

## Diffuse mode sensor

GLV18-8-600-IR/25/102/115



- Efficient Line in a short M18 plastic housing for standard applications
- Very high detection range
- 4 LEDs indicator for 360° visibility
- Optimized potentiometer design for a clear control button layout in the application
- Version with front optical face
- DC voltage version

Diffuse mode sensor, M18 threaded housing design, plastic housing, front optical face, 600 mm sensing 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.

### Application

Packaging industry:

- Presence checks, track loading, completeness checks, stack height control

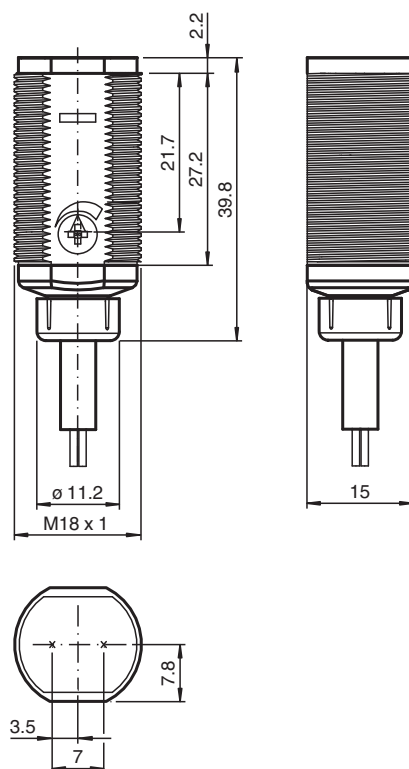
Material handling:

- Presence checks, target sensor, profile checks, trigger sensor

Automatic doors, gates and access systems, elevator:

- Secure detection for automatic door and gate systems
- Monitoring function in turnstiles
- Closing edge monitoring in elevators

## Dimensions



## Technical Data

### General specifications

|                            |                                   |
|----------------------------|-----------------------------------|
| Detection range            | 50 ... 600 mm adjustable          |
| Detection range max.       | 0 ... 600 mm                      |
| Reference target           | 100 mm x 100 mm Kodak white       |
| Light source               | LED                               |
| Light type                 | modulated infrared light , 850 nm |
| Diameter of the light spot | approx. 60 mm at 600 mm           |
| Opening angle              | approx. 6 °                       |
| Optical face               | frontal                           |
| Ambient light limit        | 30000 Lux                         |
| Hysteresis                 | H < 15 %                          |

### Functional safety related parameters

|                                |       |
|--------------------------------|-------|
| MTTF <sub>d</sub>              | 920 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 ; flashes when falling short of the operating reserve |
| Control elements    | sensitivity adjustment                                                                           |

### Electrical specifications

|                        |                |                |
|------------------------|----------------|----------------|
| Operating voltage      | U <sub>B</sub> | 10 ... 30 V DC |
| No-load supply current | I <sub>0</sub> | < 20 mA        |

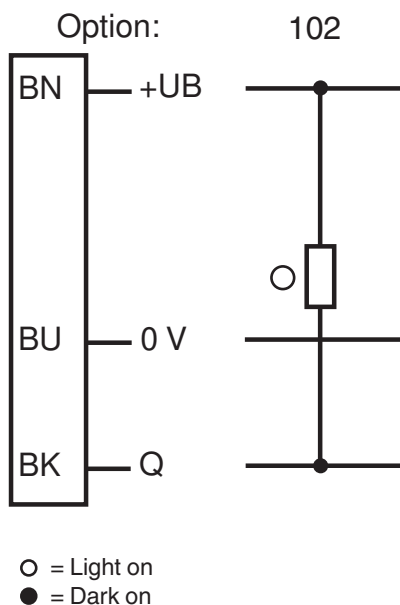
### Output

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 295494\_eng.pdf

## Technical Data

|                                   |          |                                                                                                |
|-----------------------------------|----------|------------------------------------------------------------------------------------------------|
| 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                      | $U_d$    | $\leq 1.5$ V DC                                                                                |
| Switching frequency               | $f$      | 500 Hz                                                                                         |
| Response time                     |          | $\leq 1$ ms                                                                                    |
| <b>Conformity</b>                 |          |                                                                                                |
| Product standard                  |          | EN 60947-5-2                                                                                   |
| <b>Approvals and certificates</b> |          |                                                                                                |
| Protection class                  |          | II, Rated insulation voltage $\leq 50$ 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 $\leq 36$ V                             |
| <b>Ambient conditions</b>         |          |                                                                                                |
| Ambient temperature               |          | -25 ... 60 °C (-13 ... 140 °F)                                                                 |
| Storage temperature               |          | -40 ... 70 °C (-40 ... 158 °F)                                                                 |
| <b>Mechanical specifications</b>  |          |                                                                                                |
| Degree of protection              |          | IP67                                                                                           |
| Connection                        |          | 2 m fixed cable                                                                                |
| Material                          |          |                                                                                                |
| Housing                           |          | PC                                                                                             |
| Optical face                      |          | PMMA                                                                                           |
| Cable                             |          | PVC                                                                                            |
| Mass                              |          | approx. 75 g                                                                                   |

## Connection Assignment

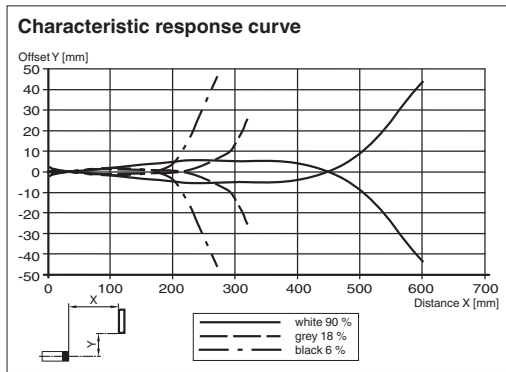


Assembly

Diagram showing the front and side views of the sensor. The front view shows the operating display (1), signal display (2), sensitivity adjustment (3), emitter (4), and receiver (5). The side view shows the sensor's profile.

|   |                        |        |
|---|------------------------|--------|
| 1 | Operating display      | green  |
| 2 | Signal display         | yellow |
| 3 | Sensitivity adjustment |        |
| 4 | Emitter                |        |
| 5 | Receiver               |        |

Characteristic Curve



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 |