

MR 380-1 DIN Rail Mount Controller



Features

- ➔ Immunity to EMI / RFI
- ➔ 62.5/125µm Multimode Fiber, 9/125µm Singlemode Fiber
- ➔ Installed outside hazardous area
- ➔ Sensor can be installed in any manner of hazardous location or explosive atmosphere - gas, dust, or mines
- ➔ Interference free transmission up to 4km with Multimode Fibers, up to 10 km with Singlemode Fibers

Product Description

The MR380-1 Controller is intended for the OEM user in support of the MR380 series Fiber Optic Signaling products. Fiber optic sensors outperform electromechanical and electronics-based sensors, where:

- Immunity to EMI, RFI
- High voltage isolation is needed
- Must operate interference-free over long distances
- Hazardous area mandates an inherently safe solution

ZapFREE® software is used for data acquisition.

Applications

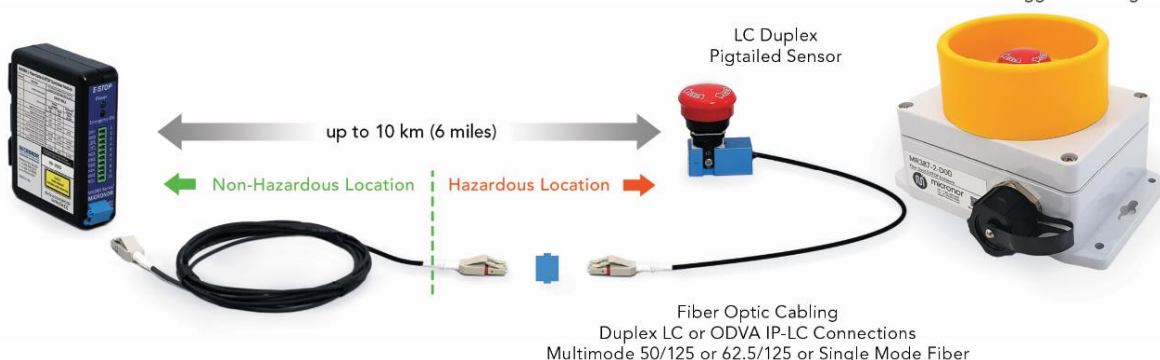
- Medical and MRI
- Transportation
- Oil, gas and mines
- Robotic systems
- Process industries and instrumentation
- Aerospace actuators

System Planning Emergency Stop

MR380-1 Controller
24 VDC, Digital, Relay Contacts

MR381 E-ACTUATOR Sensor

ODVA IP-LC Version
Features Rugged Housing

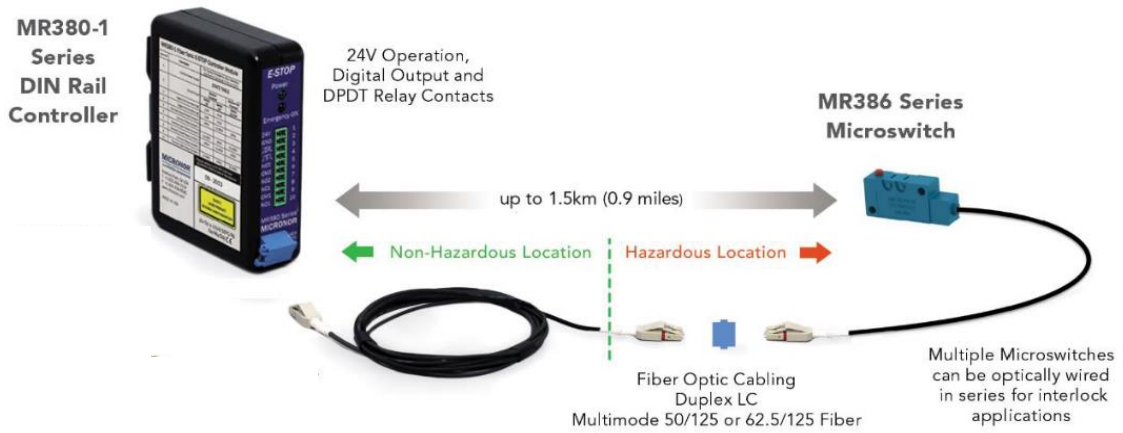


Subject to errors and changes Date: 20.04.2023

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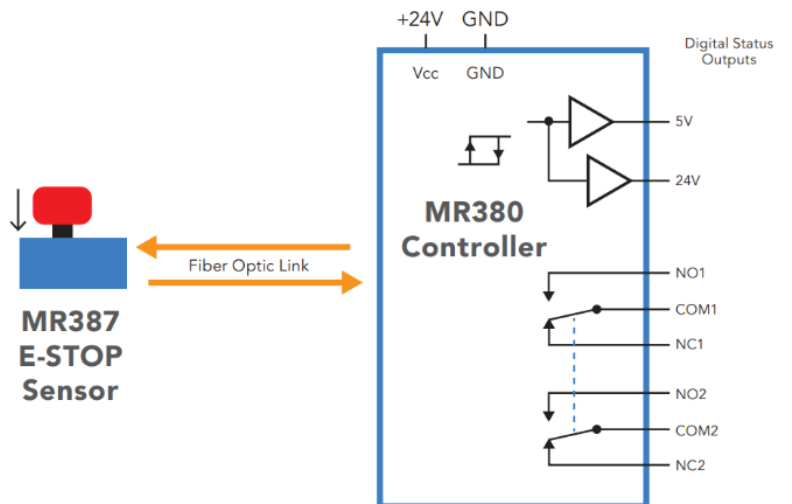
System Planning Microswitch



1. Verify cabling and junction boxes compatible with the operating environment.
2. Verify that the optical link loss is within Controller's Maximum Loss Budget.
3. Consult Application Note AN118 for more information, examples, and guidance on loss budget.

Interfaces

- DPDT relay contacts
- Digital status outputs, 5V and 24V
- Depending on sensor type, digital outputs and relay implement
- known default failure state



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Specifications

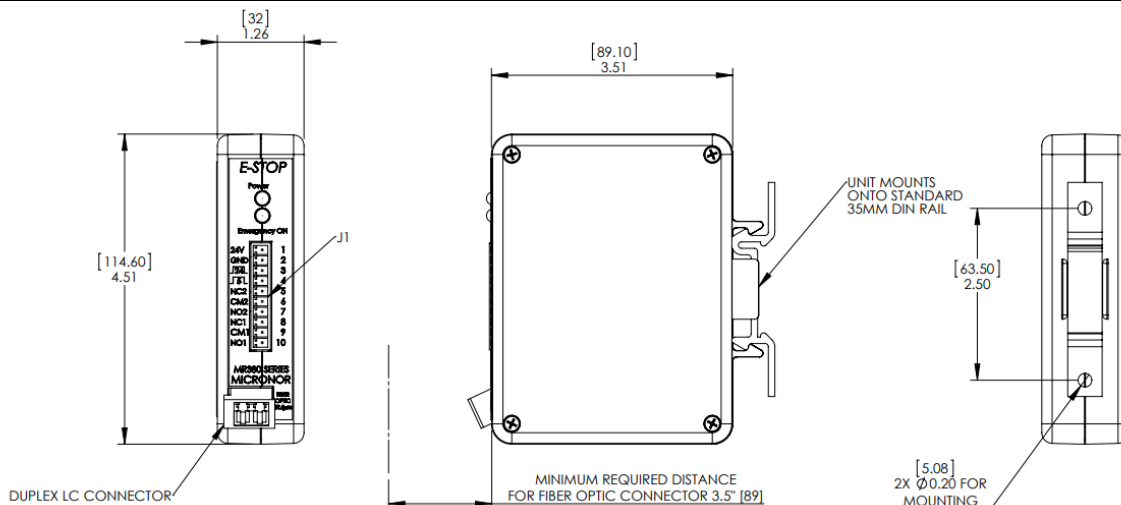
| Functional States | As Applies to MR387 E-Stop Sensor |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Normal RESET (Up Position) | Red LED is OFF Digital 5V and 24V Outputs=HI Relay NC contacts=Closed, NO contacts=Open |
| ACTIVATED (Down Position) Broken Fiber, Loss of Optical Signal, or Controller Failure | Red LED is ON Digital 5V and 24V Outputs=LOW Relay NC contacts=Open, NO contacts=Closed |
| Digital Outputs | |
| 5V Logic | 5 VDC/2k Ω Load Max |
| 24V Logic | 24 VDC/2k Ω Load Max |
| Relay Contacts | |
| | 2x Form C (COM-NO-NC) |
| Switching Power Rating | 60 W / 62.5 VA |
| Contact Material | AgNi, Gold Covered |
| DC Rating | 75 V @ 0.75A; 24 V @ 2A |
| AC Rating | 50 V @ 1A; 24 V @ 2A |
| Optical | |
| | Class I Eye Safe |
| Optical Power | 1310nm, Class I Eye Safe, System Loss Budget=25dB |
| Maximum Optical Link Length | Distance is a function of user's system loss budget which is the total round-trip loss of all optical link components - sensor(s), connectors, splices, and cable segments. |
| Interface | |
| | NOTE: Electrical connections shall not exceed 3 meters. |
| Electrical | 10-pin Screw Terminal, 30-14 AWG (Phoenix Mating Plug 1803659) |
| Optical | LC-Duplex, Multimode or Single Mode fiber type depends on model |
| Power Supply | +24 VDC, <80 mA input |
| Functional Safety | |
| | For MR387 E-Stop Sensor + MR380-1 Multimode Controller |
| ISO 13849 | Category 2 |
| MTTFd | 6.20 E+05 hours (70.8 years) |
| Safe Failure Fraction | SFF=97.85% |
| Diagnostic Coverage | DC=75.76% |
| Environmental Performance | |
| Temperature/Humidity | -5°C to +55°C (23°F to +131°F), 0-95% RH, Non-Condensing |
| Ingress Protection | IP50 |
| Physical Attributes | |
| Mounting | 35mm DIN Rail |
| Housing / Weight | 11.4 x 8.9 x 3.2 cm (4.5 x 3.5 x 1.25 inches) / 230 g (8.1 oz) |

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Drawing Inch [mm]



Ordering Code

9350.03.974 MR380-1-3 DIN Rail Mount Controller for Signaling Sensor Products

Related Products

- MR386 Fiberoptic Microswitch
- MR387 Fiberoptic Emergency Stop
- 972X.XX.XXX Fiberoptic Extension Cable