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MP8000  
APPLICATION  
GUIDE



# WATER/WASTEWATER APPLICATION GUIDE

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### Littelfuse MP8000 Series Bluetooth® Enabled Motor Overload Relays for Water/Wastewater Facilities

Regardless of their function, water and wastewater facilities share one critical system in common. They all use pumps, whether it's to move water into a plant, or send treated wastewater back into the environment. The motors inside these pumps are subject to damage from electrical hazards that can cause them to fail, resulting in significant downtime and replacement costs.

That's why many water and wastewater customers use **basic motor protection relays** to detect such issues as overheating, pulling too much current and possibly phase loss, and then shut down the motor before significant damage is done.

Also popular are **enhanced relays** that address a wider range of electrical issues, such as voltage and phase concerns, and underload, and offer options for sending electrical data to SCADA for monitoring and control.

Typically used with higher horsepower and/or medium voltage motors are **advanced relays** with diagnostics for analyzing motor trip data, and the ability to monitor temperature on motor windings.

#### Introducing the MP8000 Series Bluetooth® Enabled Motor Protection Relay:

Now available to the water and wastewater industry is the new MP8000 Series from Littelfuse, an enhanced design that combines the simplicity and economy of basic relays with the increased protection provided by more advanced units – all at a very competitive price point.

Like our other enhanced overload relays, the MP8000 provides a variety of voltage, phase and current protection features, along with the option to communicate data to SCADA via Ethernet. What make it stand out are such unique features as:

- Bluetooth Wireless Connectivity – It's the first overload relay on the market with Bluetooth® connectivity, enabling users to protect motors and pumps through a free Littelfuse app on their smart phone or tablet. With its wide range of functionality, the app allows users to program trip settings, view real-time data, start/stop the motor, and more.
- Greater Worker Safety – With the MP8000, there's no need to open control panels or cabinets, or suit up in required PPE gear. Just use the app to interact with the MP8000 while staying up to 30 feet away, avoiding exposure to live power while safeguarding equipment and personnel from potential arc-flash hazards.
- Event History for Troubleshooting – The MP8000 stores over 1,000 events in memory, all of which can be viewed via the app and/or software. By easily viewing trip causes and electrical data at the time of trip, users can then troubleshoot ongoing problems in their gear and/or electrical system.
- Underpower Protection – When a pump loses access to the fluid being pumped or when outflow is blocked, it can result in an underload, causing motors to overheat and burn up. That's why monitoring underpower is critical. By monitoring for low power instead of low current, the MP8000 provides faster and more precise underload tripping.
- One Model Does It All – Unlike competitive relays that only cover certain horsepower ranges or offer specific features, the MP8000 is a universal, one-fits-all design for single- or three-phase systems with operating voltages from 90-690V, and higher voltages via potential external transformers. It protects any motor drawing 0.5-100 full-load amps (currents higher than 100 amps require external potential transformers).
- Motor Temperature Monitoring – The MP8100 relay has the same features of the MP8000, with one important distinction – it can be easily connected to a MPS-RTD module for monitoring up to 8 RTDs, helping prevent overtemperature conditions at motor windings. While advanced motor protection relays often offer overload protection, this is the first time that it's available in a more economical, enhanced unit like the MP8100.

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### Why Should Water/Wastewater Users Select the MP8000?

Simple. Just compare the new MP8000 to other relays currently being used in the industry:

- Compared to basic overload relays, the MP8000 dramatically increases motor protection, resulting in longer motor life plus reduced downtime and repair costs. With the MP8000, users receive advanced features and benefits at a price point marginally higher than that of a basic overload relay.
- Compared to enhanced overload relays, the MP8000 offers all, if not more, of the protection features provided by competitive designs at a less expensive price. What's more, it's the first enhanced overload relay with wireless connectivity.
- Compared to advanced motor protection relays, the MP8000 is easier to program, more user-friendly and less expensive. It also offers wireless Bluetooth connectivity, a feature not currently available on advanced relays. That means users can read motor data via an app on their smart phone or tablet up to 30 feet away, improving arc flash safety for personnel. What's more, the MP8100 can be combined with a MPS-RTD module to monitor RTDs.

With its unique features and capabilities, the MP8000 Series Bluetooth® Enabled Motor Protection Relay from Littelfuse is ideal for protecting motors and pumps in a variety of water/wastewater facilities, including:

- Treatment Plants
- Lift Stations
- Booster Stations
- Stormwater Retention Facilities
- Water Towers
- Water Wells
- And Other Facilities

Contact your local Littelfuse rep or distributor today for pricing and product specs so you can include the new MP8000 in your future projects. For more information, go to [Littelfuse.com/mp8000](http://Littelfuse.com/mp8000).

**For more information, visit  
[Littelfuse.com/MP8000](http://Littelfuse.com/MP8000)**



Additional technical information and application data for Littelfuse protection relays, generator and engine controls, fuses and other circuit protection and safety products can be found on **Littelfuse.com**. For questions, contact our Technical Support Group (**800-832-3873**). Specifications, descriptions and illustrative material in this literature are as accurate as known at the time of publication, but are subject to changes without notice. All data was compiled from public information available from manufacturers' manuals and datasheets.