POWERMONITOR

MONITORING, SENSING AND LOGGING



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The POWER MONITOR from Clearwater Controls combines power monitoring, sensing and logging in one compact device. With the ability to display full power information on its display and sensing when the power goes out of limits. With built in hot swappable SD card that logs around 20 years of power information.





Technical Characteristics In Brief

Size:

Width 35mm

Height 100mm Depth 115mm

Mounting: TS35 Din rail

Protection Degrees: IP20

Supply Voltage:

110Vac - 230Vac Control Voltage:

110 - 230Vac

Logging: 20 years at 5s intervals Outputs:

1 x N/C

1 x kW per pulse SSR 3 x N/O fault outputs

Inputs:

Pulse Flow meter

Reset Trip

Current Ratings:

o – 800A

Communications: Modbus

Phase Monitoring

All alarm monitors can be individually assigned to specific outputs or communed up to available outputs.

Over/under Voltage Protection

Customisable over and under voltage sensing. User can enter setpoints and debounce times.

Phase Loss Detection

Detects when a phase has dropped.

Current Imbalance

Detects when current is not balanced across each phase. The level of deviation and debounce can be set.

Over/under Current Protection

Customisable over and under current sensing. User can enter setpoints and debounce times.

Frequency Monitoring

Detects if the frequency goes out of range. Deviation and debounce can be set.

Thermal Overload

Built in IEC 60947 thermal overload when used to protect an individual motor. User can set this to trip the motor and change state of N/O and N/C contacts.



Optional Motor Diagnostics

The POWER MONITOR can monitor main incomers or individual motors.

With 365 days of downloadable performance data, you can conveniently determine maintenance and replacement schedules for motors or pumps.

170 timestamp events, alarms and trips are stored on the device.

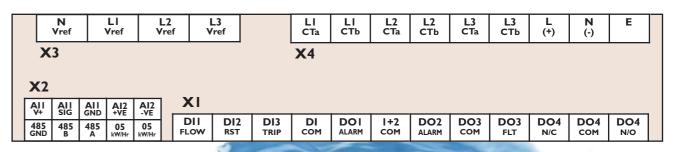
Diagnostic counters include:

- No. of starts
- No. of trips
- Last run time
- Under / over current trips
- Under / over voltage trips
- Phase loss trips
- Motor run hours
- KW/Hrs
- Average daily KW/hrs
- Average daily run time
- Average daily current consumptions
- Average daily KW/pumped flow (4-20mA input)

Remote Pump Data Analysis

The POWER MONITOR locally logs 365 days of average performance data. In addition, Clearwater Controls can provide enhanced pump analysis through our remote monitoring service. Our secure server can read the data from site and provide either a daily, weekly or monthly detailed report on the performance of each pump. This is emailed directly to the plant/asset manager.

This service can also be used to send specific alarm data to the responsible person for the site, as well as create a maintenance predictor.







Clearwater Controls,

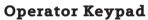
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Power Monitor

| Description | Value | Tolerance |
|--------------------------|---|-----------|
| Protection Degree | IP20 | |
| Mounting Description | TS35 Din Rail | |
| Operating Condition | o-5oC (Non Condensing) | |
| Power Consumption | 4.5W Typical | |
| Digital Input Voltage | 3 x 110-230Vac Optically isolated | +/-10% |
| Insulation | 2.5kV | |
| Relays | 3 x Volt Free SPNO (250V, 3A max) 1 x Volt Free SPDT (250V, 10A max) | |
| Solid State Relay | 1 x SPNO (250V, 100mA Max) | |
| Voltage Measurement | Up to 600Vac | |
| Analogue Inputs (0-20mA) | 1 x Passive, 1 x Active/Passive 15Vdc for Loop power | |
| Status Feedback | 10LEDS and operator keypad | |
| Internal Fuse | 1A | |
| Terminals | Torque o.5Nm Conductor CSA o.5-2.5mm ² | |
| Communications | 2 wire RS485 Modbus RTU | |



| Description | Value | Tolerance |
|----------------------|----------------------------|-----------|
| Protection Degree | IP20 | |
| Mounting Arrangement | M ₃ screws | |
| Operating Conditions | o - 40C (Non condensing) | |
| Supply Voltage | 15-25Vdc | |
| Power Consumption | o.75W typical | |
| Display | 2 line LCD Display | |
| Mounting Screws | Torque o.5Nm | |
| Communications | 2 wire Modbus RTU | |
| Storage | SD Card 2.6Million entries | |
| Connectivity | USB Mini | |

