

ICD890-45232020

ICD8xx

IMAGE-BASED CODE READERS

**SICK**  
Sensor Intelligence.



### Ordering information

| Type            | part no. |
|-----------------|----------|
| ICD890-45232020 | 1121586  |

Other models and accessories → [www.sick.com/ICD8xx](http://www.sick.com/ICD8xx)



### Detailed technical data

#### Features

|                          |  |
|--------------------------|--|
| <b>Application</b>       | Indoor area  |
| <b>Function</b>          | Line camera with integrated 1D/2D code decoder, image output and additional optional 2D vision functions   |
| <b>Optical focus</b>     | Dynamic focus control<br>Fixed focus   |
| <b>Sensor</b>            | CMOS line sensor monochrome  |
| <b>Sensor resolution</b> | 12,288 px (200 dpi, high resolution)   |
| <b>Processor</b>         | Standard performance   |
| <b>Line frequency</b>    | Max. 43 kHz  |
| <b>Lens</b>              | Integrated   |
| <b>Focal length</b>      | 120 mm   |
| <b>Reading distance</b>  | 1,550 mm ... 3,900 mm <sup>1)</sup>  |
| <b>Field of view</b>     | 1,800 mm (170 dpi)<br>1,560 mm (200 dpi)   |
| <b>Code resolution</b>   | ≥ 0.1 mm   |
| <b>Operating mode</b>    | Forward, backward, start/stop  |
| <b>Working range</b>     | 1,550 mm ... 3,900 mm <sup>1)</sup>  |
| <b>Further functions</b> | Extended analysis of code quality, empty tote detection, hazardous material detection, object classification, 2D dimensioning (image-based calculation of object dimensions) |

<sup>1)</sup> Related to device reference point, for details see field of view diagram.

#### Mechanics/electronics

|                          |   |
|--------------------------|---|
| <b>Connection type</b>   | 3 x M12, 8-pin female connector, X-coded, CAT 6A (Ethernet 1 ... 3)<br>1 x M12, 12-pin female connector, A-coded (I/O)<br>1 x M12, 5-pin female connector (CAN Out)<br>1 x M12, 5-pin male connector, A-coded (CAN In)<br>1 x M12, 8-pin female connector (Light 1)<br>1 x M12, 5-pin female connector, L-coded (PWR Out)<br>1 x M12, 5-pin male connector, L-coded (PWR In)<br>1 x USB, 5-pin female connector, type A |
| <b>Supply voltage</b>    | 24 V DC, -10 % +20 %  |
| <b>Power consumption</b> | Typ. 80 W, standby typ. 50 W  |
| <b>Battery</b>           | Type: TL-2450 cell (1/10C cell), soldered, non-rechargeable<br>Chemical system: Lithium thionyl chloride (Li-SOCI2)   |

|                               |  |
|-------------------------------|--|
|                               | Lithium quantity: 0.2 g                        |
| <b>Current consumption</b>    | 10 A   |
| <b>Housing material</b>       | Aluminum die cast                              |
| <b>Housing color</b>          | Light blue (RAL 5012)                          |
| <b>Enclosure rating</b>       | IP65 (EN 60529:1991-10 / A2:2000-02 / A3:2013) |
| <b>Protection class</b>       | III (EN 61140)                                 |
| <b>Electrical safety</b>      | EN 61010-1:2010-10                             |
| <b>Weight</b>                 | Approx. 11 kg                                  |
| <b>Dimensions (L x W x H)</b> | 486.6 mm x 300 mm x 179 mm                     |
| <b>MTBF</b>                   | 120,000 h                                      |
| <b>MTRR</b>                   | < 10 min                                       |

## Performance

|                                     |  |
|-------------------------------------|--|
| <b>Readable code structures</b>     | 1D codes, 2D codes, Stacked, plain text  |
| <b>Bar code types</b>               | GS1-128 / EAN 128, UPC / GTIN / EAN, Interleaved 2 of 5, Pharmacode, GS1 DataBar, Code 39, Code 128, Codabar, Code 32, Code 93, postal codes |
| <b>2D code types</b>                | Data Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code, Aztec, PDF417  |
| <b>Skew angle</b>                   | ≤ 75°  |
| <b>Transport speed</b>              | ≤ 4.5 m/s  |
| <b>Minimum object distance</b>      | ≥ 50 mm  |
| <b>Number of objects per second</b> | ≤ 10   |
| <b>Image type</b>                   | JPEG, TIFF, BMP  |
| <b>Image output</b>                 | Up to 4 (s)FTP clients, AWS S3 client, FTP Server, Samba Server, REST Server   |

## Interfaces

|                               |   |
|-------------------------------|---|
| <b>USB</b>                    | ✓   |
| Function                      | USB 2.0   |
| <b>Ethernet</b>               | ✓ (3), TCP/IP   |
| Function                      | FTP, real-time image output   |
| Data transmission rate        | 1 Gbit/s  |
| <b>CAN</b>                    | ✓ (2)   |
| Remark                        | CSN (SICK CAN Sensor Network)   |
| Function                      | 1 x CAN In, 1 x CAN Out   |
| Data transmission rate        | 20 kbit/s ... 500 Mbit/s  |
| <b>Optical indicators</b>     | 3 LED (device status displays)<br>3 double LED (ethernet status displays)                       |
| <b>Configuration software</b> | SOPAS ET  |
| <b>Memory card</b>            | 1 x 2.5 inch SSD (image and data logging), 1 x microSD memory card (configuration data back-up) |

## Ambient data

|  |   |
|--|---|
| <b>Electromagnetic compatibility (EMC)</b> | IEC 61000-6-4:2018 / IEC 61000-6-2:2019 |
| <b>Vibration resistance</b>                | IEC 60068-2-6:2007-12                   |
| <b>Shock resistance</b>                    | IEC 60068-2-27:2008-02                  |
| <b>Ambient operating temperature</b>       | -10 °C ... +50 °C                       |

|                                   |                      |
|-----------------------------------|----------------------|
| <b>Storage temperature</b>        | -20 °C ... +70 °C    |
| <b>Relative humidity</b>          | 95 %, Non-condensing |
| <b>Ambient light immunity</b>     | 2,000 lx, on code    |
| <b>Contamination rating</b>       | 2 (EN 61010-1)       |
| <b>Altitude (above sea level)</b> | < 2,000 m            |

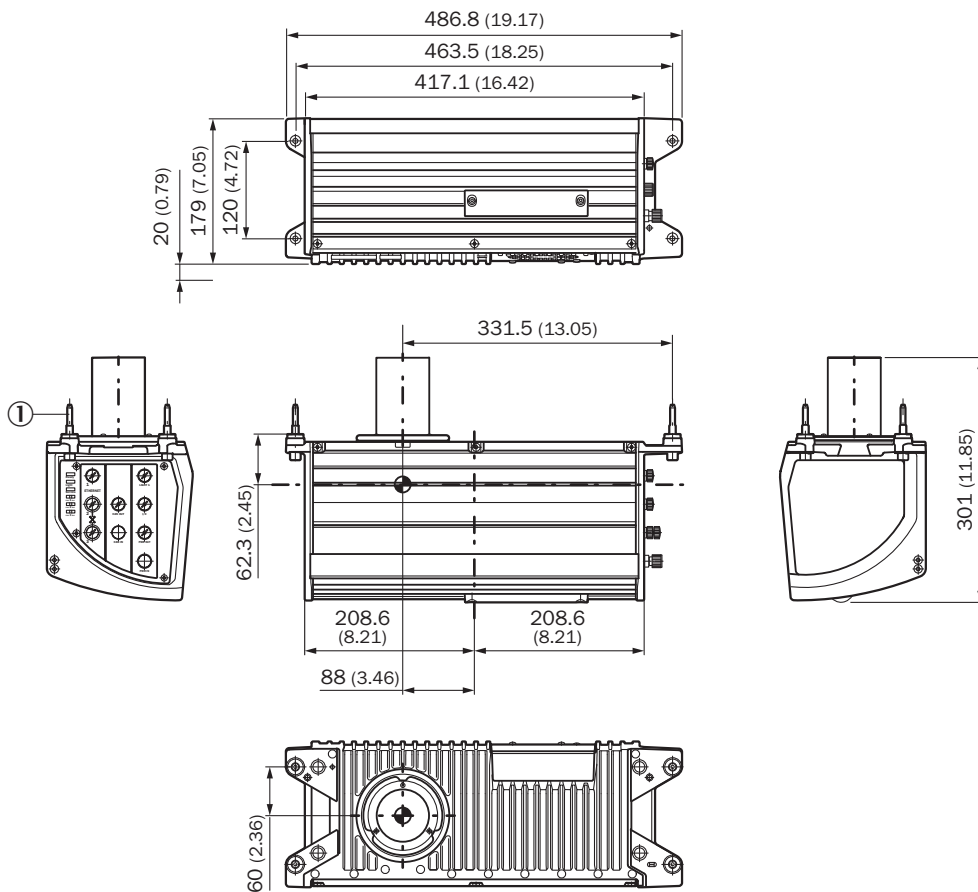
Classifications

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27280103 |
| <b>ECLASS 5.1.4</b>   | 27280103 |
| <b>ECLASS 6.0</b>     | 27280103 |
| <b>ECLASS 6.2</b>     | 27280103 |
| <b>ECLASS 7.0</b>     | 27280103 |
| <b>ECLASS 8.0</b>     | 27280103 |
| <b>ECLASS 8.1</b>     | 27280103 |
| <b>ECLASS 9.0</b>     | 27280103 |
| <b>ECLASS 10.0</b>    | 27280103 |
| <b>ECLASS 11.0</b>    | 27280103 |
| <b>ECLASS 12.0</b>    | 27280103 |
| <b>ETIM 5.0</b>       | EC002550 |
| <b>ETIM 6.0</b>       | EC002550 |
| <b>ETIM 7.0</b>       | EC002999 |
| <b>ETIM 8.0</b>       | EC002999 |
| <b>UNSPSC 16.0901</b> | 43211701 |

Certificates

|  |   |
|--|---|
| <b>EU declaration of conformity</b>  | ✓ |
| <b>UK declaration of conformity</b>  | ✓ |
| <b>ACMA declaration of conformity</b>  | ✓ |
| <b>China RoHS</b>  | ✓ |
| <b>BIS registration</b>  | ✓ |
| <b>UN38.3 Test Summary Report</b>  | ✓ |
| <b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b> | ✓ |

Dimensional drawing

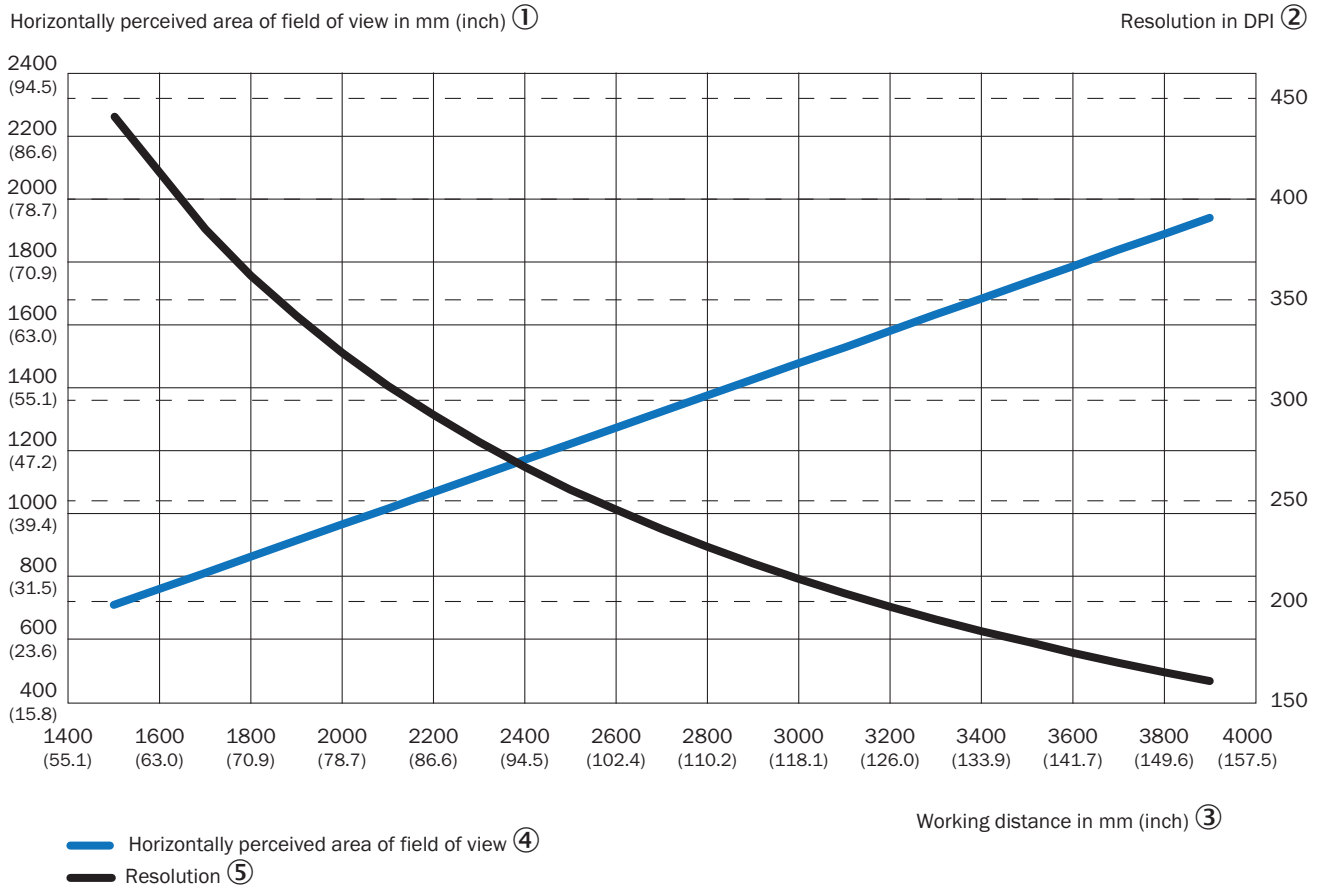


Dimensions in mm (inch)

structure and device dimensions, unit: mm (inch), decimal separator: period

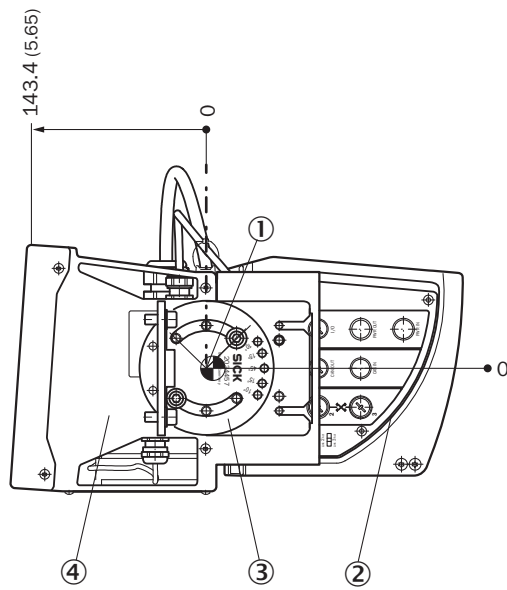
① 4 M8 mounting screws with centering pin for mounting the device on the ICI890 illumination unit

Field of view



- ① Horizontal perceived field of view area in mm (inch)
- ② Resolution in DPI
- ③ Working distance in mm (inch)
- ④ Horizontal perceived field of view area
- ⑤ Resolution

### Device reference point



- ① device reference point
- ② camera ICD890
- ③ Mounting bracket
- ④ illumination ICI890

## 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](http://www.sick.com)