

# Background suppression sensor

GLV18-8-H-120/25/102/115



- Efficient Line in a short M18 plastic housing for standard applications
- Best background suppressor in its class
- Minimal black-white difference
- 4 LEDs indicator for 360° visibility
- Optimized potentiometer design for a clear control button layout in the application

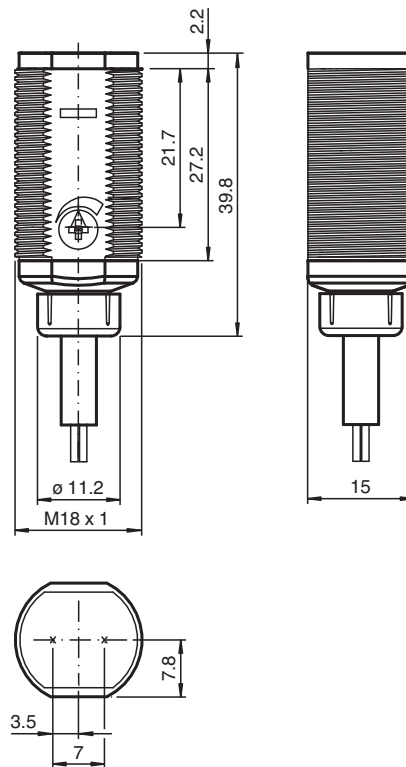
Triangulation sensor with background suppression, M18 threaded housing design, plastic housing, front optical face, 120 mm detection range, red light, light on, DC version, NPN output, fixed cable



## Function

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



Release date: 2023-04-04 Date of issue: 2023-04-04 Filename: 212928\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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## Technical Data

### General specifications

|                                   |                                        |
|-----------------------------------|----------------------------------------|
| Detection range                   | 10 ... 120 mm                          |
| Detection range min.              | 10 ... 40 mm                           |
| Detection range max.              | 15 ... 120 mm                          |
| Adjustment range                  | 40 ... 120 mm                          |
| Reference target                  | 100 mm x 100 mm Kodak white            |
| Light source                      | LED                                    |
| Light type                        | modulated visible red light , 640 nm   |
| Black-white difference (6 %/90 %) | < 6 %                                  |
| Diameter of the light spot        | approx. 6 mm at detection range 120 mm |
| Opening angle                     | approx. 2 °                            |
| Optical face                      | frontal                                |
| Ambient light limit               | 30000 Lux                              |
| Hysteresis                        | H < 2 %                                |

### Functional safety related parameters

|                                |        |
|--------------------------------|--------|
| MTTF <sub>d</sub>              | 1340 a |
| Mission Time (T <sub>M</sub> ) | 20 a   |
| Diagnostic Coverage (DC)       | 0 %    |

### Indicators/operating means

|                     |                                            |
|---------------------|--------------------------------------------|
| Operation indicator | LED green, statically lit Power on         |
| Function indicator  | LED yellow: lights when object is detected |
| Control elements    | Sensing range adjuster                     |

### Electrical specifications

|                        |                |                |
|------------------------|----------------|----------------|
| Operating voltage      | U <sub>B</sub> | 10 ... 30 V DC |
| No-load supply current | I <sub>0</sub> | < 15 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 <sub>d</sub> | ≤ 1.5 V DC                                    |
| Switching frequency | f              | 500 Hz                                        |
| Response time       |                | ≤ 1 ms                                        |

### Conformity

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

### Approvals and certificates

|                  |                                                                                           |
|------------------|-------------------------------------------------------------------------------------------|
| Protection class | II, Rated insulation voltage ≤ 50 V AC with pollution degree 1-2 according to IEC 60664-1 |
| UL approval      | cULus Listed, Class 2 Power Source                                                        |
| CCC approval     | CCC approval / marking not required for products rated ≤36 V                              |

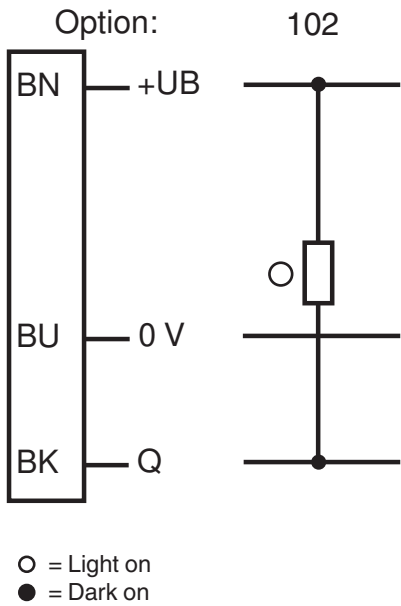
### Ambient conditions

|                     |                                |
|---------------------|--------------------------------|
| Ambient temperature | -25 ... 60 °C (-13 ... 140 °F) |
| Storage temperature | -30 ... 70 °C (-22 ... 158 °F) |

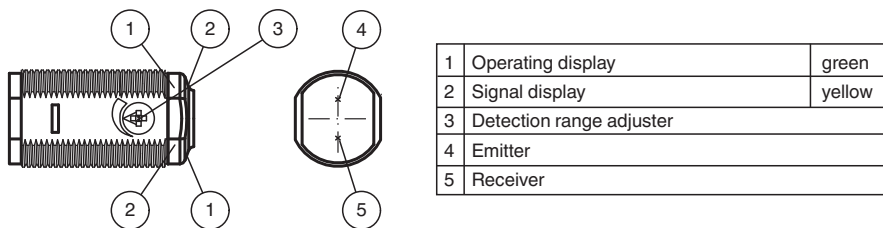
### Mechanical specifications

|                      |                 |
|----------------------|-----------------|
| Degree of protection | IP67            |
| Connection           | 2 m fixed cable |
| Material             |                 |
| Housing              | PC              |
| Optical face         | PMMA            |
| Cable                | PVC             |
| Mass                 | approx. 75 g    |

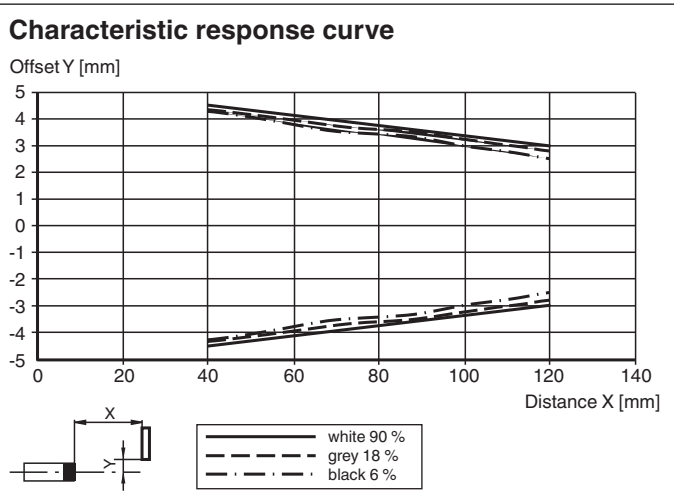
Connection Assignment



Assembly

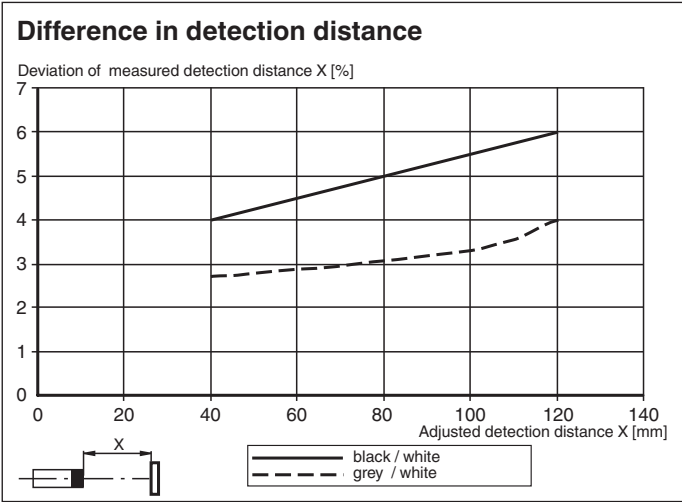


Characteristic Curve



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Characteristic Curve



Accessories

|                                                                                     |                 |                                                                                   |
|-------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|
|    | <b>CPZ18B03</b> | Mounting Bracket with swivel nut                                                  |
|    | <b>BF 18</b>    | Mounting flange, 18 mm                                                            |
|   | <b>BF 18-F</b>  | Plastic mounting adapter, 18 mm                                                   |
|  | <b>BF 5-30</b>  | Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm |