



# V3T12P-MR32A7S50

TriSpectorP1000

3D MACHINE VISION

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
V3T12P-MR32A7S50	1106177

Other models and accessories → [www.sick.com/TriSpectorP1000](http://www.sick.com/TriSpectorP1000)



### Detailed technical data

#### Features

<b>Task</b>	Quality inspection Measuring, 3D Robot guidance
<b>Technology</b>	3D line scanning
<b>Product category</b>	Programmable
<b>Toolkit</b>	SICK algorithm API HALCON 3D Belt Pick SensorApp
<b>Working distance</b>	141 mm ... 541 mm
<b>Example field of view</b>	270 mm x 100 mm
<b>Illumination</b>	Laser
<b>Illumination color</b>	Red, laser, Visible, 660 nm, ± 7 nm
<b>Laser class</b>	2 (IEC 60825-1:2014, EN 60825-1:2014)
<b>Factory calibrated</b>	✓
<b>Width at minimum operating distance</b>	90 mm
<b>Width at maximum operating distance</b>	330 mm
<b>Maximum height range</b>	400 mm
<b>Imaging angle</b>	65°
<b>Offline support</b>	Emulator

#### Mechanics/electronics

<b>Connection type</b>	M12, 12-pin male connector, A-coded (voltage supply, I/O) M12, 8-pin female connector, X-coded (Gigabit Ethernet) M12, 8-pin female connector, A-coded (encoder)
<b>Connector material</b>	Nickel plated brass
<b>Supply voltage</b>	24 V, ± 20 %
<b>Ripple</b>	< 5 V <sub>pp</sub>

<b>Power consumption</b>	≤ 11 W
<b>Current consumption</b>	< 400 mA, without output load
<b>Enclosure rating</b>	IP67
<b>Protection class</b>	III
<b>Housing material</b>	Anodized aluminum
<b>Window material</b>	Glass
<b>Weight</b>	1.3 kg
<b>Dimensions (L x W x H)</b>	217 mm x 62 mm x 84 mm

## Performance

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

## Interfaces

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

## Ambient data

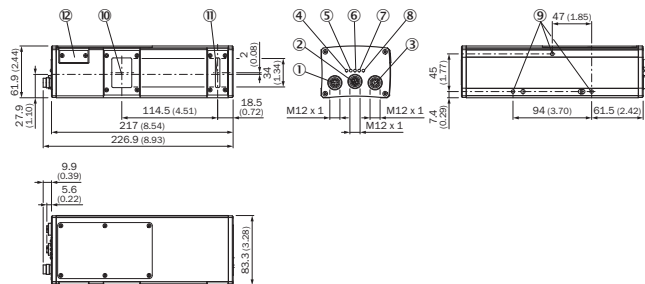
<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-2:2005 / EN 61000-6-3:2007
<b>Shock load</b>	15 g / 6 ms (EN 60068-2-27)
<b>Vibration load</b>	5 g, 10 Hz ... 150 Hz (EN 60068-2-6)
<b>Ambient operating temperature</b>	0 °C ... +50 °C
<b>Storage temperature</b>	-20 °C ... +70 °C

## Classifications

<b>ECl@ss 5.0</b>	27310205
<b>ECl@ss 5.1.4</b>	27310205
<b>ECl@ss 6.0</b>	27310205
<b>ECl@ss 6.2</b>	27310205
<b>ECl@ss 7.0</b>	27310205
<b>ECl@ss 8.0</b>	27310205
<b>ECl@ss 8.1</b>	27310205
<b>ECl@ss 9.0</b>	27310205
<b>ECl@ss 10.0</b>	27310205
<b>ECl@ss 11.0</b>	27310205

<b>ECI@ss 12.0</b>	27310205
<b>ETIM 5.0</b>	EC001820
<b>ETIM 6.0</b>	EC001820
<b>ETIM 7.0</b>	EC001820
<b>ETIM 8.0</b>	EC001820
<b>UNSPSC 16.0901</b>	43211731

### Dimensional drawing (Dimensions in mm (inch))

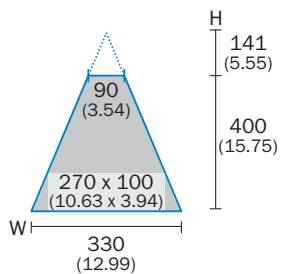


- ① Connector Encoder (thread inside)
- ② Connector Gigabit Ethernet (Gig E)
- ③ Connector Power I/O (thread inside)
- ④ LED; On
- ⑤ LED; State
- ⑥ LED; Link/Data
- ⑦ LED; Result
- ⑧ LED; Laser
- ⑨ Fastening threads (M5 x 8.5 mm length)
- ⑩ Optical receiver (center)
- ⑪ Optical sender (center)
- ⑫ Micro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

### Field of view

#### TriSpectorP1030

Typ. field of view in mm (inch)

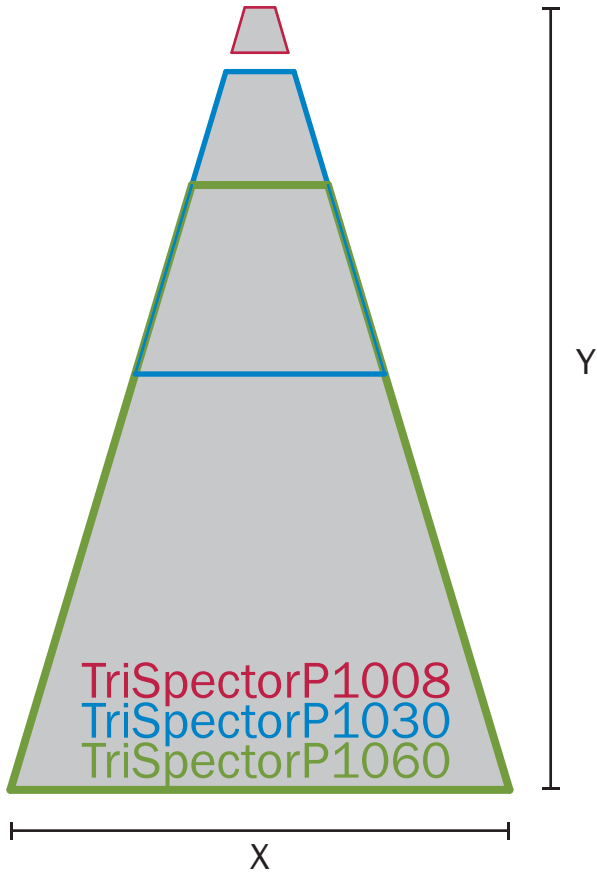


### Typical field of view

TriSpectorP1000

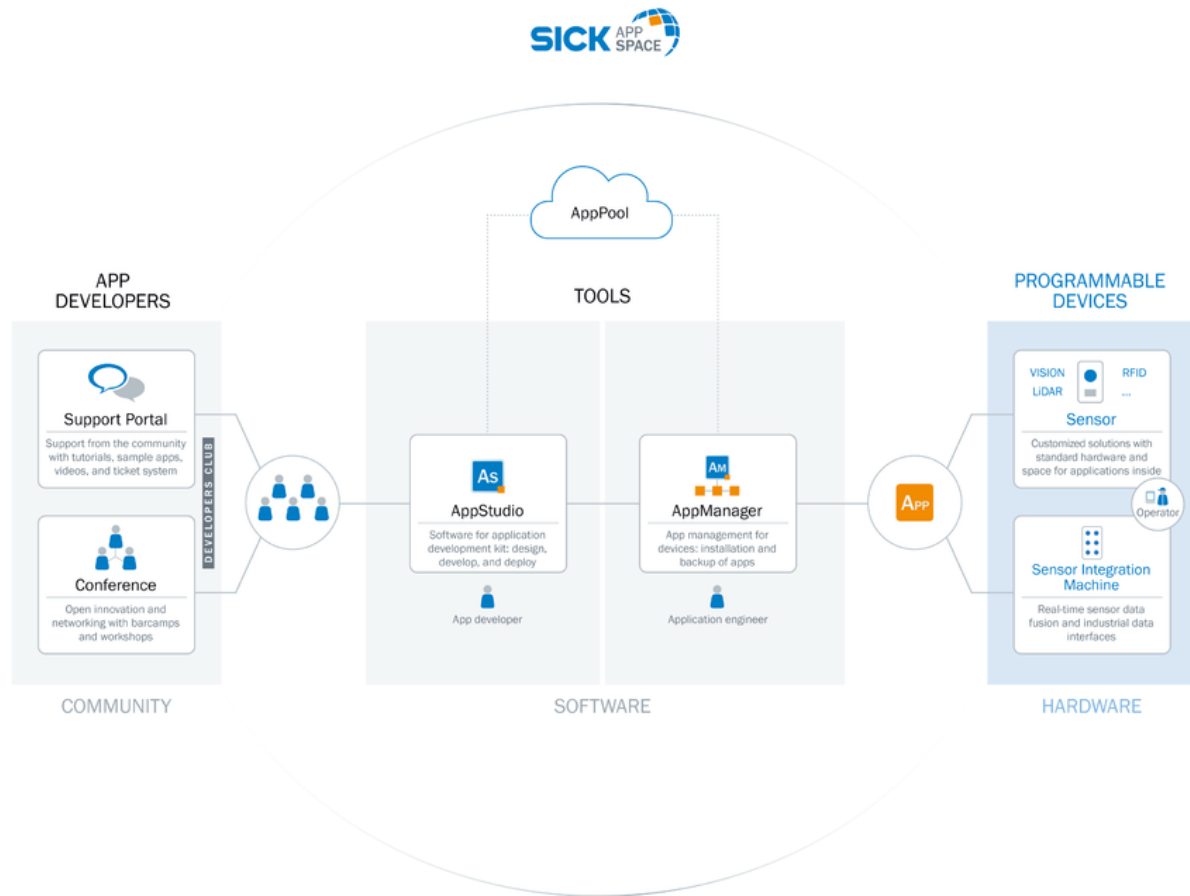


Y = Max. height range  
X = Width at max.  
working distance





### Overview

SICK AppSpace



### Recommended accessories

Other models and accessories → [www.sick.com/TriSpectorP1000](http://www.sick.com/TriSpectorP1000)

	Brief description	Type	Part no.
<b>Sets and kits</b>			
	3D belt pick accessory set with 5 m power I/O cable, 5 m gigabit Ethernet cable, 5 m sensor/actuator cable, encoder terminal and mounting bracket for TriSpectorP1000	3D belt pick accessory set	1103512
<b>Incremental encoders</b>			
	<ul style="list-style-type: none"> <li><b>Mechanical design:</b> Solid shaft face mount flange 10 mm x 19 mm</li> <li><b>Communication interface:</b> 4.5 V ... 32 V, TTL, HTL, programmable</li> <li><b>Connection type:</b> Male connector, M12, 8-pin, radial</li> <li><b>Pulses per revolution:</b> 10,000</li> </ul>	DFS60B-S4PC10000	1036721

## Recommended services

Additional services → [www.sick.com/TriSpectorP1000](http://www.sick.com/TriSpectorP1000)

	Type	Part no.
Warranty extensions		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> Identification solutions, machine vision, Distance sensors, Detection and ranging solutions</li> <li>• <b>Range of services:</b> The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase)</li> <li>• <b>Duration:</b> Five-year warranty from delivery date.</li> </ul>	Extended warranty for a total of five years from delivery date	1680671
Feasibility study		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> 2D machine vision, 3D machine vision</li> <li>• <b>Range of services:</b> Recommendations based on tests at SICK, description of the field of application, consideration of specifications of SICK products, identification of performance factors, temporary analysis of influencing factors, acceptance tests, adjustments to application-specific parameters, test scans for initial verification at SICK, documentation and archiving</li> <li>• <b>Documentation:</b> Description of the application, suggestion for a solution, proof of concept, mounting instructions, results and summary</li> <li>• <b>Duration:</b> Additional work will be invoiced separately</li> <li>• <b>Travel expenses:</b> The prices do not include expenses or costs for the travel time, travel costs, such as flight or hotel expenses, are not included</li> </ul>	Vision Gold feasibility study	1612805

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)