



V3T12P-MR32A7

TriSpectorP1000

3D MACHINE VISION

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
V3T12P-MR32A7	1091321

Other models and accessories → www.sick.com/TriSpectorP1000



Detailed technical data

Features

Task	Position determination Presence inspection Quality check Measuring, 3D
Technology	3D triangulation
Product category	Programmable
Toolkit	SICK algorithm API HALCON
Working distance	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.)
Factory calibrated	✓
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

Mechanics/electronics

Connection type	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)
Connector material	Nickel plated brass

Supply voltage	24 V, ± 20 %
Ripple	< 5 V _{pp}
Power consumption	≤ 11 W
Current consumption	< 400 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	300 kHz

Ambient data

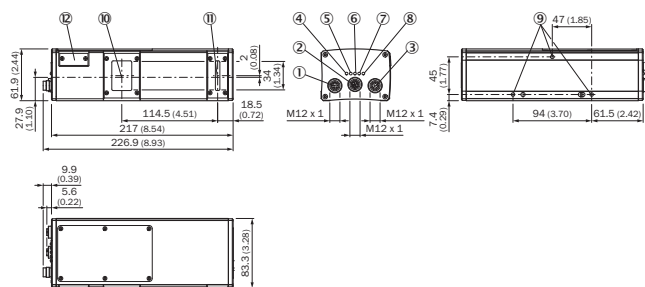
Electromagnetic compatibility (EMC)	EN 61000-6-2:2005 / EN 61000-6-3:2007
Shock load	15 g / 6 ms (EN 60068-2-27)
Vibration load	5 g, 10 Hz ... 150 Hz (EN 60068-2-6)
Ambient operating temperature	0 °C ... +50 °C
Storage temperature	-20 °C ... +70 °C

Classifications

ECLASS 5.0	27310205
ECLASS 5.1.4	27310205
ECLASS 6.0	27310205
ECLASS 6.2	27310205
ECLASS 7.0	27310205
ECLASS 8.0	27310205
ECLASS 8.1	27310205

ECLASS 9.0	27310205
ECLASS 10.0	27310205
ECLASS 11.0	27310205
ECLASS 12.0	27310205
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820
ETIM 8.0	EC001820
UNSPSC 16.0901	43211731

Dimensional drawing (Dimensions in mm (inch))

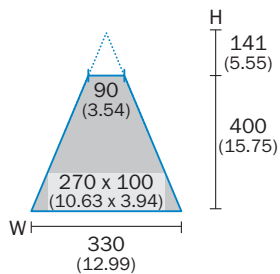


- ① Connector Encoder (thread inside)
- ② Connector Gigabit Ethernet (Gig E)
- ③ Connector Power I/O (thread inside)
- ④ LED; On
- ⑤ LED; State
- ⑥ LED; Link/Data
- ⑦ LED; Result
- ⑧ LED; Laser
- ⑨ Fastening threads (M5 x 8.5 mm length)
- ⑩ Optical receiver (center)
- ⑪ Optical sender (center)
- ⑫ Micro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

Field of view

TriSpectorP1030

Typ. field of view in mm (inch)

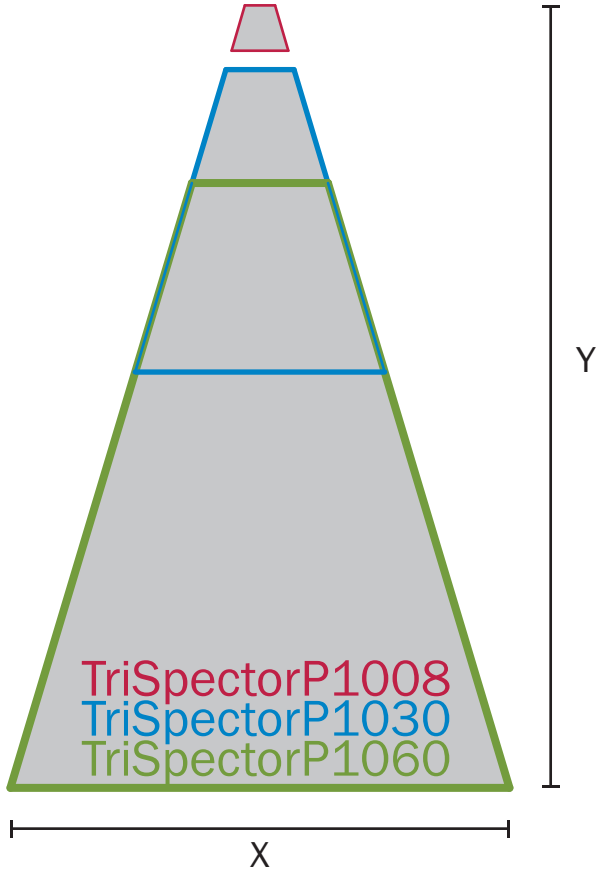


Typical field of view

TriSpectorP1000

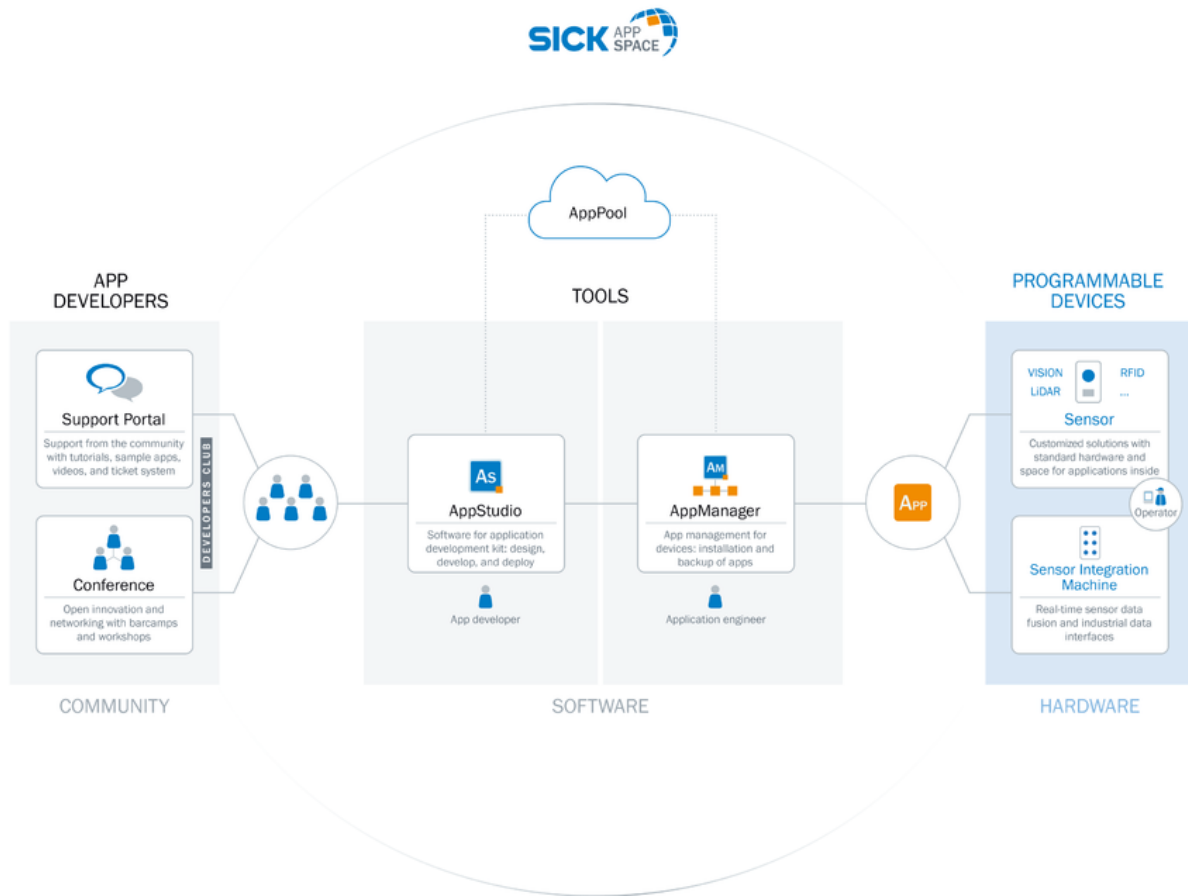


Y = Max. height range
X = Width at max.
working distance





Overview







SICK AppSpace



Recommended accessories

Other models and accessories → www.sick.com/TriSpectorP1000

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket set consisting of mounting bracket, cooling plate, includes angle display for setting the tilt angle	Mounting bracket	2076735
Plug connectors and cables			
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 5-pin, straight Connection type head B: Flying leads Cable: 2 m Description: Shielded Connection systems: Flying leads 	Connecting cable	6024860

	Brief description	Type	Part no.
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 8-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 8-wire, PVC • Description: Sensor/actuator cable, shielded • Application: Zones with chemicals 	YM2A28-050VA6XLEAX	2096233
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 8-pin, straight, A-coded • Connection type head B: Male connector, M12, 8-pin, straight, A-coded • Signal type: Sensor/actuator cable • Cable: 2 m, 8-wire, PUR, halogen-free • Description: Sensor/actuator cable, shielded • Application: Zones with oils and lubricants, Drag chain operation 	YF2A28-020UA6M2A28	2096105
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 12-pin, straight • Connection type head B: Male connector, M12, 5-pin, straight • Signal type: Power • Cable: 0.25 m • Description: Power, Cable for connecting a TriSpector to power supply unit 2079609 	YF2A6B-C25XXM2A15	2079766
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 8-pin, straight, X-coded • Connection type head B: Male connector, RJ45, 8-pin, straight • Signal type: Ethernet, Gigabit Ethernet • Cable: 2 m, 8-wire, PUR, halogen-free • Description: Ethernet, Gigabit Ethernet, shielded • Application: Zones with oils and lubricants 	YM2X18-020EG1MRJA8	2106258
Others			
	24 V DC power supply unit, 5-pin, M12, for TriSpector in combination with connecting cable 2079766	Power supply unit	2079609
Incremental encoders			
	<ul style="list-style-type: none"> • Mechanical design: Solid shaft face mount flange 10 mm x 19 mm • Communication interface: 4.5 V ... 32 V, TTL, HTL, programmable • Connection type: Male connector, M12, 8-pin, radial • Pulses per revolution: 10,000 	DFS60B-S4PC10000	1036721

Recommended services

Additional services → www.sick.com/TriSpectorP1000

	Type	Part no.
Extended warranty		
<ul style="list-style-type: none"> • Product area: Identification solutions, machine vision, Detection and ranging solutions, safety camera sensors, Safety laser scanners, Safety radar sensors • Range of services: The services correspond to the scope of the statutory manufacturer warranty (SICK general terms of delivery). • Duration: Five-year warranty from delivery date. 	Extended warranty for a total of five years from delivery date	1680671

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