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Booth 829

The Fiber Optic

BUZZ!

FO Emergency Stop enables Functional Safety in Harsh Environments and Hazardous Locations

Presented by **Dennis Horwitz**, President

Sensors Converge New Tech Breakfast
Wednesday, May 6, 2026, 8-9am

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MR380 Series

Fiber Optic Immunity Series

FO E-STOP Links and Networks Up to 18 km

E-STOP & MICROSWITCH FOR FUNCTIONAL SAFETY

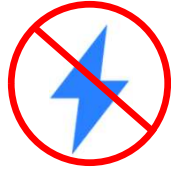
Fiber Optic Emergency Stop Sensor System

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Limitations of Electromechanical E-Stops



Affected by
EM & RF Fields



Metallic - Difficult to
Provide Voltage Isolation



Affected by
Radiation



Extremely
Small Size



Affected by
Magnetic Fields

Wide Temperature
Range

Explosive
Atmosphere

Interference Builds Up
Over Distances



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Fiber Optic E-Stop Offers Immunity and Longer Reach



Immune to
EM & RF Fields



Non-Metallic
Provides Voltage Isolation



Radiation
Resistant



Extremely
Small Size



Affected by
Magnetic Fields

Wide Temperature
Range

Inherently
Safe

Interference-Free
Over Long Distance

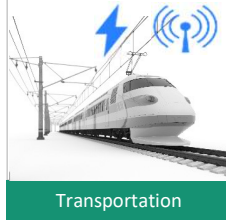


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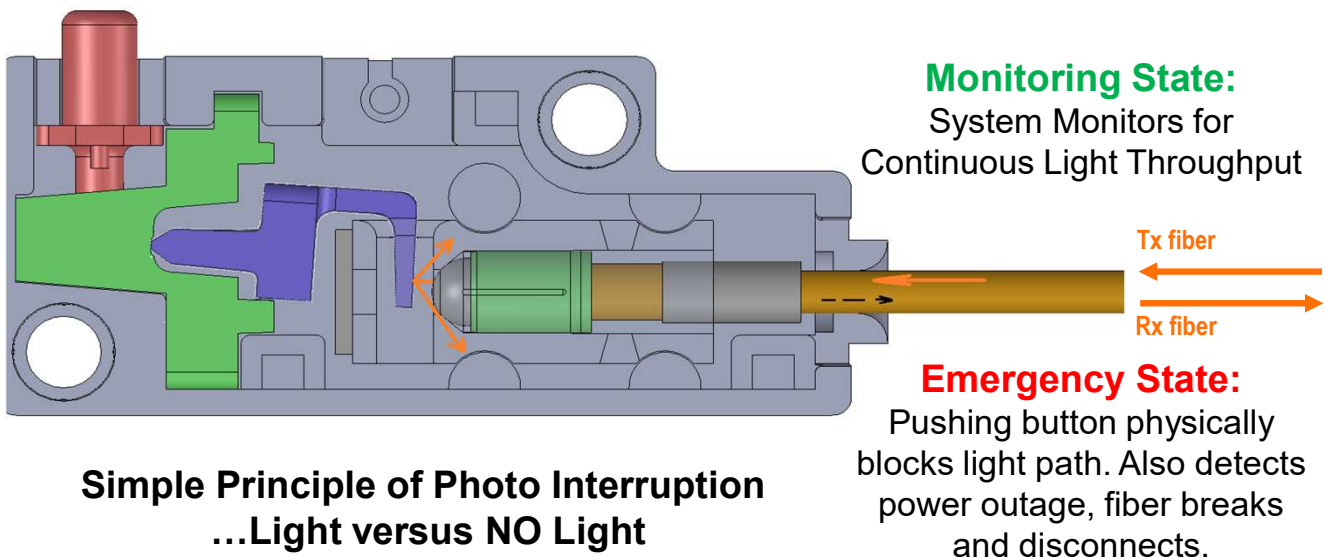
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Examples of FO E-Stop Applications



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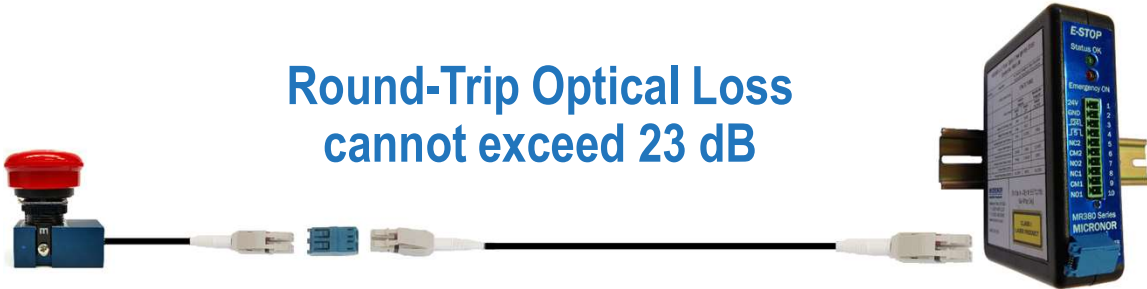
How The FO E-Stop and Microswitch Work



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1. A Single E-Stop can reach up to 18km

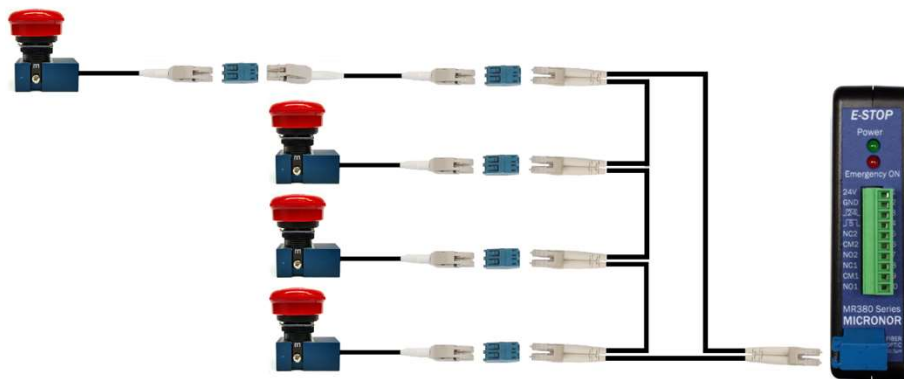
Round-Trip Optical Loss
cannot exceed 23 dB



Worst Case Values:
MM E-Stop = 3 dB, SM E-Stop = 5 dB
MMF Loss = 0.75 dB/km, SMF Loss = 0.5 dB/km
Interconnects (Duplex) = 1 dB



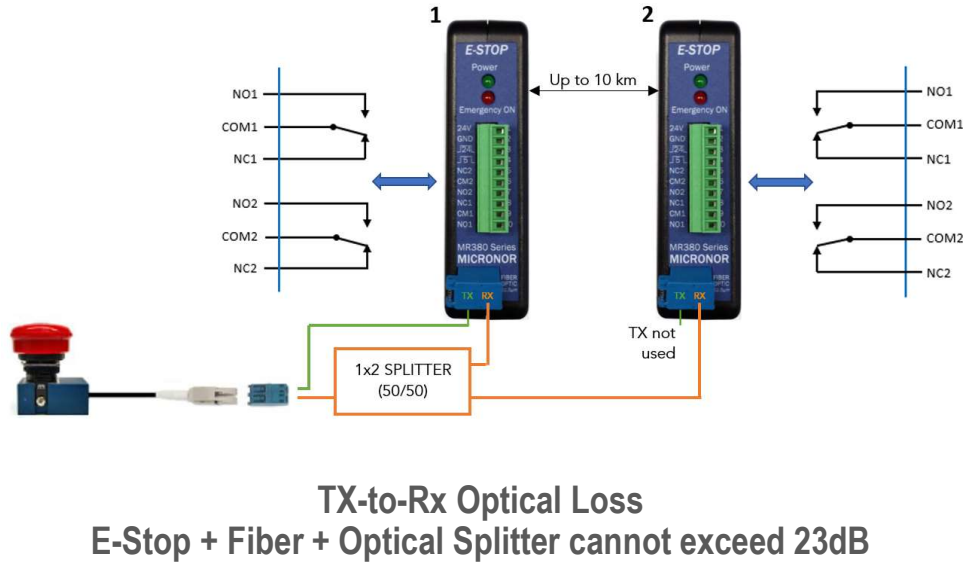
2. Multiple E-Stops Can Be Daisy Chained



Round-Trip Optical Loss
cannot exceed 23dB

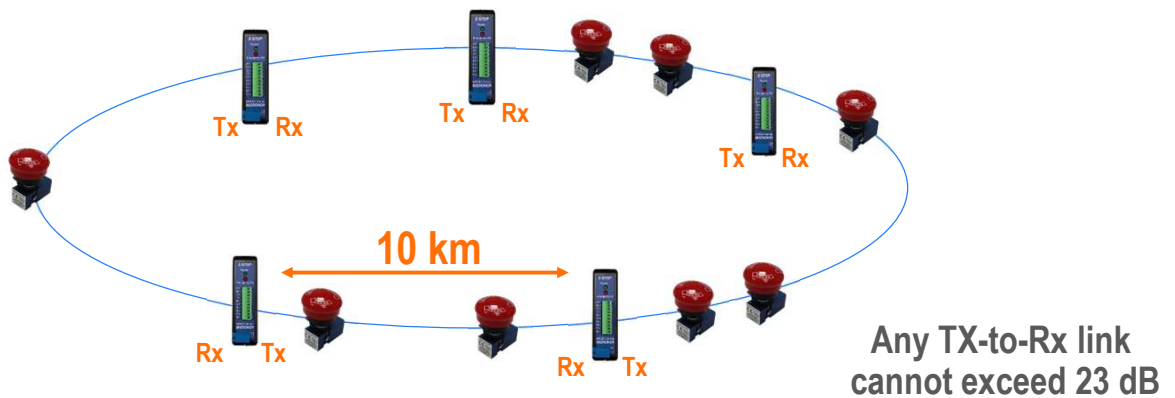


3. Multiple Remote Controllers By Single E-Stop



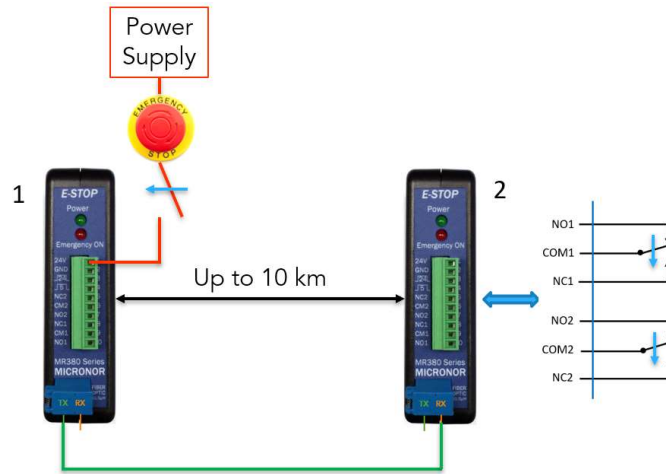
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4. Multiple E-Stops and Controllers can be arranged in a loop for remotely controlling equipment around a large industrial plant or campus



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5. Controllers Can Extend Reach of an EM E-Stop



TX-to-Rx Optical Loss cannot exceed 23dB

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 **Sensors
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May 5-7, 2026
Santa Clara, CA

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Demonstrations**

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