SICK.COM

DATA SHEET

V3T12P-MR32A7

TriSpector1000
3D machine vision

SICK Sensor Intelligence

3D MACHINE VISION

V3T12P-MR32A7

ORDERING INFORMATION

Type	part no.
V3T12P-MR32A7	1091321

Further device versions and accessories at www.sick.com/TriSpector1000

DETAILED TECHNICAL DATA

FEATURES

Technology	3D laser triangulation
Programmable	✓
Pre-calibrated	✓
Toolkit	SICK algorithm API HALCON
Working range	141 mm ... 541 mm
Example field of view	270 mm x 100 mm
Illumination	Integrated
Illumination color	Red, laser, Visible, 660 nm, ± 7 nm
Laser class	2 (EN 60825-1:2014+A11:2021; IEC 60825-1:2014, Complies with the FDA performance requirements for laser products except for conformance with IEC 60825-1 Ed.3., as described in Laser Notice 56 dated May 8, 2019.)
Width at minimum operating distance	90 mm
Width at maximum operating distance	330 mm
Maximum height range	400 mm
Imaging angle	65°
Offline support	Emulator
Task	Detecting - Standard objects Detecting - Level Measuring - Dimension, contour and volume Measuring - Number Monitoring and controlling - Quality Determining position - 3D position determination

MECHANICS/ELECTRONICS

Connector material	Nickel plated brass
Supply voltage	24 V DC, ± 20 %
Ripple	< 5 V_{pp}
Power consumption	≤ 11 W

Current consumption	≤ < 450 mA Without output load
Enclosure rating	IP67
Protection class	III
Housing material	Anodized aluminum
Window material	Glass
Weight	1.3 kg
Dimensions (L x W x H)	217 mm x 62 mm x 84 mm

PERFORMANCE

Scan/frame rate	5,000 3D profiles/s
Maximum number of profiles	2,500 Per image
Data points/profile	1,536
Height resolution	40 µm ... 280 µm
3D profile resolution	0.215 mm/px

INTERFACES

Ethernet	✓ , TCP/IP
Function	FTP, HTTP
Data transmission rate	≤ 1,000 Mbit/s
Serial	✓ , RS-232, RS-422
Operator interfaces	Web server
Configuration software	SICK AppStudio
Digital input	3 inputs
Configurable outputs	4 inputs/outputs
Encoder interface	RS-422 / TTL
Maximum encoder frequency	Max. 300 kHz

AMBIENT DATA

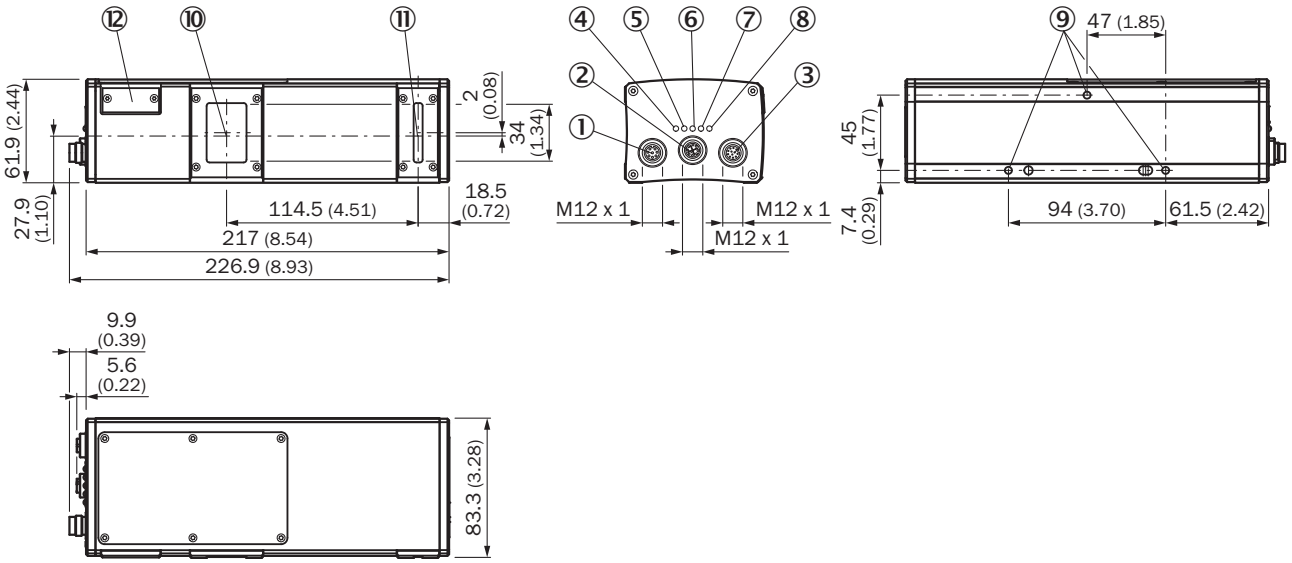
Electromagnetic compatibility (EMC)	EN 61000-6-2:2005 / EN 61000-6-3:2007
Shock load	15 g / 6 ms (EN 60068-2-27)
Vibration load	5 g, 10 Hz ... 150 Hz (EN 60068-2-6)
Ambient operating temperature	0 °C ... +50 °C
Storage temperature	–20 °C ... +70 °C [1]

[1] Permissible relative humidity: 0% ... 90% (non-condensing).

CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
cTUVus certificate	✓
Optical radiation safety (GB 44703:2024) declaration of manufacturer (low risk)	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

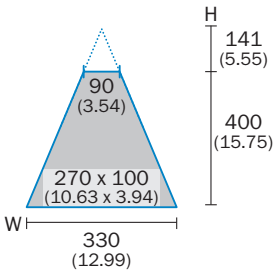
DIMENSIONAL DRAWING



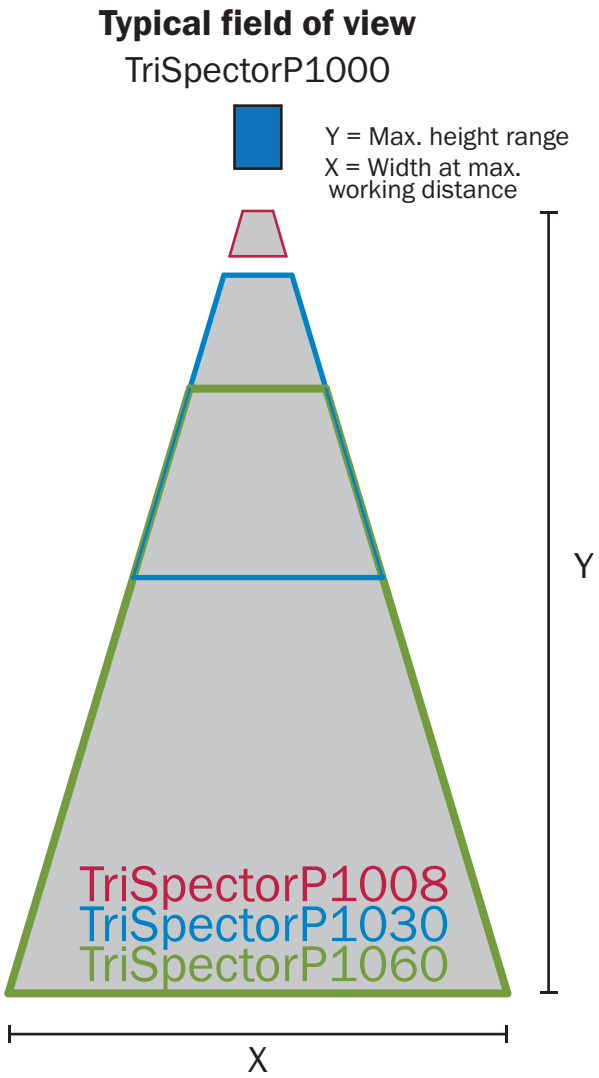
Dimensions in mm (inch)
① Connector Encoder (thread inside)
② Gigabit Ethernet connection (GbE)
③ Connector Power I/O (thread inside)
④ LED; On
⑤ LED; State
⑥ LED; Link/Data
⑦ LED; Result
⑧ LED; Laser
⑨ Fastening threads (M5 x 8.5 mm length)
⑩ Optical receiver (center)
⑪ Optical sender (center)
⑫ Micro SD memory card

FIELD OF VIEW

TriSpectorP1030
Typ. field of view in mm (inch)

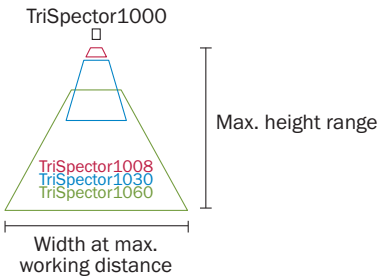


FIELD OF VIEW



FIELD OF VIEW

Typical field of view



Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1091321

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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