# Safe and Reliable.

Powerful protection for plants, people, processes and the environment.

Surge Protection for Process Automation





#### Surge Protection Systems

# Power Surge—The No. 1 Underestimated Cause of Damage

Overvoltages due to lightning strikes or switching operations are one of the most common causes of electronic damage. In process engineering plants such as refineries with exposed building parts or extensive water management systems, surge events can cause devastating damage: from fires, damage to or destruction of expensive components and machines, to breakdown of complete automation systems—not including risks to personnel.

Besides these dangerous risks to people and environment, overvoltages are still one of the most common causes of damage in electrical plant engineering. They primarily occur due to lightning strikes or switching operations, but also due to the following causes:

- Electrostatic discharge
- Brush fire of large electric machines
- Fluctuations in power supply
- Ground faults/short circuits
- Triggering fuses
- Parallel installation of energy and information technology control systems





#### Simple Surge Protection: M-LB-2000

The M-LB-2000 offers basic features in a compact housing: with a width of just 6.2 mm it reduces installation space to a minimum. This cost efficient simple surge protection is a one-piece device for mounting on DIN rail and easy to handle tool-free. The integrated loop disconnect function simplifies troubleshooting in the event of a fault.

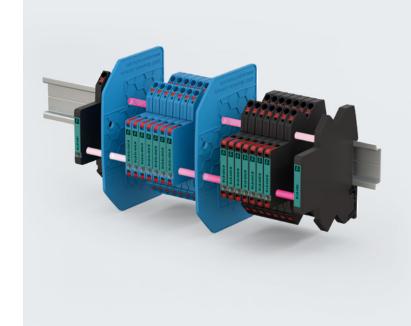
#### **Key Features**

- Compact 6.2 mm width for reduced installation space
- Loop disconnect for easy maintenance
- Global certifications

# Pluggable surge protection with fault detection: M-LB-4000

The modular design of the M-LB-4000 system allows users to quickly exchange pluggable surge protection modules during operation—without any interruption of the signal circuit. The entire protection function is housed in the protection module. If the protection module is removed and re-inserted with 180° rotation, the signal circuit is interrupted by the integrated disconnect function. This loop disconnect feature allows isolation testing as well as loop monitoring during commissioning. With a width of just 6 mm, the M-LB-4000 surge protection modules provide the highest packing density and reduce installation space to a minimum. User-friendly mechanics allow operational staff to conveniently install the modules without any additional wiring effort.

The M-LB-4000 offers reliable self monitoring inside: The display shows status information which also can be forwarded to the control level with a fault status indication module. This allows easy maintenance and reduces operational costs.



#### **Key Features**

- Compact 6 mm width for reduced installation space
- Continuous self-monitoring with status indication
- Protection function in replaceable protection module
- Plug-in modules for easiest installation
- Hot swap during operation—without any interruption of signal circuit
- Loop disconnect for easy maintenance
- Global certifications

Technical Features	M-LB-2000	M-LB-4000
Compact design	•	
DIN rail mounting		•
For intrinsically safe signals		
Hot swap during operation		•
Modularity		
Loop disconnect		•
Error detection		
Global certifications	•	
Functional Safety—SIL3		

# **Portfolio Overview**



System	Application	Mounting
M-LB-4000	Modular system for signal lines	DIN-Rail
M-LB-2000	Simple system for signal lines	DIN-Rail
P-LB-*	Plug-in with KF barriers and isolators	at KF-module
F*-LB	Screw-in modules for field transmitters	Screw
M-LB-*	AC voltages and high power	DIN-Rail

# Your automation, our passion.

## **Explosion Protection**

- Intrinsic Safety Barriers
- Signal Conditioners
- FieldConnex® Fieldbus Infrastructure
- Remote I/O Systems
- Electrical Explosion Protection Equipment
- Purge and Pressurization Systems
- HMI Systems
- Mobile Computing and Communications
- HART Interface Solutions
- Surge Protection
- Wireless Solutions
- Level Measurement

### **Industrial Sensors**

- Proximity Sensors
- Photoelectric Sensors
- Industrial Vision
- Ultrasonic Sensors
- Rotary Encoders
- Positioning Systems
- Inclination and Acceleration Sensors
- Vibration Monitoring
- Industrial Ethernet
- AS-Interface
- IO-Link
- Identification Systems
- Displays and Signal Processing
- Connectivity

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