

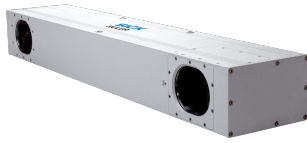


Ruler-S2114

ScanningRuler

3D MACHINE VISION

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
Ruler-S2114	1051660

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



Detailed technical data

Features

Technology	3D triangulation
Pre-calibrated	✓
Product category	Streaming, pre-calibrated
Working distance	1,000 mm ... 2,000 mm
Example volume of view (L x W x H)	1,000 mm x 1,200 mm x 750 mm (max. image area), 800 mm x 1,200 mm x 1,000 mm (max. height range)
Light source	Internal lighting
Laser class	Laser, Visible, Red, 660 nm, ± 15 nm
Data synchronization	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	Free running, external triggering
Grayscale measurements	✓
Spectral range	✓
Description	Approx. 630 nm ... 690 nm
Description	ScanningRuler S1200 - Snapshot 3D camera with built-in class 2M laser. For field of view up to size of Euro and U.S. pallets. Factory calibrated and Gigabit Ethernet interface.

Mechanics/electronics

Connection type	Harting Push Pull (Ethernet) M12, 8-pin male connector, A-coded (voltage supply, I/O)
Connector material	M12: nickel-plated brass, Ethernet: thermoplast/anodized aluminum
Supply voltage	24 V DC, ± 20 %
Ripple	< 5 V _{pp}
Power consumption	10 W
Current consumption	< 1 A
Enclosure rating	IP65
Housing material	Aluminum
Housing color	Gray, varnished
Window material	Float glass, anti-reflective coated
Weight	13.5 kg
Dimensions (L x W x H)	820 mm x 107 mm x 145 mm

Performance

Image sensor	CMOS
Sensor resolution	756 px x 512 px
Scan/frame rate	2.5 s per 3D image
Typical resolution	1 mm ... 4 mm, depending on distance to camera

Interfaces

Ethernet	✓, UDP/IP
Data transmission rate	1,000 Mbit/s
Configuration software	Ranger Studio
Operating system	Windows 7, Windows XP Pro, Windows 10
Development environment	C++ / .Net
Programming interface	iCon API
Digital input	2 x HIGH = 10 V ... 28.8 V
Digital output	1 x B-type, < 100 mA in total

Ambient data

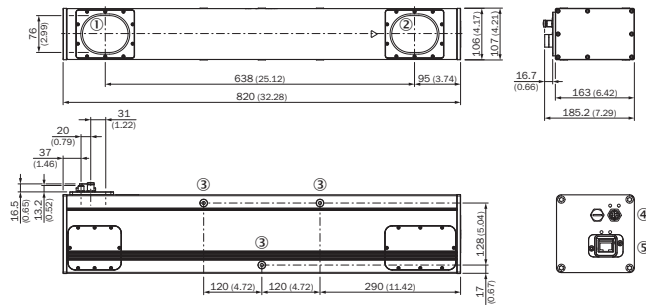
Shock load	15 g, 3 x 6 directions
Vibration load	5 g, 58 Hz ... 150 Hz
Ambient operating temperature	0 °C ... +40 °C ¹⁾
Storage temperature	-30 °C ... +70 °C ¹⁾

¹⁾ Non-condensing.

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

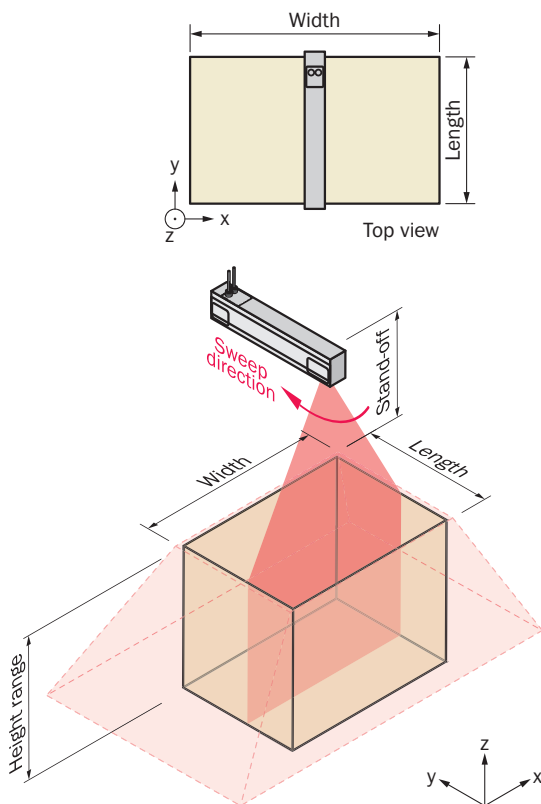
Dimensional drawing (Dimensions in mm (inch))



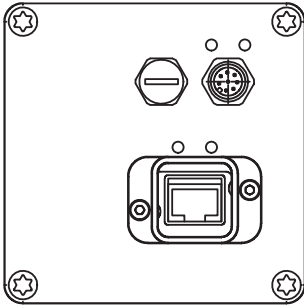
- ① Image sensor
- ② Laser unit and rotating mirror
- ③ Fastening threads (M8 x 15 mm)
- ④ Power I/O: M12, 8-pin
- ⑤ Gigabit Ethernet

Working range diagram

Measuring details

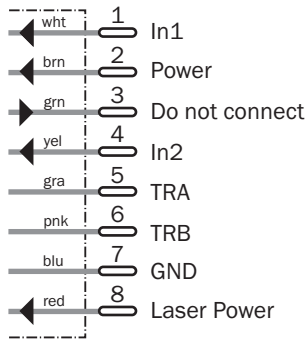


Connection type







Connection diagram


Connection diagram, voltage I/O



Recommended accessories

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

	Brief description	Type	Part no.
Connection modules			
	Single port PCI board for connection to Gigabit Ethernet high-end camera	Gigabit Ethernet Board Single	6032329
	24 V DC power supply with 8-pin M 12 connector, 90 ... 264 V AC, 1.14 A / 24 W, including two line cords (European and US)	Power supply (Ruler E/S)	1014242
	<ul style="list-style-type: none"> • Connection type head A: Male connector, RJ45 • Connection type head B: Male connector, RJ45 • Signal type: Gigabit Ethernet • Cable: 10 m • Description: Gigabit Ethernet, Push-pull male connector, unshielded, CAT6 	SSL-0J08-G10ME	6032322
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 8-pin, A-coded • Connection type head B: Female connector, M12, 8-pin, A-coded • Connection type head C: Male connector, M12, 8-pin, A-coded • Description: T-junction • Note: Parallel connected 	SBO-02F12-SF	6026503

	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: 10 m, 8-wire, PVC• Description: Sensor/actuator cable, shielded• Application: Zones with chemicals	YM2A28-100VA6XLEAX	2096246

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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.”

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