Data sheet

V2D610D-MMSBE4

Lector61x

IMAGE-BASED CODE READERS

SICK
Sensor Intelligence.

Ordering information

Type	part no.
V2D610D-MMSBE4	1105797

Other models and accessories ➜ www.sick.com/Lector61x

Detailed technical data

Features

Variant	Complete device
Optical focus	Adjustable focus (manually)
Sensor	CMOS monochrome
Sensor resolution	640 px x 480 px (0.3 MP)
Illumination	Integrated
Illumination color	Amber, LED, Visible, 617 nm, ± 15 nm Blue, LED, Visible, 470 nm, ± 15 nm
LED class	1 (IEC 62471:2006-07, EN 62471:2008-09)
Feedback spot	LED, Visible, green, 525 nm, ± 15 nm LED, Visible, Red, 635 nm, ± 15 nm
Alignment aid	LED, Red, 630 nm, ± 15 nm
Laser class	1, complies with 21 CFR 1040.10 except for the conformance according to “Laser Notice No. 56” from May 8, 2019 (IEC 60825-1:2014, EN 60825-1:2014+A11:2021)
Lens	
Focal length	6 mm
Scanning frequency	40 Hz
Code resolution	0.1 mm [1]
Working range	50 mm ... 300 mm [1] [2]

[1] For details see reading field diagram.

[2] With internal illumination, can be extended to longer distances when using external illumination.

Mechanics/electronics

Connection type	1 x Cable with M12 male connector, 17-pin

	1 x Cable with M12 Ethernet socket, 4-pin Circular plug-in connector
Supply voltage	12 V DC ... 24 V DC, ± 15 %
Power consumption	Typ. 3.5 W
Output current	≤ 50 mA
Housing material	Zinc diecast
Housing color	Light blue (RAL 5012)
Window material	Plastic
Enclosure rating	IP54 (EN 60529, EN 60529/A2)
Protection class	III
Electrical safety	EN 62368-1
Weight	165 g
Dimensions (L x W x H)	50 mm x 40.3 mm x 29.6 mm

Performance

Readable code structures	1D codes, 2D codes, Stacked, direct-marked codes
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, Plessey Code, MSI/Plessey, Telepen, postal codes
2D code types	Data Matrix ECC200, GS1 Data-Matrix, PDF417, PDF417 Truncated, QR code, MaxiCode
Code qualification	On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 15416, ISO/IEC 18004
No. of codes per reading interval	1 ... 50
No. of characters per reading interval	500 (for multiplexer function in CAN operation)
Exposure time	≥ 60 µs
Automated parameter switching	✓

Interfaces

Ethernet	✓ , TCP/IP
Function	Data interface (read result output), FTP (image transmission)
Data transmission rate	10/100 MBit/s
PROFINET	✓
Function	PROFINET Single Port
Data transmission rate	10/100 MBit/s
EtherNet/IP™	✓
Data transmission rate	10/100 MBit/s
Serial	✓ , RS-232
Function	Data interface (read result output)
Data transmission rate	0.3 kBaud ... 115.2 kBaud
CAN	✓
Function	SICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server)
Data transmission rate	20 kbit/s ... 1 Mbit/s
CANopen	✓
Data transmission rate	20 kbit/s ... 1 Mbit/s
Digital inputs	2 (physical, switching, “Sensor 1”, “Sensor 2”)
Digital outputs	3 (physical, switching, “Result 1” ... “Result 3”)

Reading pulse	Digital inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode
Optical indicators	9 LEDs (6 status displays, 2 LED alignment aids, 1 feedback spot)
Control elements	1 pushbutton (select and start/stop functions)
Operator interfaces	Web server
Configuration software	SOPAS ET
Data storage and retrieval	Image and data storage via external FTP
EncoderFrequency	Max. 300 Hz
External illumination control	Via digital output (max. 24 V trigger)

Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-3:2007+A1:2011 EN 61000-6-2:2005-08
Vibration resistance	EN 60068-2-6:2008-02
Shock resistance	EN 60068-2-27:2009-05
Ambient operating temperature	0 °C ... +40 °C [1)]
Storage temperature	–20 °C ... +70 °C
Permissible relative humidity	90 %, Non-condensing

[1)] To use the product at the maximum ambient operating temperature, mount it with an aluminum mounting bracket (e.g., part number 2113160, 2112790).

Certificates

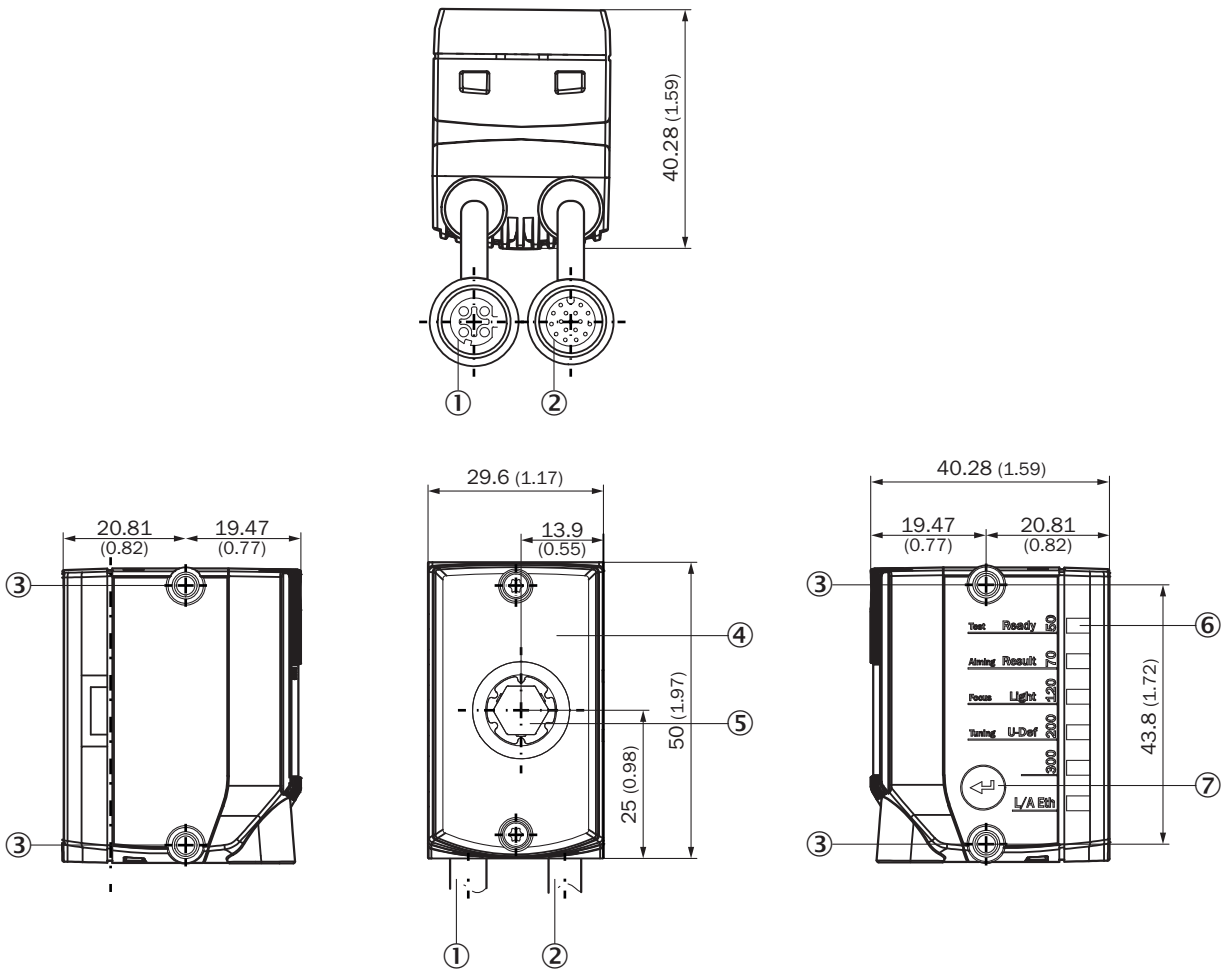
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
KC Mark certificate	✓
Profinet certificate	✓
BIS registration	✓
ESD conformity	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓
4Dpro	✓

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

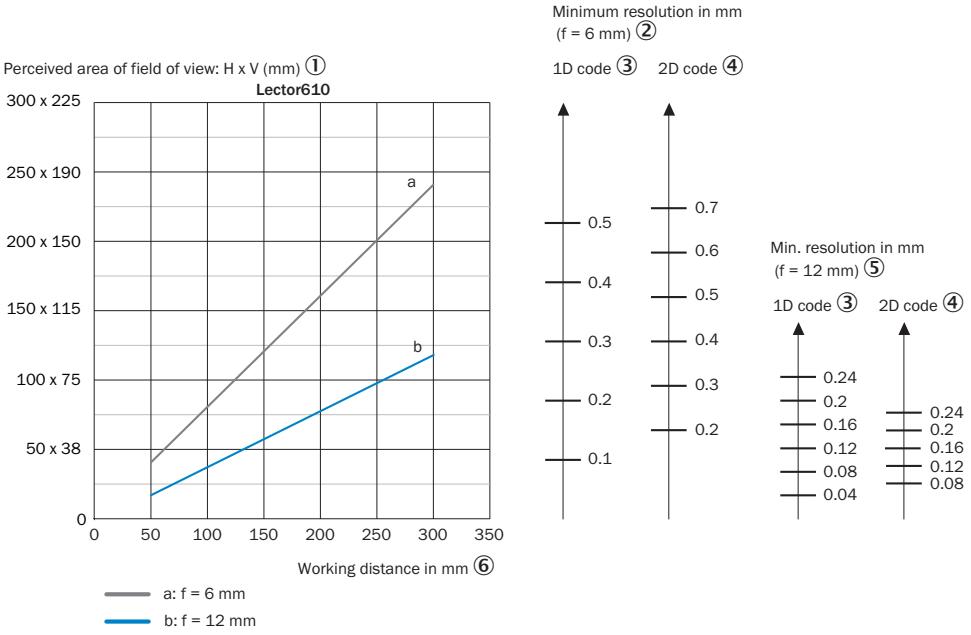
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002999
ETIM 8.0	EC002999
UNSPSC 16.0901	43211701

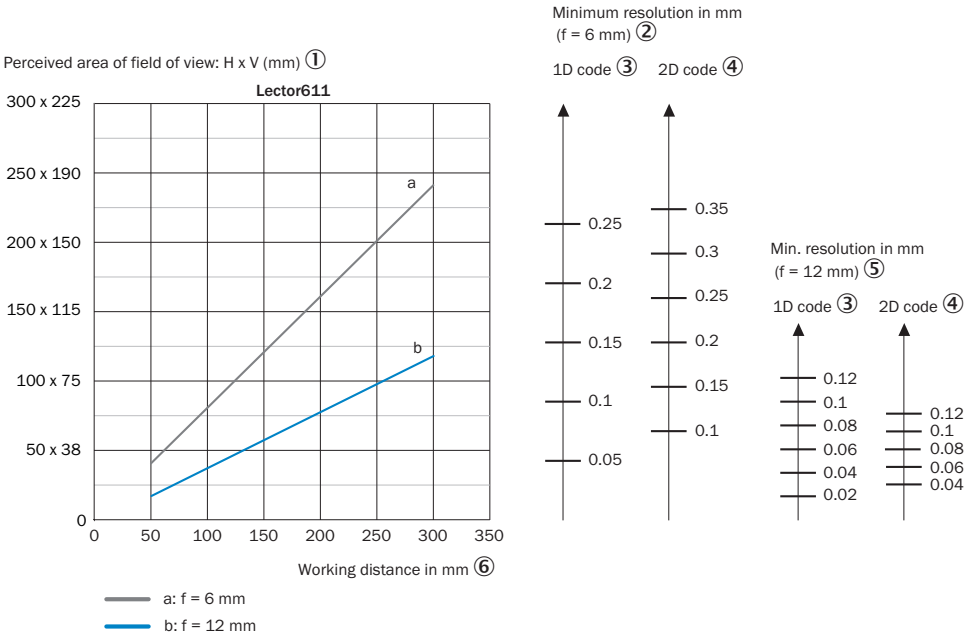
Dimensional drawing



Dimensions in mm (inch)
① Connecting cable with “Ethernet” connection (female connector, M12, 4-pin, D-coded), length of cable: 0.25 m
② Connecting cable with “Power/Serial Data/CAN/I/O” connection (male connector, M12, 17-pin, A-coded), length of cable: 0.35 m
③ 4 x M4 blind tapped holes, 6.4 mm deep for mounting the device
④ Viewing window with 8 integrated illumination LEDs, 2 LED alignment aids, 1 feedback LED, 1 time-of-flight sensor
⑤ Optics, manual focus adjustment with the help of a focus adjustment tool
⑥ 6 status LEDs to display the focus position and working distance, device status and device function (3 display levels)
⑦ Function key

Field of view





① perceived field of view area: horizontal x vertical (mm)
② Minimum resolution in mm (f = 6 mm)
③ 1D code
④ 2D code
⑤ Minimum resolution in mm (f = 12 mm)
⑥ Working distance in mm

Recommended accessories

Other models and accessories ➜ www.sick.com/Lector61x

	Brief description	Type	part no.
Junction boxes			
		CDB650-204	1064114
connectors and cables			
	• **Connection type head A:** Female connector, M12, 17-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 17-wire, PUR • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A2D-020U-V2XLEAX	2114287
	• **Connection type head A:** Female connector, M12, 17-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 17-wire, PUR • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A2D-050U-V2XLEAX	2114296
	• **Connection type head A:** Female connector, M12, 17-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 17-wire, PUR • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A2D-100U-V2XLEAX	2114297
	• **Connection type head A:** Male connector, M12, 4-pin, straight, D-coded • **Connection type head B:** Male connector, RJ45, 4-pin, straight • **Signal type:** Ethernet, PROFINET • **Cable:** 2 m, 4-wire, PUR, halogen-free • **Description:** Ethernet, shielded, PROFINET • **Application:** Drag chain operation, Zones with oils and lubricants	YM2D24-020P-N1MRJA4	2106182
	• **Connection type head A:** Female connector, M12, 17-pin, straight, A-coded • **Connection type head B:** Male connector, M12, 17-pin, A-coded • **Signal type:** Sensor/actuator cable • **Cable:** 0.3 m, 17-wire, PUR • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YM2A2D-C30S01F2A2D	2148050

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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