rapid detection and isolation of short circuits to safeguard the pump and panel from severe damage.
- ◆ **User-Friendly Interface:** Clear display of voltage, current, power, and power factor readings for simplified monitoring and diagnostics.
- ◆ **Rugged and Reliable Design:** Built to withstand harsh environments, ensuring consistent performance even in challenging operating conditions.
- ◆ **Compact and Easy Installation:** Fits seamlessly into any control panel design.



## TECHNICAL SPECIFICATIONS



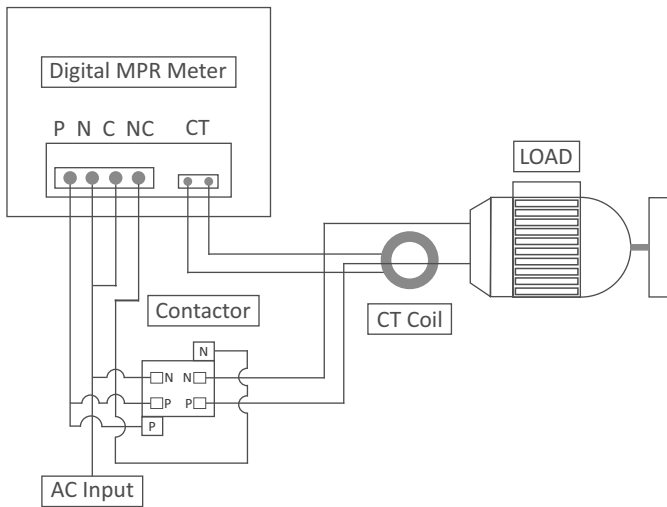
Parameter	Specification
Nominal Input Voltage	230VAC / 1PH
Operating Voltage Range	100VAC - 305VAC / PH
Current Measurement Range (External CT)	0 - 30A
Input Frequency Range	47 - 53Hz
Metering Accuracy (Both Voltage and Current)	Class 2.0 @ FSR
Display	3 Digit 0.56" 7 Segment LED Display
Input Protection	Surge Voltage Protection Using MOV @ 3KV
Low Voltage Output Cut OFF	@Input Voltage < 150VAC +/- 2%
High Voltage Output Cut OFF	@Input Voltage > 250VAC +/- 2%
Load Current Setting Range	3A - 30A (Can be Altered as Per Customer Requirement. Selectable via Switch Settings)
Dry Run Current in % of Load Current	60% (or) 70% of Load Current (Selectable via Switch Settings)
Overload Current in % of Load Current	120% (or) 130% of Load Current (Selectable via Switch Settings)
Output Load (Relay rating)	3 A (C & NC)
Mounting	Panel Mountable
Product Dimensions	70 X 70 X 42 mm
Panel Cutout Dimensions	72 X 67 mm
Weight	80 grams
Operating Conditions	0°C to +60°C, 90% Non-condensing
CT turns	1 : 500 Turns Ratio

## APPLICATION

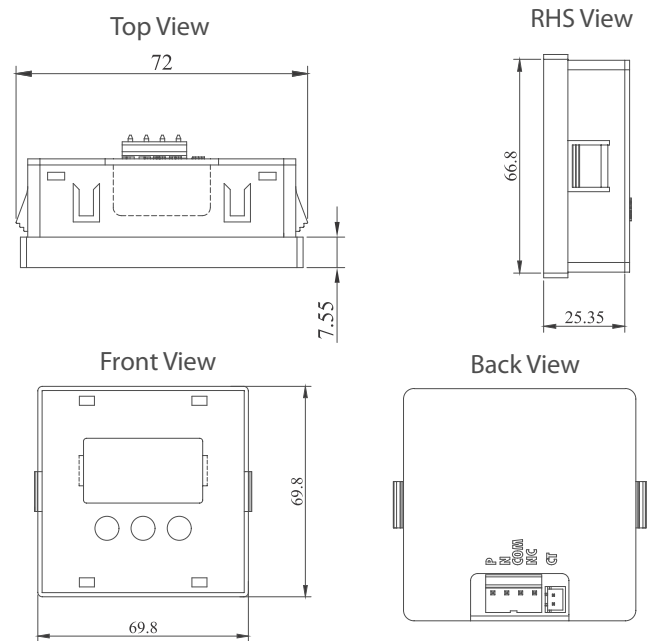
- ◆ Submersible pump systems (agricultural, industrial, domestic)
- ◆ Borewell and irrigation pumps
- ◆ Water pumping systems requiring enhanced protection
- ◆ Motor control panels

- ◆ Power control panels
- ◆ Generator control panels
- ◆ Electrical distribution control & relay panels
- ◆ Test benches and laboratory equipment
- ◆ Wind energy and co-generation plants
- ◆ Air conditioning and refrigeration plants

## WIRING DETAILS



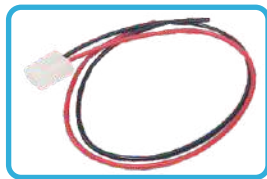
## MECHANICAL DETAILS



## PRODUCT ACCESSORIES



CT coil With Pluggable Connector



4 Pin Female Connector for AC Input Supply

## WHY CHOOSE THIS PRODUCT?

The Motor Protection Relay guarantees optimal performance and enhances the lifespan of your submersible pumps by offering accurate, power-factor-based protection. It minimizes downtime and ensures reliable operation, providing peace of mind for critical applications.

**Order Now:** Invest in reliable protection for your submersible pumps today!

