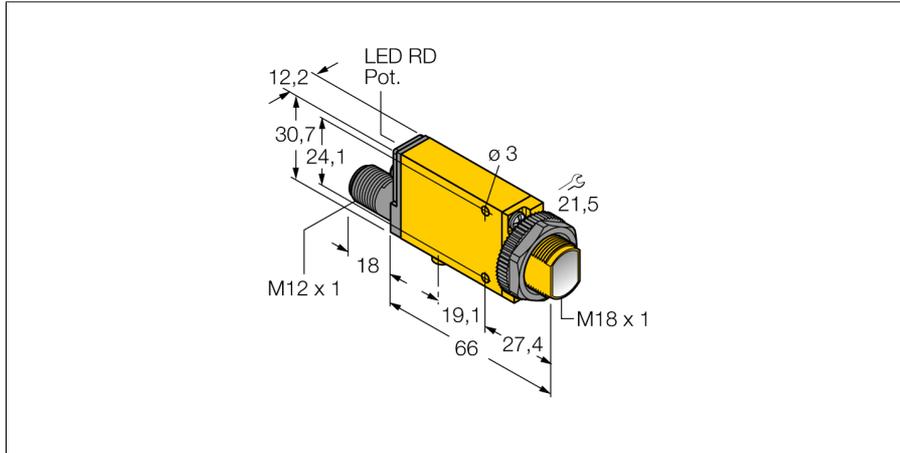
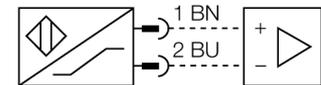


**Photoelectric sensor
retroreflective sensor with polarizing filter
MIAD9LVAGQ**



- ATEX II 1 G approval
- Acc. to EN 60947-5-6 (NAMUR)
- Metallic optical fibers must be grounded
- Male M12 x 1, 4-pin
- Protection class IP67
- Sensitivity adjustable via potentiometer
- Alignment indicator
- Sensitivity adjustable via potentiometer
- ATEX II 1 G approval
- Acc. to EN 60947-5-6 (NAMUR)

Wiring diagram



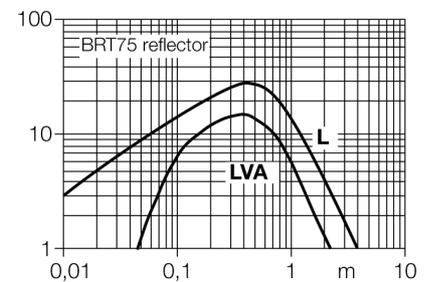
| | |
|--|--|
| Type code | MIAD9LVAGQ |
| Ident no. | 3037294 |
| Operating mode | retro-reflective sensor with polarisation filter |
| Light type | red |
| Wavelength | 650 nm |
| Range | 50...2000 mm |
| Ambient temperature | -40...+70 °C |
| Voltage | Nom. 8.2 VDC |
| Non-actuated current consumption | ≤ 1.2 mA |
| Actuated current consumption | ≥ 2.1 mA |
| Output function | light operation, NAMUR |
| Switching frequency | ≤ 100 Hz |
| Device designation | Ex II 1 G Ex ia IIC T5 |
| Design | rectangular, Mini Beam |
| Dimensions | 84 x 12.3 x 30.7 mm |
| Housing material | plastic, PBT, yellow |
| Lens | plastic, acrylic |
| Connection | male, M12 x 1 |
| Protection class | IP67 |
| Protection type | Ex ia IIC T5 Ga |
| Ex approval acc. to conformity certificate | FM12ATEX0094X |
| Switching state | LED red |
| Excess gain indication | LED red flashing |

Functional principle

Retro-reflective sensors incorporate emitter and receiver in a single compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device. A smaller sensing range and susceptibility of devices without polarisation filter can be of disadvantage when shiny objects have to be detected.

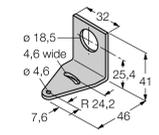
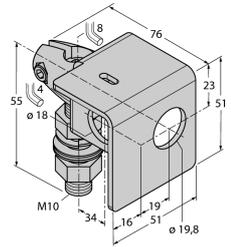
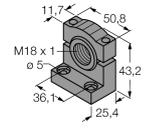
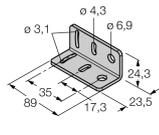
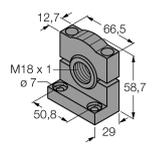
Excess gain curve

Excess gain in relation to the distance



**Photoelectric sensor
retroreflective sensor with polarizing filter
MIAD9LVAGQ**

Accessories

| Type code | Ident no. | Description | Dimension drawing |
|-------------|-----------|---|---|
| SMB18A | 3033200 | Mounting bracket, stainless steel, for sensors with 18 mm thread |  |
| SMB18AFAM10 | 3012558 | Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm |  |
| SMB18SF | 3052519 | Mounting bracket, PTB black steel, for sensors with 18 mm thread |  |
| SMB312B | 3025519 | Mounting bracket, stainless steel, for MINI-BEAM NAMUR |  |
| SMB3018SC | 3053952 | Mounting bracket, PTB black, for sensors with 18 mm thread |  |

Wiring accessories

| Type code | Ident no. | Description | Dimension drawing |
|-----------|-----------|--|-------------------|
| MQD9-406 | 3045135 | Connection cable, female M12, 4-pin, cable length: 1.83 m, sheath material: PVC, blue; other cable lengths and qualities available, see www.turck.com | |

**Photoelectric sensor
retroreflective sensor with polarizing filter
MIAD9LVAGQ**

Wiring accessories

| Type code | Ident no. | Description | Dimension drawing |
|------------|-----------|---|-------------------|
| MQD9-406RA | 3047106 | Connection cable, female M12, angled, 4-pin, cable length: 1.83 m, sheath material: PVC, blue; other cable lengths and qualities available, see www.turck.com | |

Function accessories

| Type code | Ident no. | Description | Dimension drawing |
|------------|-----------|--|-------------------|
| IM1-22EX-R | 7541231 | Isolating switching amplifier, dual-channel; 2 relay outputs NO; input NAMUR signal; selectable ON/OFF mode for wire-break and short-circuit monitoring; adjustable signal flow (NO/ NC mode); removable terminal blocks; 18 mm width; universal voltage supply unit | |
| BRT-3 | 3016164 | Round reflector, reflection coefficient 1.0, material acrylic, ambient temperature -20 ... +60 °C | |

Photoelectric sensor retroreflective sensor with polarizing filter MIAD9LVAGQ

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.