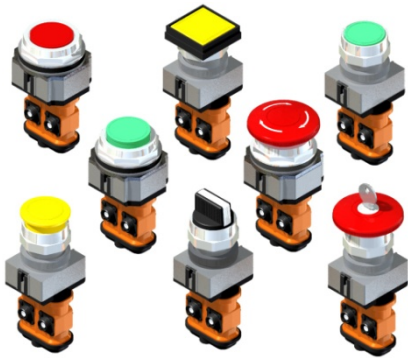


FIBER OPTIC SWITCH

Model:
FOS-01



FiberSwitch

FEATURES

1. Absolutely safe for installation in hazardous areas, as it eliminates the ignition source.
2. Immune to EMI/RFI and high voltage power lines
3. Eliminates electrocution and fire hazards.
4. Can be installed up to 2.5Km away from equipment it controls.
5. Uses standard multimode 62.5/125µm fiber optic cable with FC connectors.
6. Low overall installation cost as fiber optic cable is less costly than copper cable.

APPLICATIONS

- Start-stop control of a motor, heater, MOV, etc.
- Emergency shutdown applications.
- Motor starter with PLC control over fiber optic cable.
(see Application manual for more details & applications)

7. Unique fail safe feature that opens its NC contacts if the optical contact block comes off the operator.
8. Stackable optical contact blocks up to two tiers.
9. Allows for multiple Fiber Optic Switches to be daisy chained.

OVERVIEW

The Fiber Optic Switch (FiberSwitch™) is a revolutionary device that opens new fields of application for fiber optics as well as introducing a new method of controlling electrical devices. It outperforms electrical switches in many applications such as hazardous locations and remote control over long distances. It acts as a switch which interrupts a fiber optic signal to indicate a button press or selection. The Fiber Optic Switch is essentially an optical contact block which connects to a variety of existing operators, making it a perfectly safe switch for hazardous areas.



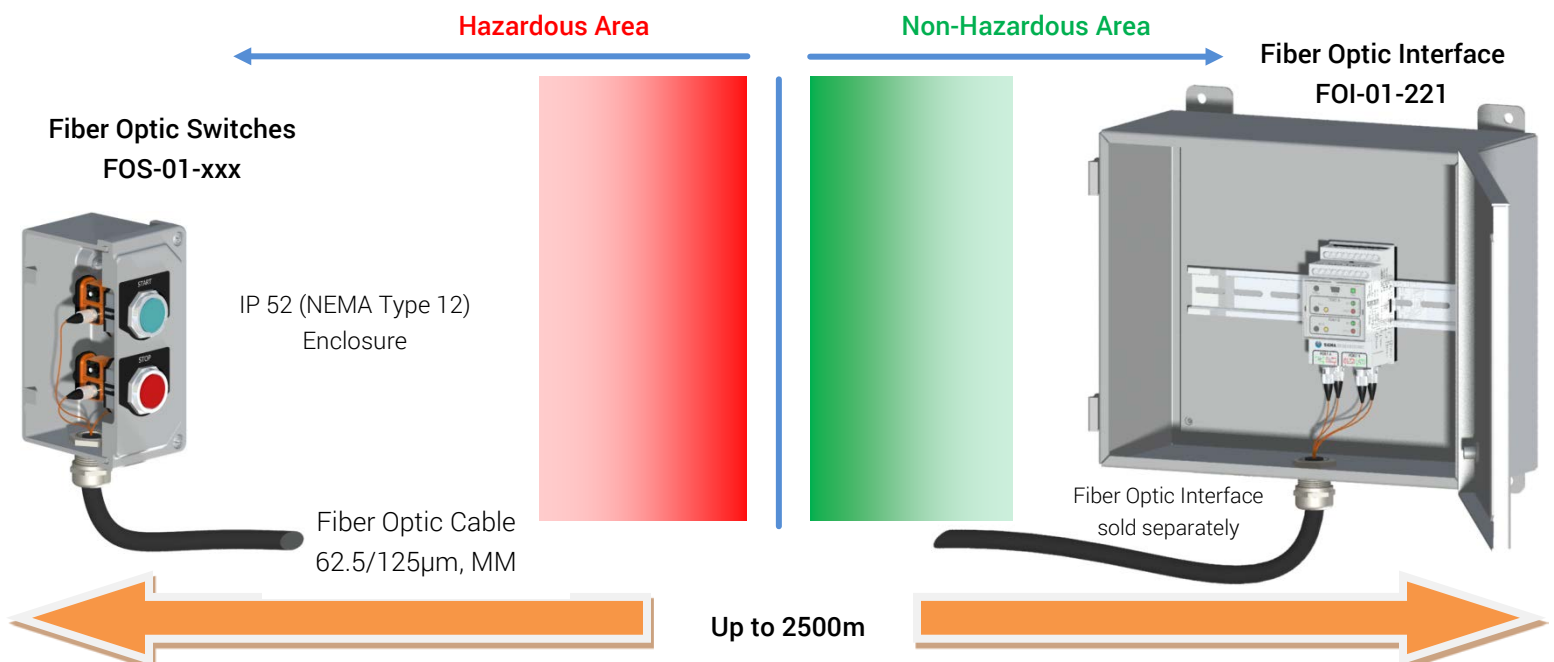
22mm
FiberSwitch™



30mm
FiberSwitch™

FUNCTIONS

Fiber optic switches work in conjunction with Fiber Optic Interfaces to create a system which provides a safe optical signal (rated inherently safe **Ex op is**) into hazardous environments or explosive atmospheres.



SPECIFICATIONS

Max. Distance:	2.5Km@850nm, 7Km@1310nm
Attenuation:	<4dB* for 62.5/125µm MM fiber
Wavelength:	850nm, 1310nm
MM Graded Fiber:	62.5/125µm, OM1
Connector:	FC
Operating Temperature Range:	-25 - 60°C (-13 - 140°F)
Storage Temperature Range:	-40 - 70°C (-40 - 158°F)
Humidity:	20-80% RH (non-condensing)
Enclosure:	IP52 / NEMA Type 12
Operators:	NEMA 30.5mm, IEC 22.5mm
Max. # of Stackable Optical Contact Blocks:	2

*Attenuation may be higher due to size tolerances of the FC connector

Optical Contact Blocks

- NC
- NO
- NC-LB Late Break,
- NO-EM Early Make

Explosive Atmosphere ATEX*

- I/II 1G
- II 1D
- I M1

Explosive Atmosphere IECEx*

- Ex op is IIC T6 Ga
- Ex op is IIIC T60°C Da

Hazardous Area NEC 500, 505, 506 (CEC)*

Divisions:

- Class I,II,III, Div. 1,2, Group A, B, C, D, E, F, G, Temp. Code T6

Zones:

- Class I, Zone 0, AEx op is IIC T6 Ga
- Class II, Zone 20, AEx op is IIIC T60°C Da

* when used in conjunction with the Fiber Optic Interface
FOI-01-221

Weight

One optical contact block with no operator: 29g (1oz)
Two stacked optical contact blocks with no operator: 52g
(1.8oz)

Standards, Codes & Directives

IEC 61010-1, IEC 60825-1, 2
IEC 60079-0, IEC 60079-28, UL1203,
NEC, CEC, RoHS, ATEX

Patents

US 7,786,428 Aug 31/2010
CANADA 2,614,920 Feb 14/2012

Catalog Number

FOS - 01 - x x(x) x

Fiber Optic Switch

Series 01 (optical contact block c/w
2 optical contacts)

of Optical Contact Blocks: 1
2

Optical Contact Types: 1 - NC/NC
! Specify 1 number for single
contact block, 2 numbers for
double contact blocks
2 - NO/NO
3 - NO/NC*
4 - NO/NC**

1st optical contact block

2nd optical contact block***

Adaptor Plate: 1 - for IDEC series TW 22mm
2 - for IDEC series TWTD 30mm

* "Break-Before-Make" contacts. NC contact opens before NO
contact closes.

** "Make-Before-Break" contacts. NO contact closes before NC
contact closes.

*** Leave blank if choosing single optical contact block (ex. 1 optical
contact block: FOS-01-121, 2 optical contact blocks: FOS-01-2121)

! Operator to be specified from IDEC catalog. The adaptor plate must
match the operator (ex. 22mm for TW series, or 30mm for TWTD series)



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FOS-01 Data Sheet

Doc#: FOS-DC-DS-14001-B