

The MR387 Series Emergency Stop Switch Systems is a new, innovative emergency signalling system that can be deployed where EMI immunity is required, in hazardous environments or over long distances - beyond the capabilities of conventional electromechanical solutions. The MR387 E-STOP system employs a photo interrupt scheme operating over either a duplex multimode or duplex single mode optical link.



Inherently Safe, Simple Mechanical Device
EPL Mb/Gb/Gc/Db/Dc

The MR387 E-STOP is designed for applications where a system needs to be deactivated when the E-STOP switch sensor is depressed or any system malfunction occurs.

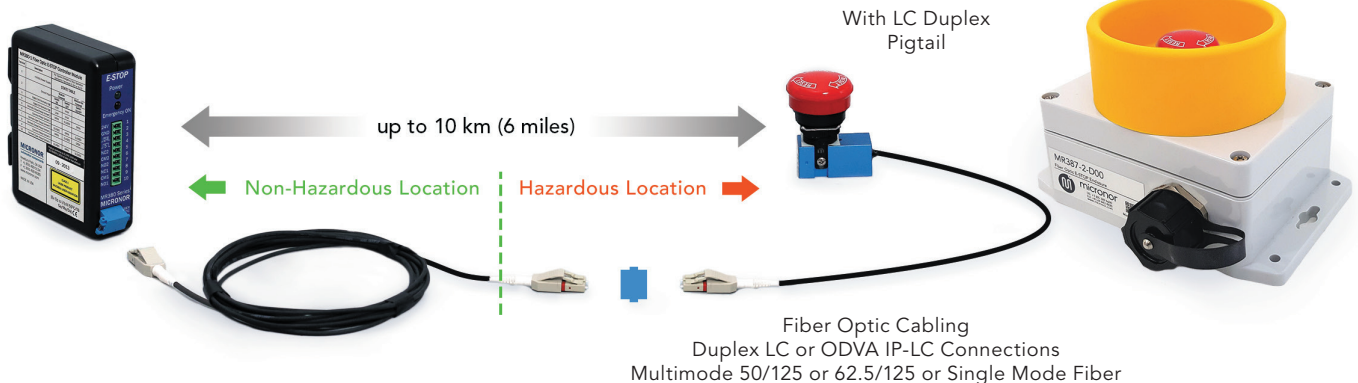
MR380-1 Controller

24 VDC, Digital, Relay Contacts

MR387 E-STOP Sensor

Multiple sensors can be optically wired in series

Panel Mount Housing with ODVA IP-LC Receptacle, IP65



Features

- Sensor is EX Classified "Inherently Safe, Simple Mechanical Device"
- Sensor can be operated in any hazardous or explosive environment - gas, dust, mines, etc.
- Immune to EMI, RFI, lightning, and ground loops
- Immune to high voltage lines
- Panel mountable sensor
- Choice of Ø30mm or Ø40mm mushroom button
- Operates over short to long distances - up to 10 km
- Multiple E-STOP switches can be connected in series
- DIN rail mount and OEM controller available



Sensor Specifications

Functionality	
ISO 13850	ISO 13850 defines the characteristics and requirements for a traditional electromechanical E-STOP switch. The MR380 Sensor/Controller integrates the definition of purpose and functionality only.
Functional States	MR380-1 Series DIN Rail Mount Controller Output States
Normal RESET (Up Position)	Red LED is OFF Digital 5V and 24V Outputs=HI Relay NC contacts=Closed, Relay 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, Relay NO contacts=Closed
Functional Safety	MR387 Sensor + MR380-1 DIN Rail Mount Multimode Controller
ISO 13849	Category 2
MTTF _d	6.20E+05 hours (70.8 years)
Performance Level	PL=c
Safety Integrity Level	SIL=1
Safe Failure Fraction	SFF=97.85%
Diagnostic Coverage	DC=75.76%
Optical Interface	
Interface	Duplex LC for pigtailed sensors, MR387-XX-YY where YY is pigtail length in meters ODVA IP-LC connector receptacle, MR387-XX-D00 sensors in housing
Insertion Loss	For calculating System Loss Budget: MR387-2X-XX, IL=2.5dB max (2dB typical), 62.5/125 OM1 MM Fiber MR387-3X-XX, IL=3.5dB max (3dB typical), 9/125 OS1 SM Fiber MR387-5X-XX, IL=3.5dB max (3dB typical), 50/125 OM2/OM3 MM Fiber Consult Application Note AN118 for guidance on determining system loss budget and maximum distance
Explosive Atmospheres	Inherently Safe, Simple Mechanical Device
EX Classification	Inherently safe, simple mechanical device when used with MR380 Multimode Controller IECEX Test Report GB/CML/ExTR 16.0105.00/00
ATEX	☐ EPL Mb/Gb/Gc/Db/Dc
IEC Ex	EPL Mb/Gb/Gc/Db/Dc
NEC	Exempt
Environmental	
Temperature/Humidity	-40°C to +65°C (-40°F to +150°F), 0-95% RH, Non-Condensing
Ingress Protection	Pigtail Version=IP61, Panel Mount Housing=IP65
Mechanical	
Housing	Aluminum body, anodized finish
Durability	100,000 operations min.
Physical	
Housing Dimension	Consult Mechanical Reference Drawing
Mounting	Consult Mechanical Reference Drawing
Unit Weight	Sensor with 5 meter pigtail, 240 g (8.5 oz)

Specifications subject to change without notice

Ordering Info

M R 3 8 7 - [2] [S] - [0 3]

Fiber

2	62.5/125 MMF (OM1)
3	9/125 SMF (OS1)
5	50/125 MMF (OM2/OM3)

Mushroom Button Size

S	Ø30mm
M	Ø40mm

Optical Interface/Pigtail Length

1R5	LC Duplex Pigtail, 1.5m
03	LC Duplex Pigtail, 3 m
05	LC Duplex Pigtail, 5m
10	LC Duplex Pigtail, 10m
D00	Panel Mount Housing with Switch Guard and ODVA IP-LC Connector Receptacle

Quick Ship Configurations:

MR387-2S-03	E-STOP, Ø30mm Button, 62.5/125 MMF, Pigtail 3m
MR387-2S-D00	E-STOP in Panel Mount Housing, Ø30mm Button, 62.5/125 MMF, ODVA IP-LC Interface
MR387-3S-03	E-STOP, Ø30mm Button, SMF, Pigtail 3m
MR387-3S-D00	E-STOP in Panel Mount Housing, Ø30mm Button, SMF, ODVA IP-LC Interface
MR387-5S-03	E-STOP, Ø30mm Button, 50/125 MMF, Pigtail 3m
MR387-5S-D00	E-STOP in Panel Mount Housing, Ø30mm Button, 50/125 MMF, ODVA IP-LC Interface
MR380-0-1	OEM Controller, 850nm Multimode
MR380-1-1	DIN Rail Mount Controller, 850nm Multimode
MR380-1-2	DIN Rail Mount Controller, 1310nm Multimode
MR380-1-3	DIN Rail Mount Controller, 1310nm Single Mode

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