



PLOC2D-631C

PLOC2D

ROBOT GUIDANCE SYSTEMS

SICK
Sensor Intelligence.



Ordering information

| Type | part no. |
|-------------|----------|
| PLOC2D-631C | 1089629 |

Other models and accessories → www.sick.com/PLOC2D



Detailed technical data

Features

| | |
|-------------------------------|--|
| Product name | PLOC2D-FLEX0008 |
| System features | Stand-alone sensor with easy teach, for localization of parts using 2D measurements |
| Light source | Illumination LEDs: (to be ordered separately as accessories) |
| Laser class | 1, complies with 21 CFR 1040.10 except for the conformance according to "Laser Notice No. 50" from June 24, 2007 (IEC 60825-1:2014) EN 60825-1:2014 |
| Optical focus | Adjustable focus (manually) |
| Localization principle | Shape comparison |
| Sensor resolution | 1,280 px x 1,024 px (1.3 Mpixel) |
| Lens | C-mount |
| Mounting method | Changeable |
| Optical format | 1/1.8" |
| Remark | To be ordered separately as accessories |
| Technology | 2D snapshot, image analysis |
| Description | Basic resolution 2D localization of parts in medium fields of view at medium reading distances |

Mechanics/electronics

| | |
|-------------------------------|--|
| Connection type | 1 x M12, 17-pin male connector (serial, I/Os, voltage supply) 1 x M8, 4-pin female connector (USB, not used) 2 x M12, 8-pin socket (Gigabit Ethernet, only one connection used) 1 x M12, 4-pin male connector (external illumination) |
| Supply voltage | 12 V ... 24 V, ± 20 % |
| Power consumption | 10 W, ± 20 % |
| Housing material | Aluminum die cast |
| Housing color | Light blue (RAL 5012) |
| Dimensions (L x W x H) | 108 mm x 63 mm x 46 mm (Housing only, without lens and optics protection hood) |
| Weight | 430 g |
| Enclosure rating | IP65 ¹⁾ |

¹⁾ When using optics cover and male connector.

Performance

| | |
|-------------------------------|---|
| Part localization time | < 0.5 seconds for the first part in the image and then < 100 ms for additional parts in the image |
| Localization accuracy | ± 0.5 px, $\pm 0.1^\circ$ |
| Output data | X, Y (mm), rotation around Z (degrees) |

Interfaces

| | |
|-----------------------------------|--|
| Ethernet | ✓ |
| Data transmission rate | 100 Mbit/s |
| Protocol | TCP/IP XML and CSV (robot), TCP/IP (operator)PROFINETEtherNet/IP™FTP |
| Electrical connection | M12 male connector, 8-pin, x-coded |
| Supply voltage | |
| Electrical connection | Male connector M12, 17-pin |
| User interface | Web server |
| Data storage and retrieval | Image and data logging via microSD memory card and external FTP |

Ambient data

| | |
|---------------------------------------|---|
| Ambient temperature, operation | 0 °C ... +50 °C, permissible relative humidity: 0% ... 90% (non-condensing) |
| Ambient temperature, storage | -20 °C ... +70 °C ¹⁾ |
| Shock load | EN 60068-2-27:2009-05 |
| Vibration load | EN 60068-2-6:2008-02 |

¹⁾ Permissible relative humidity: 0% ... 90% (non-condensing).

General notes

| | |
|-----------------------|---|
| Items supplied | Camera with C-mount PLOC2D software Not included with delivery: Optics and illumination |
|-----------------------|---|

Certificates

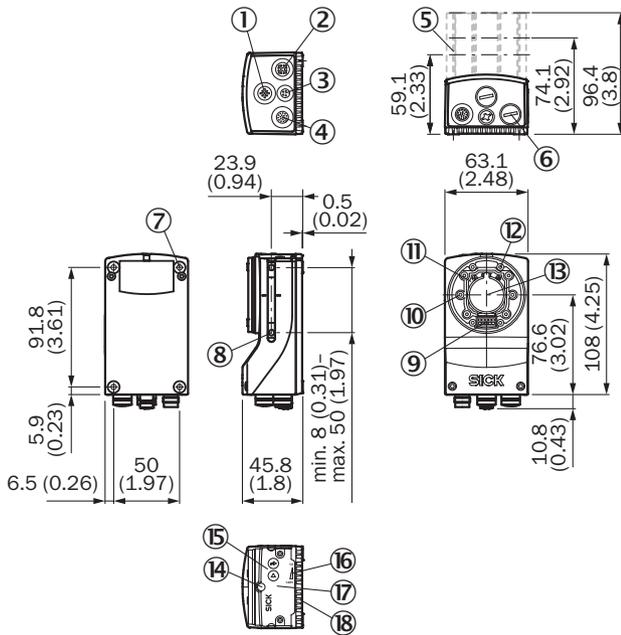
| | |
|--|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| China-RoHS | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |

Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27381501 |
| ECLASS 5.1.4 | 27381501 |
| ECLASS 6.0 | 27381590 |
| ECLASS 6.2 | 27381590 |
| ECLASS 7.0 | 27381590 |
| ECLASS 8.0 | 27381590 |
| ECLASS 8.1 | 27381590 |
| ECLASS 9.0 | 27381590 |
| ECLASS 10.0 | 27381590 |

| | |
|--------------------|----------|
| ECLASS 11.0 | 27381591 |
| ECLASS 12.0 | 27381591 |

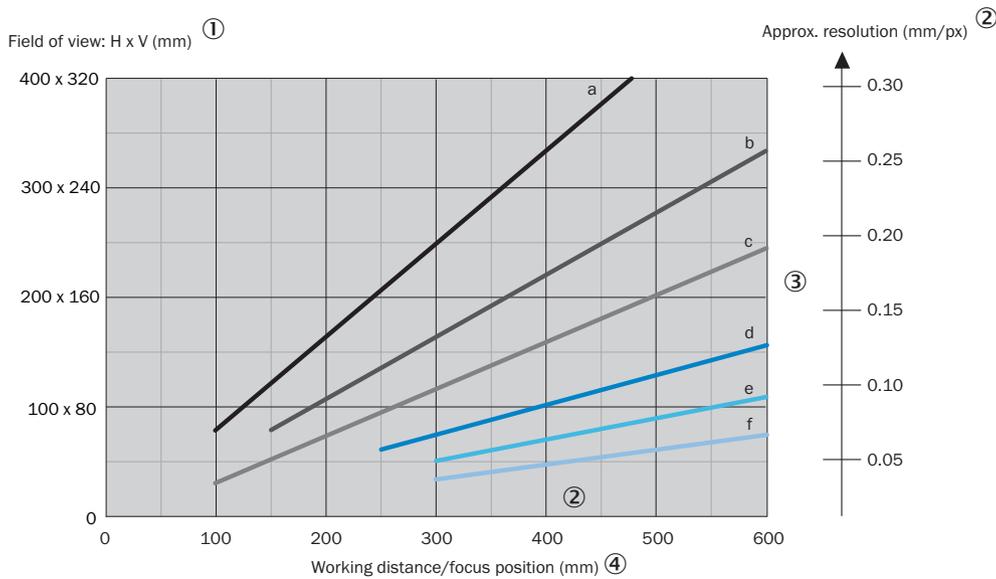
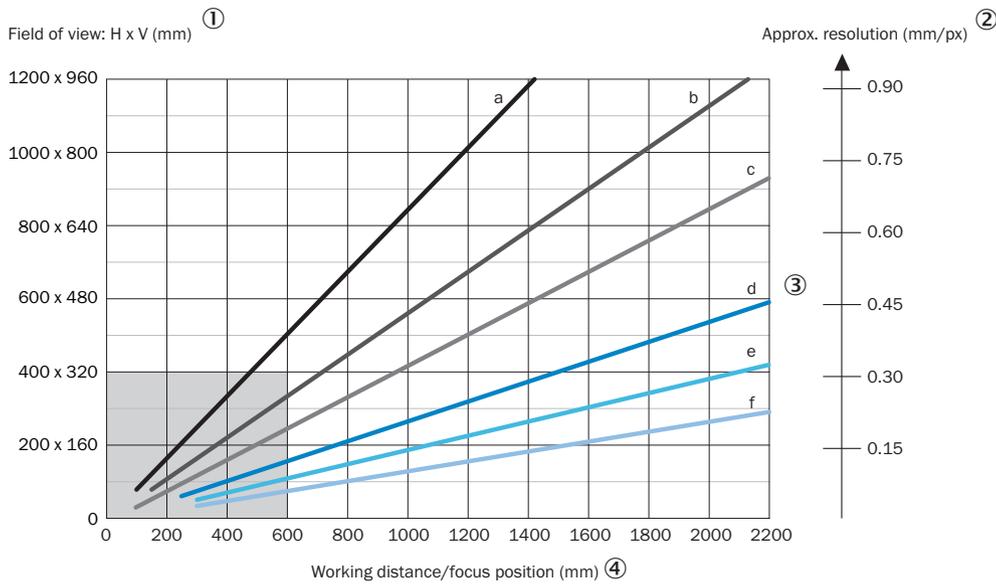
Dimensional drawing



Dimensions in mm (inch)

- ① “External light” connection (external illumination unit, female connector, M12, 4-pin, A-coded)
- ② “Ethernet” connection (Gigabit Ethernet, female connector, M12, 8-pin, X-coded)
- ③ “USB” connection (female connector, type M8, 4-pin), for temporary use as a service interface only
- ④ “Power/Serial Data/CAN/I/O” connection (male connector, M12, 17-pin, A-coded)
- ⑤ Optics protection hood (length: 22.7 mm, 37.7 mm or 60 mm)
- ⑥ 4 protective caps for sealing off the electrical connections as required for enclosure rating IP67 (delivery condition)
- ⑦ 4 tapped blind holes, M5, 5.5 mm deep for mounting the product
- ⑧ 2 M5 sliding nuts; 5.5 mm deep; pivoting; as an alternative method of mounting the product
- ⑨ Connection for an integrable illumination unit (VI551 ring illumination unit)
- ⑩ 2 laser alignment aids
- ⑪ S-mount or C-mount optics module
- ⑫ 4 blind tapped holes, 2.5 mm for mounting the spacers for the integrable illumination (VI551 ring illumination unit)
- ⑬ Optical axis and center of the image sensor
- ⑭ Basic device: Manual focus screw for an S-mount lens, accessible via the round opening in the housing cover. To secure the focus setting, cover the round opening with a self-adhesive label. Complete device: The opening is already covered by a label.
- ⑮ 2 function keys
- ⑯ 5 bar graph LEDs
- ⑰ Hinged cover on the top side of the device, access to the microSD memory card and the manual focus screw (S-mount)
- ⑱ 5 status LEDs (2 levels)

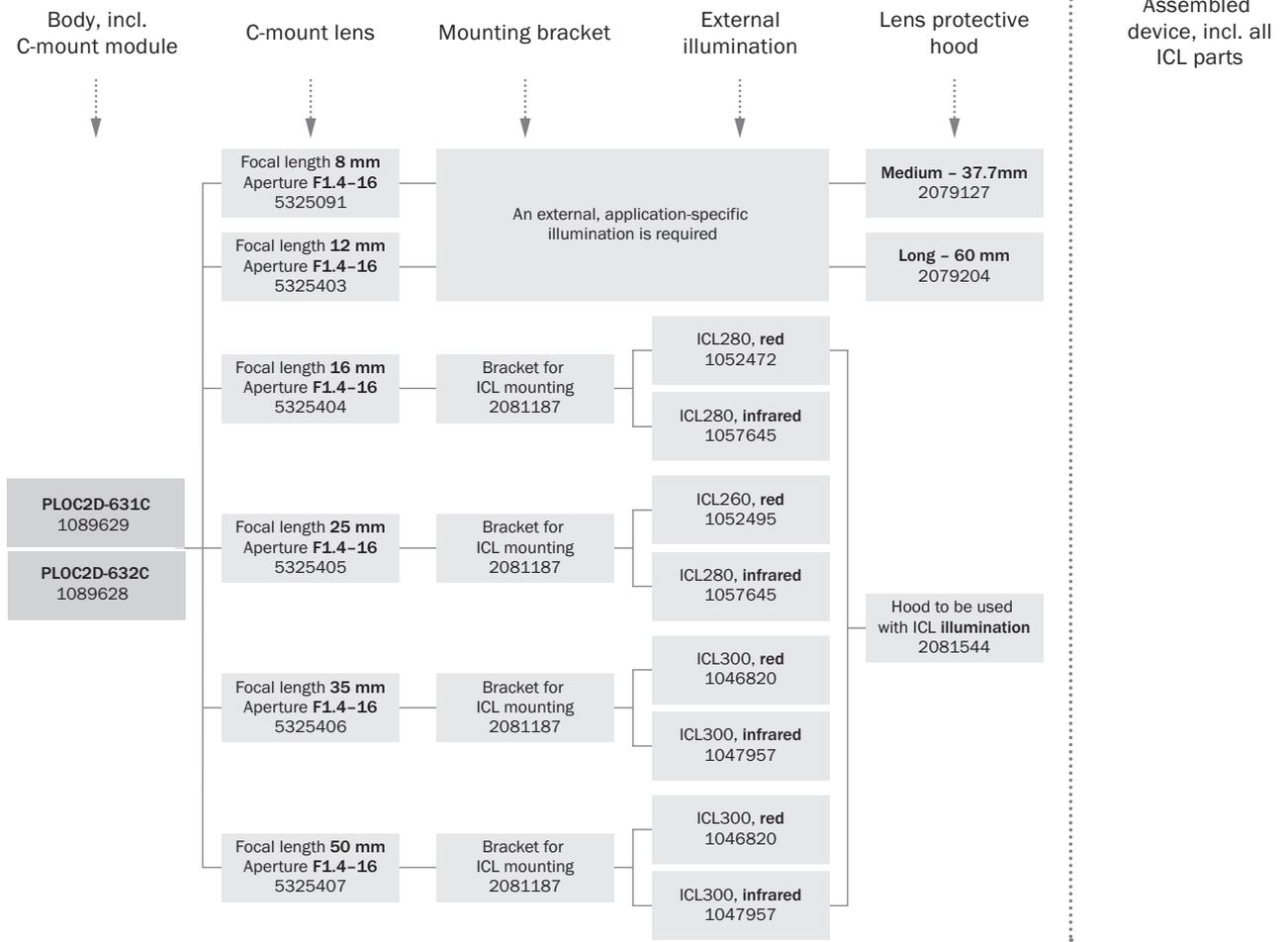
Characteristic curve



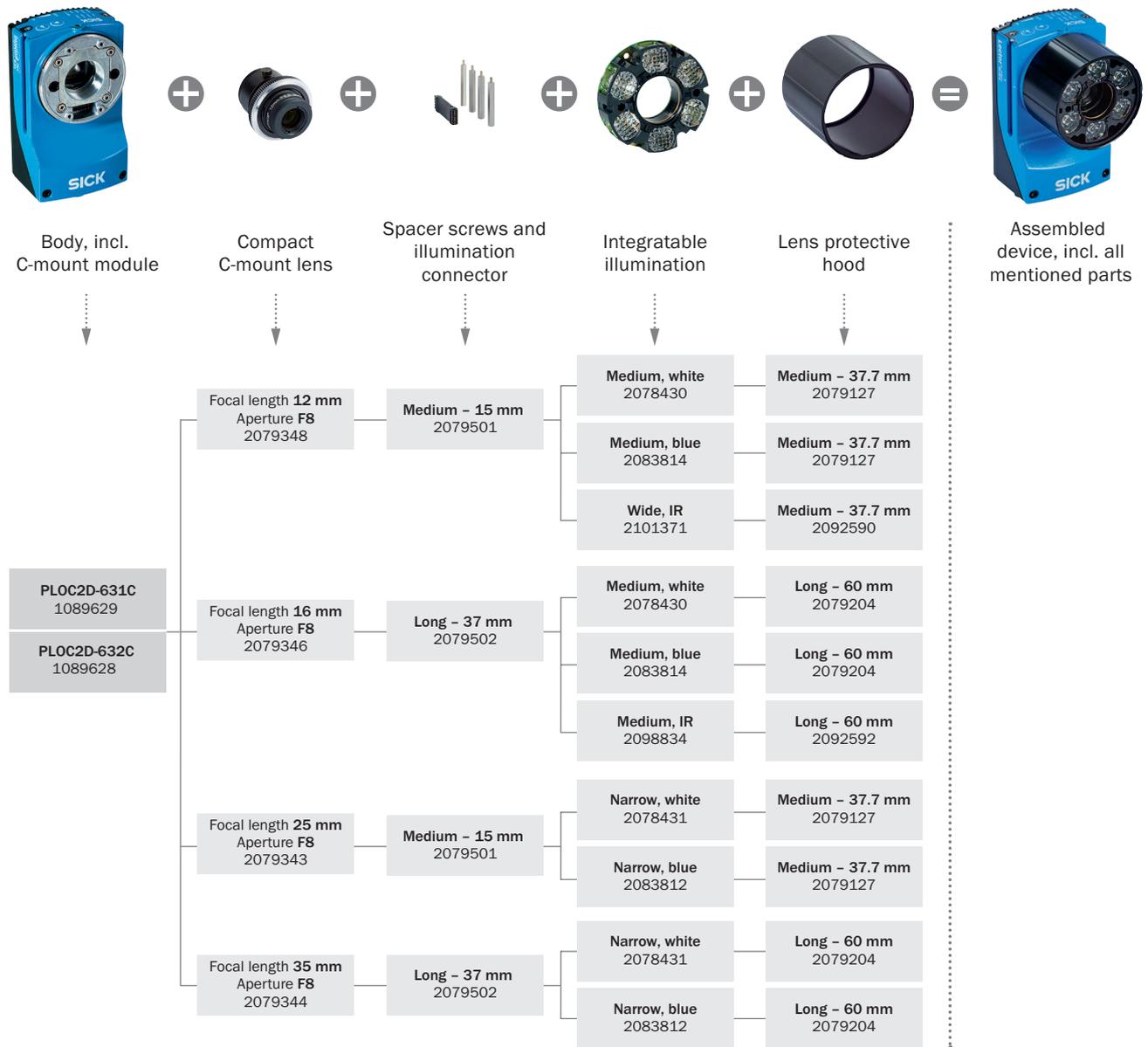
For S-mount and standard C-mount lenses, spacer rings are needed for working distances shorter than approximately 10 times the focal length. For compact C-mount lenses, spacer rings are not needed, but the built-in illumination cannot be used for distances shorter than 300 mm.

- ① Field of view: Horizontal x vertical in mm
- ② approximate resolution in mm/px
- ③ Lens focal length
- ④ Working distance/Focus position in mm

Selection Guide



Selection Guide



Recommended accessories

Other models and accessories → www.sick.com/PLOC2D

| | Brief description | Type | part no. |
|---------------------------------------|---|--|----------|
| Commissioning aids and test equipment | | | |
| | <ul style="list-style-type: none"> Product: Test equipment Description: Target for alignment and calibration, A3-size | PLOC2D alignment and calibration target A3 | 4092645 |

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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