



Model Number

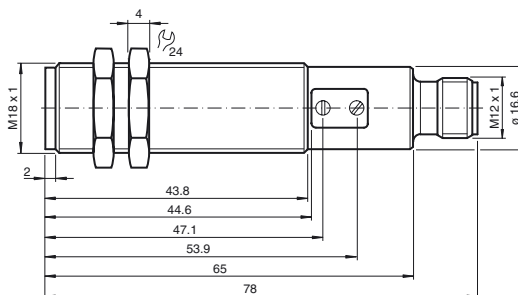
VL18-54-M/40a/118/128

Retroreflective sensor
with 4-pin, M12 x 1 connector

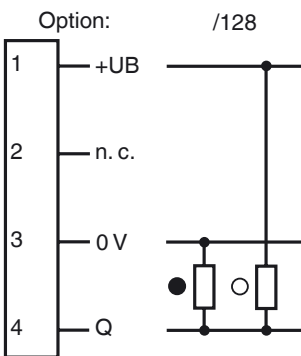
Features

- 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

Dimensions

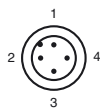


Electrical connection



○ = Light on
● = Dark on

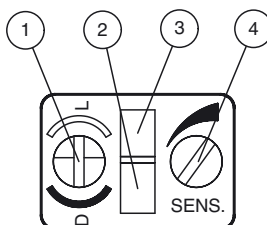
Pinout



Wire colors in accordance with EN 60947-5-2

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

Indicators/operating means



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

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Technical data**General specifications**

Effective detection range	0 ... 3.5 m
Threshold detection range	4 m
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
Angle of divergence	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

Switching type	light/dark on, switchable	
Signal output	Push-pull (4 in 1) output short-circuit protected overvoltage protected	
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
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Ambient conditions

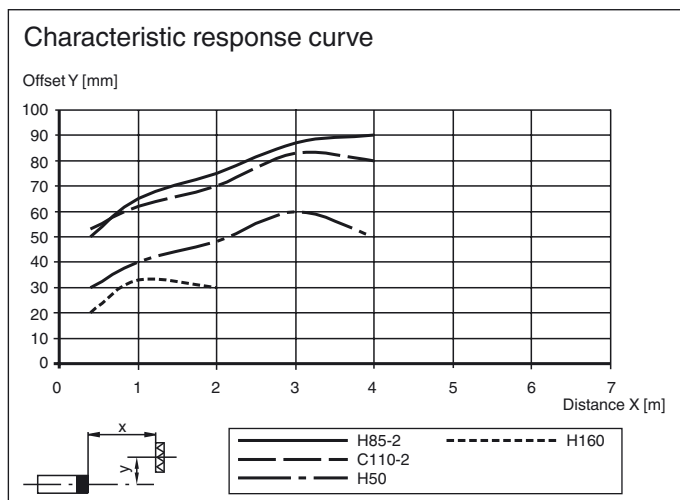
Ambient temperature	-25 ... 70 °C (-13 ... 158 °F)
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)
Relative humidity	90 % , noncondensing

Mechanical specifications

Degree of protection	IP67
Connection	4-pin, M12 x 1 connector
Material	
Housing	brass, nickel-plated
Optical face	PMMA
Mass	60 g

Approvals and certificates

UL approval	cULus Listed, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤36 V

Curves/Diagrams**Accessories****CPZ18B03**

Mounting Bracket with swivel nut

BF 18

Mounting flange, 18 mm

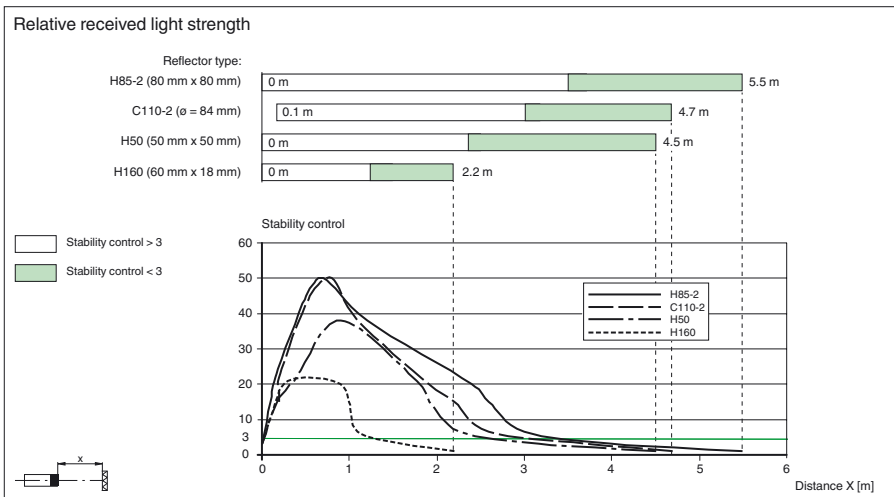
BF 18-F

Plastic mounting adapter, 18 mm

BF 5-30

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

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



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

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