Dimensions

Model Number

GLV18-55-G/25/102/159

Retroreflective sensor

with 3-pin, M12 x 1 plastic connector

Features

- Efficient Line in a short M18 plastic housing for standard applications

- Two devices in one: choice of either clear object detection or retroreflective operating mode with a large detection range

- 4 LEDs indicator for 360° visibility

- Optimized potentiometer design for a clear control button layout in the application

- 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.

Electrical connection

Option: 102
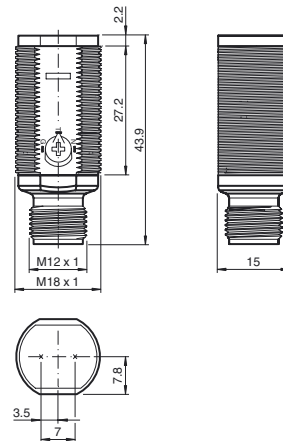
○ = Light on
● = Dark on
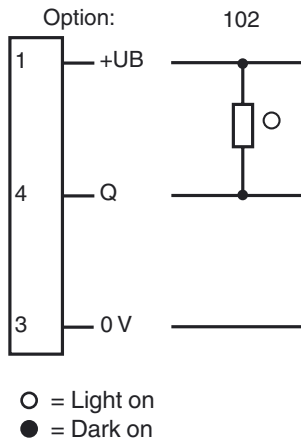
Pinout
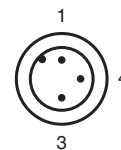
Indicators/operating means
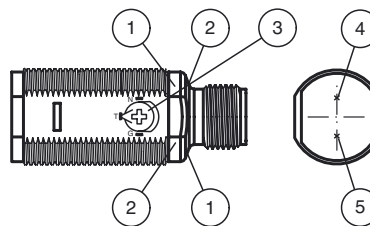
1	Operating display	green
2	Signal display	yellow
3	Potentiometer Teach-In and Mode selection N Normal mode T Teach-In Mode G Glas mode	
4	Emitter	
5	Receiver	

Subject to modifications without notice

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Technical data

General specifications

Effective detection range	0 ... 2.5 m in glass mode; 0 ... 5 m in normal mode
Reflector distance	0 ... 2.5 m in glass mode; 0 ... 5 m in normal mode
Threshold detection range	6.5 m
Reference target	reflector C110-2
Light source	LED
Light type	modulated visible red light , 640 nm
Diameter of the light spot	approx. 370 mm at 6.5 m ; 50 mm at 1 m
Angle of divergence	approx. 2 °
Optical face	frontal
Ambient light limit	30000 Lux

Functional safety related parameters

$MTTF_d$	1260 a
Mission Time (T_M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operating display	LED green, statically lit Power on, blinking with 2 Hz or 4 Hz in Teach-In mode
Function display	LED yellow: In retro-reflective mode: Lights up when light beam is free; flashing if signal is short of function reserve, off when light beam is interrupted In glass-mode: Lights up when light beam is free; flashing if further compensation is impossible; off when light beam is interrupted
Controls	potentiometer for Teach-In and Mode selection
Contrast detection levels	18 % - clear glass bottles

Electrical specifications

Operating voltage	U_B	10 ... 30 V DC
No-load supply current	I_0	< 15 mA

Output

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_d	≤ 1.5 V DC
Switching frequency	f	1 kHz
Response time		≤ 0.5 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, 3-pin
Material	
Housing	PC
Optical face	PMMA
Connector	plastic
Mass	approx. 10 g

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
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

REF-C110-2
Reflector, round ø 84 mm, central mounting hole

REF-H60
Reflector, rectangular 40.5 mm x 60 mm, mounting holes

REF-H85
Reflector, rectangular 84.5 mm x 84.5 mm, mounting holes

REF-H50
Reflector, rectangular 51 mm x 51 mm, mounting holes, fixing strap

ORR50
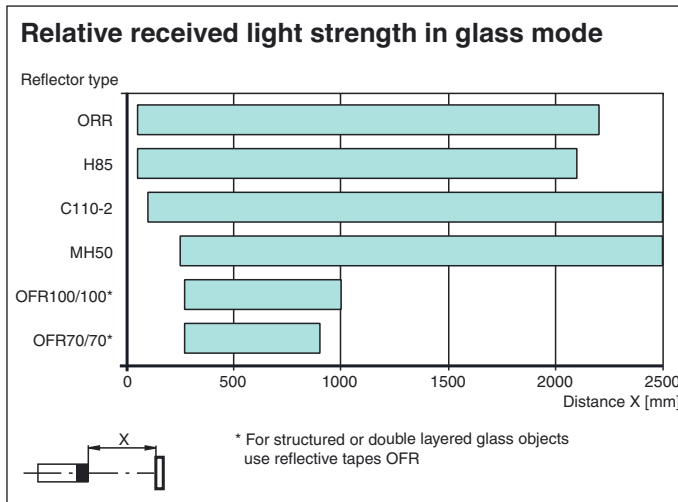Reflector, rectangular 50.9 mm x 50.9 mm, mounting holes, fixing strap
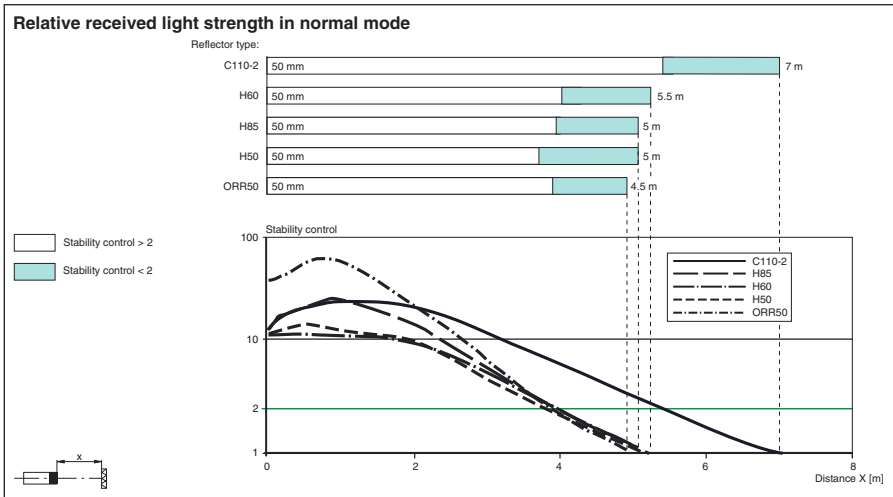
V11-G-2M-PUR
Cable socket, M12, 3-pin, PUR cable

V11-W-2M-PUR
Cable socket, M12, 3-pin, PUR cable

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

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Relative received light strength in normal mode

Reflector type:

C110-2	50 mm	7 m
H60	50 mm	5.5 m
H85	50 mm	5 m
H50	50 mm	5 m
ORR50	50 mm	4.5 m

☐ Stability control > 2
▨ Stability control < 2

Stability control

C110-2
H85
H60
H50
ORR50

Distance X [m]

Relative received light strength in glass mode

Reflector type

ORR
H85
C110-2
MH50
OFR100/100*
OFR70/70*

Distance X [mm]

* For structured or double layered glass objects
  use reflective tapes OFR

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