

These fiber optic safety switches are intended to be used with PICO-GUARD series controllers in personnel safety and equipment-protection applications.

Features and Description

- Compact, rugged, non-contact, fiber optic element for perimeter and access guarding
- Intended for one emitter/receiver pair for each fiber optic channel (up to 4 pairs per controller)
- Integral 2.2 mm OD, 1 mm core, PE or PTFE-jacketed plastic optical fiber or 5 mm OD, 1mm core, PVC jacketed plastic optical fiber (see models)
- Robust stainless steel housing with tempered glass lens window
- Environmental rating of IEC IP67
- Type 4 per IEC 61496-2 for Safety Category 4 per ISO 13849-1 applications
- Easy installation with multiple mounting bracket options



Refer to PICO-GUARD Controller Manual (p/n 69761) and PICO-GUARD Application and Design Guide (p/n 69763) for complete installation and operation information.

Models

Each PICO-GUARD Point is individually packaged and includes two mounting nuts, a test rod and data sheet. Two Points are required for each emitter/receiver pair. Point emitters and receivers may be used interchangeably. PICO-GUARD 30 mm Points are available with three types of integral plastic optical fiber, in three lengths:

Model	Fiber Description	Fiber Length	Fiber Outer Diameter
SFP30SXP8	Standard Integral Fiber, PVC Coated	2.4 m (8.0')	5 mm (0.2")
SFP30SXP15		4.5 m (15')	
SFP30SXP25		7.5 m (25')	
SFP30SXP50		15 m (50')	
SFP30SXP100		30 m (100')	
SFP30SXT8	Standard Integral Fiber, PTFE Coated	2.4 m (8.0')	2.2 mm (0.09")
SFP30SXT15		4.5 m (15')	
SFP30SXT25		7.5 m (25')	
SFP30SXT50		15 m (50')	
SFP30SXT100		30 m (100')	
SFP30SS8	Standard Integral Fiber, Polyethylene Coated	2.4 m (8.0')	2.2 mm (0.09")
SFP30SS15		4.5 m (15')	
SFP30SS25		7.5 m (25')	
SFP30SS50		15 m (50')	
SFP30SS100		30 m (100')	



Warning ... Explosive Environments

When used in a potentially explosive environment, and if there is a possibility of a significant static accumulation that could cause an electrical spark, **SFP series Fiber Optic Safety Points must be mounted on an electrically grounded surface.**



Warning ... Avoid Misapplication of this Product

PICO-GUARD optical elements must be properly installed and interfaced with a PICO-GUARD Fiber Optic Controller to be considered a safeguard. See the PICO-GUARD Controller Instruction Manual (p/n 69761) and the PICO-GUARD Application and Design Guide (p/n 69763) for complete installation instructions, maintenance instructions, and application limitations.

Use of a Banner PICO-GUARD Fiber Optic Safety Point is generally not allowed for use on:

- Any machine that cannot be stopped immediately after a stop signal is issued, such as single stroke (also known as "full-revolution") clutched machinery.
- Any machine with inadequate or inconsistent machine response time and stopping performance.
- Any machine that ejects materials or component parts through the defined area.
- or in any environment that is likely to adversely affect photoelectric sensing system efficiency (for example, corrosive chemicals or fluids or unusually severe levels of smoke or dust).

Follow all installation and maintenance instructions with extreme care. **The user is responsible for following all local, state, and national laws, rules, codes, and regulations relating to the use of this safeguarding system in any particular application.**

Specifications

Operating Range	Range information is based on the use of integral polished fibers. The use of SFA-FS Fiber Splice or cutting the fiber will reduce range.																																									
	<p>Do not cut polished fiber ends unless absolutely necessary – cut only if the end has been damaged or contaminated, or if it must be cut to length. Use only the Model PFC-2 Fiber Cutter to cut fibers, when necessary. If a polished end is cut, the excess gain will be reduced, the advantage of polishing will be lost, and the operating range will be reduced.</p> <p>Minimum Operating Range: 800 mm (2.6')</p> <p>Maximum Operating Range: see table below</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="6">Maximum Operating Range*</th> </tr> <tr> <th>Receiver \ Emitter</th> <th>SFP30..8</th> <th>SFP30..15</th> <th>SFP30..25</th> <th>SFP30..50</th> <th>SFP30..100</th> </tr> </thead> <tbody> <tr> <td>SFP30..8</td> <td>28.7 m (94.0')</td> <td>25.9 m (85.0')</td> <td>23.2 m (76.0')</td> <td>20.1 m (66.0')</td> <td>13.7 m (45.0')</td> </tr> <tr> <td>SFP30..15</td> <td>25.9 m (85.0')</td> <td>24.4 m (80.0')</td> <td>22.9 m (75.0')</td> <td>19.5 m (64.0')</td> <td>12.8 m (42.0')</td> </tr> <tr> <td>SFP30..25</td> <td>23.2 m (76.0')</td> <td>22.9 m (75.0')</td> <td>21.9 m (72.0')</td> <td>17.1 m (56.0')</td> <td>12.2 m (40.0')</td> </tr> <tr> <td>SFP30..50</td> <td>20.1 m (66.0')</td> <td>19.5 m (64.0')</td> <td>17.1 m (56.0')</td> <td>14.0 m (46.0')</td> <td>11.0 m (36.0')</td> </tr> <tr> <td>SFP30..100</td> <td>13.7 m (45.0')</td> <td>12.8 m (42.0')</td> <td>12.2 m (40.0')</td> <td>11.0 m (36.0')</td> <td>8.5 m (28.0')</td> </tr> </tbody> </table> <p>*In applications using SSM or MSM Series corner mirrors, range is reduced by approximately 8 percent for each mirror used.</p>	Maximum Operating Range*						Receiver \ Emitter	SFP30..8	SFP30..15	SFP30..25	SFP30..50	SFP30..100	SFP30..8	28.7 m (94.0')	25.9 m (85.0')	23.2 m (76.0')	20.1 m (66.0')	13.7 m (45.0')	SFP30..15	25.9 m (85.0')	24.4 m (80.0')	22.9 m (75.0')	19.5 m (64.0')	12.8 m (42.0')	SFP30..25	23.2 m (76.0')	22.9 m (75.0')	21.9 m (72.0')	17.1 m (56.0')	12.2 m (40.0')	SFP30..50	20.1 m (66.0')	19.5 m (64.0')	17.1 m (56.0')	14.0 m (46.0')	11.0 m (36.0')	SFP30..100	13.7 m (45.0')	12.8 m (42.0')	12.2 m (40.0')	11.0 m (36.0')
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Beam Diameter	25 mm (0.98")																																									
Effective Aperture Angle (EAA)	Meets Type 4 requirements per IEC 61406-2, Section 5.2.9; ± 2.5° at 3 m																																									
Operating Conditions	Temperature range: 0° to +70° C (+32° to 158° F) Max. relative humidity: 95% (non-condensing)																																									
Environmental Rating	IEC IP67																																									
Construction	Housing and Window: 304 stainless steel housing, glass window.																																									

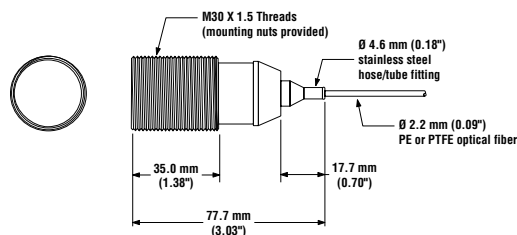
Mounting, Installation and Alignment

See the PICO-GUARD Controller Manual (p/n 69761) and PICO-GUARD Application and Design Guide (p/n 69763) for complete mounting, installation, alignment and operation information.

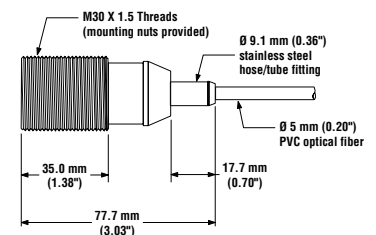
PICO-GUARD Points may be mounted using the two 30 mm threaded nuts provided. Optional mounting brackets are available, see the PICO-GUARD Application and Design Guide. Refer to the appropriate machine safety standards for proper safeguarding requirements and guidelines. The point of detection must be at a distance such that exposure to the hazard is prevented.

Dimensions

SFP30SS and SFP30SXT Series Models



SFP30SXP Series Models



WARRANTY: Banner Engineering Corp. warrants its products to be free from defects for one year. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture found to be defective at the time it is returned to the factory during the warranty period. This warranty does not cover damage or liability for the improper application of Banner products. This warranty is in lieu of any other warranty either expressed or implied.