



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

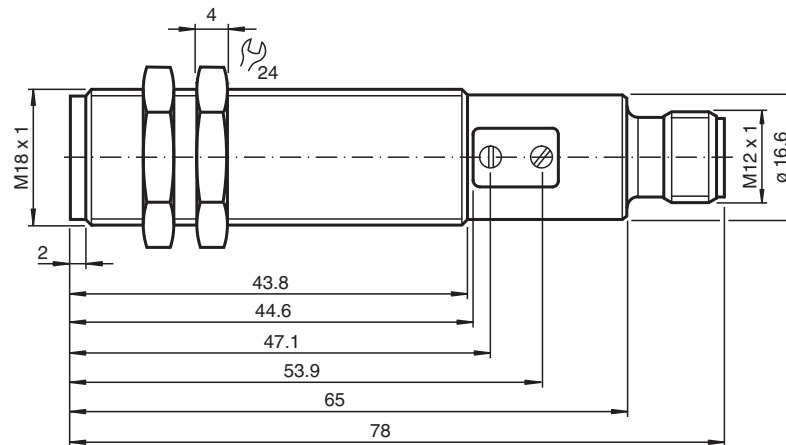


- Array control panel with highly visible LED display
- Flashing power on LED in case of short-circuit
- Multiple device installation possible, no mutual interference (no cross-talk)
- Not sensitive to ambient light, even with switched energy saving lamps
- Protection class II

Retroreflective sensor with polarization filter



Dimensions



Technical Data

General specifications

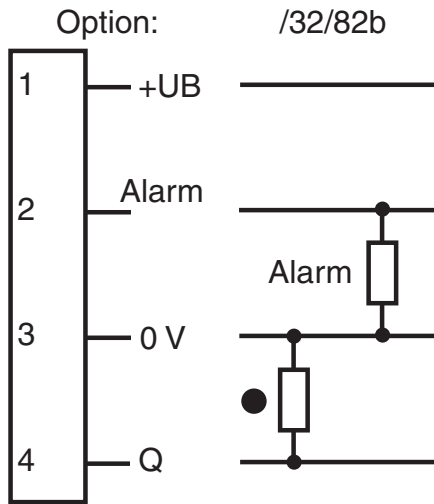
Effective detection range	0 ... 3.5 m
Threshold detection range	4 m

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Technical Data

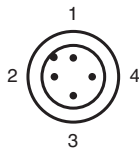
Reference target	H50 reflector	
Light source	LED	
Light type	modulated visible red light , 632 nm	
Polarization filter	yes	
Diameter of the light spot	200 mm at a distance of 3500 mm	
Opening angle	3 °	
Optical face	frontal	
Ambient light limit	30000 Lux ; according to EN 60947-5-2:2007	
Hysteresis	H	< 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



○ = Light on
● = Dark on

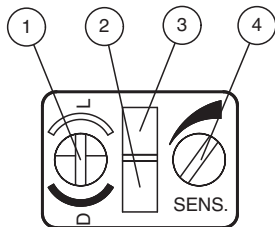
Connection Assignment



Wire colors in accordance with EN 60947-5-2

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

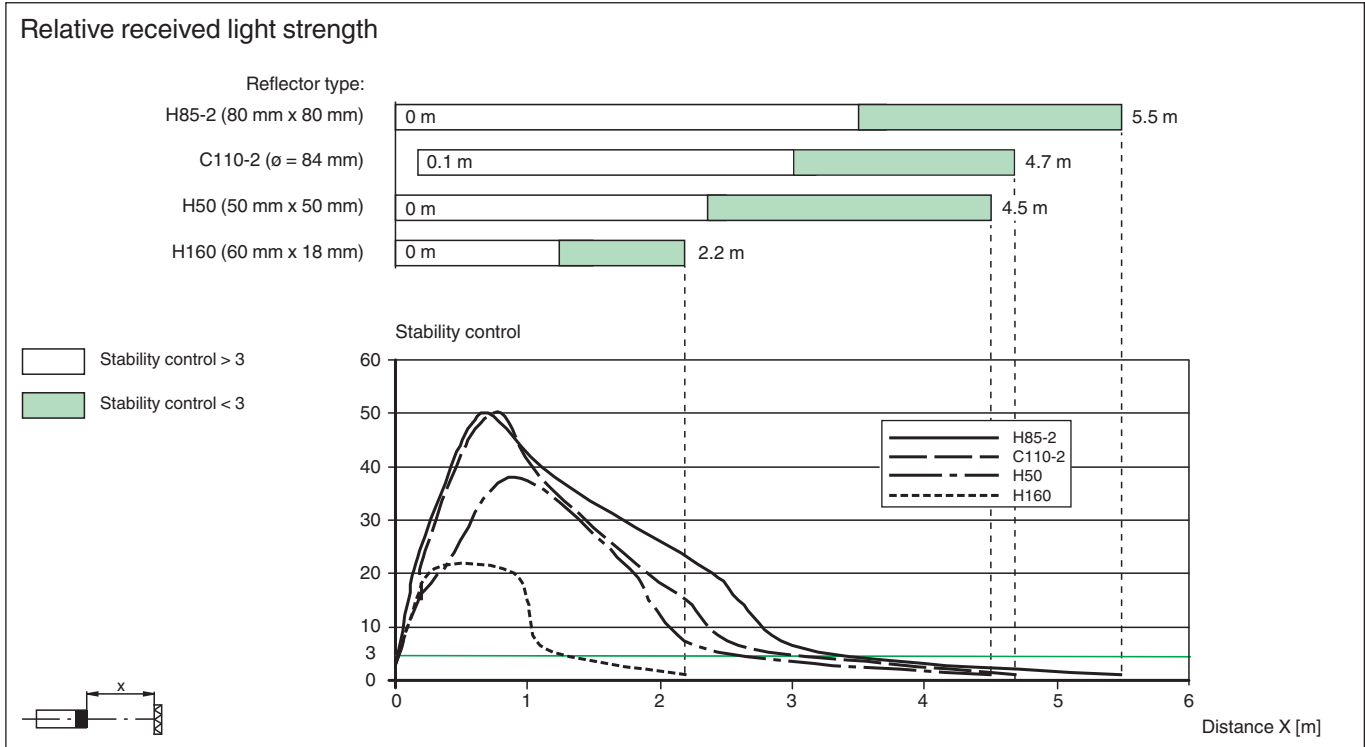
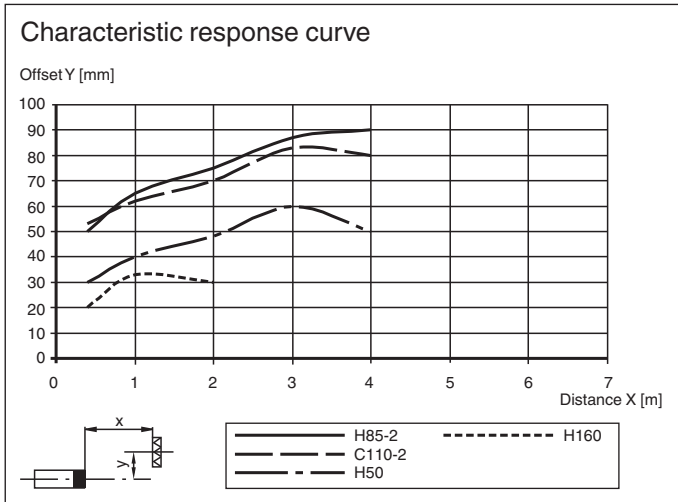
Assembly



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

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Characteristic Curve



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

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Accessories



REF-H50

Reflector, rectangular 51 mm x 61 mm, mounting holes, fixing strap