



V2D652R-MEWHF6 for Systems

Lector64x/Lector65x

IMAGE-BASED CODE READERS

SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|----------------------------|----------|
| V2D652R-MEWHF6 for Systems | 1071727 |

Other models and accessories → www.sick.com/Lector64x_Lector65x



Detailed technical data

Features

| | |
|---------------------------|---|
| Variant | Complete device |
| Optical focus | Dynamic focus control |
| Sensor | CMOS monochrome |
| Sensor resolution | 2,048 px x 1,088 px (2.1 MP) |
| Illumination | Integrated |
| Illumination color | White, LED, Visible, |
| LED class | Risk group 1 (IEC 62471:2006-07, EN 62471:2008-09) |
| Feedback spot | LED, Visible, green, 525 nm, ± 15 nm |
| Alignment aid | Laser, Red, 630 nm ... 680 nm |
| Laser class | 1, Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed.3., as described in "Laser Notice No. 56" dated May 8, 2019 (IEC 60825-1:2014, EN 60825-1:2014+A11:2021) |
| Lens | C-mount |
| Optical format | 1" |
| Focal length | 54 mm |
| Aperture | 8 |
| Scanning frequency | 70 Hz, With resolution of 2 megapixels |
| Code resolution | ≥ 0.12 mm ¹⁾ |
| Working range | 670 mm ... 2,000 mm ^{2) 3)} |

¹⁾ Depends on distance.

²⁾ Depends on lens used.

³⁾ For details see field of view diagram.

Mechanics/electronics

| | |
|-------------------------------|--|
| Connection type | 1 x M12, 5-pin plug (CAN) 1 x M12, 5-pin female connector (CAN) 1 x M8, 3-pin socket (external illumination) 2 x M12, 8-pin socket (Ethernet, P1 not yet with function) |
| Supply voltage | 24 V DC, ± 20 % |
| Power consumption | Typ. 20 W, ± 20 % |
| Output current | ≤ 100 mA |
| Housing material | Aluminum die cast |
| Housing color | Light blue (RAL 5012) |
| Window material | Glass |
| Enclosure rating | IP65 (EN 60529 (1991-10), EN 60529/A2 (2002-02)) |
| Protection class | III |
| Electrical safety | EN 60950-1 (2011-01) |
| Weight | 963 g |
| Dimensions (L x W x H) | 142.8 mm x 90 mm x 106.1 mm |
| MTBF | 100,000 h |

Performance

| | |
|---------------------------------|---|
| Readable code structures | 1D codes, Stacked, 2D 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, USPS (Postnet, Planet, USPS4SCB), Australian Post, Dutch KIX Post, Royal Mail, Swedish Post |
| 2D code types | Data Matrix ECC200, GS1 Data-Matrix, MaxiCode, QR code |
| Stacked code types | PDF417 |
| Code qualification | On the basis of ISO/IEC 16022, ISO/IEC 15415, ISO/IEC 18004 |
| Internal image storage | 512 MB |

Interfaces

| | | |
|-----------------------------|------------------------|---|
| Ethernet | Function | ✓, TCP/IP |
| | Data transmission rate | Data interface (read result output), Service interface, FTP (image transmission) 10/100/1,000 Mbit/s |
| EtherNet/IP™ | Function | ✓ |
| | Data transmission rate | 10/100/1,000 Mbit/s |
| CAN | Function | ✓ |
| | Data transmission rate | SICK CAN sensor network CSN (CAN controller/CAN device, multiplexer/server) 20 kbit/s ... 1 Mbit/s |
| Digital inputs | | 4 ("Sensor 1", "Sensor 2", 2 inputs via optional CMC600 parameter memory in CDB650/CDM420) |
| Configurable inputs | | Encoder input, external trigger |
| Digital outputs | | 6 (CDB650: "Result 1", "Result 2", "Result 3", "Result 4", 2 external outputs via CMC600 or CDM420: "Result 1", "Result 2", 2 external outputs via CMC600 or cable with open end: "Result 1", "Result 2", "Result 3", "Result 4") |
| Configurable outputs | | Good read, External illumination control, free configurable output condition, "device ready" |
| Reading pulse | | Digital inputs, non-powered, serial interface, Ethernet, CAN, auto pulse, presentation mode |
| Optical indicators | | 21 LEDs (10 x status display, 10 x LED bar graph, 1 green feedback spot) |

| | |
|--------------------------------------|--|
| Acoustic indicators | Beeper/buzzer (can be switched off, can be assigned a function to signal a result) |
| Control elements | 2 buttons (choose and start/stop functions) |
| Operator interfaces | Web server |
| Configuration software | SOPAS ET |
| Memory card | Micro SD memory card (flash card) max. 16 GB, optional |
| Data storage and retrieval | Image and data storage via microSD memory card and external FTP |
| EncoderFrequency | Max. 1 kHz |
| External illumination control | Via digital output (max. 24 V trigger) or external illumination connection |

Ambient data

| | |
|--|---|
| Electromagnetic compatibility (EMC) | EN 61000-6-2:2005-08 / EN 61000-6-3 (2007-01) |
| Vibration resistance | EN 60068-2-6:2008-02 |
| Shock resistance | EN 60068-2-6 |
| Ambient operating temperature | 0 °C ... +50 °C |
| Storage temperature | -20 °C ... +70 °C |
| Relative humidity | 90 %, Non-condensing |
| Ambient light immunity | 2,000 lx, on code |

Certificates

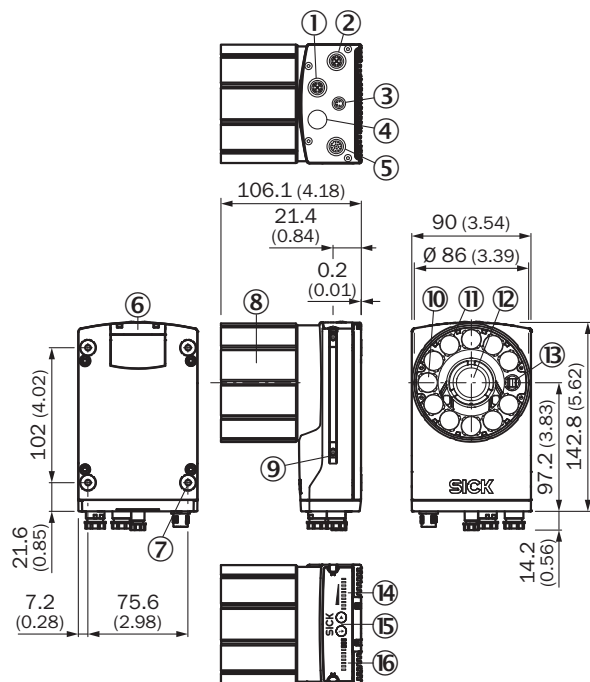
| | |
|--|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |
| Profinet certificate | ✓ |
| BIS registration | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |
| 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



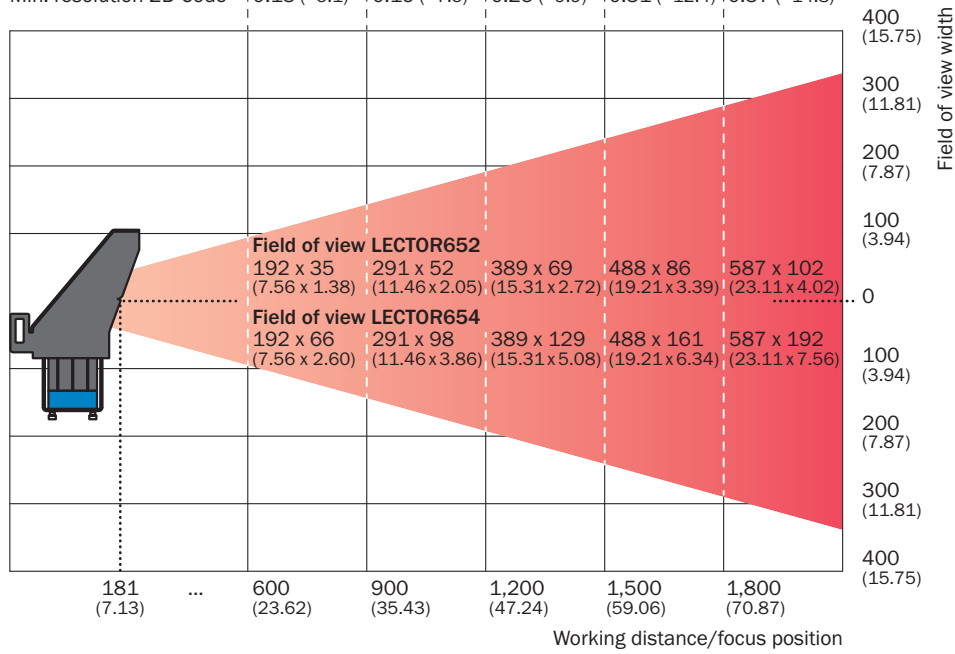
Dimensions in mm (inch)

- ① "Ethernet" P1 connection
- ② P3 connection "Ethernet"
- ③ X2 "USB" connection or "trigger external lighting", depending on type
- ④ P2 connection "CAN OUT", depending on type
- ⑤ X1 "Power/Serial Data/CAN/I/O" connection or "CAN IN", depending on type
- ⑥ cover for the microSD memory card
- ⑦ M5 blind tapped holes, 5 mm deep (4 x), for mounting the sensor
- ⑧ optics protection hood
- ⑨ sliding nut M5, 5.5 mm deep (2 x), for mounting (as alternative)
- ⑩ green feedback LED
- ⑪ ring lighting
- ⑫ Lens
- ⑬ laser alignment aid exit
- ⑭ Bar graph display
- ⑮ Function button (2 x)
- ⑯ LED for status display (2 levels), 10 x

Field of view Lector65x Dynamic Focus with Panorama 54 mm

Dimensions in mm (inch/*mil)

| | | | | | |
|-------------------------|-------------|-------------|-------------|--------------|--------------|
| Max. code size | 35 (1.38) | 52 (2.05) | 68 (2.68) | 85 (3.35) | 102 (4.02) |
| Min. resolution 1D-Code | 0.10 (*3.8) | 0.14 (*5.7) | 0.19 (*7.4) | 0.24 (*9.3) | 0.28 (*11.1) |
| Min. resolution 2D-Code | 0.13 (*5.1) | 0.19 (*7.5) | 0.25 (*9.9) | 0.31 (*12.4) | 0.37 (*14.8) |

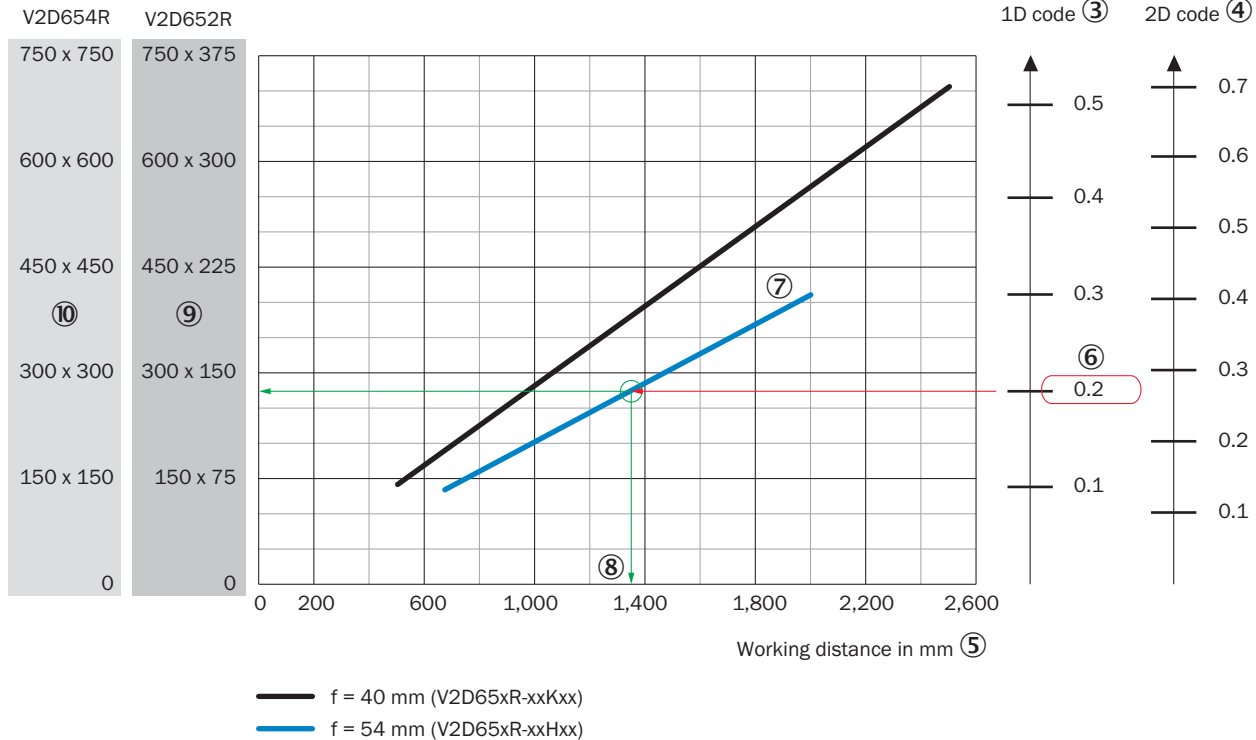


Field of view

Perceived area of field of view: H x V (mm) ①

Min. resolution in mm ②

1D code ③ 2D code ④



- ① perceived field of view area: horizontal x vertical (mm)
- ② Minimum resolution in mm
- ③ 1D code
- ④ 2D code
- ⑤ Working distance in mm
- ⑥ Selected code resolution
- ⑦ Focal length of lens, here example for f = 54.0 mm
- ⑧ Reading off: resultant maximum working distance
- ⑨ Reading off: Resulting perceived area of the field of view V2D652R (mm x mm)
- ⑩ Reading off: Resulting perceived area of the field of view V2D654R (mm x mm)

Recommended accessories

Other models and accessories → www.sick.com/Lector64x_Lector65x

| | Brief description | Type | part no. |
|-----------------------|--|---------------------|----------|
| connectors and cables | | | |
| | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 8-pin, straight, X-coded • Connection type head B: Male connector, RJ45, 8-pin, straight • Signal type: Ethernet, Gigabit Ethernet • Cable: 2 m, 8-wire, PUR, halogen-free • Description: Ethernet, shielded, Gigabit Ethernet • Application: Zones with oils and lubricants | YM2X18-020EG1M-RJA8 | 2106258 |
| | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 8-pin, straight, X-coded • Connection type head B: Male connector, RJ45, 8-pin, straight • Signal type: Ethernet, Gigabit Ethernet • Cable: 3 m, 8-wire, PUR, halogen-free • Description: Ethernet, shielded, Gigabit Ethernet • Application: Zones with oils and lubricants | YM2X18-030EG1M-RJA8 | 2145693 |

SICK AT A GLANCE

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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.

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