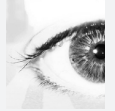




Vision Sensor

PHA250-F200A-R2-T-6778



- Large capture range
- High operating range
- Integrated contrast compensation
- Compact design
- Integrated illumination
- Detects the position of an index hole

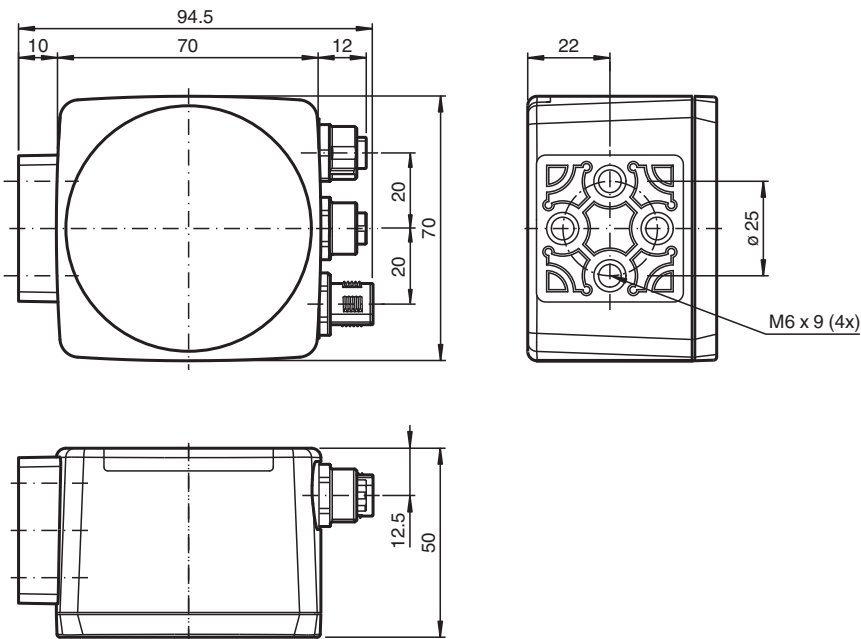
Precision positioning on hole in the 70 mm x 70 mm housing



Function

The sensor has been developed for the precision positioning of high-bay racking operating equipment. It detects circular holes in the racking structure and their positional deviation from the nominal position. The sensor operates in two dimensions.

Dimensions



Technical Data

General specifications

| | |
|----------------|-------------------------------------|
| Light source | LED |
| Light type | Integrated LED lightning (infrared) |
| Object size | Hole diameter 13 mm |
| Response delay | 100 ms |

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

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Technical Data

| | |
|---|---|
| Read distance | 250 mm |
| Depth of focus | ± 50 mm |
| Relative stroke | -5 mm |
| Capture range | max. 120 mm x 100 mm |
| Nominal ratings | |
| Camera | |
| Type | CMOS , Global shutter |
| Number of pixels | 752 x 480 pixels |
| Gray scale | 256 |
| Functional safety related parameters | |
| MTTF _d | 70 a |
| Mission Time (T _M) | 10 a |
| Diagnostic Coverage (DC) | 0 % |
| Indicators/operating means | |
| Operation indicator | LED green: Ready for operation |
| Function indicator | 4 x LED yellow: +X, -X, +Y, -Y |
| Control elements | none |
| Electrical specifications | |
| Operating voltage | U _B 24 V DC ± 15% , PELV |
| No-load supply current | I ₀ max. 250 mA |
| Power consumption | P ₀ 6 W |
| Interface | |
| Interface type | serial , RS 232 |
| Transfer rate | max. 115.2 kBit/s |
| Cable length | max. 30 m |
| Interface 1 | |
| Interface type | Ethernet |
| Protocol | TCP/IP |
| Transfer rate | 100 MBit/s |
| Cable length | max. 30 m |
| Input | |
| Input voltage | to be applied externally 24 V ± 15% PELV |
| Number/Type | Cycle stop, relative stroke |
| Input current | 1.6 mA at 24 V |
| Switching threshold | low: < 10 V, high: > 15 V |
| Cable length | max. 30 m |
| Output | |
| Switching type | PNP , short-circuit/overload protected |
| Signal output | +X, -X, +Y, -Y |
| Switching voltage | 24 V |
| Switching current | max. 100 mA each output |
| Cable length | max. 30 m |
| Compliance with standards and directives | |
| Directive conformity | |
| EMC Directive 2004/108/EC | EN 61326-1 , EN 61000-6-4 |
| Standard conformity | |
| Noise immunity | EN 61326-1:2006 |
| Emitted interference | EN 61000-6-4:2007/A1:2011 |
| Approvals and certificates | |
| UL approval | cULus Listed, General Purpose, Class 2 Power Source, Type 1 enclosure |
| CCC approval | CCC approval / marking not required for products rated ≤36 V |
| Approvals | CE |
| Ambient conditions | |

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 **PEPPERL+FUCHS**

Technical Data

| | |
|----------------------------------|---|
| Operating temperature | -30 ... 60 °C (-22 ... 140 °F) , (noncondensing; prevent icing on the lens!) |
| Storage temperature | -20 ... 85 °C (-4 ... 185 °F) |
| Relative humidity | 90 % , noncondensing |
| Shock resistance | < 50 g |
| Vibration resistance | < 3 G , 11 ... 200 Hz |
| Mechanical specifications | |
| Degree of protection | IP67 |
| Connection | 8-pin, M12x1 connector, standard (supply+IO) , 5-pin, M12x1 socket, standard (RS 232) , 4-pin, M12x1 socket, standard (LAN) |
| Material | |
| Housing | PC/ABS |
| Optical face | Plastic pane |
| Installation | 4 x M6 threading |
| Mass | approx. 160 g |

Connection

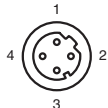
RS 232



Pin Signal

- 1 +UB
- 2 TX RS232
- 3 GND
- 4 RX RS232
- 5 NC

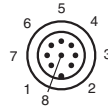
LAN



Pin Signal

- 1 TX+ Ethernet
- 2 RX+ Ethernet
- 3 TX- Ethernet
- 4 RX- Ethernet

24 V DC+IO

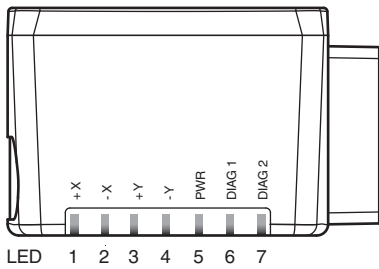
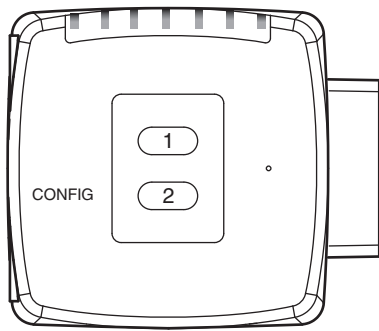


Pin Signal

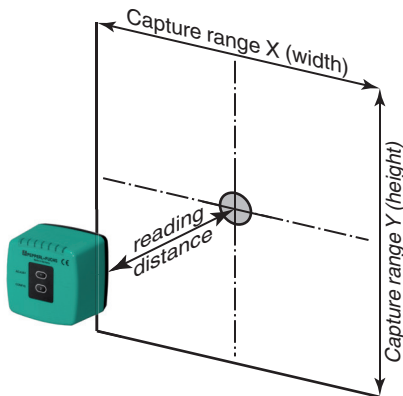
- 1 OUT +X
- 2 +UB
- 3 OUT -Y
- 4 OUT +Y
- 5 OUT -X
- 6 IN 1
- 7 GND
- 8 IN 2

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

Assembly



Characteristic Curve



Accessories

| | | |
|---|-----------------------------------|---|
|  | V19-G-BK5M-PUR-U/ABG | Female cordset, M12, 8-pin, shielded, PUR cable |
|  | CBL-PUR-ABG-GY-04x034-100M | Cable, PUR/PP, 4-wire, shielded |
|  | V45-G | Field-attachable male connector |
|  | V1-G-2M-PUR-ABG-V1-W-UL | Connecting cable, M12 to M12, PUR cable 4-pin, shielded |
|  | PCV-MB1 | Mounting bracket for PCV* read head |

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Accessories

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

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