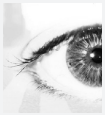


Vision Sensor

PHA150-F200A-R2



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

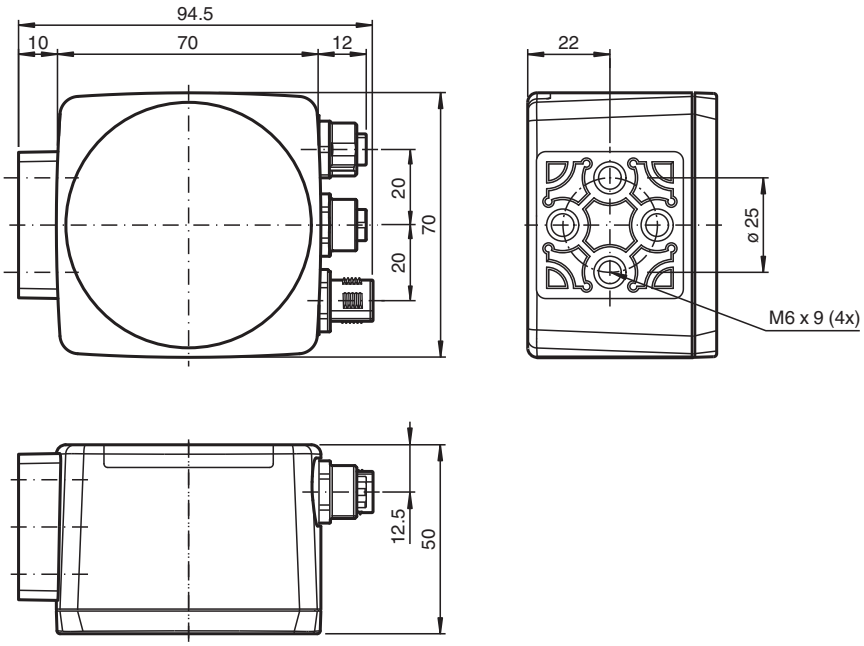
Precision positioning on hole in the 70 mm x 70 mm housing

CE

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
Read distance	150 mm

Release date: 2021-06-14 Date of issue: 2021-06-14 Filename: 240255_eng.pdf

Technical Data

Depth of focus		± 50 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 EN 62471:2008
Approvals and certificates		
CE conformity		CE
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
Ambient conditions		
Operating temperature		0 ... 60 °C (32 ... 140 °F) , -20 ... 60 °C (-4 ... 140 °F) (noncondensing; prevent icing on the lens!)

Release date: 2021-06-14 Date of issue: 2021-06-14 Filename: 240255_eng.pdf

Technical Data

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		
Housing width		70 mm
Housing height		70 mm
Housing depth		50 mm
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

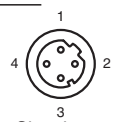
Connection

RS 232



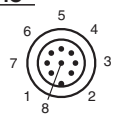
Pin	Signal
1	+UB
2	TX RS232
3	GND
4	RX RS232
5	NC

LAN



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

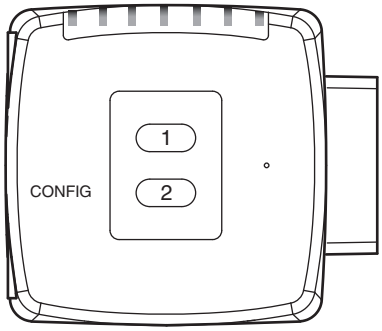
24 V DC+IO

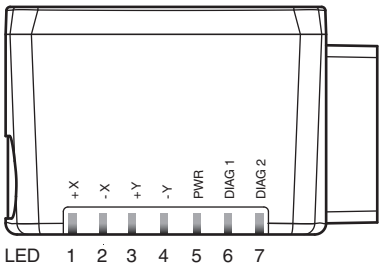


Pin	Signal
1	OUT +X
2	+UB
3	OUT -Y
4	OUT +Y
5	OUT -X
6	IN 1
7	GND
8	IN 2

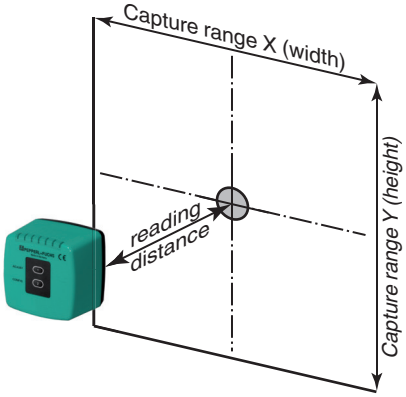
Release date: 2021-06-14 Date of issue: 2021-06-14 Filename: 240255_eng.pdf

Assembly





Characteristic Curve



Accessories

	**V19-G-5M-PUR-ABG**	Female cordset single-ended M12 straight A-coded, 8-pin, PUR cable grey, shielded
	**V15S-G-5M-PUR-ABG**	Male cordset single-ended M12 straight A-coded, 5-pin, PUR cable grey, shielded
	**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

Release date: 2021-06-14 Date of issue: 2021-06-14 Filename: 240255_eng.pdf