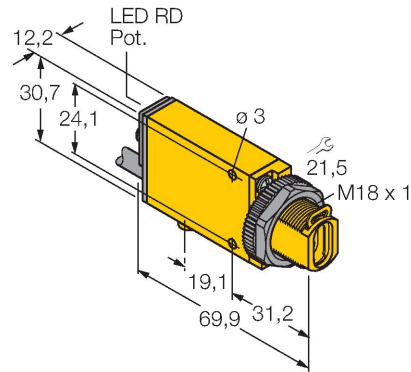


MIAD9F

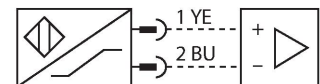
Photoelectric Sensor – Photoelectric Sensor for Glass Fibers



Features

- Cable, PVC, 2 m
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Alignment indicator
- Operating voltage: 5...15 VDC (NAMUR)
- NAMUR output in accordance with DIN 19234 (IEC/EN 60947-5-6)
- ATEX category II 1 G, Ex zone 0

Wiring diagram



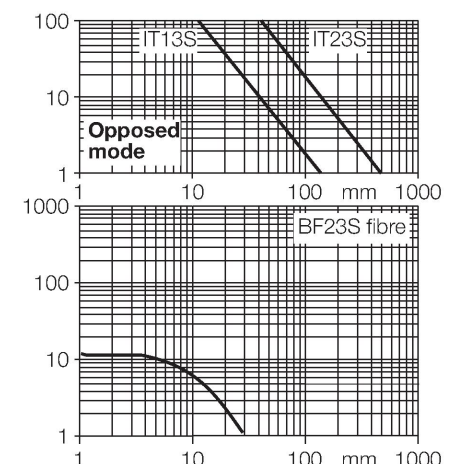
Technical data

Type	MIAD9F
ID	3037715
Optical data	
Function	Fiber optic sensor
Operating mode	Glass fiber
Fiber-optic type	glass
Light type	IR
Wavelength	880 nm
Electrical data	
Voltage	Nom. 8.2 VDC
Current consumption non-actuated	≤ 1.2 mA
Actuated current consumption	≥ 2.1 mA
Output function	Light operation, NAMUR
Switching frequency	≤ 100 Hz
Response time typical	< 5 ms
Setting option	Potentiometer
Mechanical data	
Design	Rectangular with thread, Mini Beam
Dimensions	66 x 12.3 x 30.7 mm
Housing material	Plastic, Thermoplastic material, Yellow
Electrical connection	Cable, 2 m, PVC
Number of cores	2
Core cross-section	0.5 mm ²
Ambient temperature	-40...+70 °C
Relative humidity	0...90 %
Protection class	IP67
Special features	Wash down

Functional principle

Glass or plastic fibers are the optimum choice for high-temperature applications and limited spaces. Optical fibers transfer the light from the sensor to a remote object. Individual fibers are used for opposed sensing mode, whereas bifurcated fibers are suited for diffuse sensing mode.

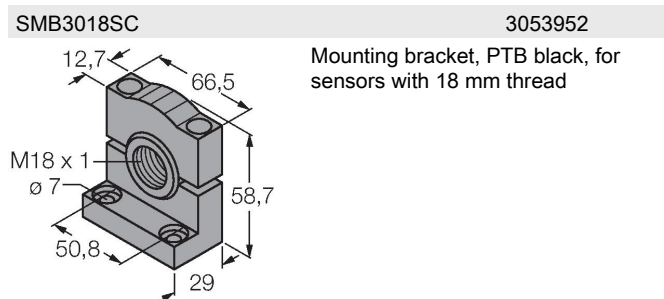
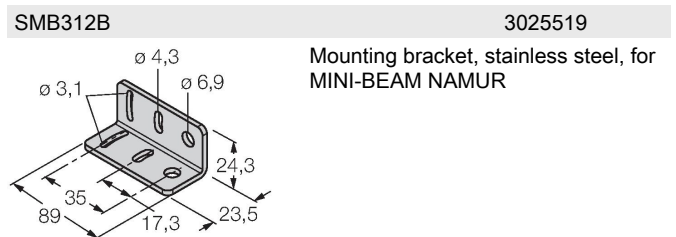
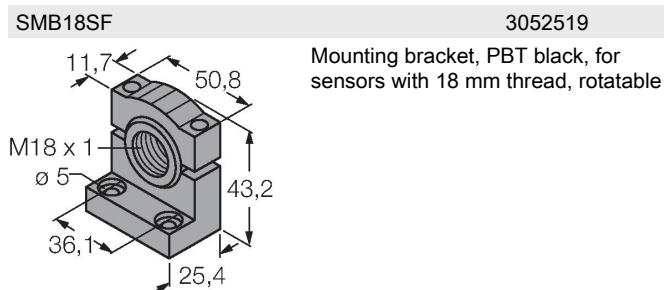
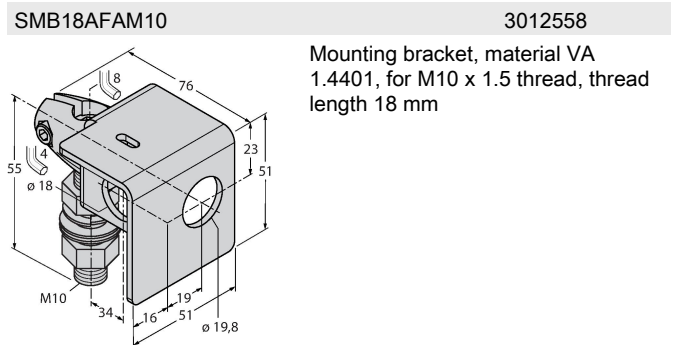
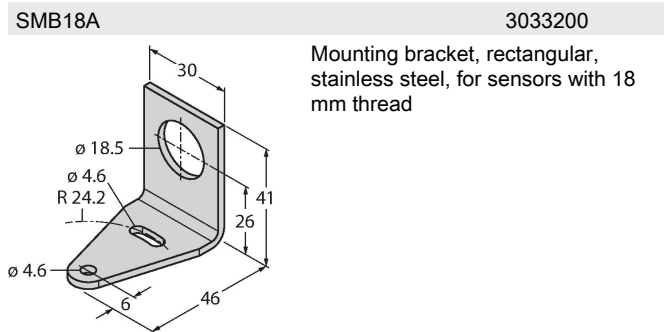
Excess gain curve
Excess gain in relation to distance



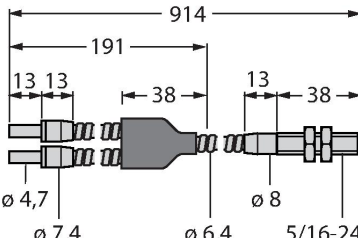
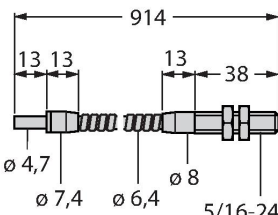
Technical data

Switching state	LED, Red
Excess gain indication	LED, red, flashing
Tests/approvals	
Approvals	CE, FM, CSA
Approvals	ATEX II 1G ATEX II 2G ATEX II 3G
Device marking	Ex II 1 G Ex ia IIC T5 Ga
Ignition protection category	Ex ia IIC T5 Ga
Ex approval acc. to conformity certificate	FM12ATEX0094X

Accessories



Accessories

Dimension drawing	Type	ID	
	IM1-22EX-R	7541231	Isolating switching amplifier, 2-channel; 2 relay outputs; input NAMUR signal; selectable ON/OFF mode for wire-break and short-circuit monitoring; adjustable output mode (NO / NC mode); removable terminal blocks; width 18 mm; universal power supply unit
	BT23S	3017276	Glass fiber, sensing mode: Diffuse mode, threaded sleeve (brass), bundle diameter 3.2 mm, flexible stainless steel jacket, ambient temperatures -140... +250 °C
	IT23S	3017355	Glass fiber, sensing mode: Opposed mode, threaded sleeve (brass), bundle diameter 3.2 mm, flexible stainless steel jacket, ambient temperatures -140... +250 °C

Operating Instructions

Intended use	This device fulfills the directive 94/9/EC and is suited for use in explosion hazardous areas according to EN60079-0:2009, -11:2012, -26:2007. In order to ensure correct operation to the intended purpose it is required to observe the national regulations and directives.
For use in explosion hazardous areas conform to classification	II 1 G (Group II, Category 1 G, electrical equipment for gaseous atmospheres).
Marking (see device or technical data sheet)	Ⓔ II 1 G and Ex ia IIC T5 Ga acc. to EN60079-0, -11 and -26
Local admissible ambient temperature	-25...+70 °C
Installation/Commissioning	These devices may only be installed, connected and operated by trained and qualified staff. Qualified staff must have knowledge of protection classes, directives and regulations concerning electrical equipment designed for use in explosion hazardous areas. Please verify that the classification and the marking on the device comply with the actual application conditions.
	This device is only suited for connection to approved Exi circuits according to EN 60079-0 and EN 60079-11. Please observe the maximum admissible electrical values. After connection to other circuits the sensor may no longer be used in Exi installations. When interconnected to (associated) electrical equipment, it is required to perform the "Proof of intrinsic safety" (EN60079-14).
Installation and mounting instructions	Avoid static charging of cables and plastic devices. Please only clean the device with a damp cloth. Do not install the device in a dust flow and avoid build-up of dust deposits on the device. If the devices and the cable could be subject to mechanical damage, they must be protected accordingly. They must also be shielded against strong electro-magnetic fields. The pin configuration and the electrical specifications can be taken from the device marking or the technical data sheet. In order to avoid contamination of the device, please remove possible blanking plugs of the cable glands or connectors only shortly before inserting the cable or opening the cable socket.
Service/Maintenance	Repairs are not possible. The approval expires if the device is repaired or modified by a person other than the manufacturer. The most important data from the approval are listed.