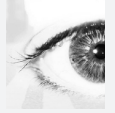




Vision Sensor

PHA250-F200A-R2-5834



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

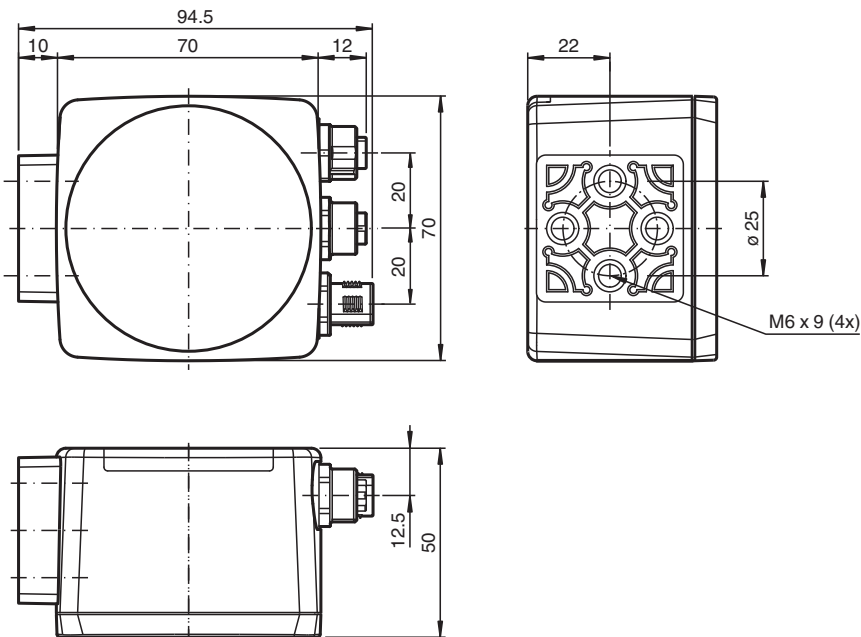
Precision positioning on hole in the 70 mm x 70 mm housing



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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Technical Data

Read distance	250 mm	
Depth of focus	± 50 mm	
Relative stroke	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	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	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

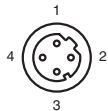
Connection

RS 232



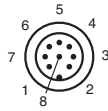
Pin	Signal
1	+UB
2	TX RS232
3	GND
4	RX RS232
5	NC

LAN



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

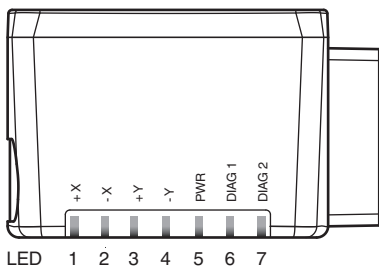
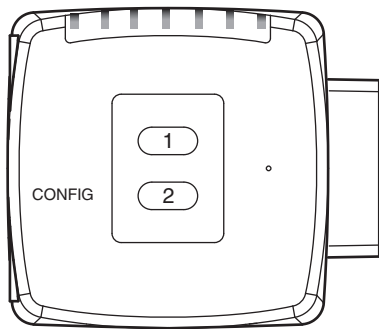
24 V DC+IO



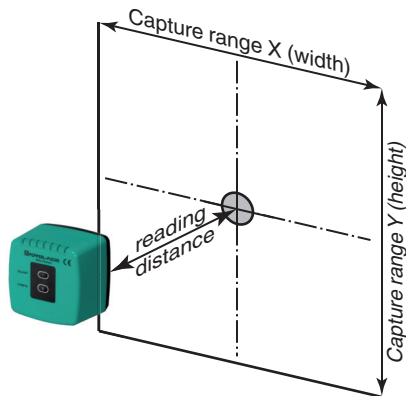
Pin	Signal
1	OUT +X
2	+UB
3	OUT -Y
4	OUT +Y
5	OUT -X
6	IN 1
7	GND
8	IN 2

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Assembly



Characteristic Curve



Accessories

	V19-G-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

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Accessories

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

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