



Model Number

PHA300-F200A-R2-5301

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

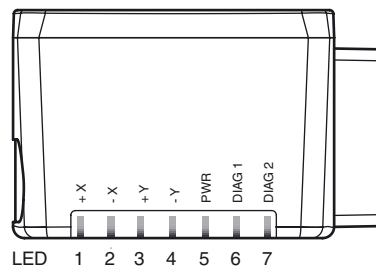
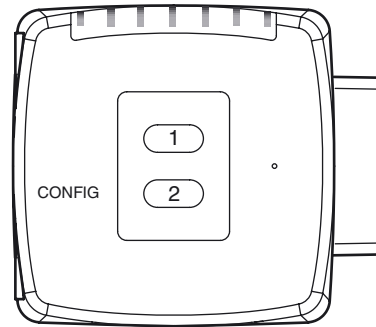
Features

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

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.

Indicating / Operating means



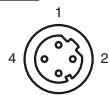
Electrical connection

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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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 | 300 mm |
| Depth of focus | ± 50 mm |
| Capture range | max. 90 mm x 90 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

| | |
|-------------------|--------------------------------|
| Operating display | LED green: Ready for operation |
| Function display | 4 x LED yellow: +X, -X, +Y, -Y |
| Controls | 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 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 |

Ambient conditions

| | |
|-----------------------|---|
| 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

| | |
|-------------------|---|
| Protection degree | 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 |

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 |

Accessories**V19-G-5M-PUR-ABG**

Female cordset, M12, 8-pin, shielded, PUR cable

V15S-G-5M-PUR-ABG

Male cordset, M12, 5-pin, shielded, PUR cable

V1SD-G-2M-PUR-ABG-V45-G

Connection cable, M12 to RJ-45, PUR cable 4-pin, CAT5e

V1SD-G-2M-PUR-ABG-V45X-G

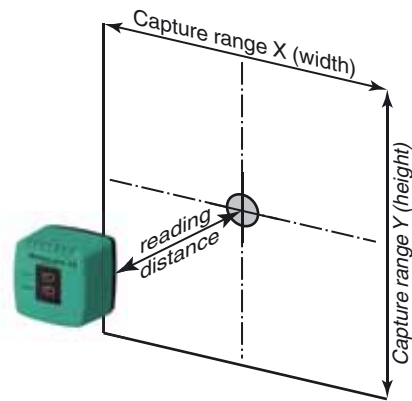
Connection cable, M12 to RJ-45, PUR cable 4-pin, CAT5e

PCV-MB1

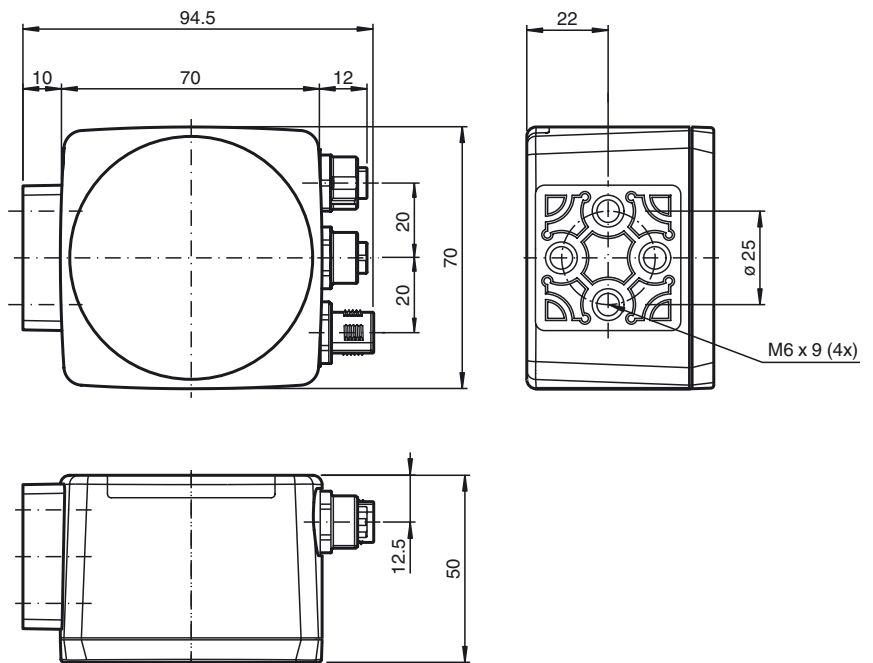
Mounting bracket for PCV* read head

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

Curves / Diagrams



Dimensions



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

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