



Model Number

VOS120-FFPL-400-IR-4697

Vision Sensor

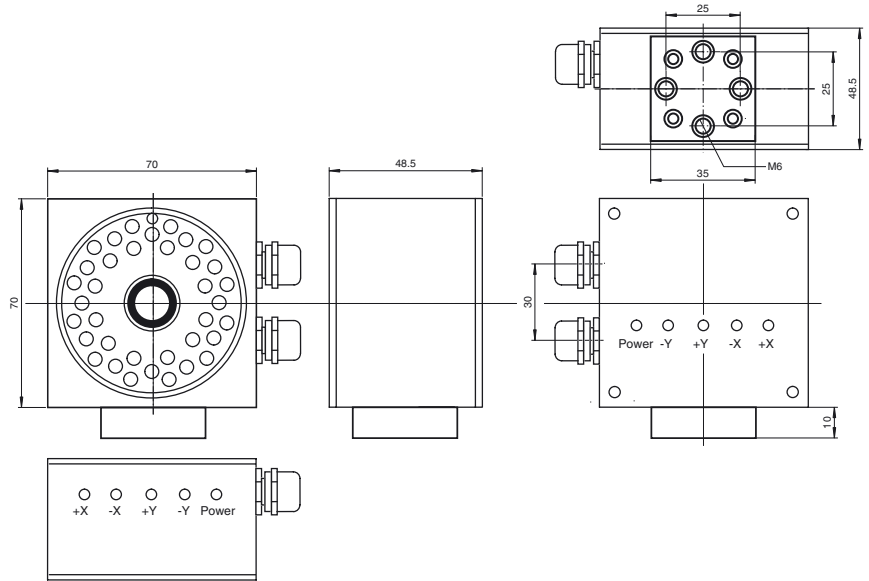
Features

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

Product information

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



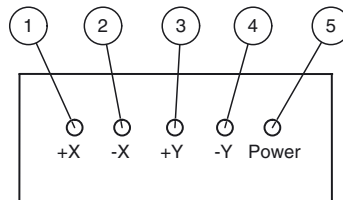
Electrical connection

Pinning according 8-pin M12-connector (Process-interface) Pinning according 4-pin M12-socket (RS 232)



Pin	Signal	Color	Direction	Pin	Signal	Color
1	+ X	white	Output	1	RxD	brown
2	+24 V	brown		2	TxD	white
3	- Y	green	Output	3	GND	blue
4	+ Y	yellow	Output	4	(free)	black
5	- X	grey	Output			
6	Cycle stop	pink	Input			
7	GND	blue				
8	Relative stroke / error image memory	red				

Indicators/operating means



1	+X Position	red
2	-X Position	red
3	+Y Position	red
4	-Y Position	red
5	Power	green

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Technical data**General specifications**

Object distance	400 mm +/- 50 mm
Light source	IRED
Light type	infrared , 880 nm
Approvals	CE
Object size	Hole diameter 10 - 15 mm (10 % - 15 % of the capture range)
Horizontal screen segment	depending on the objective used and the distance to the object
Vertical screen segment	depending on the objective used and the distance to the object
Response delay	100 ms
Optical resolution	depending on the objective used and the distance to the object
Capture range	80 mm x 80 mm

Nominal ratings

Camera	
CCD type	progressive scan
Number of pixels	640 x 480 pixels
Gray scale	256

Functional safety related parameters

MTTF _d	122.8 a
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Indicators/operating means

Operating display	LED green: Ready for operation
Function display	4 x LED red: +X, -X, +Y, -Y
Controls	none

Electrical specifications

Operating voltage	U _B	24 V DC ± 20 %
Operating current		240 mA

Interface

Interface type	serial , RS 232
Transfer rate	max. 115.2 kBit/s

Input

Input voltage	12 ... 24 V DC
Input current	1.6 mA at 24 V
Switching threshold	low: < 2.5 V, high: > 8 V

Output

Signal output	4 x PNPNC +X, -X, +Y, -Y
Switching voltage	24 V each output
Switching current	max. 100 mA each output

Ambient conditions

Ambient temperature	0 ... 45 °C (32 ... 113 °F)
Storage temperature	-20 ... 60 °C (-4 ... 140 °F)
Relative humidity	80 % , noncondensing
Shock resistance	< 50 g
Vibration resistance	< 3 G , 11 ... 200 Hz

Mechanical specifications

Protection degree	IP54
Connection	300 mm fixed cable with M12 connector, 8-pin ; 300 mm fixed cable with M12 x 1 Socket, straight , 4-pin

Material

Housing	anodized aluminium
Optical face	glass pane
Mass	350 g

Compliance with standards and directives

Directive conformity	
EMC Directive 2004/108/EC	EN 61326-1 , EN 55011
Standard conformity	
Noise immunity	EN 61326
Emitted interference	EN 55011
Protection degree	EN 60529

Accessories**V1S-G-2M-PUR-SUBD9**

Cable connector, M12, 4-pin, PUR cable on Sub-D female connector, 9-pin

V19-G-2M-PUR ABG

Cable socket, M12, 8-pin, shielded, PUR cable

V19-G-5M-PUR-ABG

Cable socket, M12, 8-pin, shielded, PUR cable

VSK120-Y231214

Y connecting cable, Sub-D-connector, 25-pin to 1xM12, 4-pin and 1xM12, 8-pin, PUR cable

CBX800-KIT-B6-5004

Connection module for RS 232 and RS 485 enabled devices

Additional accessories can be found in the Internet.