



Model Number

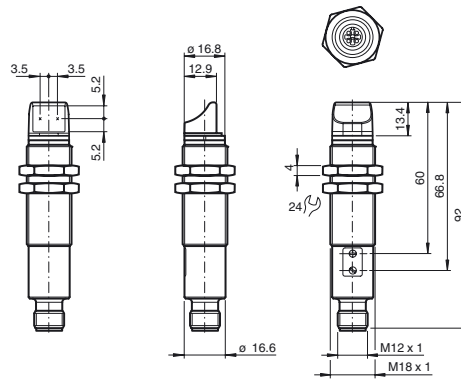
VL18-54-MS/40a/118/128

Retroreflective sensor
with 4-pin, M12 x 1 connector

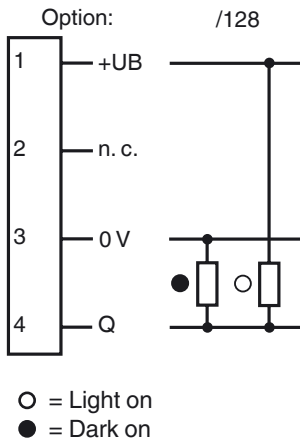
Features

- Array control panel with highly visible LED display
- Flashing power on LED in case of short-circuit
- Optical face lateral, embeddable to the housing
- Multiple device installation possible, no mutual interference
- Not sensitive to ambient light, even with switched energy saving lamps
- Protection class II

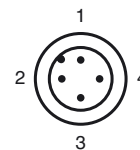
Dimensions



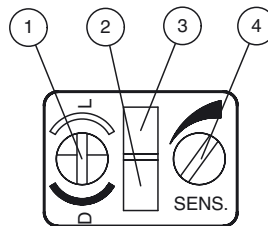
Electrical connection



Pinout



Indicators/operating means



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

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Subject to modifications without notice

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0001
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776-4411
fa-info@pepperl-fuchs.com

Copyright Pepperl+Fuchs
Singapore: +65 6779 9091
fa-info@sg.pepperl-fuchs.com

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
Diameter of the light spot	160 mm at a distance of 3500 mm
Angle of divergence	3 °
Optical face	lateral
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

Operating display	LED green, flashes in case of short-circuit
Function display	LED yellow, light with free light beam , flashes when falling short of the stability control , OFF when light beam is interrupted
Controls	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

Output

Switching type	light/dark on, switchable	
Signal output	Push-pull 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

Ambient conditions

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

Mechanical specifications

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

Compliance with standards and directives

Directive conformity	EMC Directive 2004/108/EC
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, Type 1 enclosure
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**

For Series CP18 Threaded Photoelectric Sensors

BF 18

Mounting flange, 18 mm

BF 18-F

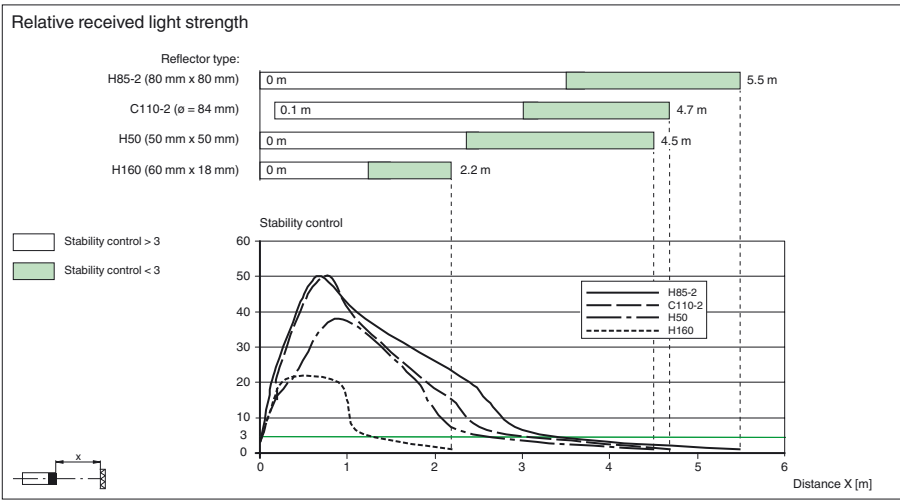
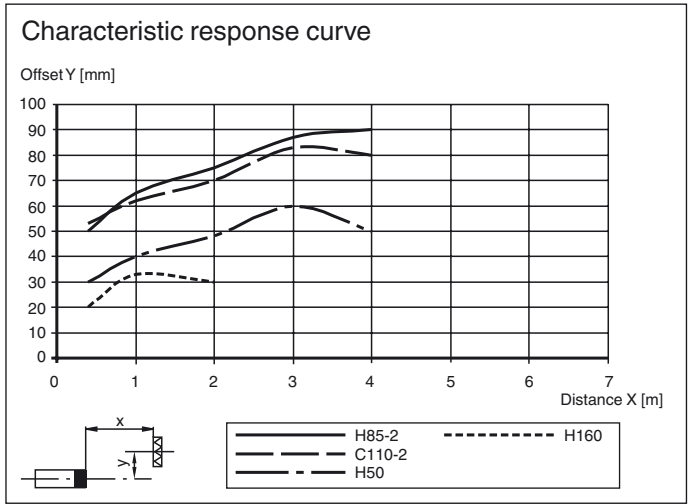
Mounting flange with dead stop, 18 mm

BF 5-30

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

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

Curves/Diagrams



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