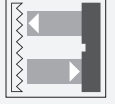


# Retroreflective sensor

## GLV18-6-4594-10M



- Short design in M18 plastic housing
- 4 LEDs indicator for 360° visibility
- Optimal price/power ratio

### Retroreflective sensor



### 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

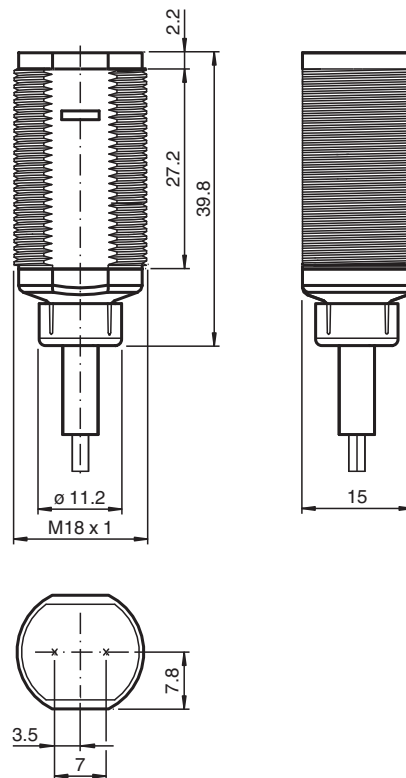
#### Material handling:

- 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	
Effective detection range	0 ... 4 m
Reflector distance	0.05 ... 4 m
Threshold detection range	5.5 m
Reference target	reflector C110-2
Light source	IRED
Light type	IRED , Modulated light , 880 nm
Polarization filter	no
Diameter of the light spot	approx. 200 mm at 5.5 m
Opening angle	approx. 2 °
Optical face	frontal
Ambient light limit	30000 Lux
Accessories provided	Mounting Nut
Indicators/operating means	
Operation indicator	LED green, statically lit Power on
Function indicator	LED yellow: lights up when receiving the light beam ; flashes when falling short of the operating reserve; 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

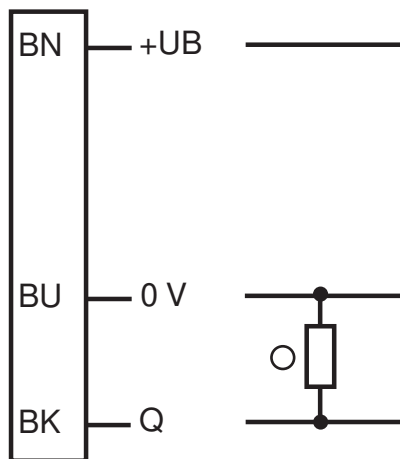
Release date: 2023-04-05 Date of issue: 2023-04-05 Filename: 70124170\_eng.pdf

## Technical Data

Signal output	1 PNP, 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		fixed cable 10 m
<b>Material</b>		
Housing		PC
Optical face		PMMA
Mass		approx. 335 g

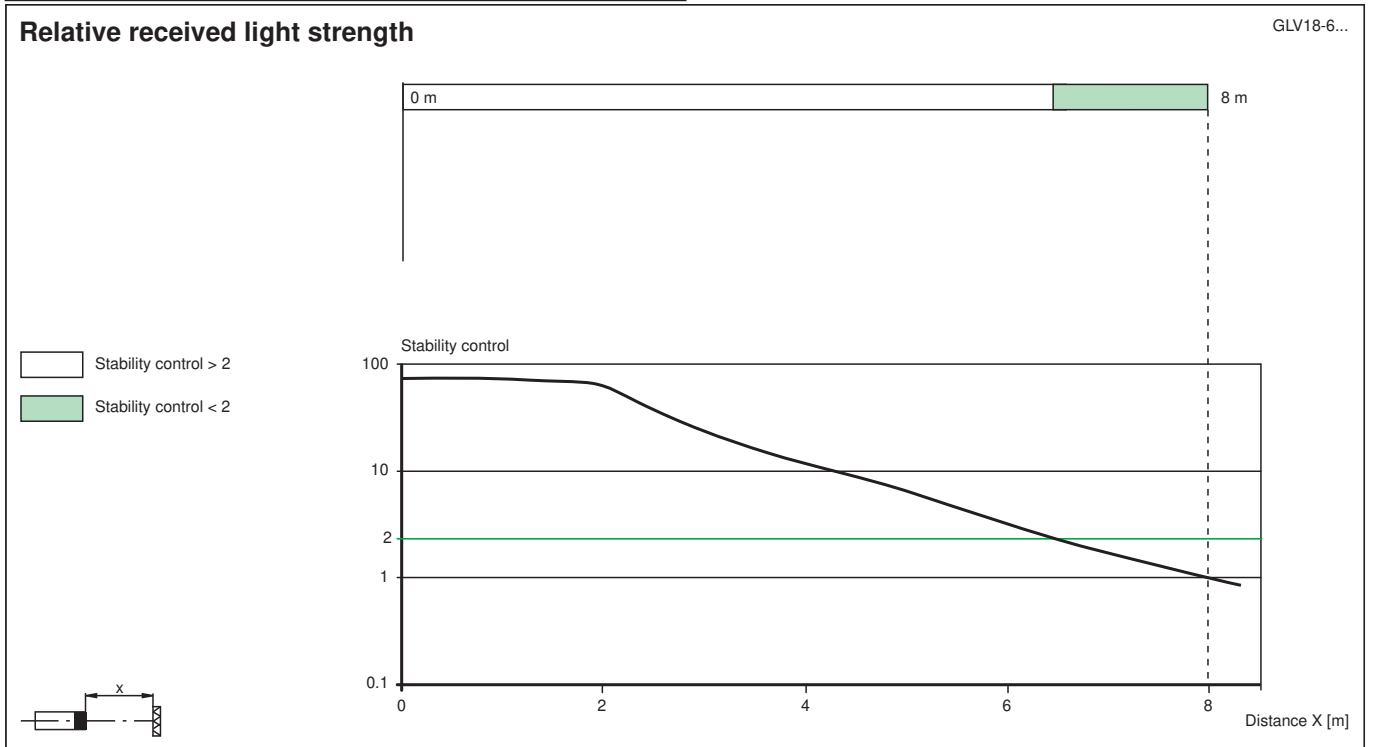
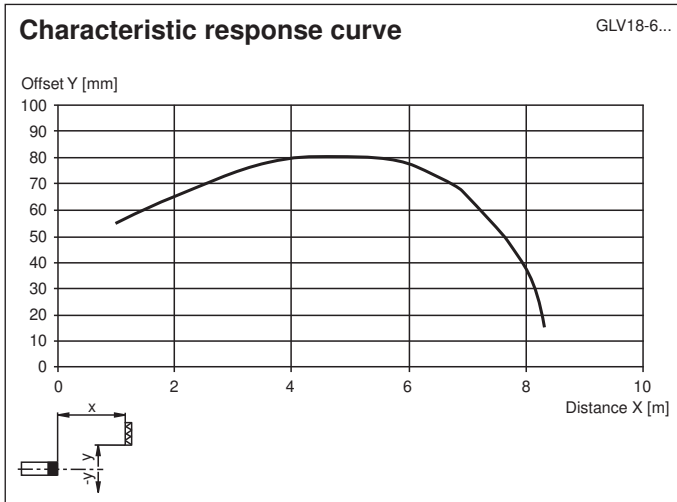
## Connection Assignment

Option: 103



- = Light on
- = Dark on

**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

Release date: 2023-04-05 Date of issue: 2023-04-05 Filename: 70124170\_eng.pdf

## System Description

### System Description

The retro-reflective sensor contains both an emitter and a receiver in a single housing. A reflector reflects the light from emitter back to the receiver. If an object interrupts the light beam, the switching function is initiated.

### Mounting

**Sensor:** The sensors have an M18 x 1 threaded housing design, and two 24 mm AF nuts, which must be fitted with a maximum torque of 1.5 Nm. The sensors can be mounted directly through a simple bore of  $\varnothing$  18 mm, or using a mounting bracket. Mounting brackets are available as accessories.

Pay careful attention to the position and visibility of the programming interface or signal indicators during mounting.

## Commissioning

**Aligning the sensor:** Apply the operating voltage to the sensor. The operating indicator lights up green.

Mount a suitable reflector opposite the light barrier. Roughly align the sensor (without an object) with the reflector. Next, adjust the sensor to the reflector by swiveling the sensor horizontally and vertically so that the yellow signal indicator lights up continuously. In the event of misalignment, the yellow signal indicator flashes.

### Commissioning

**Checking object detection:** Follow the steps below to check that the sensor detects objects as required.

Position the object in the beam path of the sensor.

When the object is detected, the yellow signal indicator goes out. If the yellow signal indicator remains lit, reduce the sensitivity of the potentiometer until the yellow signal indicator goes out.

When the object disappears from the beam path of the sensor, the yellow signal indicator lights up again continuously.

## Maintenance

### Maintenance

**Cleaning:** If the transmission reception deteriorates, e.g., due to dirt, the yellow signal indicator on the receiver flashes. Clean the optical interfaces of the sensor (e.g., lenses) at regular intervals.

**Maintenance:** Check the mounting fittings and the electrical connections regularly.