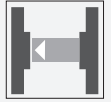


# Thru-beam sensor

## GD18/GV18/25/102/115



- 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

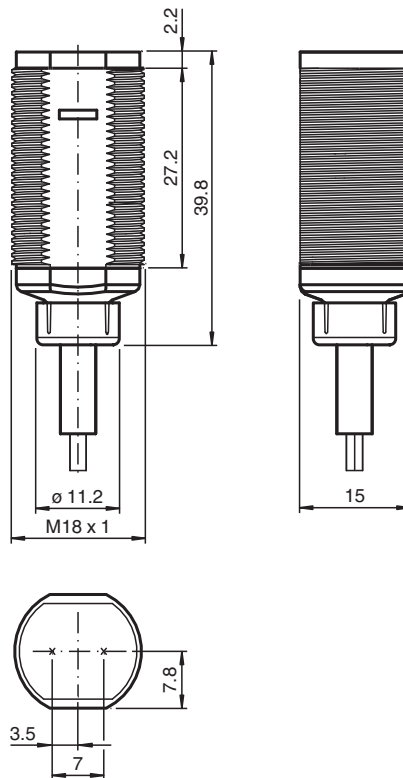
Thru-beam sensor, M18 threaded housing design, plastic housing, front optical face, 20 m detection range, red light, light on, DC version, NPN output, fixed cable



### 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: 2020-11-06 Date of issue: 2020-11-06 Filename: 188549\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

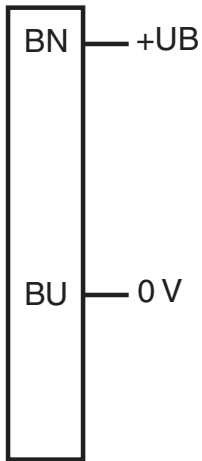
**PF** PEPPERL+FUCHS

## Technical Data

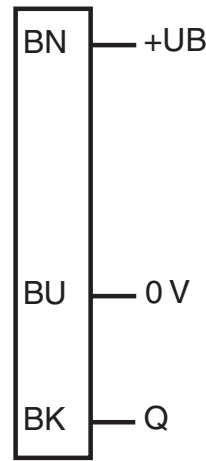
<b>System components</b>		
Emitter		GD18/115
Receiver		GV18/25/102/115
<b>General specifications</b>		
Effective detection range		0 ... 20 m
Threshold detection range		25 m
Light source		LED
Light type		modulated visible red light , 640 nm
Diameter of the light spot		approx. 1300 mm at 25 m
Angle of divergence		approx. 3 °
Optical face		frontal
Ambient light limit		30000 Lux
<b>Functional safety related parameters</b>		
MTTF <sub>d</sub>		630 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Indicators/operating means</b>		
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
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	10 ... 30 V DC
No-load supply current	I <sub>0</sub>	< 20 mA
<b>Output</b>		
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
<b>Conformity</b>		
Product standard		EN 60947-5-2
<b>Approvals and certificates</b>		
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, Type 1 enclosure
CCC approval		CCC approval / marking not required for products rated ≤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**

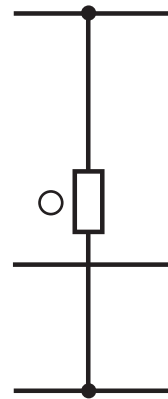
**Emitter**



**Receiver**

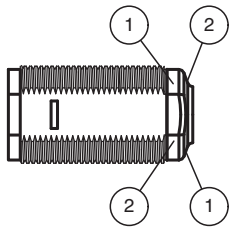


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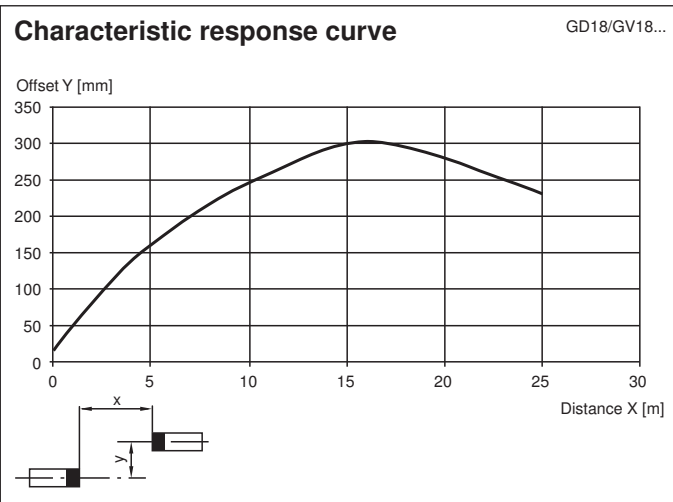
○ = Light on  
● = Dark on

**Assembly**

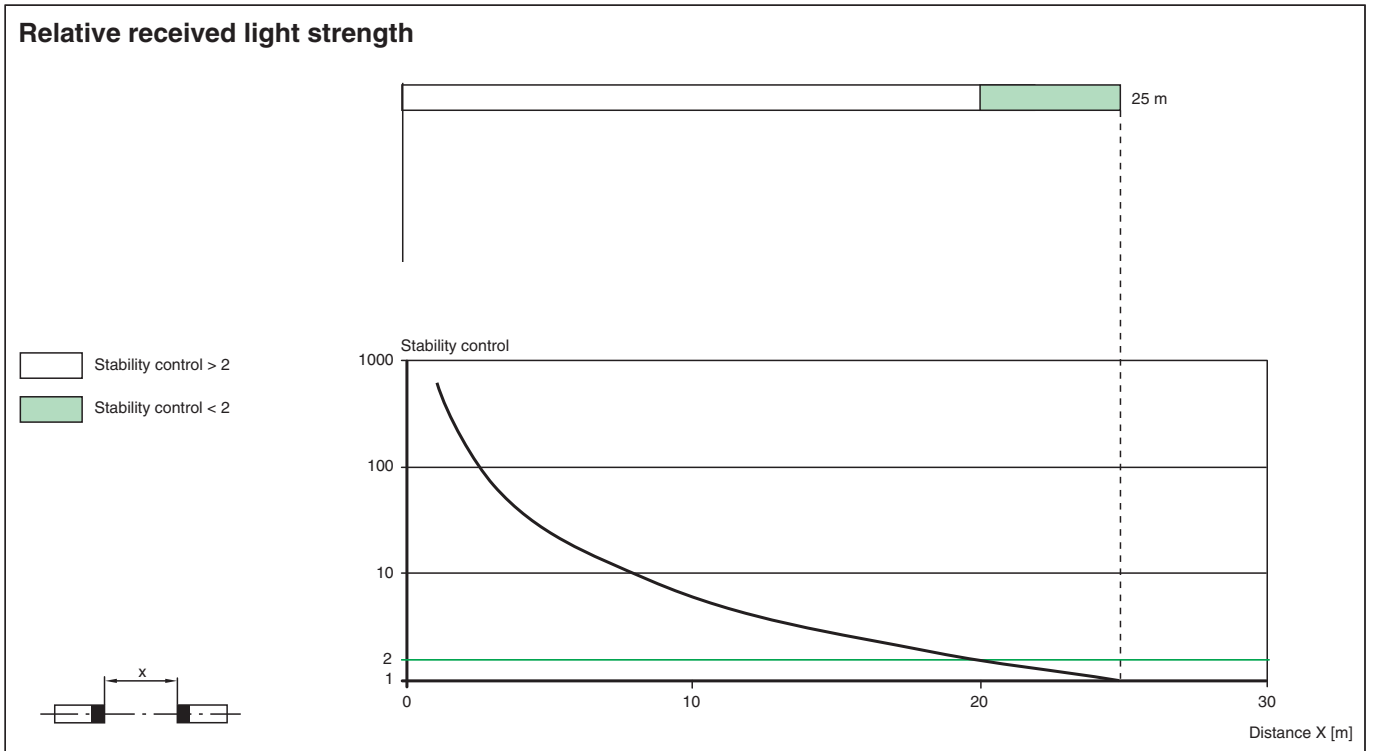


1	Operating display	green
2	Signal display	yellow
4	Emitter	
5	Receiver	

**Characteristic Curve**



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## Application



## 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

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fa-info@sg.pepperl-fuchs.com

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## Accessories

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

## 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