# DUAL-HEAD 3D SENSORS **ACCURATE, SHADOW-FREE SCANNING**

DUAL-HEAD

**ECCO 95+**

3D INSPECTION SENSOR


**SHADOW-FREE 3D SCANNING**
TWO-CAMERA 3D SCANNING FOR OPTIMUM TARGET VISIBILITY

**ULTRA-HIGH RESOLUTION**
THE CAPABILITY TO INSPECT EXTREMELY FINE FEATURES

**SUPERIOR IMAGE QUALITY**
THE BEST REPEATABILITY UNDER CHALLENGING CONDITIONS

SmartRay

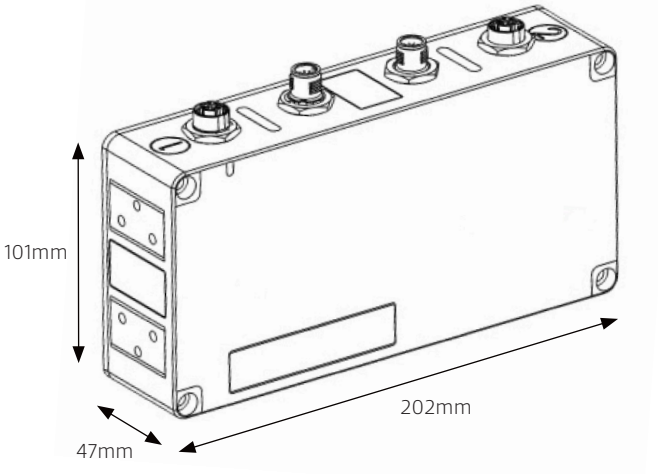
Certainty in metrology

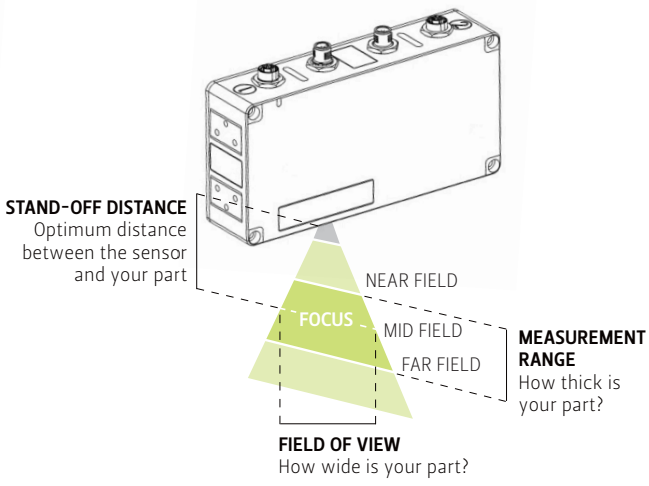
# KEY SPECIFICATIONS

| Model | **Dual-Head ECCO 95.010+** | **Dual-Head ECCO 95.040+** | **Dual-Head ECCO 95.200+** |
|---|---|---|---|
| Field of view (near \| mid \| far) | 10.5 \| **11** \| 11.5 mm | 34 \| **36** \| 38 mm | 125 \| **190** \| 280 mm |
| Typical measurement range | 4 mm | 16 mm | 300 mm (-125 mm, +175 mm) |
| Stand-off distance | 25 mm | 55 mm | 320 mm |
| Typical vertical resolution | 0.37-0.45 µm | 1.4-1.8 µm | 12-50 µm |
| Typical lateral resolution | 5.8-6.8 µm | 18-20 µm | 66-138 µm |
| Z-linearity | 0.015% | 0.006% | 0.015% |
| Z-repeatability | 0.1 µm | 0.4 µm | 3.3 µm |
| Mounting distance | 45.5 mm | 75.5 mm | 345.5 mm |
| Laser wavelength | 450 nm (brilliant blue laser) | | 660 nm (red laser) |
| laser class 2 | 3.001.602 | 3.001.603 | 3.005.604 |
| laser class 3R | 3.004.602 | 3.004.603 | 3.008.604 |
| Laser class (standard \| optional) | 2 \| 3R | | |
| Maximum points / 3D profile | 3840 | | |
| Weight | 1350g | | |
| Typical scan rate 1 | Approx. from 1 kHz up to 10 kHz | | |
| Typical 3D point rate 1 | Approx. from 0.7 up to 15 million points/sec | | |
| Interface | Gigabit Ethernet (1 Gbit/sec) | | |
| Inputs | 2x Inputs (5 – 24 VDC)<br>Quadrature Encoder (AB-Channel, RS-422 standard) | | |
| Outputs | 2 x Outputs, 24 VDC (max. 20 mA) | | |
| Trigger | The following triggers are supported:<br>START Trigger support on Input 1 – 2<br>DATA Trigger support on Quadrature Encoder Input (Max. DATA trigger rate: 1 MHz)<br>DATA Trigger support on Input 2 (Max. DATA trigger rate: 10 kHz) | | |
| Input voltage \| power | 24 VDC ± 15% 17W | | |
| Maximum ambient light | 10,000 lx | | |
| EMC test | as per EN 61 000-6-2, EN 61 000-6-4, EN 61326-1:2013-07 | | |
| Electrical safety | as per EN 61 010-1-3 | | |
| Protection class | III, as per EN 61 040-3 | | |
| Laser safety inputs | 24 VDC \| 0V | | |
| Enclosure rating | IP65 | | |
| Air humidity | Maximum 90%, non-condensing | | |
| Temperature operation \| storage | 0 - 40˚C \| -20 - 70˚C | | |
| Compatible accessories | Power-I/O-Encoder cable: 6.320.0XX Ethernet cable: 6.445.003 - Y Cable | | |

Note: Typical values may vary up to ±5% due to optical and production tolerances

**1** Scan rate & point rate are dependent on the configured field of view, measurement range and exposure time. A ‚scan' by definition considers maximum points/3D profile i.e. full FOV. The typical scan/point rate range has been estimated considering an exposure time of 1 µsec, min-max MR and full FOV. The typical scan rate can be further boosted by windowing the FOV




## FOR MORE INFORMATION PLEASE CONTACT US:

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