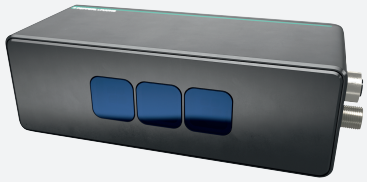


3-D Time-of-Flight sensor

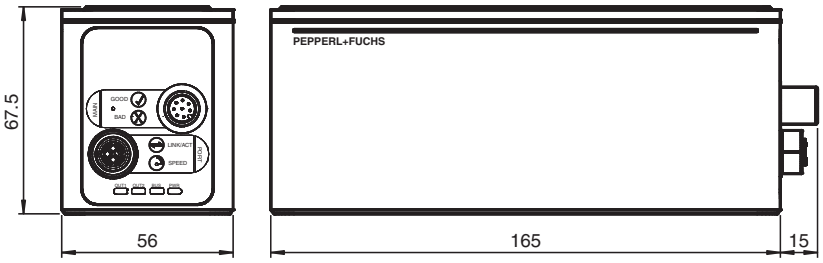
SmartRunner Explorer 3-D

VTE7500-F400-B12-A1500

- Resolution 640 x 480 pixel
- Gigabit-Ethernet (GigE) interface
- Simple and fast mounting
- Intuitive and user-friendly operating software ViSolution
- Sturdy metallic housing
- C# API
- DuraBeam technology

The 3-D time-of-flight sensor is based on the principle of measuring time-of-flight of infrared light. This allows raw 3-D data from objects at a range of 400 to 7500 mm to be acquired with an image resolution of 0.3 MP and a frame rate of 30 fps. The sensor features a Gigabit Ethernet interface, intuitive operating software, rugged metal housing, and an API interface. The sensor is especially suitable for dynamic applications with a larger measuring range.

Dimensions



Technical Data

General specifications		
Detection range		max. 7500 mm min. 400 mm
Light source		Vertical-cavity surface-emitting laser
Light type		Infrared
Laser nominal ratings		
Laser class		1
Wave length		940 nm
Target velocity		max. 1 m/s
Object reflectivity		> 18 %
Picture detail		dependant of operating distance
Opening angle		47 ° x 35 °
Nominal ratings		
Camera		

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Technical Data

Number of pixels		640 x 480 pixels
Shutter		4 - Phases Global shutter
Frame rate		30 fps
Image resolution		0.3 MP
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. 13 W , Outputs without load
Interface		
Interface type		Ethernet TCP/IP
Transfer rate		1 GBit/s
Input		
Control input		1 digital input and External trigger
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
Laser class		IEC 60825-1:2014
Function and system design		
Measuring principle		Time-of-Flight
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		67.5 mm
General information		
Note		INVISIBLE LASER RADIATION , DO NOT STARE INTO BEAM DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS , LASER ENERGY EXPOSURE NEAR APERTURE MAY CAUSE BURNS

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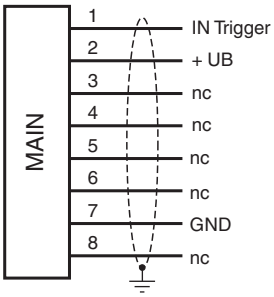
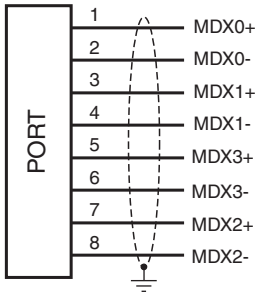
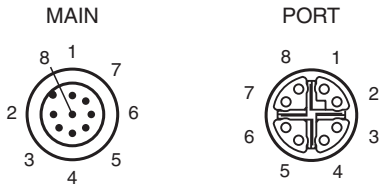
Connection Assignment





Connection



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Safety Information

LASERLICHT
LASER LIGHT

LASER KLASSE 1
CLASS 1 LASER PRODUCT

Safety Information

Laser Class 1 Information

The irradiation can lead to irritation especially in a dark environment. Do not point at people!

Maintenance and repairs should only be carried out by authorized service personnel!

Attach the device so that the warning is clearly visible and readable.

The warning accompanies the device and should be attached in immediate proximity to the device.

Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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