



Vision Sensor

PHA200-F200A-R2-6474



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

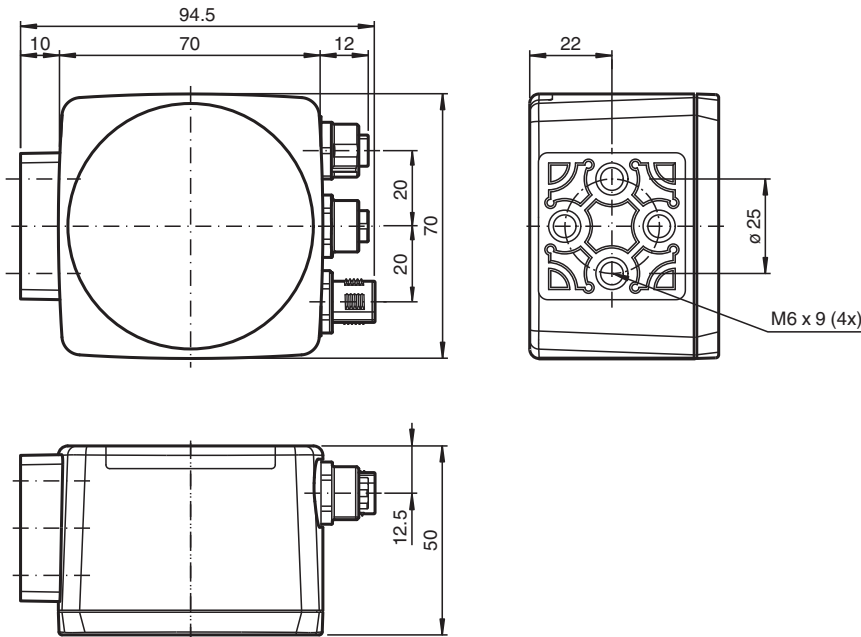
Precision positioning on hole in the 70 mm x 70 mm housing



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



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Technical Data

General specifications

| | |
|----------------|-------------------------------------|
| Light source | LED |
| Light type | Integrated LED lightning (infrared) |
| Object size | Hole diameter 13 mm |
| Response delay | 100 ms |
| Read distance | 200 mm |

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

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Technical Data

| | | |
|---|----------------|--|
| Depth of focus | | ± 50 mm |
| Relative stroke | | 10 mm |
| Zero point offset | | 10 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 | | 65 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 |
| Conformity | | |
| Shock resistance | | EN 60068-2-27:2009 |
| Vibration resistance | | EN 60068-2-6:2008 |
| Emitted interference | | EN 61000-6-4:2007+A1:2011 |
| Noise immunity | | EN 61326-1:2013 |
| Photobiological safety | | exempt group according to EN 62471:2008 |
| Approvals and certificates | | |
| CE conformity | | CE |
| CCC approval | | CCC approval / marking not required for products rated ≤36 V |
| Ambient conditions | | |

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PEPPERL+FUCHS

Technical Data

| | |
|----------------------------------|---|
| Operating temperature | 0 ... 60 °C (32 ... 140 °F) , -20 ... 60 °C (-4 ... 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 |
| Dimensions | |
| Height | 70 mm |
| Width | 70 mm |
| Depth | 50 mm |

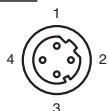
Connection

RS 232



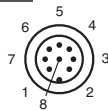
| Pin | Signal |
|-----|----------|
| 1 | +UB |
| 2 | TX RS232 |
| 3 | GND |
| 4 | RX RS232 |
| 5 | NC |

LAN



| Pin | Signal |
|-----|--------------|
| 1 | TX+ Ethernet |
| 2 | RX+ Ethernet |
| 3 | TX- Ethernet |
| 4 | RX- Ethernet |

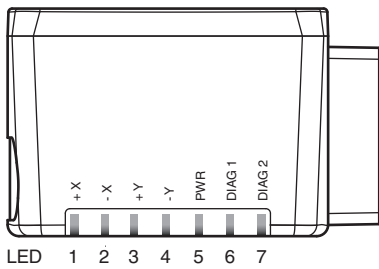
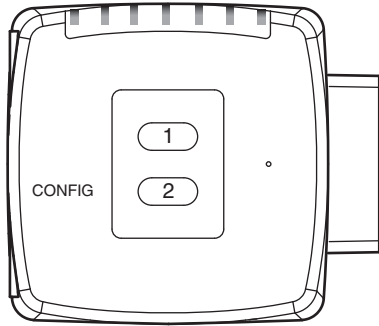
24 V DC+IO



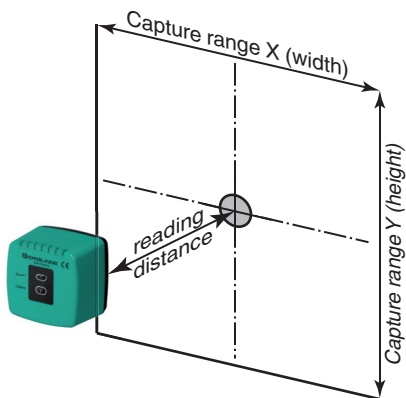
| Pin | Signal |
|-----|--------|
| 1 | OUT +X |
| 2 | +UB |
| 3 | OUT -Y |
| 4 | OUT +Y |
| 5 | OUT -X |
| 6 | IN 1 |
| 7 | GND |
| 8 | IN 2 |

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Assembly



Characteristic Curve



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