



Model Number

GD18/GV18/25/102/159

Thru-beam sensor
with 3-pin, M12 x 1 plastic connector

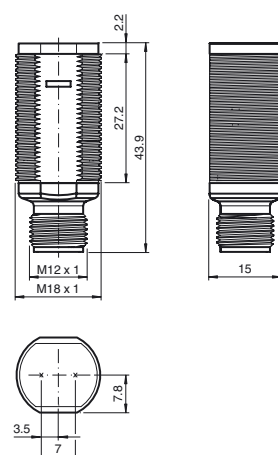
Features

- Efficient Line in a short M18 plastic housing for standard applications
- Very high detection range
- 4 LEDs indicator for 360° visibility
- Version with front optical face
- DC voltage version

Product information

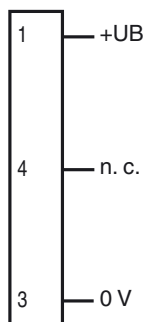
The GLV/GLK18 series sensors help improve the efficiency of machines and systems. The design of the M18 plastic housing, the connection technology, and sensor properties are highly standardized. Concentrating on the key sensor requirements has produced a robust and reliable product series for DC and AC/DC voltage systems without any over-engineering. The mounting set included in the scope of delivery and the optimized potentiometer design ensure fast assembly and easy configuration.

Dimensions

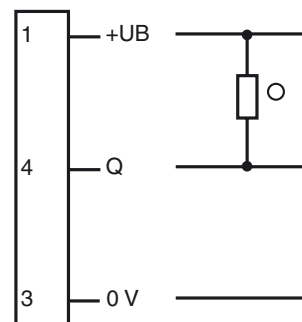


Electrical connection

Emitter

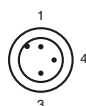


Receiver



○ = Light on
● = Dark on

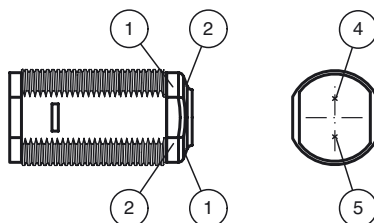
Pinout



Wire colors in accordance with EN 60947-5-2

| | | |
|---|----|---------|
| 1 | BN | (brown) |
| 3 | BU | (blue) |
| 4 | BK | (black) |

Indicators/operating means



| | | |
|---|-------------------|--------|
| 1 | Operating display | green |
| 2 | Signal display | yellow |
| 4 | Emitter | |
| 5 | Receiver | |

Technical data**System components**

| | |
|----------|-----------------|
| Emitter | GD18/159 |
| Receiver | GV18/25/102/159 |

General specifications

| | |
|----------------------------|--------------------------------------|
| Effective detection range | 0 ... 20 m |
| Threshold detection range | 25 m |
| Light source | LED |
| Light type | modulated visible red light , 640 nm |
| Diameter of the light spot | approx. 1300 mm at 25 m |
| Angle of divergence | approx. 3 ° |
| Optical face | frontal |
| Ambient light limit | 30000 Lux |

Functional safety related parameters

| | |
|--------------------------------|-------|
| MTTF _d | 630 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Indicators/operating means

| | |
|---------------------|---|
| Operation indicator | LED green, statically lit Power on |
| Function indicator | Receiver: LED yellow, lights up when light beam is free, flashes when falling short of the stability control ; OFF when light beam is interrupted |

Electrical specifications

| | | |
|------------------------|----------------|----------------|
| Operating voltage | U _B | 10 ... 30 V DC |
| No-load supply current | I ₀ | < 20 mA |

Output

| | | |
|---------------------|---|------------|
| Switching type | light on | |
| Signal output | 1 NPN, short-circuit protected open collector | |
| Switching voltage | max. 30 V DC | |
| Switching current | max. 100 mA | |
| Voltage drop | U _d | ≤ 1.5 V DC |
| Switching frequency | f | 500 Hz |
| Response time | ≤ 1 ms | |

Conformity

| | |
|------------------|--------------|
| Product standard | EN 60947-5-2 |
|------------------|--------------|

Ambient conditions

| | |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 60 °C (-13 ... 140 °F) |
| Storage temperature | -40 ... 70 °C (-40 ... 158 °F) |

Mechanical specifications

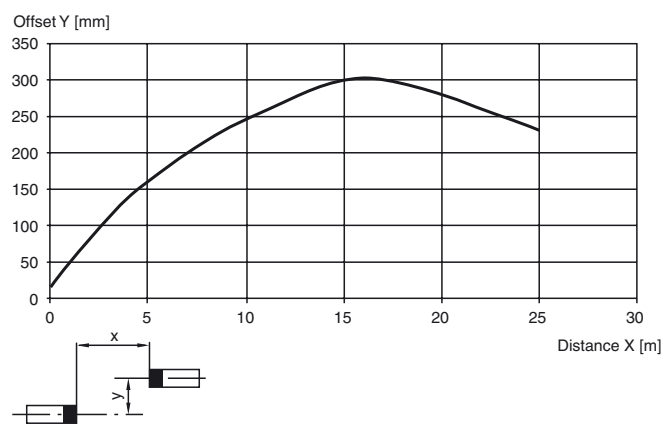
| | |
|----------------------|--------------------------|
| Degree of protection | IP67 |
| Connection | 3-pin, M12 x 1 connector |
| Material | |
| Housing | PC |
| Optical face | PMMA |
| Connector | plastic |
| Mass | approx. 10 g per device |

Approvals and certificates

| | |
|------------------|--|
| Protection class | II, rated insulation voltage ≤ 250 V AC with pollution degree 1-2 according to IEC 60664-1 |
| UL approval | cULus Listed, Class 2 Power Source, Type 1 enclosure |
| CCC approval | CCC approval / marking not required for products rated ≤ 36 V |

Curves/Diagrams**Characteristic response curve**

GD18/GV18...

**Accessories****CPZ18B03**

Mounting Bracket with swivel nut

BF 18

Mounting flange, 18 mm

BF 18-F

Plastic mounting adapter, 18 mm

BF 5-30

Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm

V11-G-2M-PUR

Female cordset, M12, 3-pin, PUR cable

Other suitable accessories can be found at www.pepperl-fuchs.com

