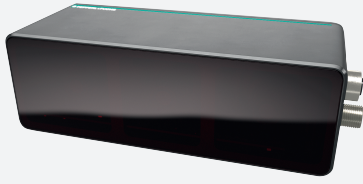


3-D stereo sensor

SmartRunner Explorer 3-D

VSE1000-F400-B12-A1000

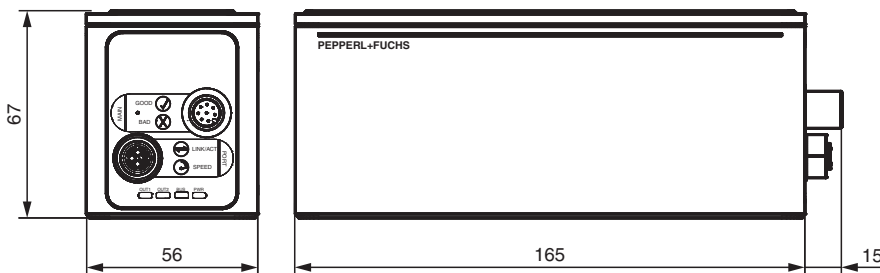


- Resolution 1300 x 1080 pixel
- Gigabit-Ethernet (GigE) interface
- Measurement data preprocessing
- Simple and fast mounting
- Intuitive and user-friendly operating software ViSolution
- Sturdy metallic housing
- C# API

The sensor uses stereo-vision technology and structured light to capture objects in 3-D. It can acquire raw 3-D data at a range of 600 to 950 mm with an image resolution of 1.4 MP and a frame rate of 10 fps. The sensor features a Gigabit Ethernet interface, intuitive operating software, rugged metal housing, and an API interface. As a raw data sensor, it is suitable for a variety of applications that require detailed contour detection.



Dimensions



Technical Data

General specifications

Detection range	600 ... 950 mm
Measuring range	X: 430 mm and Y: 360 mm at 600 mm distance X: 650 mm and Y: 550 mm at 900 mm distance
Light source	LED projector
Light type	Infrared Wave length 850 nm
Light direction	Structured light
Target velocity	max. 1 m/s
Object reflectivity	> 18 %
Picture detail	dependant of operating distance
Resolution	point spacing X/Y: 0.3 mm and Z noise: 0.6 mm at 600 mm distance point spacing X/Y: 0.5 mm and Z noise: 1 mm at 900 mm distance (18% reflectivity)

Nominal ratings

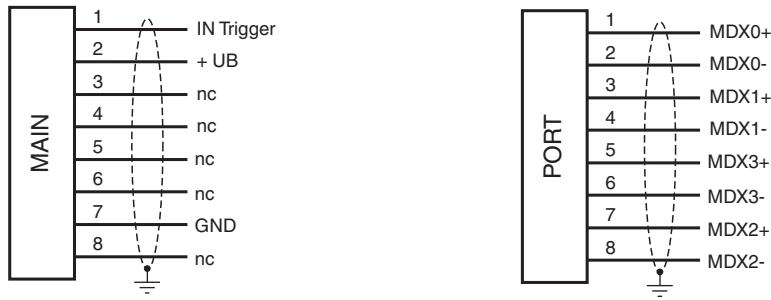
Camera	
Number of pixels	1300 x 1080 pixels
Shutter	Global shutter
Frame rate	10 fps
Image resolution	1.4 MP
Disparity	128

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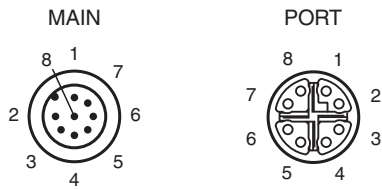
Technical Data

Functional safety related parameters		
MTTF _d		20 a
Mission Time (T _M)		10 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		4 LEDs (OUT 1, OUT 2, BUS, PWR)
Electrical specifications		
Operating voltage	U _B	24 V ± 20 % , PELV
No-load supply current	I ₀	max. 450 mA
Power consumption	P ₀	max. 10 W , Outputs without load
Interface		
Interface type		Ethernet TCP/IP
Transfer rate		1 GBit/s
Input		
Control input		1 digital input and External trigger
Conformity		
Photobiological safety		Risk group 0 according to IEC 62471
Compliance with standards and directives		
Standard conformity		
Noise immunity		EN 61000-6-2:2005
Emitted interference		EN 61000-6-4:2007/A1:2011
Degree of protection		EN 60529
Shock and impact resistance		EN 60068-2-27:2009
Function and system design		
Measuring principle		3-D image data Stereo vision Structured light
Application		3-D raw data
Approvals and certificates		
CE conformity		CE
UKCA conformity		UKCA
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Operating temperature		-20 ... 45 °C (-4 ... 113 °F) , (noncondensing; prevent icing on the lens!)
Relative humidity		< 99 % , noncondensing
Mechanical specifications		
Degree of protection		IP65 / IP67
Connection		M12 connector, 8-pin , A-coded 8-pin M12 socket , X-coded
Material		
Housing		metal
Optical face		Plastic pane
Installation		M5 screws
Mass		approx. 800 g
Tightening torque, fastening screws		max. 2 Nm
Dimensions		
Height		180 mm
Width		56 mm
Depth		67 mm
General information		
Note		INVISIBLE LED , DO NOT STARE INTO BEAM DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS

Connection Assignment



Connection



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