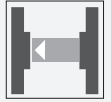




Thru-beam sensor GD18/GV18/59/102/159



- 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

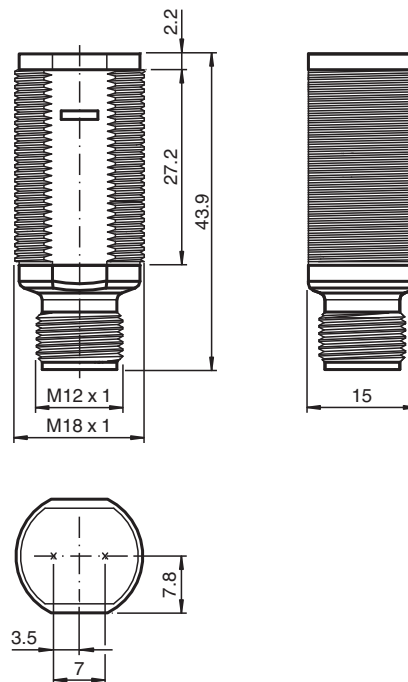
Thru-beam sensor, M18 threaded housing design, plastic housing, front optical face, 20 m detection range, red light, dark on, DC version, NPN output, M12 plug



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



Technical Data

System components

Emitter	GD18/159
Receiver	GV18/59/102/159

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
Angle of divergence	approx. 3 °
Optical face	frontal
Ambient light limit	30000 Lux

Functional safety related parameters

MTTF _d	630 a
Mission Time (T _M)	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 stability control ; 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	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	≤ 1.5 V DC
Switching frequency	f	500 Hz
Response time	≤ 1 ms	

Conformity

Product standard	EN 60947-5-2
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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, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤36 V

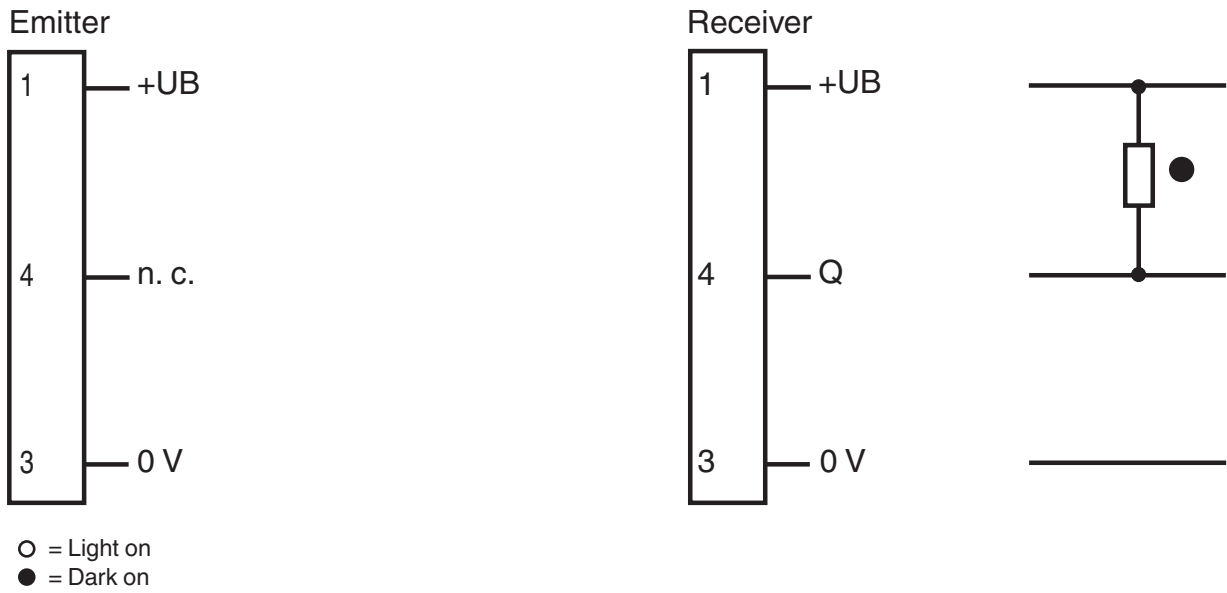
Ambient conditions

Ambient temperature	-25 ... 60 °C (-13 ... 140 °F)
Storage temperature	-40 ... 70 °C (-40 ... 158 °F)

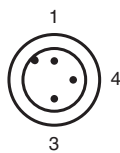
Mechanical specifications

Degree of protection	IP67
Connection	3-pin, M12 x 1 connector
Material	
Housing	PC
Optical face	PMMA
Connector	plastic
Mass	approx. 10 g per device

Connection Assignment



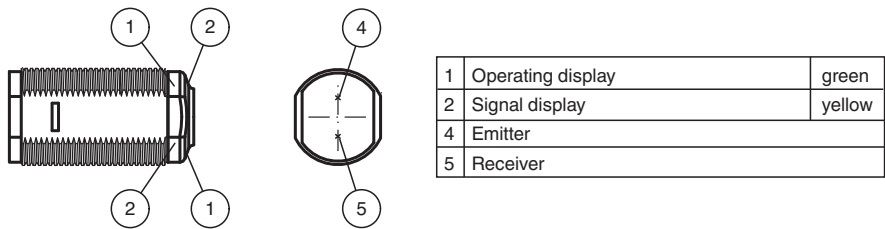
Connection Assignment



Wire colors in accordance with EN 60947-5-2

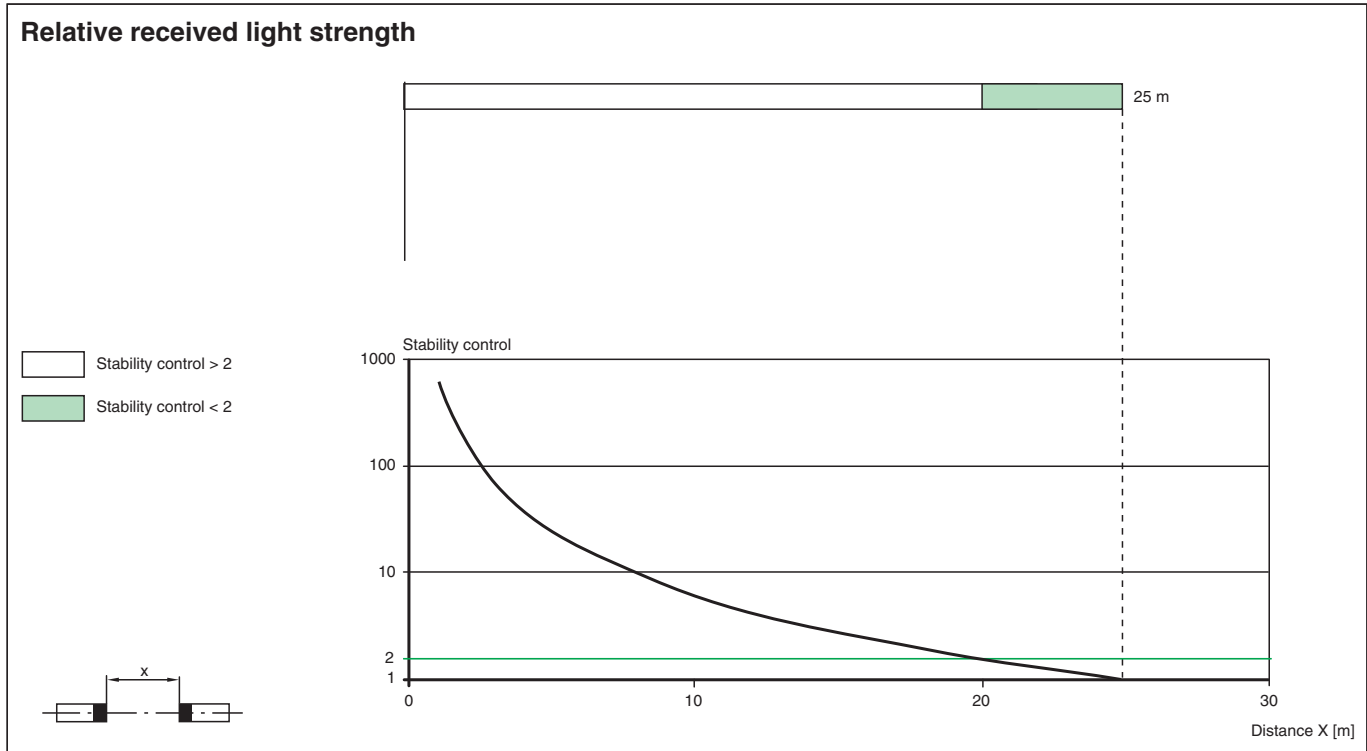
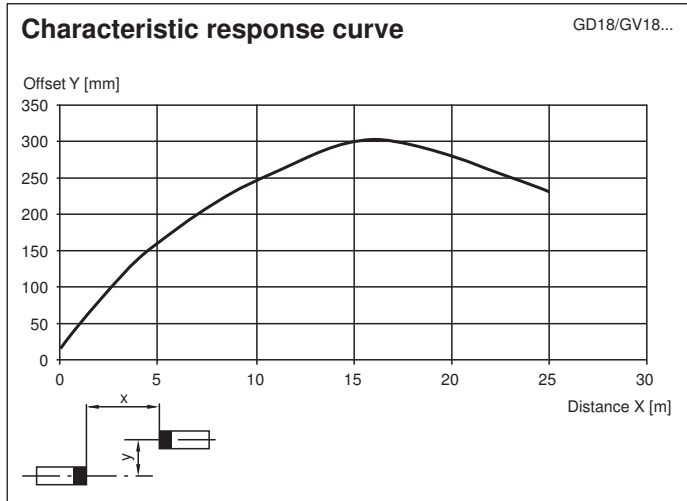
1	BN	(brown)
3	BU	(blue)
4	BK	(black)

Assembly



Release date: 2020-11-06 Date of issue: 2020-11-06 Filename: 188545_eng.pdf

Characteristic Curve



Application



Release date: 2020-11-06 Date of issue: 2020-11-06 Filename: 188545_eng.pdf

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
	V11-G-2M-PUR	Female cordset, M12, 3-pin, PUR cable

Accessories

Other suitable accessories can be found at 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