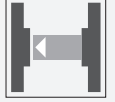


# Thru-beam sensor

## GD18/GV18/59/102/115



- 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

Thru-beam sensor, M18 threaded housing design, plastic housing, front optical face, 20 m detection range, red light, dark 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

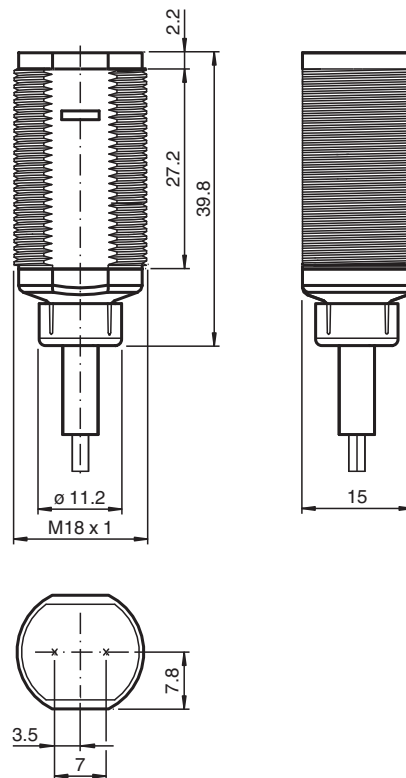
Material handling:

- 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

System components	
Emitter	GD18/115
Receiver	GV18/59/102/115
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
Opening angle	approx. 3 °
Optical face	frontal
Ambient light limit	30000 Lux
Functional safety related parameters	
MTTF <sub>d</sub>	630 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	Receiver: LED yellow, lights up when light beam is free, flashes when falling short of the operating reserve ; OFF when light beam is interrupted
Electrical specifications	
Operating voltage	U <sub>B</sub> 10 ... 30 V DC

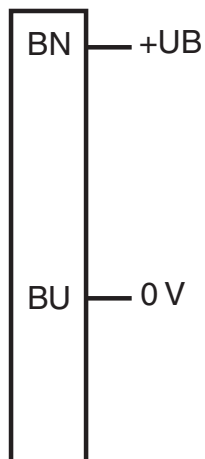
Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 188548\_eng.pdf

## Technical Data

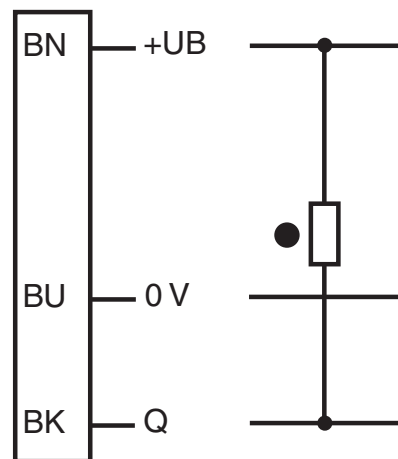
No-load supply current	$I_0$	< 20 mA
<b>Output</b>		
Switching type		dark-on
Signal output		1 NPN, short-circuit protected open collector
Switching voltage		max. 30 V DC
Switching current		max. 100 mA
Voltage drop	$U_d$	$\leq 1.5$ V DC
Switching frequency	$f$	500 Hz
Response time		$\leq 1$ ms
<b>Conformity</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, Type 1 enclosure
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
Mass		approx. 75 g per device

## Connection Assignment

### Emitter



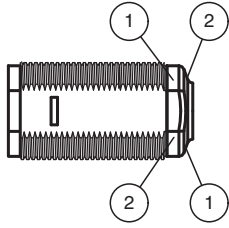
### Receiver



102

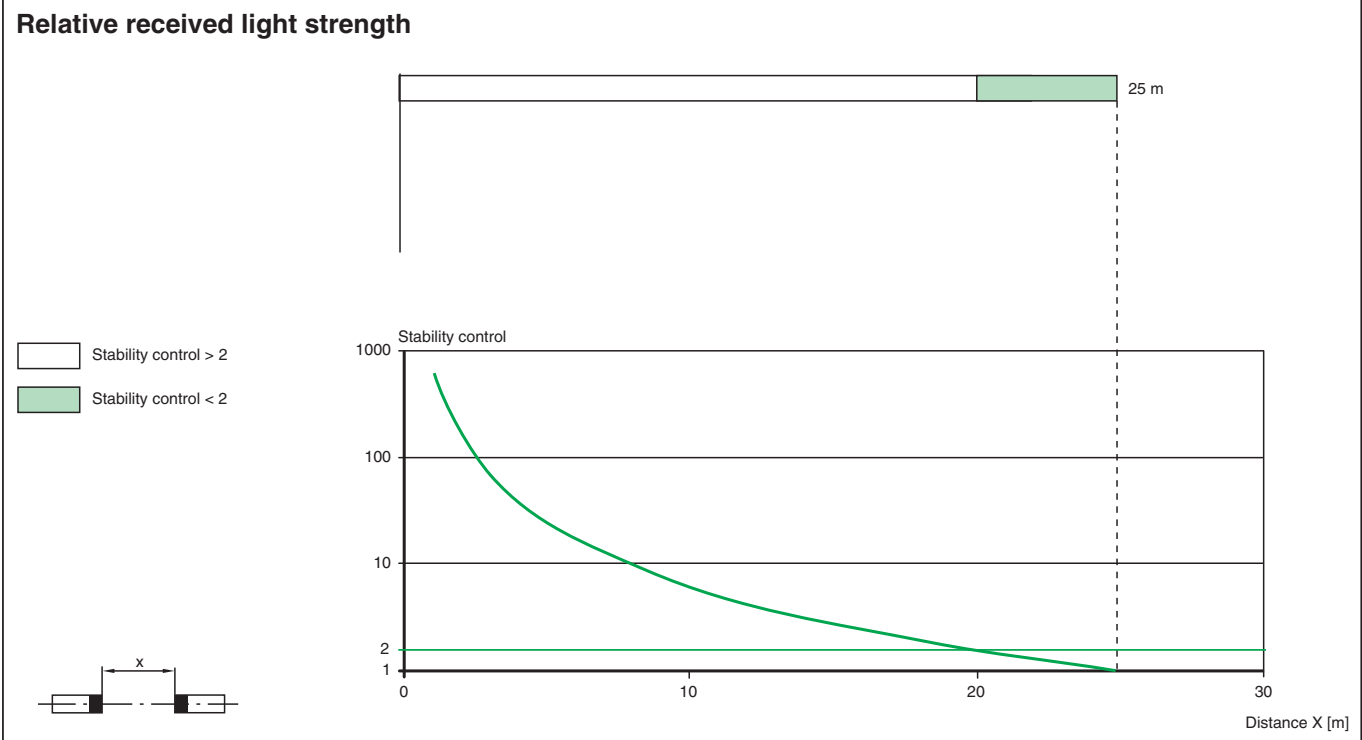
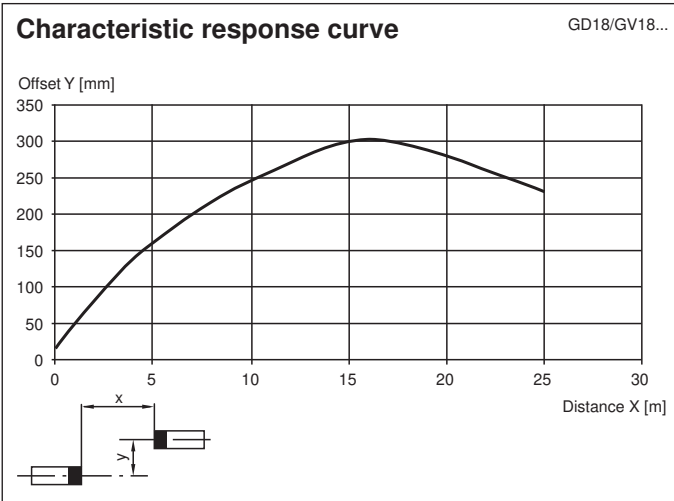
- = Light on
- = Dark on

**Assembly**





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

**Characteristic Curve**



**Accessories**

	<b>CPZ18B03</b>	Mounting Bracket with swivel nut
	<b>BF 18</b>	Mounting flange, 18 mm

Release date: 2023-03-28 Date of issue: 2023-03-28 Filename: 188548\_eng.pdf

**Accessories****BF 18-F**

Plastic mounting adapter, 18 mm

**BF 5-30**

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