

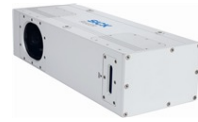


High-end cameras  
Ruler, Ruler E600, Ruler E600 S, Gigabit  
Ethernet

Ruler-E2112



**Model Name** > [Ruler-E2112](#)  
**Part No.** > [1029238](#)



**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 S - 2M Laser, Scatter measurements, 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: 2M (IEC 60825-1 : 2008-01)  
Factory calibrated: ✓

## Performance

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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  
Scatter resolution: 1,536 px

## Interfaces

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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

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Connectors: Harting Push Pull (Ethernet)  
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

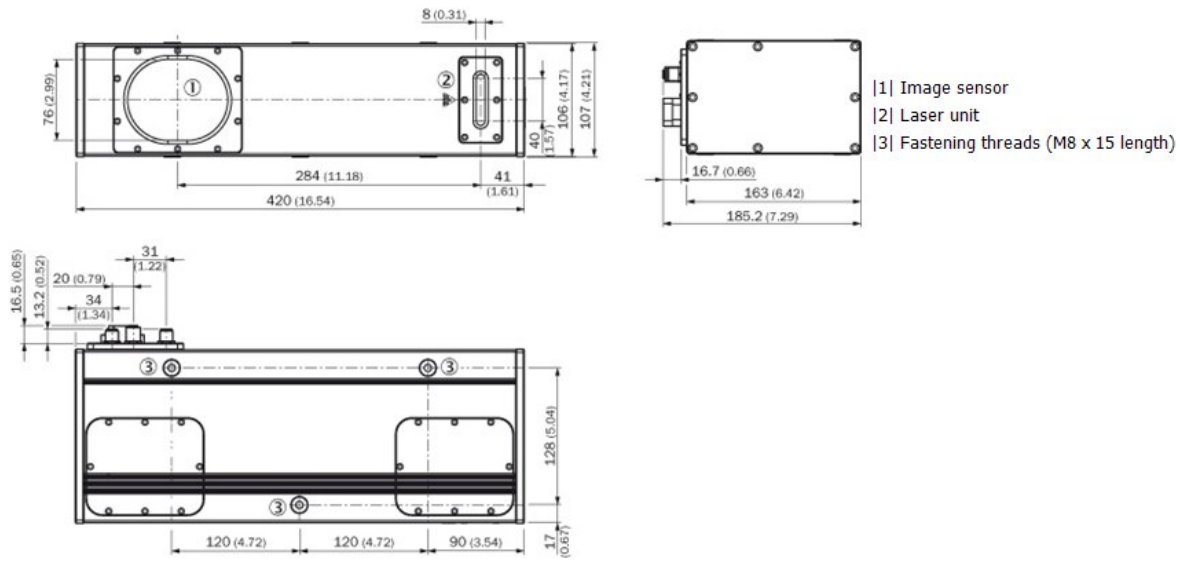
## Ambient data

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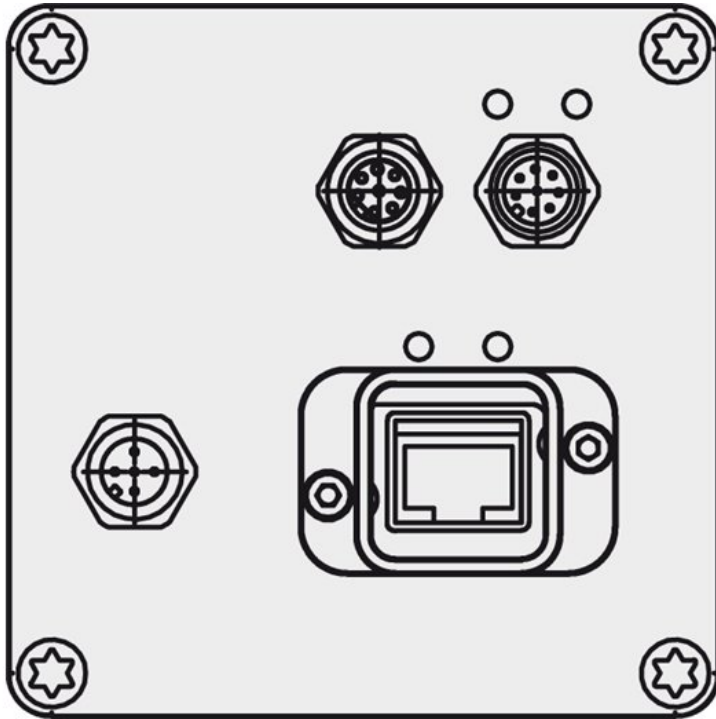
Shock load: 15 g, 3 x 6 directions  
Vibration load: 5 g, 58 Hz ... 150 Hz  
Ambient operating temperature: 0 °C ... 40 °C <sup>1)</sup>  
Ambient storage temperature: -30 °C ... 70 °C <sup>2)</sup>

1) 2) Non-condensing

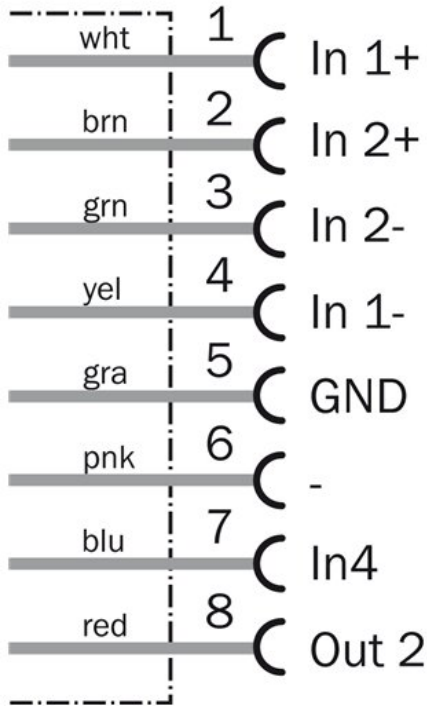
## Dimensional drawing



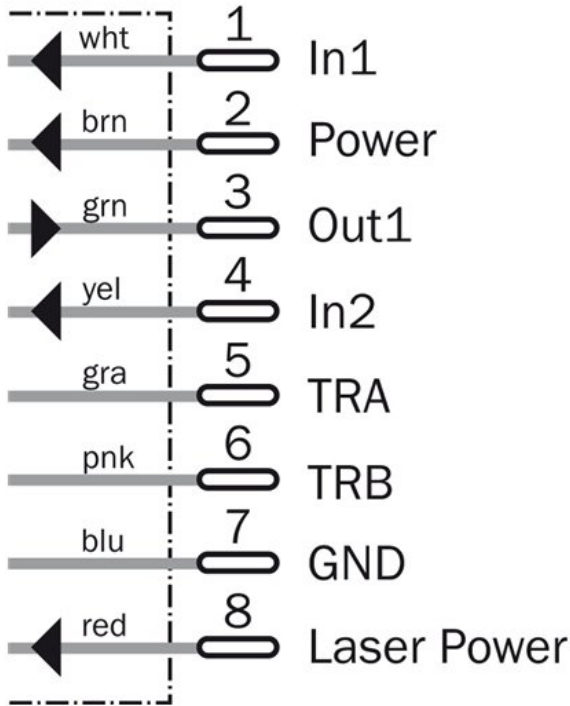
## Connection type



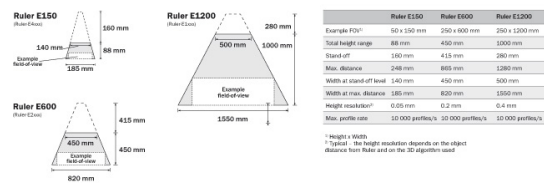
Connection diagram, Encoder connection



Connection diagram Power I/O



Measuring details



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