



# Single Phase Motor / Pump Protection Relay

# MP 820



### ORDERING CODE

TYPE	SUPPLY VOLTAGE	AC/DC	RELAY CONTACTS
MP820	240	A	S

Refer to MP830 for 3 Phase Motors

## Application Examples

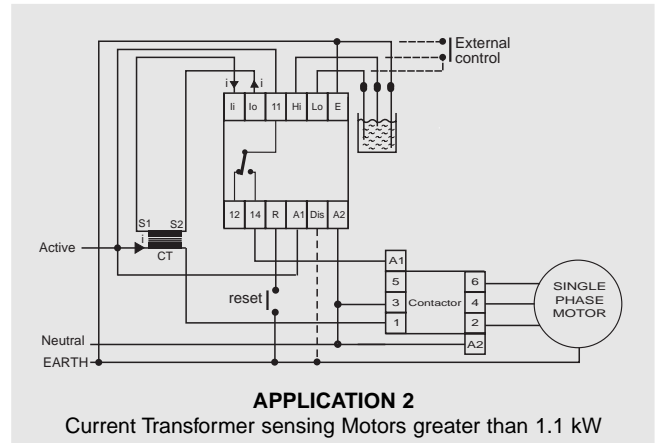
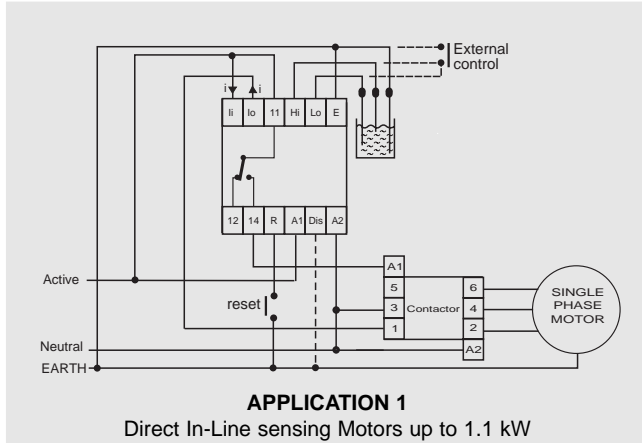
- Borehole pump protection
- Protection of Single Phase Motors
- **Protection against:** Running dry, jamming of motor, closed valve or no-flow, overcurrent, over- & under-voltage.

## Features

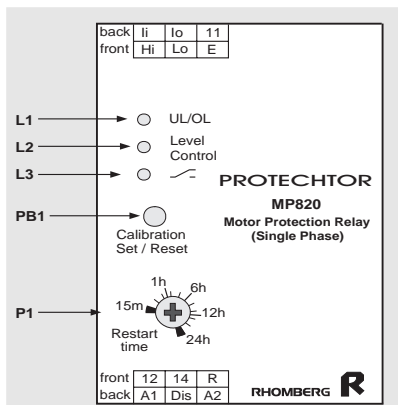
- Underload sensing by measuring phase angle (Auto-calibration)
- Overload sensing by measuring current amplitude (Auto-calibration)
- Calibration reset for easy setting up of motor changeover
- Direct in-line current sensing for motors up to 1.1kW
- Direct interface with conventional current transformer for motors > 1.1kW
- Liquid Level Control
- Adjustable restart timer on underload (ie running dry)
- Fixed start-up delay (3 seconds standard)
- Unit latches in de-energised state on overload fault only
- LED indication of all fault conditions and all modes of operation (Chart supplied)



## Wiring Diagrams



## Description of Controls



- L1: The red "UL / OL" LED
- L2: The yellow "Level Control" LED
- L3: The green "Relay ON" LED

Collectively the 3 LED's indicate the status of the unit - see Table 1. This table (with the wiring diagram) is supplied as an adhesive laminated chart for mounting on inside of cabinet door).

- PB1: Calibration Set / Reset is initiated with PB1. Calibration Set & Reset: Refer to Calibration under Description of Operation on next page.
- P1: Restart Time is set on P1. This time period is adjustable from 15 min to 24 hrs.

TABLE 1:

GREEN	YELLOW	RED	UNIT STATUS
ON	OFF	OFF	Normal Operation
OFF	ON	OFF	Liquid Level High (Low)
OFF	OFF	ON	Overload
OFF	Flash	ON	Underload/Dry-Timing
OFF	OFF	Flash	Low voltage (uncal mode)
OFF	ON	Flash	Under/Over Voltage
Flash	Flash	Flash	Unit Uncalibrated
Flash	OFF	OFF	Unit Calibrating
OFF	ON	ON	Unit Faulty