

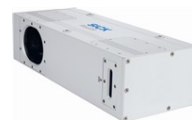


High-end cameras
Ruler, Ruler E600, Ruler E600 HB, Gigabit
Ethernet

Ruler-E2221



Model Name > [Ruler-E2221](#)
Part No. > [1050303](#)



At a glance

- Factory calibrated 3D in millimeters at full production speed
- High accuracy 3D for measurement widths from 100 mm up to 1.5 m
- Capture 3D, grayscale, and scatter at the same time
- Easy to integrate without need for external lights
- Rugged housing for tough environments and operation down to -30 °C
- Remote operation over long cable distances with Gigabit Ethernet

Your benefits

- High-speed measurement allows you to increase production throughput and still ensure product quality
- Accurate size and position measurement in 3D, regardless of an object's height or color, creating reliable solutions
- Simultaneously capturing 3D, scatter, and grayscale, allows for more reliable quality control and inspection
- Factory calibrated 3D with built-in lighting instantly provides results in millimeters, which makes integration easy
- Designed for tough industrial environments to ensure a long and problem-free life time



Features

Task:	Inspection, Measuring, Positioning
Description:	Ruler E600 HB - 3B Laser, Heating elements, up to 10 k profiles/second. Gigabit Ethernet interface, 1,536 px x 512 px.
Technology:	3D LineScan
Example field of view (H x W):	250 mm x 600 mm
Field of view width:	450 mm ... 820 mm
Working distance:	415 mm ... 865 mm
Maximum height range:	450 mm
Data synchronization:	Encoder triggered External enable Free running
Grayscale measurements:	✓
Scatter measurement:	-
Spectral range:	Ca. 630 nm ... 690 nm
Heating element:	-
Light source:	Visible red light, laser, 660 nm, ± 15 nm

Laser class:	3B (IEC 60825-1 : 2008-01)
Factory calibrated:	✓

Performance

Image sensor:	CMOS
Maximum performance:	10,000 3D profiles/s
Sensor resolution:	1,536 px x 512 px
3D profile resolution:	1,536 px
Typical height resolution:	0.2 mm
Gray line resolution:	1,536 px

Interfaces

Configuration software:	Ranger Studio
Communication interfaces:	Gigabit Ethernet
Operating system:	Windows 7, Windows XP Pro
Development environment:	C++ (VS 2005/2008/2010) or C
Programming interface:	iCon API
Digital inputs:	3 x HIGH = 10 V ... 28.8 V
Digital outputs:	2 x B-type, < 100 mA in total
Encoder interface:	RS-422
Maximum encoder frequency:	2 MHz

Mechanics/electronics

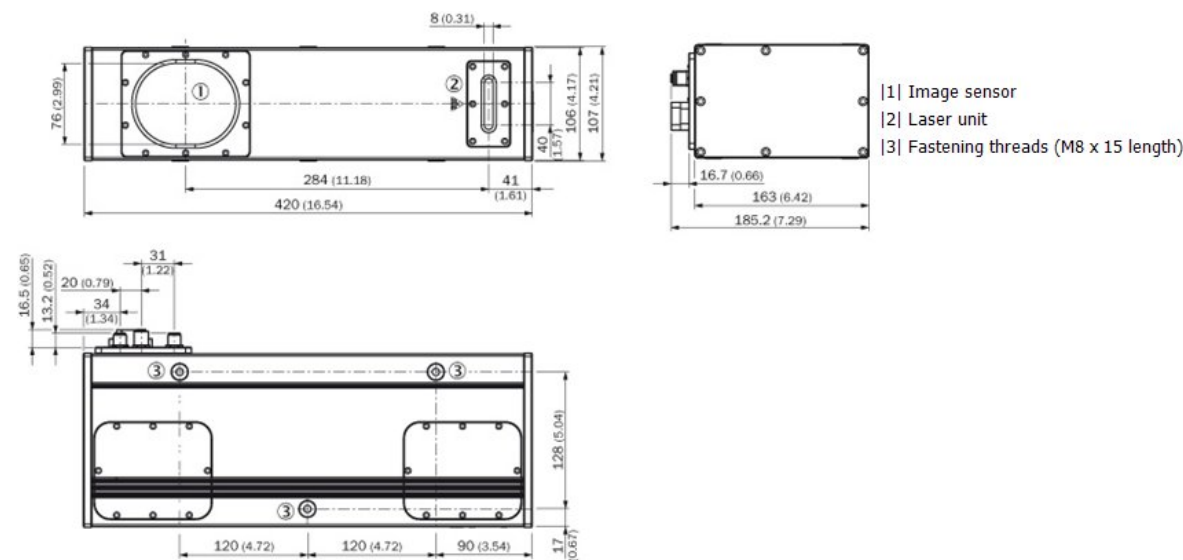
Connectors:	Harting Push Pull (Ethernet) M12, 4-pin male connector (heating) M12, 8-pin socket (encoder) M12, 8-pin male connector (power I/O)
Connector material:	Ethernet: thermoplast/anodized aluminum, M12: nickel-plated brass
Power consumption:	7 W
Power consumption:	< 1 A
Ripple:	< 5 Vpp
Enclosure rating:	IP 65
Housing material:	Aluminum
Housing color:	Gray, varnished
Window material:	Float glass, AR-coated
Weight:	7 kg
Dimensions (L x W x H):	420 mm x 107 mm x 163 mm

Ambient data

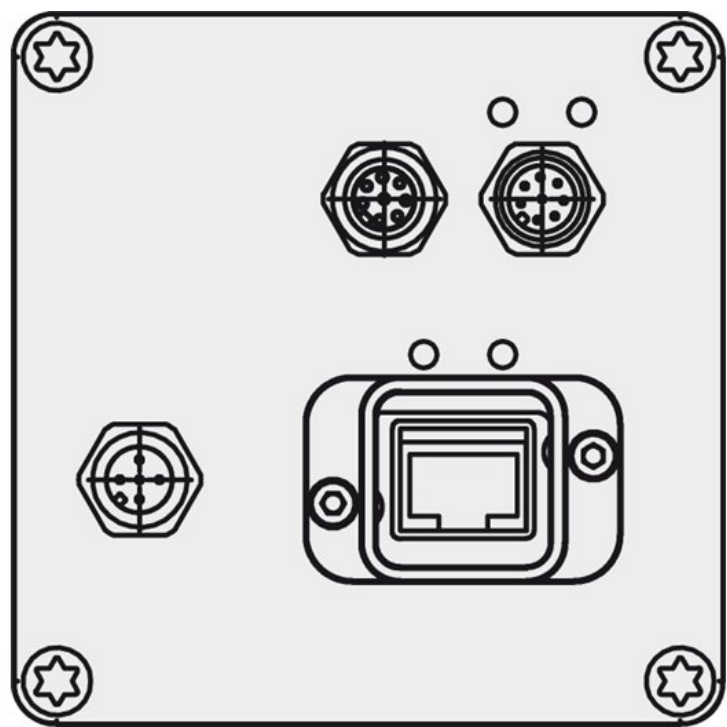
Shock load:	15 g, 3 x 6 directions
Vibration load:	5 g, 58 Hz ... 150 Hz
Ambient operating temperature:	-30 °C ... 40 °C ¹⁾
Ambient storage temperature:	-30 °C ... 70 °C ²⁾

1) 2)
Non-condensing

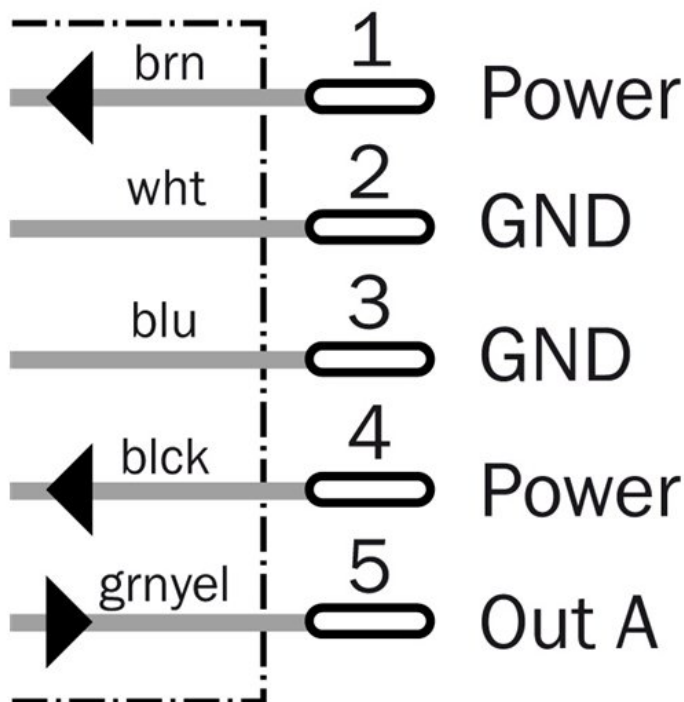
Dimensional drawing



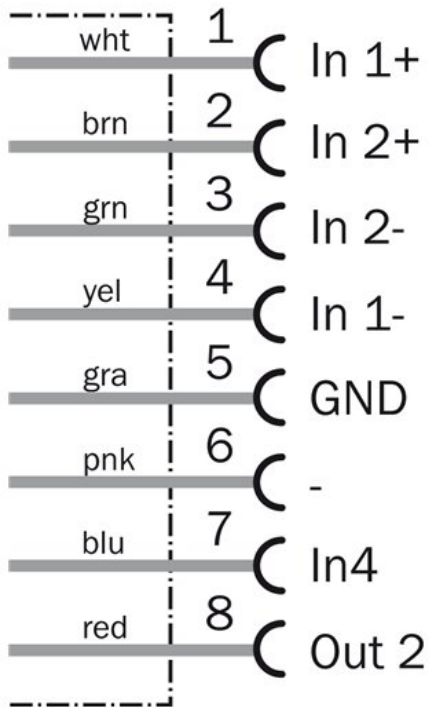
Connection type

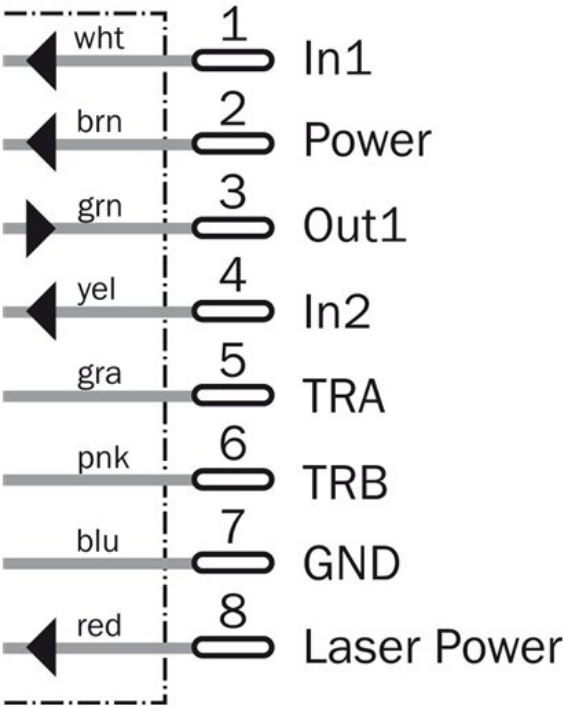


Connection diagram, Heating connection

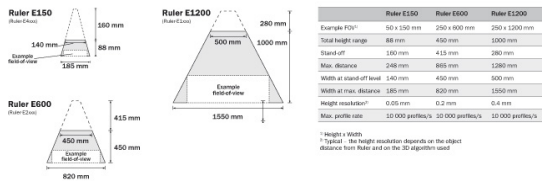


Connection diagram, Encoder connection





Measuring details



Australia

Phone +61 3 9457 0600
1800 334 802 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail sac@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Ceská Republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail kundenservice@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6801000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 3358 1341
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederlands

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail austefjord@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail admin@sicksgp.com.sg

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886-2-2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 8865 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 800-325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com