Model Number

GD18-S/GV18-S/73/120

Thru-beam sensor
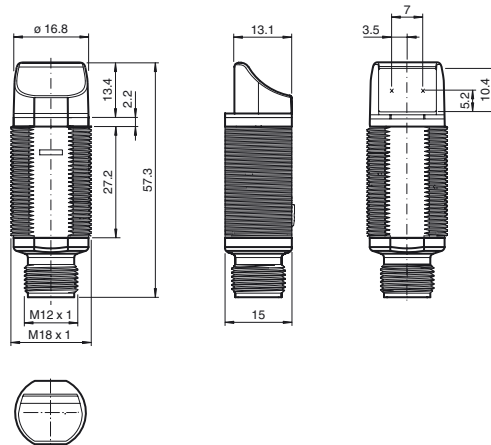with 4-pin, M12 x 1 plastic connector

Features

- Efficient Line in a short M18 plastic housing for standard applications
- Very high detection range
- 4 LEDs indicator for 360° visibility
- Sidelookerversion
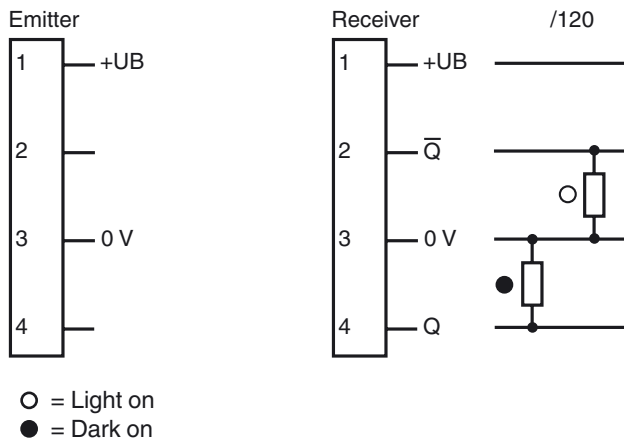- DC voltage version

Product information

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

ø 16.8 · 13.1 · 3.5 · 7
13.4 · 2.2 · 27.2 · 57.3 · 5.2 · 10.4
M12 x 1 · M18 x 1 · 15

Electrical connection

Emitter

1	— +UB
2	
3	— 0 V
4	

Receiver   /120

1	— +UB
2	— $\overline{Q}$
3	— 0 V
4	— Q

○ = Light on
● = Dark on

Pinout
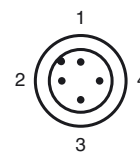
Indicators/operating means
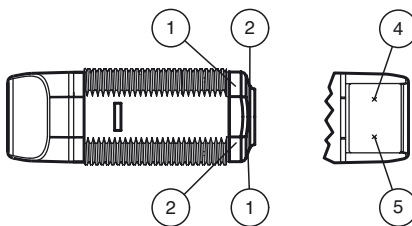
1	Operating display	green
2	Signal display	yellow
4	Emitter	
5	Receiver	

Subject to modifications without notice
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Technical data

System components
Emitter	GD18-S/159
Receiver	GV18-S/73/120

General specifications
Effective detection range	0 ... 12 m
Threshold detection range	17.5 m
Light source	LED
Light type	modulated visible red light , 640 nm
Diameter of the light spot	approx. 650 mm at 17.5 m
Angle of divergence	approx. 2 °
Optical face	lateral
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
Operating display	LED green, statically lit Power on
Function display	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		light/dark on
Signal output		2 PNP, complementary, short-circuit protected, open collectors
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

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

Mechanical specifications
Protection degree	IP67
Connection	connector M12 x 1, 4-pin
Material	
Housing	PC
Optical face	PMMA
Connector	plastic
Mass	approx. 10 g per device

Compliance with standards and directives
Standard conformity	
Product standard	EN 60947-5-2:2007 IEC 60947-5-2:2007

Approvals and certificates
Protection class	II, rated insulation voltage ≤ 250 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	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

Accessories

CPZ18B03
Mounting Bracket with swivel nut

BF 18
Mounting flange, 18 mm

BF 18-F
Mounting flange with dead stop, 18 mm

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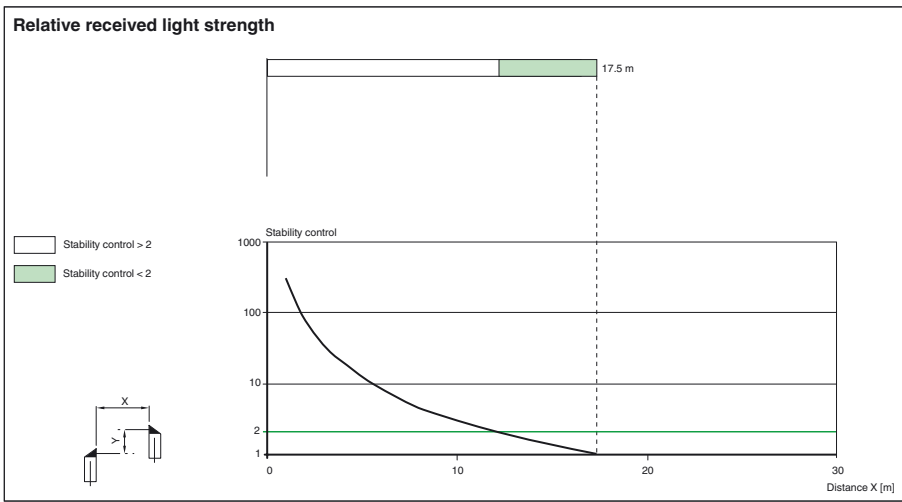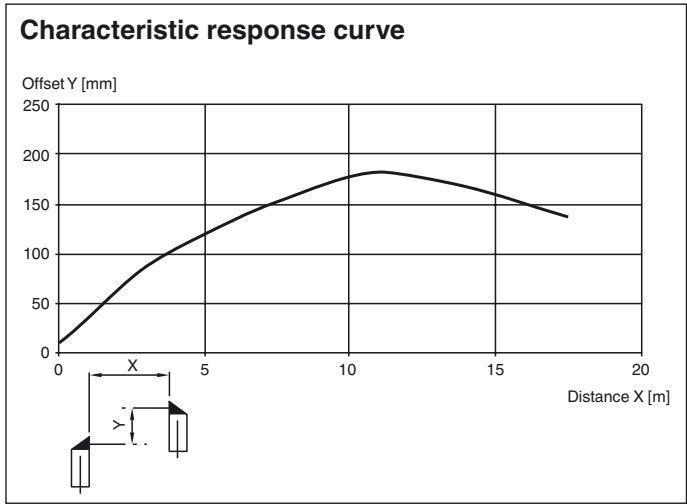Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm

V1-G-2M-PUR
Cable socket, M12, 4-pin, PUR cable

V1-W-2M-PUR
Cable socket, M12, 4-pin, PUR cable

Other suitable accessories can be found at www.pepperl-fuchs.com

Release date: 2013-01-14 15:22   Date of issue: 2013-02-04   190527_eng.xml

Curves/Diagrams

Characteristic response curve

Offset Y [mm]

Distance X [m]

Relative received light strength

17.5 m

☐ Stability control > 2

▨ Stability control < 2

Stability control

Distance X [m]

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