POWER MONITOR

Model M20

Affordable protection for any FTI pump including UC, DB and SP Series mag drives

Features:

• Provides accurate shaft power measurement
• Instantaneously shuts down pump when a change in shaft power is sensed
• Easy to install
• Autoset makes set up quick and easy
• Monitors supply power from line voltage
• Electronically locks parameters
• Digital readout of HP, % HP, kW, % kW, volts and amps
• Programmable relay configurations
• Four levels of protection (pre-alarm minimum & maximum power; alarm minimum & maximum power)
• Just three models cover all motor voltages up to 690 VAC
• Operates at 50 or 60 Hz
• Programmable analog signal proportionate to the motor’s shaft power
• UL, cUL and CE approved

How it works

The M20 utilizes a unique algorithm to measure normal work load and then calculates and sets a shut-down sequence when an increase or decrease in shaft power is detected outside the determined parameters. Pump shut-down takes place before dry-running damage can occur.

Benefits

• More accurate than amp monitors and motor input power monitors.
• Pump curves express load data in shaft power, not motor input power.
• The significant losses of the motor are removed to improve accuracy and reliability.
• Protection parameters are set against the actual working load.
• The power displayed by the meter is the actual power being used by the pump.

Uses:

• Dry running – Protects pumps with PTFE, silicon carbide or ceramic bushings if no liquid is present.
• Dead heading – Prevents operating the pump with a closed discharge valve or clogged filter.
• Excess power – Prevents failures due to foreign objects being sucked into the pump, changes in system piping, or changes in fluid characteristics such as viscosity or specific gravity.
• SP Series – Delay feature ensures pump is primed and operating.
SPECIFICATIONS

The complete M20 requires a transducer.

Selecting an M20 power monitor:
- Select a part number based on the operating voltage and phase for the motor
- Monitors work at either 50 or 60 Hz.

Selecting a transducer:
- Determine the full load amp draw of the motor at the installed voltage.
- Price for M20 includes transducer

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Part Number</th>
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</thead>
<tbody>
<tr>
<td>100-240 volt, 1 &amp; 3 phase</td>
<td>J103768-1</td>
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<tr>
<td>380-500 volt, 3 phase</td>
<td>J103767-1</td>
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<tr>
<td>525-690 volt, 3 phase</td>
<td>106431</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Full Load Amps</th>
<th>Part Number</th>
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</thead>
<tbody>
<tr>
<td>0.40 to 10.0</td>
<td>J103769</td>
</tr>
<tr>
<td>10.1 to 25.0</td>
<td>J103770</td>
</tr>
<tr>
<td>25.1 to 50</td>
<td>J103771</td>
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</tbody>
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M20 WIRING DIAGRAM

Sample Installation