

Retroreflective sensor

GLV18-55-G/73/120



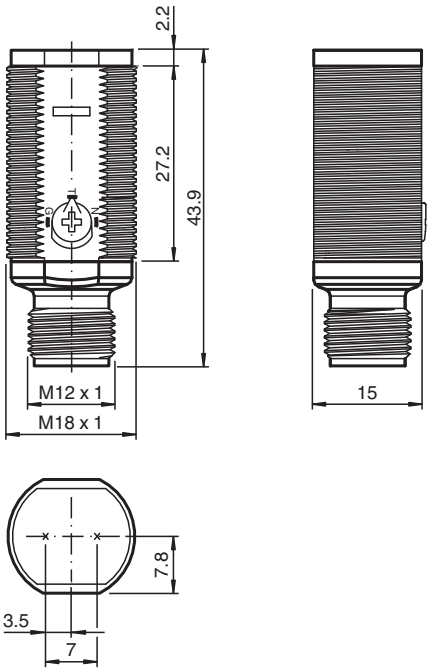
- Efficient Line in a short M18 plastic housing for standard applications
- Two devices in one: choice of either clear object detection or retroreflective operating mode with a large detection range
- 4 LEDs indicator for 360° visibility
- Optimized potentiometer design for a clear control button layout in the application
- DC voltage version

Retroreflective sensor for glass detection, M18 threaded housing design, plastic housing, front optical face, 2.5 m detection range, red light, light/dark on, DC version, 2 PNP outputs, 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



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Technical Data

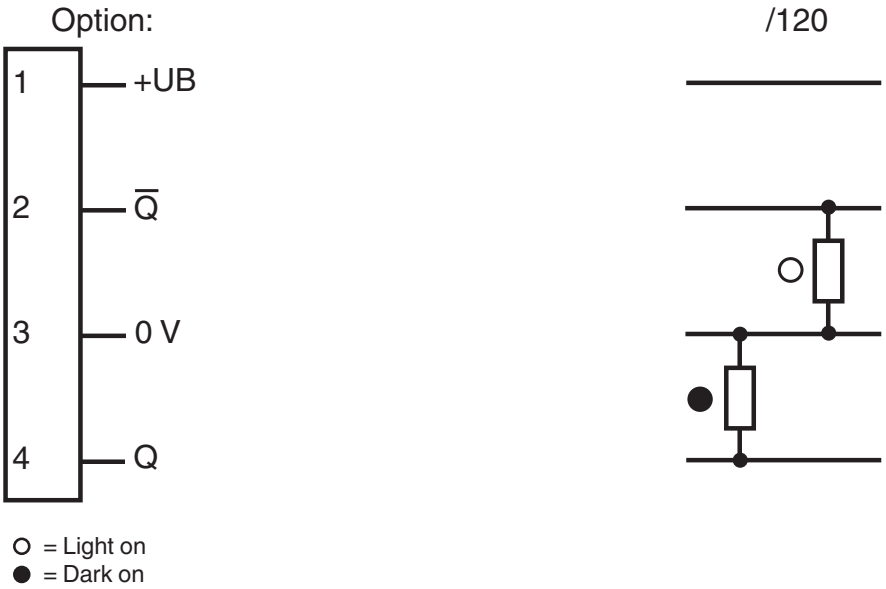
General specifications		
Effective detection range		0 ... 2.5 m in glass mode; 0 ... 5 m in normal mode
Reflector distance		0 ... 2.5 m in glass mode; 0 ... 5 m in normal mode
Threshold detection range		6.5 m
Reference target		reflector C110-2
Light source		LED
Light type		modulated visible red light , 640 nm
Polarization filter		yes
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		
Operation indicator		LED green, statically lit Power on, blinking with 2 Hz or 4 Hz in Teach-In mode
Function indicator		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
Control elements		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/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	1 kHz
Response time		≤ 0.5 ms
Conformity		
Product standard		EN 60947-5-2
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
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		4-pin, M12 x 1 connector
Material		
Housing		PC
Optical face		PMMA
Connector		plastic

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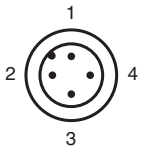
Mass	approx. 10 g

Connection Assignment



○ = Light on
● = Dark on

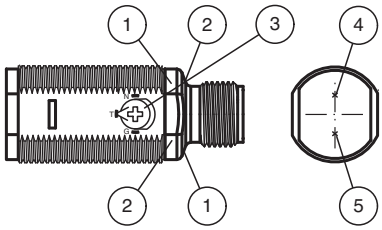
Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

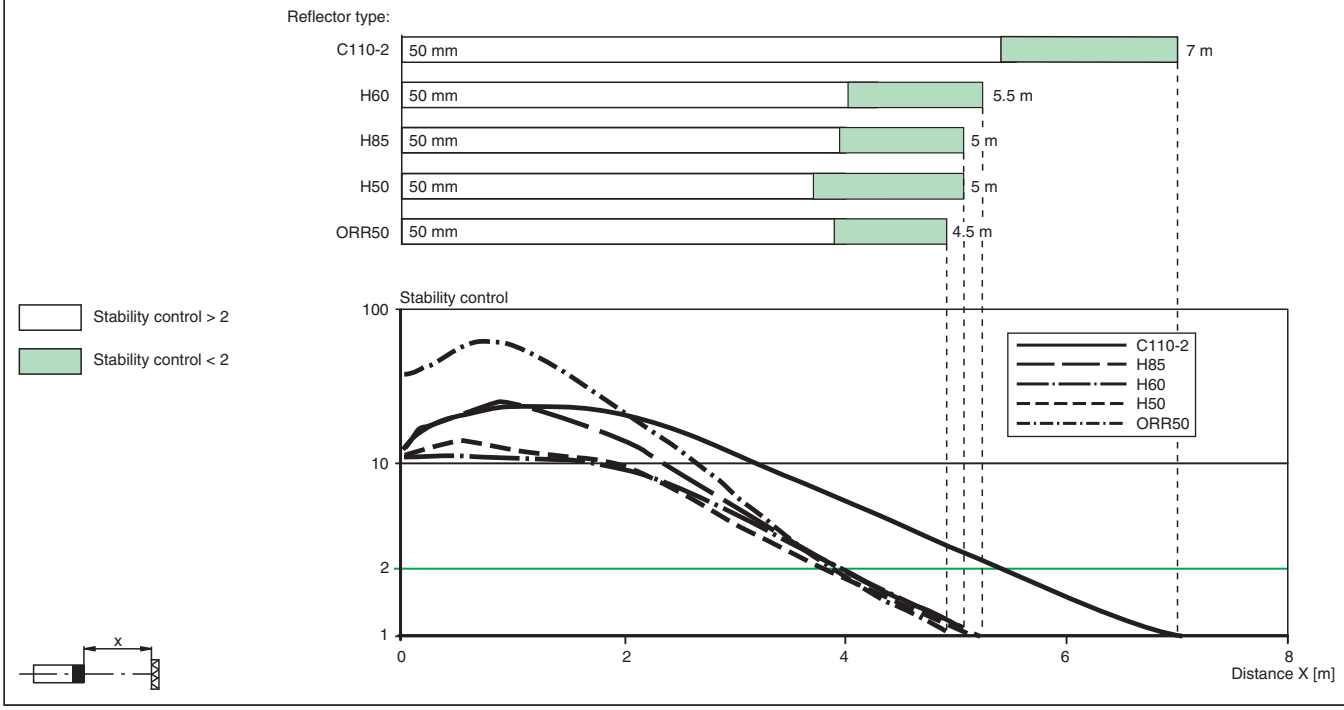
Assembly



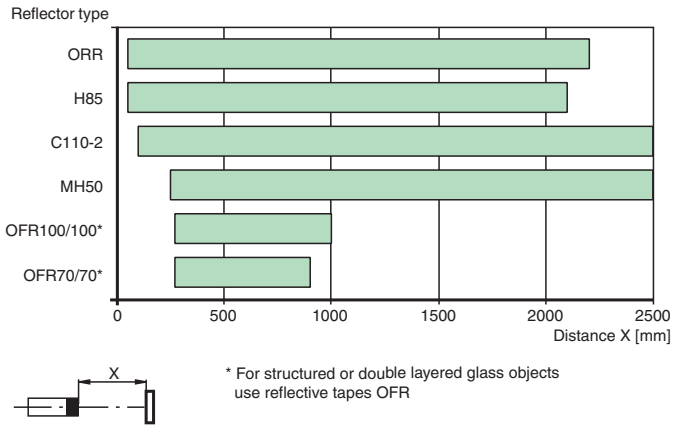
1	Operating display	green
2	Signal display	yellow
3	Potentiometer Teach-In and Mode selection N Normal mode T Teach-In Mode G Glas mode	
4	Emitter	
5	Receiver	

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Relative received light strength in normal mode



Relative received light strength in glass mode



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

Application



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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
	**REF-C110-2**	Reflector, round ø 84 mm, central mounting hole
	**REF-H60**	Reflector, rectangular 40.5 mm x 60 mm, mounting holes
	**REF-H50**	Reflector, rectangular 51 mm x 61 mm, mounting holes, fixing strap
	**V1-G-2M-PUR**	Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey
	**V1-W-2M-PUR**	Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey

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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

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