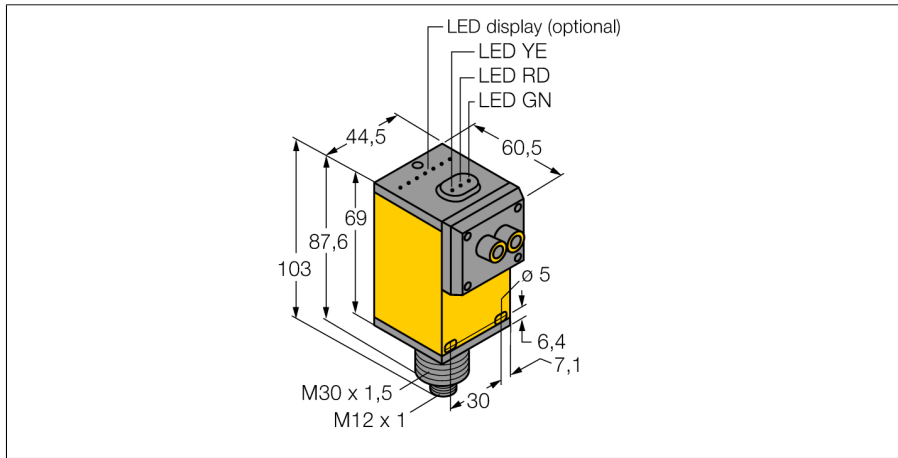
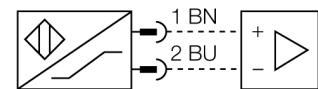


Photoelectric sensor
Base unit for optical fibers
Q45AD9FPQ

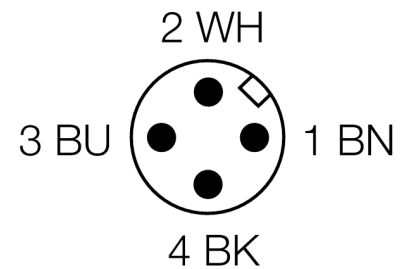


- ATEX category II 1 G, Ex zone 0
- Male M12 x 1
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Operating voltage: 5...15 VDC
- NAMUR output: dark \leq 1.2 mA ; light \geq 2.1 mA
- Acc. to EN 60947-5-6 (NAMUR)

Wiring diagram



Type code	Q45AD9FPQ
Ident no.	3037632
Operating mode	fibres optic sensor
Light type	red
Wavelength	660 nm
Ambient temperature	-40...+70 °C
Voltage	Nom. 8.2 VDC
Non-actuated current consumption	\leq 1 mA
Actuated current consumption	\geq 2.1 mA
No-load current I_0	\leq 2.1 mA
Output function	light operation, NAMUR
Switching frequency	\leq 100 Hz
Device designation	Ex II 1 G Ex ia IIC T5
Design	rectangular, Q45
Dimensions	60.5 x 44.5 x 102.6 mm
Housing material	plastic, PBT
Lens	plastic, acrylic
Connection	male, M12 x 1
Protection class	IP67
MTTF	67 years acc. to SN 29500 (Ed. 99) 40 °C
Protection type	Ex ia IIC T6
Ex approval acc. to conformity certificate	KEMA 03ATEX 1441 X
Switching state	LED red

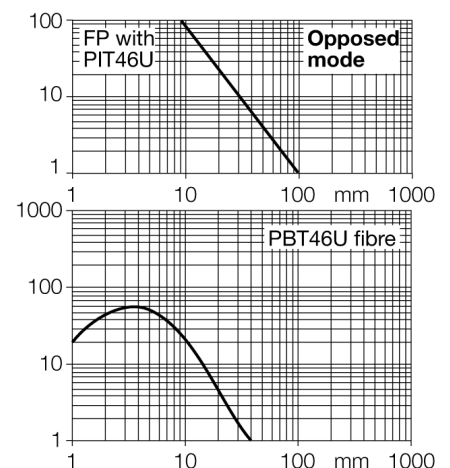


Functional principle

Glass or fibre optic sensors are the optimum choice for high temperature or space restricted applications. Fibre optics transfer the light from the sensor to a remote object. Individual fibre optics are used for opposed mode sensing, whereas bifurcated fibre optics are suited for retro-reflective or diffuse mode operation.

Excess gain curve

Excess gain in relation to the distance

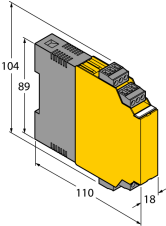
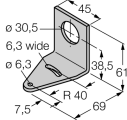
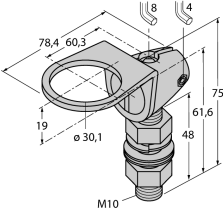
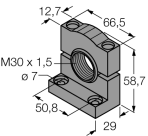


**Photoelectric sensor
Base unit for optical fibers
Q45AD9FPQ**

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Industrial
Automation

Accessories

Type code	Ident no.	Description	Dimension drawing
IM1-22EX-R/24VDC	7541210	isolating switching amplifier, two channels; input for NAMUR signals; optional wire-break and short-circuit monitoring function; selectable normally open or normally closed performance; removable terminal blocks; 18 mm wide; supply voltage 24 VDC	 <p>Technical drawing showing the dimensions of the IM1-22EX-R/24VDC amplifier. The drawing is a perspective view of a yellow and grey rectangular component. Dimensions are: total height 104 mm, mounting hole offset 89 mm, total width 110 mm, and component thickness 18 mm.</p>
SMB30A	3032723	Mounting bracket, stainless steel, for sensors with 30 mm thread	 <p>Technical drawing showing the dimensions of the SMB30A mounting bracket. The drawing is a perspective view of a stainless steel L-shaped bracket. Dimensions include: hole diameter $\phi 30.5$, hole offset 45 mm, bracket width 6.3 mm, hole diameter $\phi 6.3$, hole offset 38.5 mm, hole diameter $\phi 6.3$, hole offset 61 mm, hole diameter $\phi 7.5$, hole offset R 40, and hole offset 69 mm.</p>
SMB30FAM10	3011185	Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm	 <p>Technical drawing showing the dimensions of the SMB30FAM10 mounting bracket. The drawing is a perspective view of a stainless steel bracket with a circular hole and a threaded section. Dimensions include: hole diameter $\phi 30.1$, hole offset 78.4 mm, hole offset 60.3 mm, hole offset 19 mm, hole offset 75 mm, hole offset 61.6 mm, hole offset 48 mm, and thread size M10.</p>
SMB30SC	3052521	Mounting bracket, PBT black; for 30 mm thread; with 4 screws M5 x 0.8	 <p>Technical drawing showing the dimensions of the SMB30SC mounting bracket. The drawing is a perspective view of a black PBT bracket. Dimensions include: hole diameter $\phi 7$, hole offset 12.7 mm, hole offset 66.5 mm, hole offset 58.7 mm, hole offset 50.8 mm, and hole offset 29 mm.</p>

Photoelectric sensor

Base unit for optical fibers

Q45AD9FPQ

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Industrial
Automation

Operating manual

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)

Ex II 1 G and Ex ia IIC T5 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 compliant to EN60079-0 and -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.