



# LBC631

Label Checker

QUALITY CONTROL SYSTEMS

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	part no.
LBC631	1091689

Other models and accessories → [www.sick.com/Label\\_Checker](http://www.sick.com/Label_Checker)

## Detailed technical data

### Features

<b>Technology</b>	2D snapshot
<b>Light source</b>	Illumination LEDs: (to be ordered separately as accessories) Laser alignment aid: visible red light ( $\lambda = 630 \text{ nm} \dots 680 \text{ nm}$ )
<b>Laser class</b>	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)
<b>Focus</b>	Adjustable focus (manually)
<b>Sensor</b>	CMOS matrix sensor, grayscale values, 1.3 Mpixel, 1,280 px, 1,024 px
<b>Spectral range</b>	Approx. 400 nm ... 900 nm
<b>Lens</b>	C-mount

### Mechanics/electronics

<b>Dimensions, system (L x W x H)</b>	108 mm x 63 mm x 46 mm (Housing only, without lens and optics protection hood)
<b>Enclosure rating</b>	IP67 (EN 60529 (1991-10), EN 60529/A2 (2002-02))
<b>Protection class</b>	III (EN 60950-1 (2014-08))
<b>Power consumption</b>	Typ. 10 W, $\pm 20 \%$
<b>Housing material</b>	Aluminum die cast
<b>Output current</b>	$\leq 100 \text{ mA}$
<b>Connections</b>	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 female connector (Gigabit Ethernet, only one connection used) 1 x M12, 4-pin male connector (external illumination)
<b>Supply voltage</b>	12 V DC ... 24 V DC, $\pm 20 \%$
<b>Window material</b>	PMMA
<b>Weight</b>	430 g

### Performance

<b>Bar code types</b>	2/5 Industrial Interleaved 2 of 5 Codabar Code 39 Code 93 Code 128 EAN-8
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	EAN13 Pharmacode
<b>2D code types</b>	Data Matrix ECC200 QR code Micro QR code PDF417 Aztec
<b>OCR/OCV fonts</b>	Universal, industrial, document, DotPrint, pharma, OCR-A, OCR-B, Arabic numbers
<b>Optical format</b>	1/1.8"
<b>Maximum encoder frequency</b>	1 kHz

## Interfaces

<b>Serial (RS-232, RS-422)</b>	✓
Data transmission rate	(300 Baud ... 115.2 kBaud)
<b>Ethernet</b>	✓ , TCP/IP
Function	EtherNet/IP UDP / PROFINET FTP HTTP
Data transmission rate	10/100/1,000 Mbit/s
<b>Operator interface</b>	Web server
<b>Optical indicators</b>	5 x status display, 5 x LED bar graph, 1 green/red feedback spot
<b>Data storage and retrieval</b>	Image and data logging via microSD memory card and external FTP
<b>Acoustic indicators</b>	Beeper

## Ambient data

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

<sup>1)</sup> Permissible relative humidity: 0% ... 90% (non-condensing).

## General notes

<b>Items supplied</b>	InspectorP V2D631P LabelChecker software
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## Certificates

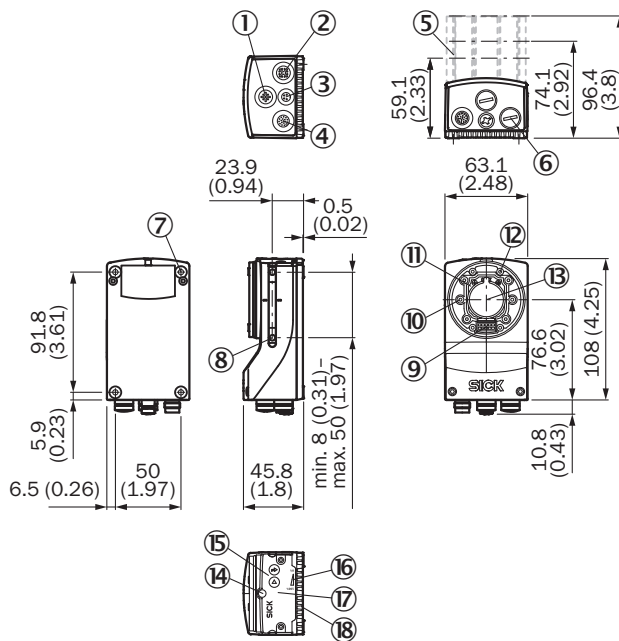
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓

## Classifications

<b>ECLASS 5.0</b>	27310205
<b>ECLASS 5.1.4</b>	27310205
<b>ECLASS 6.0</b>	27310205
<b>ECLASS 6.2</b>	27310205
<b>ECLASS 7.0</b>	27310205
<b>ECLASS 8.0</b>	27310205
<b>ECLASS 8.1</b>	27310205

<b>ECLASS 9.0</b>	27310205
<b>ECLASS 10.0</b>	27289090
<b>ECLASS 11.0</b>	27289090
<b>ECLASS 12.0</b>	27289090
<b>ETIM 5.0</b>	EC001820
<b>ETIM 6.0</b>	EC001820
<b>ETIM 7.0</b>	EC001820
<b>ETIM 8.0</b>	EC001820
<b>UNSPSC 16.0901</b>	43211731

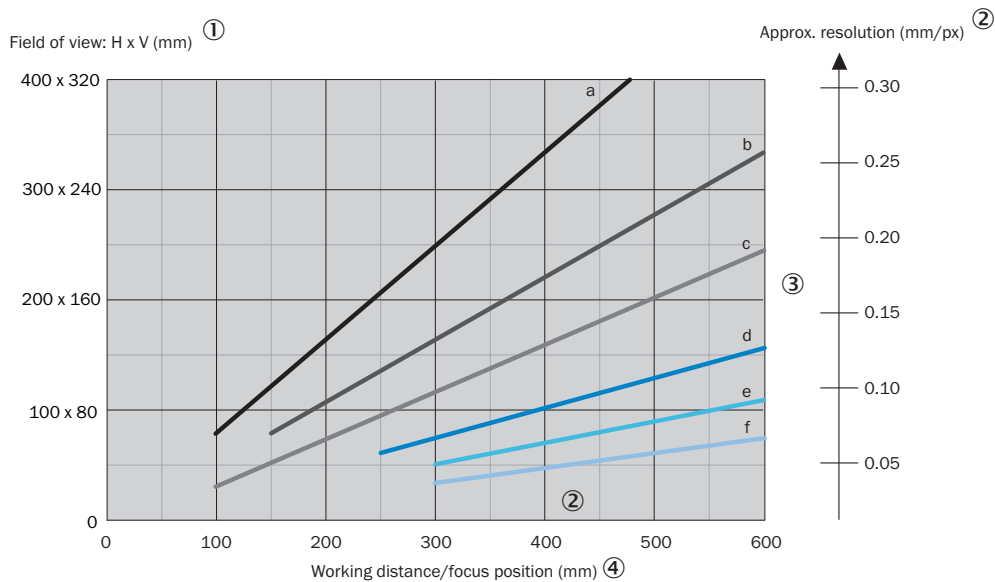
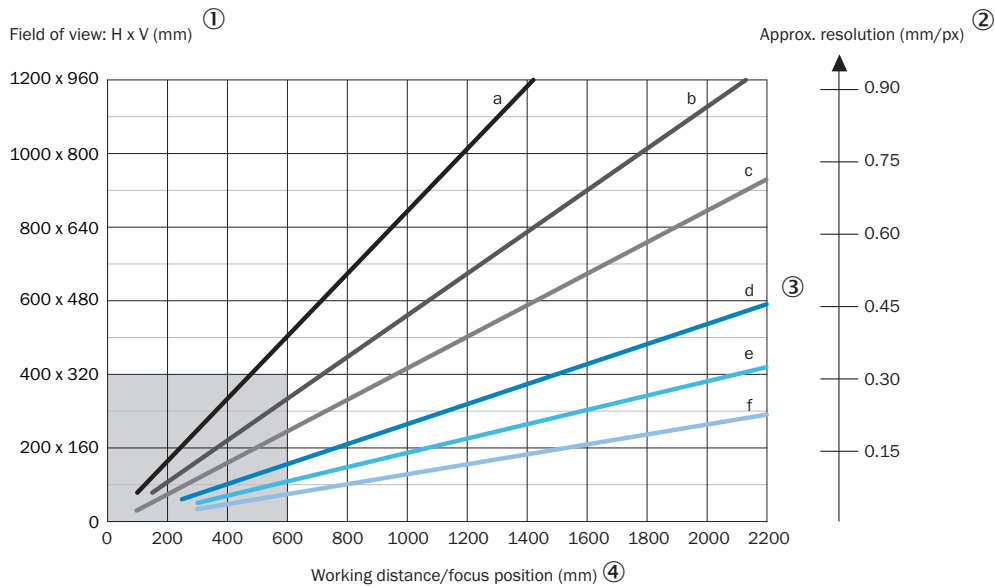
## Dimensional drawing



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 device
- ⑧ 2 sliding nuts, M5, 5.5 mm deep, as an alternative method of mounting the device
- ⑨ Connection for an integrable illumination unit (VI55I 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 (VI55I 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

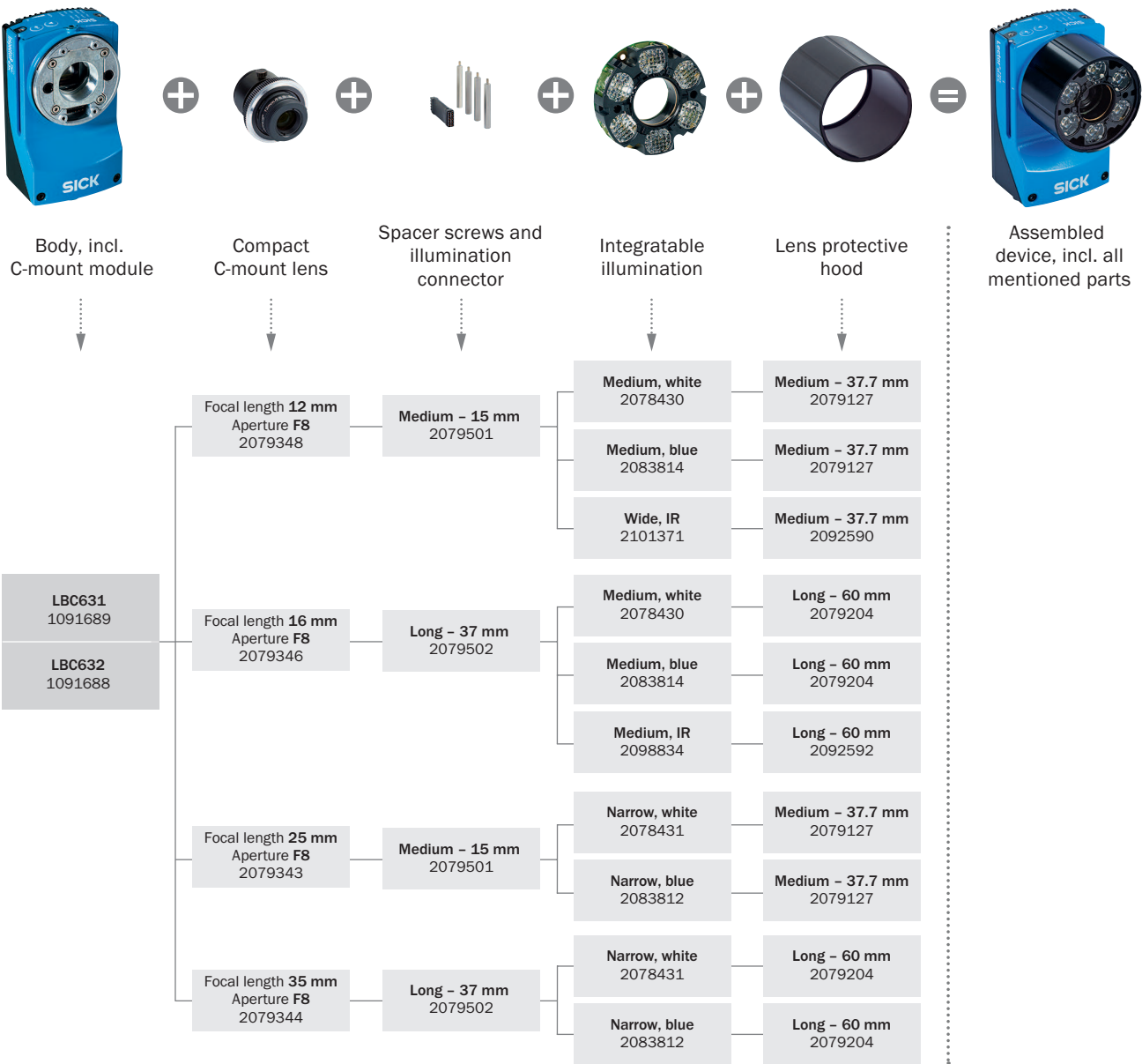


- a: f = 8.0 mm (only C-mount standard)
- b: f = 12.0 mm
- c: f = 16.0 mm
- d: f = 25.0 mm
- e: f = 35.0 mm
- f: f = 50.0 mm

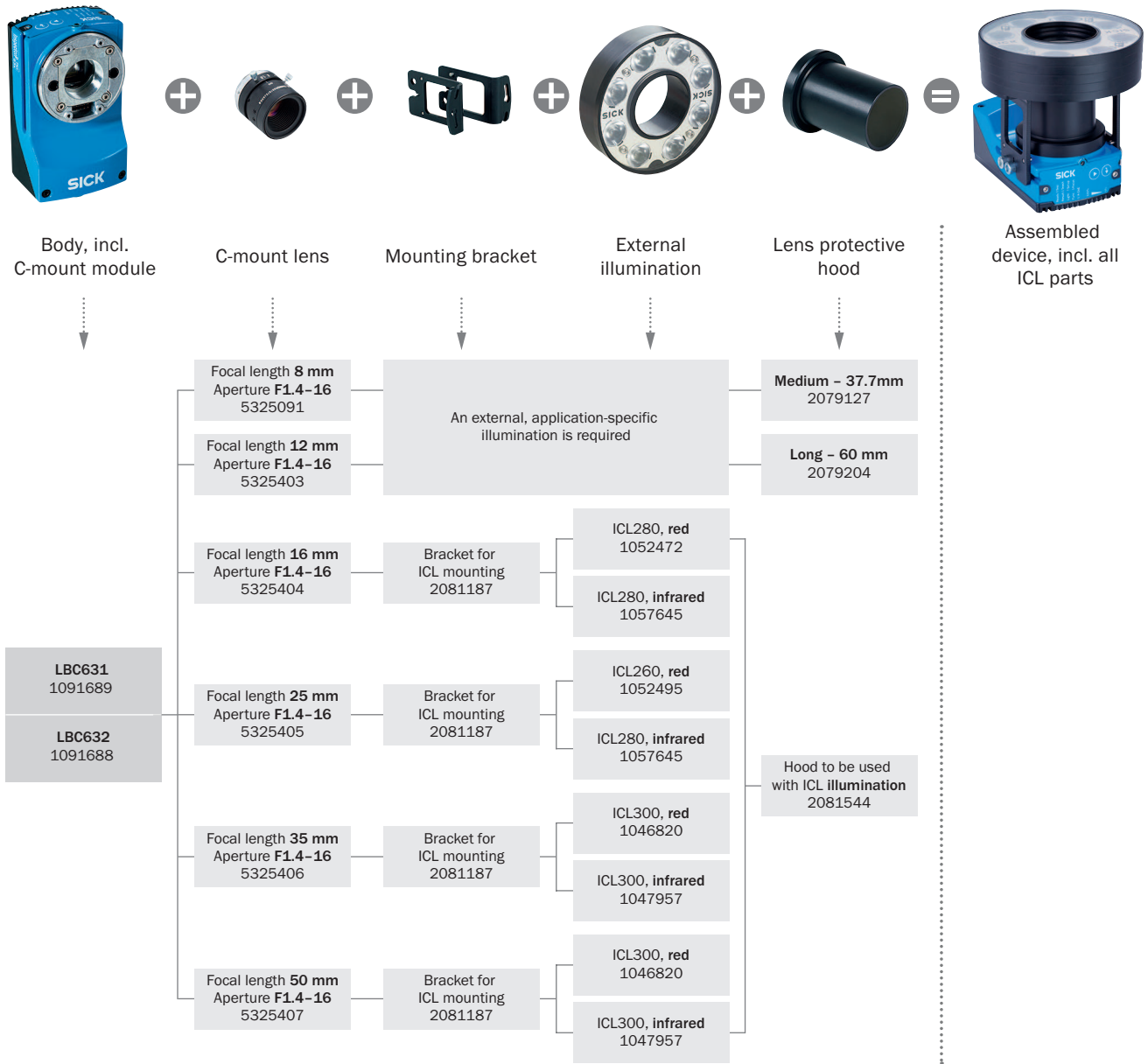
For S-mount and standard C-mount lenses, spacer rings are needed for working distances shorter than approximately 10 times the focal length. For compact C-mount lenses, spacer rings are not needed, but the built-in illumination cannot be used for distances shorter than 300 mm.

- 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





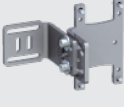




## Selection Guide



## Recommended accessories

Other models and accessories → [www.sick.com/Label\\_Checker](http://www.sick.com/Label_Checker)

	Brief description	Type	part no.
reflectors and optics			
	<ul style="list-style-type: none"> <li><b>Description:</b> Optics protection hood, medium, enclosure rating IP 67, length: 37.7 mm, PMMA, for use with compact C-mount lens with focal length 12 mm or 25 mm and S-mount lens with focal length 25 mm</li> </ul>	Optics protection hood (PMMA)	2079127
	<ul style="list-style-type: none"> <li><b>Description:</b> Compact C-mount 2/3", focal length 12 mm, aperture 8</li> </ul>	C-mount lens	2079348
	<ul style="list-style-type: none"> <li><b>Description:</b> Integratable lighting, lighting color white, medium, suitable for S-mount and compact C-mount lenses with a focal length of 12 mm, 16 mm and 17.5 mm</li> </ul>	VI55I-WH1441M0	2078430
	<ul style="list-style-type: none"> <li><b>Description:</b> Distance bracket and light extension connector (medium) for mounting integratable lighting, length 15 mm, used with compact C-mount lenses with focal length of 12 mm or 25 mm and S-mount lens with focal length 25mm</li> </ul>	Distance bracket	2079501
Mounting systems			
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket set consisting of mounting bracket, cooling plate, includes angle display for setting the tilt angle</li> <li><b>Suitable for:</b> Lector63x, Inspector63x, Lector83x – up to 40 °C ambient operating temperature, Insepctor83x – up to 40 °C ambient operating temperature, Lector83x – up to 40 °C ambient operating temperature, Insepctor83x – up to 40 °C ambient operating temperature, Lector63x, Insepctor63x</li> </ul>	Mounting bracket set with inclination angle –40° - 40°	2076735
	<ul style="list-style-type: none"> <li><b>Description:</b> Sliding nut, M5, short</li> <li><b>Usable for:</b> Lector62x, EventCam</li> </ul>	Sliding nut	5324896
connectors and cables			
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 17-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Power, serial, CAN, digital I/Os</li> <li><b>Cable:</b> 3 m, 17-wire, stripped, PE-X</li> <li><b>Description:</b> Power, suitable for 2 A, shielded, Serial, Changed color coding of the flying leads, CAN, Digital I/Os</li> <li><b>Connection systems:</b> Flying leads</li> <li><b>Note:</b> Max. permissible current strength at ambient temperature 50 °C: Contact 1 (blue) and contact 2 (brown): 3 A while the remaining contacts are operated with max. 100 mA; max. permissible current strength at ambient temperature 40 °C: 2 A for two and 1.5 A for 15 contacts.</li> <li><b>Application:</b> Drag chain operation</li> </ul>	YF2ASD-030XXXXLECX	2070425



## 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)