

# Good, Better, & Best

## MOTOR PROTECTION CHECKLIST



The more ways your motor is protected, the fewer chances you take with downtime and repairs. This checklist helps you pick the degree of motor monitoring and relay protection that you need for a given application.

### CHECKLIST

<input type="checkbox"/> Over/under voltage <input type="checkbox"/> Phase loss <input type="checkbox"/> Reverse phase <input type="checkbox"/> Unbalanced voltage <input type="checkbox"/> Rapid cycling	<p><b>Good</b> </p> <p>A basic level of protection is provided by monitoring the voltage going into the motor. Without protection, faulty conditions can cause motor windings to overheat and burn motor insulation—causing premature motor failure.</p>	<p><b>460</b> (DIN-rail or surface mount)  <b>201 A-AU</b> (8-pin socket mount)  <b>Voltage/Phase Monitors</b></p> <p>Cost-effective options for 3-phase motors.</p>	 <p><b>460</b>      <b>201 A-AU</b></p>
<input type="checkbox"/> Contactor failure <input type="checkbox"/> Fault history <input type="checkbox"/> Real-time display of conditions	<p><b>Better</b> </p> <p>In addition to all the voltage/phase protection above, you may wish to monitor the load side, log events, and view conditions on a display in real time—ideal for troubleshooting.</p>	<p><b>455 Voltage/Phase Monitor</b>  <b>Informer-MS Handheld Diagnostic Tool</b></p> <p>Second set of voltage inputs monitors voltage on the load-side of the motor contactor to detect contact failure. Keeps history of the past 20 fault causes including voltages and unbalance at the time of trip. With optional Informer-MS, wirelessly download and view fault history, read real time voltages per phase, voltage unbalance and more.</p>	 <p><b>455</b>  <b>Informer-MS</b></p>
<input type="checkbox"/> Current overloads and underloads <input type="checkbox"/> Current unbalance <input type="checkbox"/> Ground fault <input type="checkbox"/> On-board display <input type="checkbox"/> Remote communications	<p><b>Best</b> </p> <p>This Enhanced Overload relay combines all the voltage/phase protection features above into an overload relay with on-board display and optional communications.</p>	<p><b>777-P2 MotorSaver®</b> (for industrial motors)  <b>777-KW/HP-P2 PumpSaver®</b> (for pumps)</p> <p>Underload protection keeps pumps from running dry or motors from running unloaded. The display allows for easy programming, real-time voltage/current readings and fault codes. It can connect to a remote monitor, SCADA, PLC, or PC via a communications module.</p>	 <p><b>777 -P2</b></p>

### Awesome

What's better than best? Littelfuse has a broad line of advanced motor protection relays that provide awesome protection of expensive motors in critical applications.

- MPU-32 Motor Protection Unit Used to provide current and temperature-based protection, metering, and data logging for three-phase low-voltage medium-horsepower induction motors.
- MPS Motor Protection System Monitors voltage, current, and temperature to provide a comprehensive package of 22 protective functions.