ICD890-45232010

ICD8xx

IMAGE-BASED CODE READERS

SICK
Sensor Intelligence.

ICD890-45232010 | ICD8xx
IMAGE-BASED CODE READERS

Ordering information

Type	part no.
ICD890-45232010	1092552

Other models and accessories ➜ www.sick.com/ICD8xx

Detailed technical data

Features

Application	Indoor area
Function	Line camera with integrated 1D/2D code decoder, image output and additional optional 2D vision functions
Optical focus	Dynamic focus control Fixed focus
Sensor	CMOS line sensor monochrome
Sensor resolution	12,288 px (200 dpi, high resolution)
Processor	High performance
Line frequency	Max. 43 kHz
Lens	Integrated
Focal length	120 mm
Reading distance	1,550 mm ... 3,900 mm [1]
Field of view	1,800 mm (170 dpi) 1,560 mm (200 dpi)
Code resolution	≥ 0.1 mm
Operating mode	Forward, backward, start/stop
Working range	1,550 mm ... 3,600 mm [1]
Further functions	Extended analysis of code quality, empty tote detection, hazardous material detection, object classification, 2D dimensioning (image-based calculation of object dimensions)

[1] Related to device reference point, for details see field of view diagram.

Mechanics/electronics

Connection type	3 x M12, 8-pin female connector, X-coded, CAT 6A (Ethernet 1 ... 3) 1 x M12, 12-pin female connector, A-coded (I/O) 1 x M12, 5-pin female connector (CAN Out) 1 x M12, 5-pin male connector, A-coded (CAN In) 1 x M12, 8-pin female connector (Light 1) 1 x M12, 5-pin female connector, L-coded (PWR Out) 1 x M12, 5-pin male connector, L-coded (PWR In) 1 x USB, 5-pin female connector, type A
Supply voltage	24 V DC, −10 % +20 %
Power consumption	Typ. 80 W, standby typ. 50 W
Battery	Type: TL-2450 cell (1/10C cell), soldered, non-rechargeable Chemical system: Lithium thionyl chloride (Li-SOCl2)

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

Performance

Readable code structures	1D codes, 2D codes, Stacked, plain text
Bar code types	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
2D code types	Data Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code, Aztec, PDF417
Skew angle	≤ 75°
Transport speed	≤ 4.5 m/s
Minimum object distance	≥ 50 mm
Number of objects per second	≤ 10
Image type	JPEG, TIFF, BMP
Image output	Up to 4 (s)FTP clients, AWS S3 client, FTP Server, Samba Server, REST Server

Interfaces

USB		✓
	Function	USB 2.0
Ethernet		✓ (3) , TCP/IP
	Function	FTP, real-time image output
	Data transmission rate	1 Gbit/s
CAN		✓ (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
Optical indicators		3 LED (device status displays) 3 double LED (ethernet status displays)
Configuration software		SOPAS ET
Memory card		1 x 2.5 inch SSD (image and data logging), 1 x microSD memory card (configuration data back-up)

Ambient data

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

Storage temperature	−20 °C … +70 °C
Permissible relative humidity	95 %, Non-condensing
Ambient light immunity	2,000 lx, on code
Contamination rating	2 (EN 61010-1)
Altitude (above sea level)	< 2,000 m

Certificates

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

Classifications

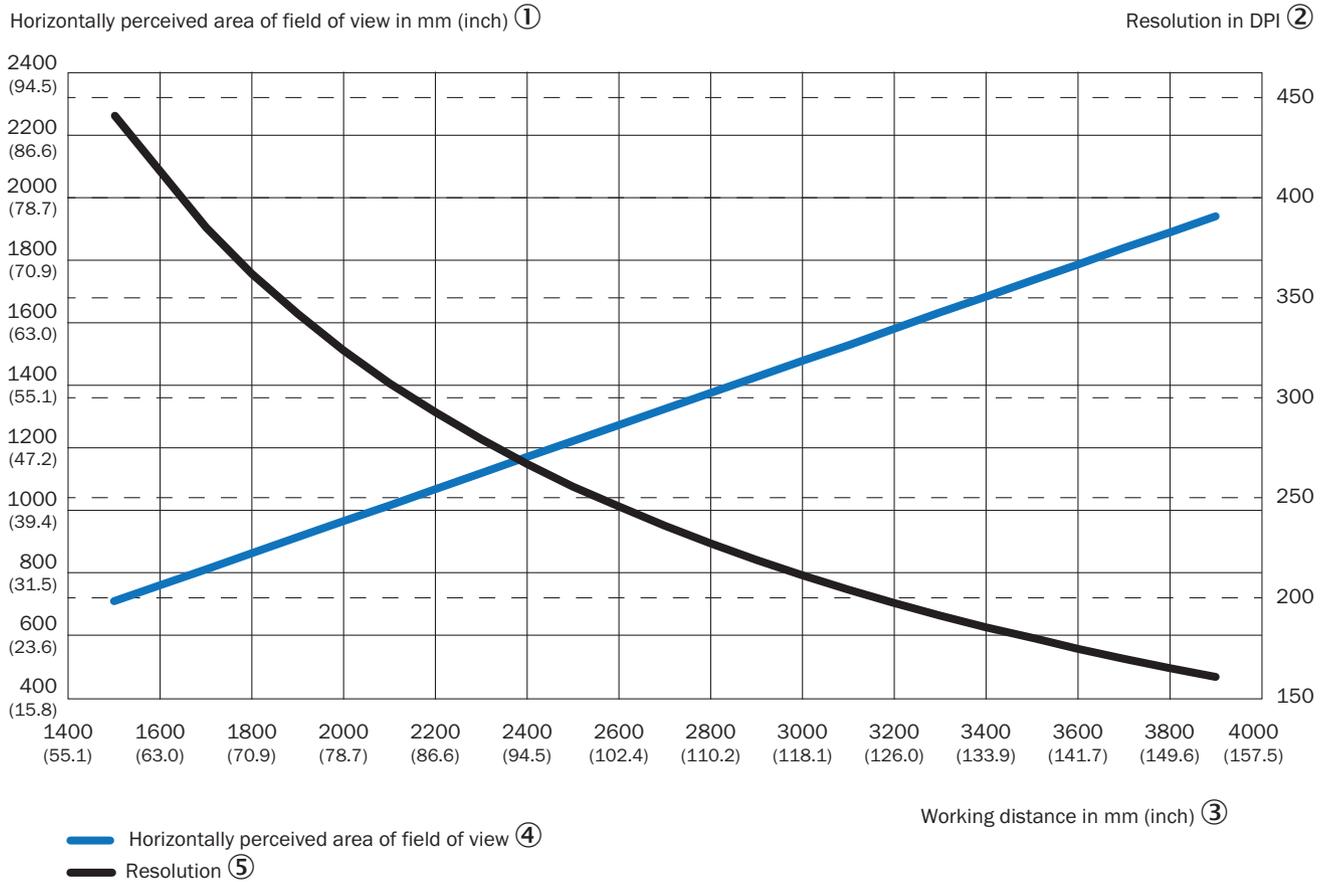|	
ECLASS 5.0	27280103
ECLASS 5.1.4	27280103
ECLASS 6.0	27280103
ECLASS 6.2	27280103
ECLASS 7.0	27280103
ECLASS 8.0	27280103
ECLASS 8.1	27280103
ECLASS 9.0	27280103
ECLASS 10.0	27280103
ECLASS 11.0	27280103
ECLASS 12.0	27280103
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002999
ETIM 8.0	EC002999
UNSPSC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

Dimensional drawing
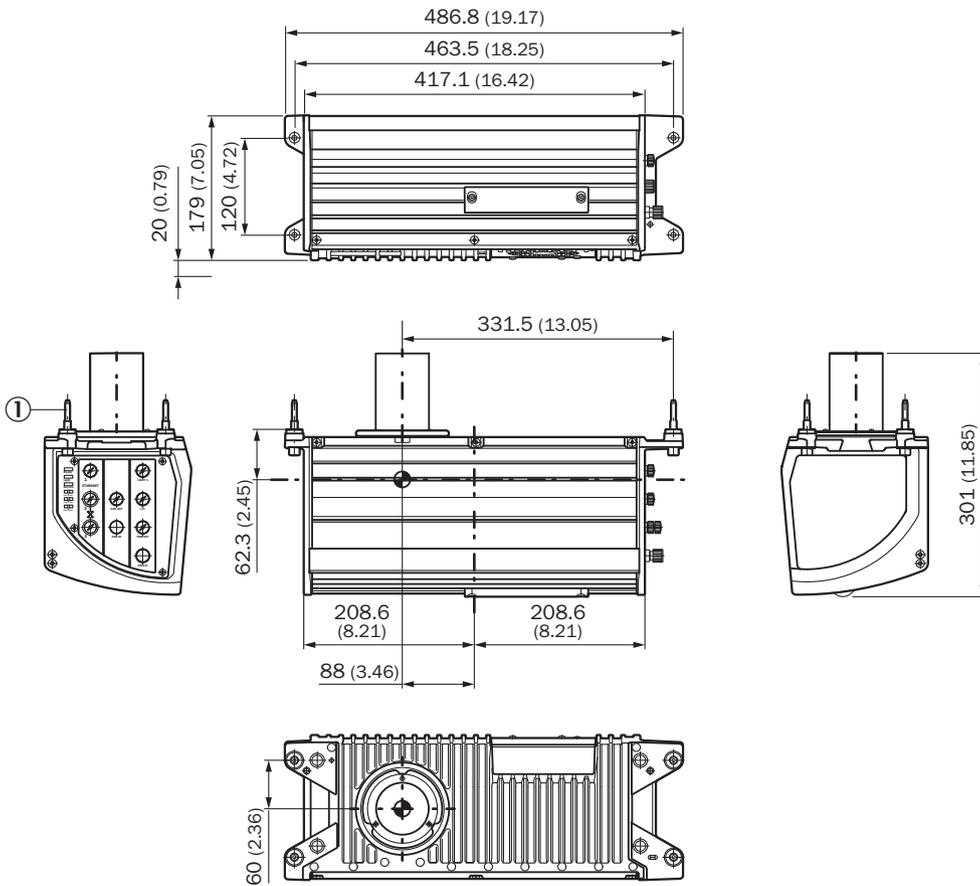
Dimensions in mm (inch)
structure and device dimensions, unit: mm (inch), decimal separator: period
① 4 M8 mounting screws with centering pin for mounting the device on the ICI890 illumination unit

Field of view

Horizontally perceived area of field of view in mm (inch) ①

Resolution in DPI ②

Working distance in mm (inch) ③

— Horizontally perceived area of field of view ④
— Resolution ⑤

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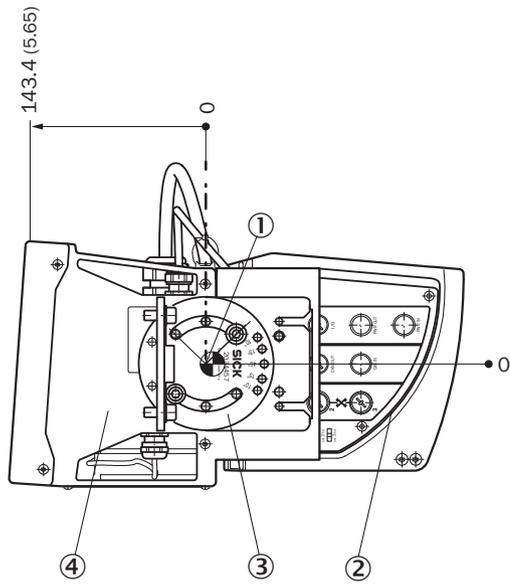
① device reference point
② camera ICD890
③ Mounting bracket
④ illumination ICI890

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."

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