

IDEM Z-Range (MLZ/MLZ-M) Locking Safety Switches

**MLZ-470001**

Description

IDEM's MLZ and MLZ-M Safety Interlock Switches are designed to prevent unintended access to hazardous areas and eliminate costly machine stoppages by securely locking units during machine operation.

These versatile devices are compact and easy to integrate with actuation capability on three sides, making them suitable for a wide range of guarding applications. They are designed to fit to the leading edge of machine guard doors to provide robust guard locking and provide a tamper-resistant interlock mechanism. They provide robust position interlock detection for moving guards and hold the guard door locked until the solenoid voltage is applied to the switch.

MLZ and MLZ-M Safety Interlock Switches have RFID-coded actuators for high level coding according to ISO14119. MLZ models are available in mirror-polished 316 stainless steel and are tested to IP67 and IP69K.

Features

- Type 4 guard locking switches with RFID
- Unobtrusive design enhances mounting versatility, reduces the risk of tampering, and minimizes the risk of potential damage
- Designed with three actuator entry points to accommodate any door style, making this line of safety interlock switches one of the most flexible solutions on the market
- Compact design for easy integration
- 4000N holding force
- Rear escape release options.
- High-visibility status Indicators
- Direct machine frame mounting
- Built-in cascading function



Flexible actuator with bevelled plunger for reducing friction on entry and ensuring a long mechanical life cycle



Three actuator entry positions for maximum compatibility with various mounting options

IDEM Z-Range (MLZ / MLZ-M) Locking Safety Switches Selection Guide

Part Number	Price	Actuator Type	Lock Type	Head Type	Holding Force	Outputs	Body Material	IP Rating	Connection	Conductor Size	Cable Length	Drawing
MLZ-470001	\$621.00	Flexible tongue (key) interlock uniquely coded RFID	Solenoid, 24 VDC to unlock	270° fixed	4000N	2 OSSD 1 status	316 stainless steel	IP67 IP69K	Pigtail	24 AWG	16.4ft [5m]	PDF
MLZ-470002	\$634.00										32.8ft [10m]	PDF
MLZ-470003	\$638.00								8-pin M12 quick-disconnect	—	—	PDF
MLZ-470103	\$638.00								5-pin M12 quick-disconnect	—	—	PDF
MLZ-M-473001	\$482.00					2 OSSD 1 status	Die-cast aluminum	IP67	Pigtail	24 AWG	16.4ft [5m]	PDF
MLZ-M-473002	\$492.00										32.8ft [10m]	PDF
MLZ-M-473003	\$496.00								8-pin M12 quick-disconnect	—	—	PDF
MLZ-M-473103	\$496.00								5-pin M12 quick-disconnect	—	—	PDF

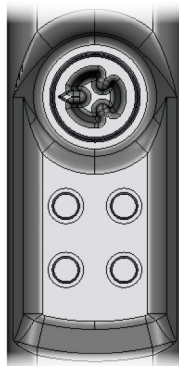
LED Operation

LED 1 (Guard State)	
Guard Locked	Green (Steady)
Guard Unlocked	Green (Flashing)
Incorrect Code	Red *Flashing)
Guard Open	Red

LED 4 (Solenoid)	
Solenoid Energized	Red
Solenoid De-energized	Off

GUARD

SOL.



INPUT

OUTPUT

LED 2 (Input)	
Safety Inputs On	Green (Steady)
Safety Inputs Missing	Green (Flashing)
Safety Inputs Off	Off
Internal Fault	Red (Steady)

LED 3 (Output)	
Safety Outputs On	Green (Steady)
Safety Outputs Off	Off
External Fault	Red (Flashing)

IDEM Z-Range (MLZ/MLZ-M) Locking Safety Switches



IDEM Z-Range Locking Safety Switches General Specifications	
	MLZ/MLZ-M
Safety Classification and Reliability Data	
Switching Reliability (B10d)	2.5x10 ⁶ at 100 ma load
ISO 13849-1	Up to Category 4 with Safety Relay Up to PLe depending upon system architecture
EN 62061	Up to SIL3 depending upon system architecture
Safety Data—Annual Usage	8 cycles per hour / 24 hours per day / 365 days
MTTFd	773 years
Max Response Time (Actuator Removed)	60 ms
Max Response Time (Input Off)	20 ms
Agency Approvals	cULus E258676, CE
Electrical and General Specifications	
Rated Operating Voltage	21.6 VDC to 26.4 VDC
Power Consumption	0.7W
Output Current	Max = 0.1A Min = 1 mA
Assured Switching Distances	SAO (Sensing Assured Operating) 10mm [0.39in] closed SAR (Sensing Assured Release) 20mm [0.79in] open
Recommended Setting Gap	6mm [0.24in]
Enclosure Protection	Die-cast aluminum: IP67 Stainless steel: IP67 and IP69K
Operating Temperature	-25 to +55 °C [-13 to +131 °F] For UL applications: -25 to +50 °C [-13 to +122 °F]
Recommended Mounting Screws/Torque	M4; 1 N•m [0.74 lb•ft]

IDEM Z-Range (MLZ/MLZ-M) Locking Safety Switches Accessories



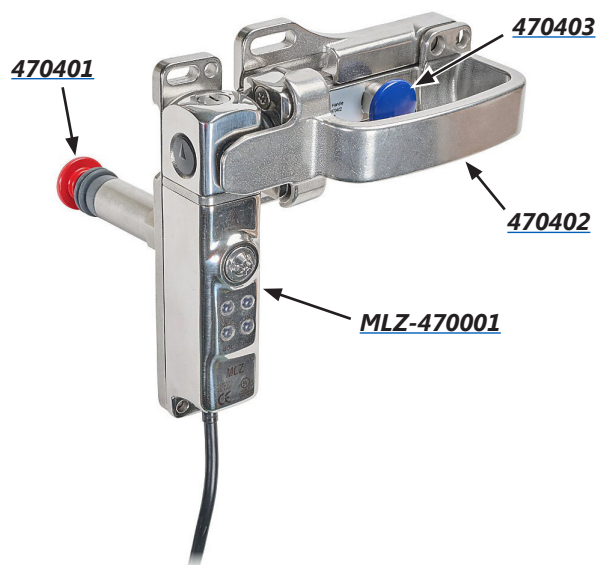
IDEM Universal Gate Box Accessories Selection Guide

Part Number	Price	Description	Handle Type	Door Type	Fits	Drawing
470401	\$65.00	Rear release button	–	–	MLZ safety switches	PDF
470402	\$152.00	Handle and mounting plate	Slide	Right or left hand	MLZ safety switches	PDF
470403	\$20.50	Spring-loaded catch	–	–	MLZ slide handle and mounting plate (470402)	PDF
470404	\$8.25	Gasket	–	–	MLZ safety switches	PDF
470410-L	\$157.00	Handle and mounting plate	Pull	Left hand	MLZ safety switches	PDF
470410-R	\$157.00	Handle and mounting plate	Pull	Right hand	MLZ safety switches	PDF
MLZ-470420	\$76.00	Actuator tongue (key)	–	–	MLZ safety switches	PDF

Accessories



Examples of Complete Switch Assemblies



Safety Products



Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors' products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.

AutomationDirect does not provide design or consulting services, and cannot advise whether any specific application or use of our products would ensure compliance with the safety requirements for any application.