



Retroreflective sensor

VL18-54-M/32/40a/82b/118

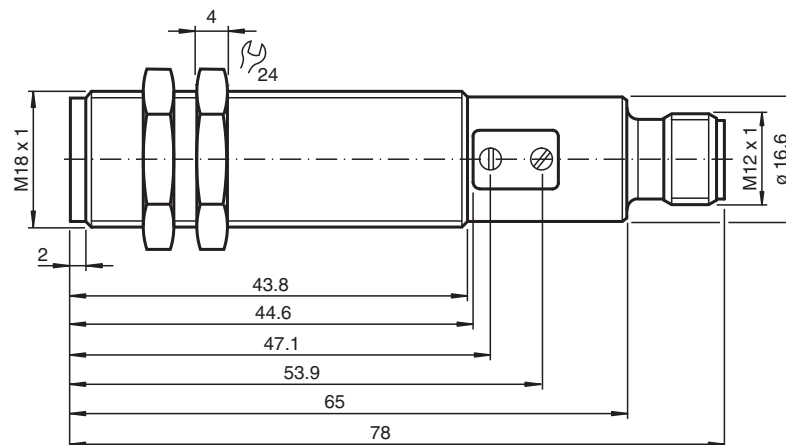


- Array control panel with highly visible LED display
- Flashing power on LED in case of short-circuit
- Multiple device installation possible, no mutual interference (no cross-talk)
- Not sensitive to ambient light, even with switched energy saving lamps
- Protection class II

Retroreflective sensor with polarization filter



Dimensions



Technical Data

General specifications

Effective detection range	0 ... 3.5 m
Threshold detection range	4 m

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

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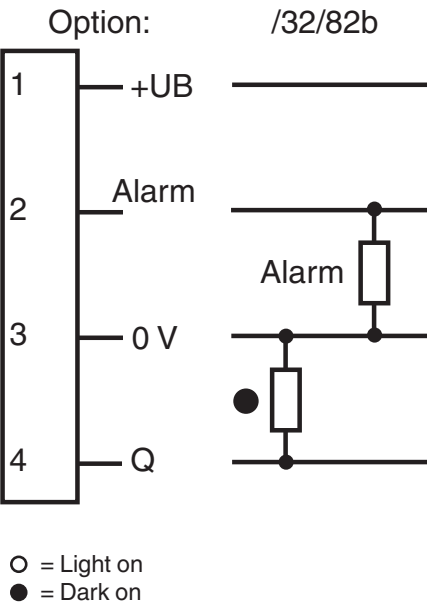
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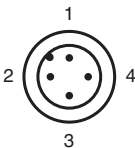
Technical Data

Reference target		H50 reflector
Light source		LED
Light type		modulated visible red light , 632 nm
Polarization filter		yes
Diameter of the light spot		200 mm at a distance of 3500 mm
Opening angle		3 °
Optical face		frontal
Ambient light limit		30000 Lux ; according to EN 60947-5-2:2007
Hysteresis	H	< 15 %
Functional safety related parameters		
MTTF _d		700 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED green, flashes in case of short-circuit
Function indicator		LED yellow, light with free light beam , flashes when falling short of the stability control , OFF when light beam is interrupted
Control elements		Sensitivity adjuster, light/dark switch
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC , class 2
No-load supply current	I ₀	< 25 mA
Protection class		II , rated voltage ≤ 50 V AC with pollution degree 1-2 according to IEC 60664-1
Output		
Pre-fault indication output		1 PNP, inactive when falling short of the stability control
Switching type		light/dark on, switchable
Signal output		1 PNP output, short-circuit protected, reverse polarity protected, open collector
Switching voltage		30 V DC
Switching current		max. 200 mA
Voltage drop	U _d	≤ 2.5 V DC
Switching frequency	f	500 Hz
Response time		1 ms
Conformity		
Product standard		EN 60947-5-2
Approvals and certificates		
EAC conformity		TR CU 020/2011
UL approval		cULus Listed, Type 1 enclosure
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-30 ... 70 °C (-22 ... 158 °F)
Relative humidity		90 % , noncondensing
Mechanical specifications		
Degree of protection		IP67
Connection		4-pin, M12 x 1 connector
Material		
Housing		brass, nickel-plated
Optical face		PMMA
Mass		60 g

Connection Assignment



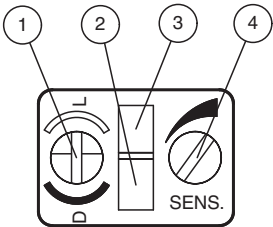
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

Assembly

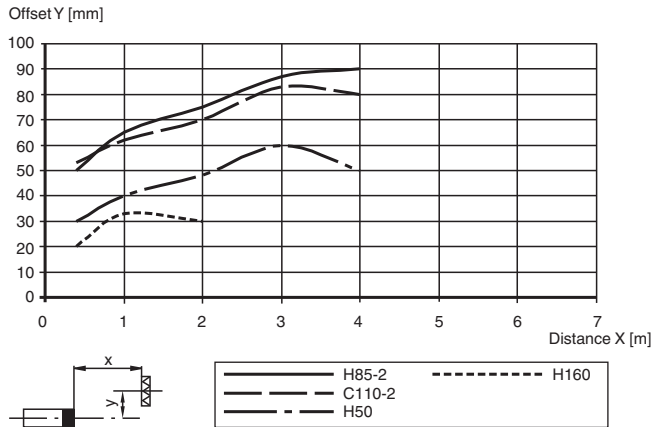


1	Light/dark switch	
2	Operating display	green
3	Switch state	yellow
4	Sensitivity adjustment	

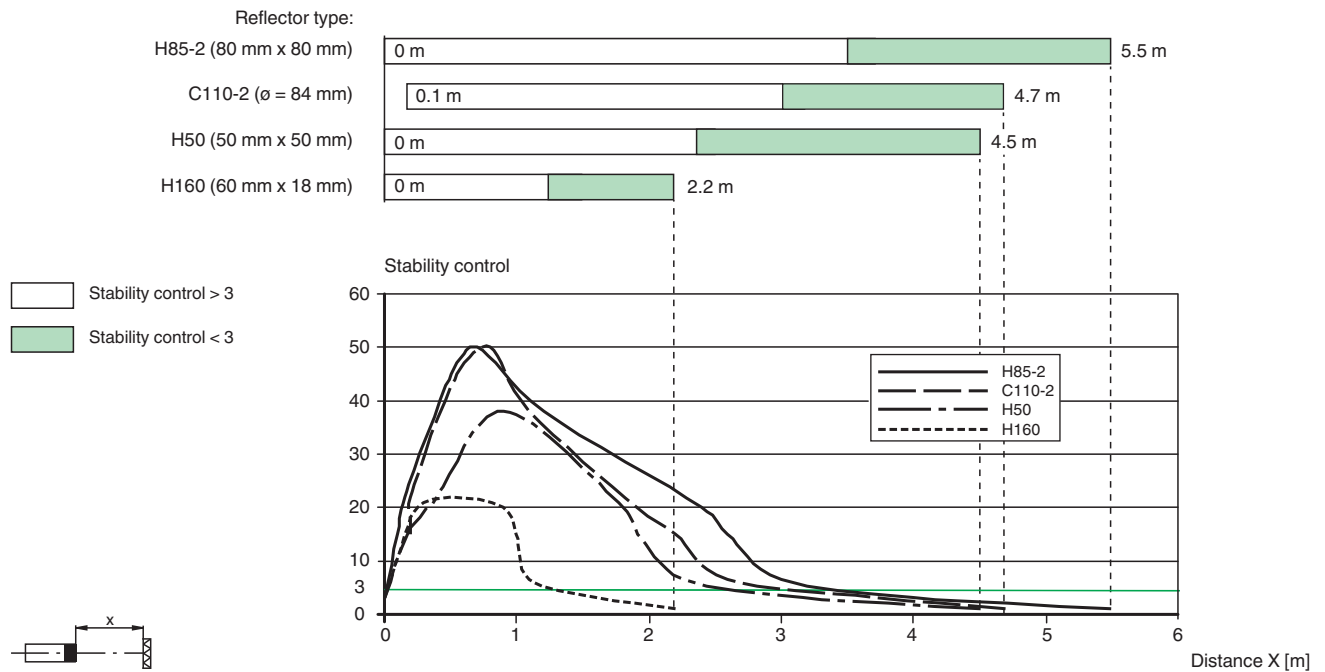
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Characteristic Curve

Characteristic response curve



Relative received light strength



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-H85-2	Reflector, rectangular 84.5 mm x 84.5 mm, mounting holes

Accessories

	REF-H50	Reflector, rectangular 51 mm x 61 mm, mounting holes, fixing strap
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