



Model Number

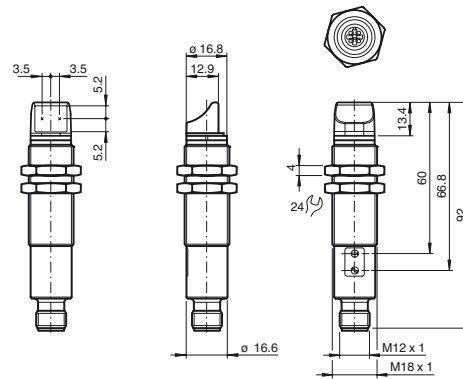
VL18-54-MS/30/40a/118/126b

Retroreflective sensor
with 4-pin, M12 x 1 connector

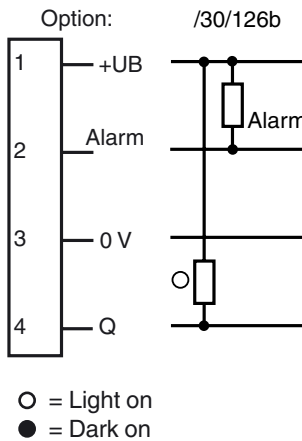
Features

- 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

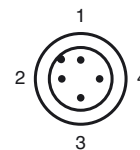
Dimensions



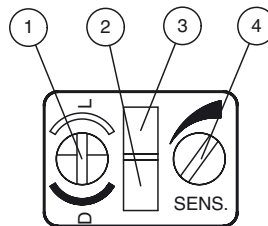
Electrical connection



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

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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 |
| 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 |
| 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 | < 35 mA |

Output

| | | |
|------------------------------------|---|------------|
| Output of the pre-fault indication | 1 NPN, inactive when falling short of the stability control | |
| Switching type | light/dark on, switchable | |
| Signal output | 1 NPN 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 |

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

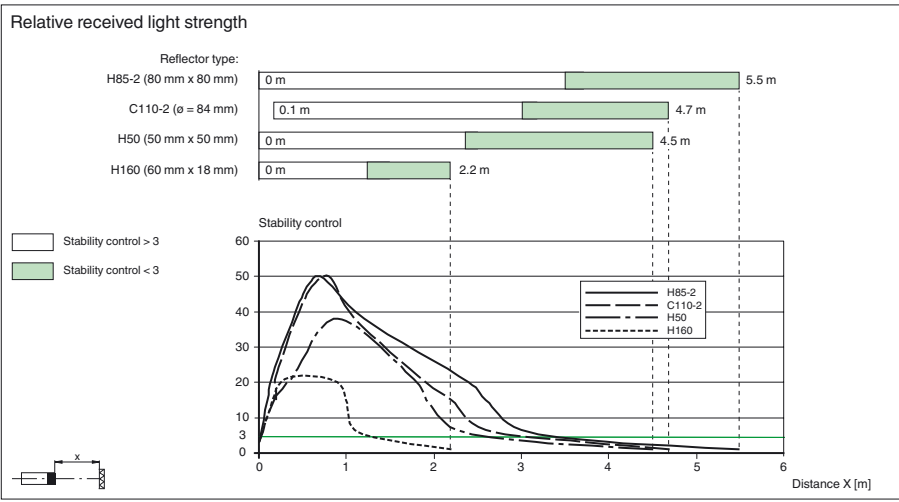
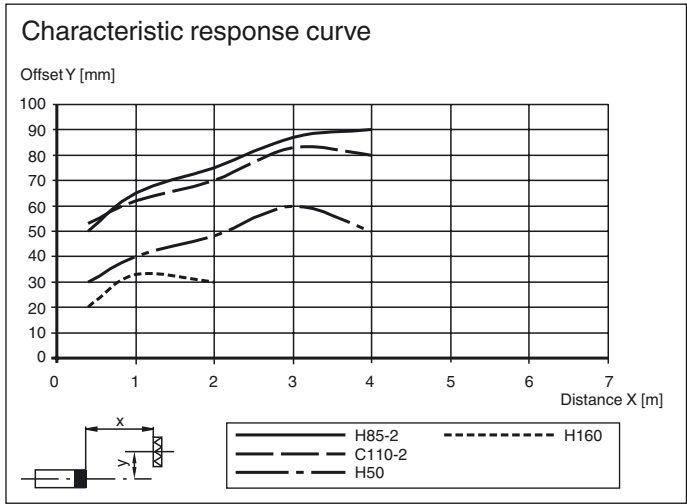
Mounting flange with dead stop, 18 mm

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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