



# V2D621P-2MSFBB5

InspectorP62x

2D MACHINE VISION

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
V2D621P-2MSFBB5	1110847

Other models and accessories → [www.sick.com/InspectorP62x](http://www.sick.com/InspectorP62x)



### Detailed technical data

#### Features

<b>Technology</b>	2D snapshot
<b>Product category</b>	Programmable, configurable
<b>SensorApp</b>	Nova Inspector
<b>License included</b>	Quality Inspection License Optional upgrade with the Intelligent Inspection Upgrade License, which enables productive use of the complete toolset.
<b>Toolkit</b>	HALCON
<b>Sensor</b>	CMOS matrix sensor, grayscale values
<b>Shutter technology</b>	Global-Shutter
<b>Optical focus</b>	Adjustable focus (electric)
<b>Working distance</b>	70 mm ... 1,500 mm <sup>1)</sup>
<b>Illumination</b>	Integrated
<b>Illumination color</b>	Red, LED, Visible, 617 nm, ± 15 nm Blue, LED, Visible, 470 nm, ± 15 nm
<b>Feedback spot</b>	LED, Visible, green, 525 nm, ± 15 nm
<b>Alignment aid</b>	Laser, Red, 630 nm ... 680 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>LED class</b>	Risk group 1 (IEC 62471 (2006-07) / EN 62471 (2008-09))
<b>Spectral range</b>	Approx. 400 nm ... 900 nm
<b>Lens</b>	
	Focal length 9.6 mm
<b>Task</b>	Detecting - Standard objects

<sup>1)</sup> For details see field of view diagram.

	Measuring - Dimension, contour and volume Measuring - Number Identifying - 2D code Identifying - OCR Identifying - Pattern Identifying - Classifying Identifying - Sorting Determining position - 2D position determination
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<sup>1)</sup> For details see field of view diagram.

## Mechanics/electronics

<b>Connection type</b>	1 x M12, 17-pin male connector (serial, I/Os, voltage supply) 1 x M12, 4-pin female connector (Ethernet)
<b>Supply voltage</b>	12 V DC ... 24 V DC, ± 10 %
<b>Power consumption</b>	Typ. 4 W
<b>Enclosure rating</b>	IP65 (EN 60529 (1991-10), EN 60529/A2 (2002-02))
<b>Protection class</b>	III
<b>Housing material</b>	Aluminum die cast
<b>Window material</b>	PMMA
<b>Weight</b>	170 g
<b>Dimensions (L x W x H)</b>	71 mm x 43 mm x 35.6 mm
<b>MTBF</b>	75,000 h

## Performance

<b>Sensor resolution</b>	1,280 px x 1,024 px (1.3 Mpixel)
<b>Scan/frame rate</b>	50 Hz

## Interfaces

<b>Serial</b>	✓, RS-232, RS-422
Remark	Not yet available in the pre-installed Quality Inspection SensorApp
Data transmission rate	300 Baud ... 115.2 kBaud
<b>Ethernet</b>	✓, TCP/IP
Function	FTP, HTTP
Data transmission rate	10/100 MBit/s
<b>CAN</b>	✓
Remark	Not yet available in the pre-installed Quality Inspection SensorApp
Function	SICK CAN sensor network (CAN controller/CAN device)
<b>EtherNet/IP™</b>	✓
Data transmission rate	10/100 MBit/s
<b>EtherCAT</b>	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600
Remark	Not yet available in the pre-installed Quality Inspection SensorApp
<b>PROFINET</b>	✓
Function	PROFINET Single Port
Data transmission rate	10/100 MBit/s
<b>PROFIBUS DP</b>	✓

<sup>1)</sup> Not yet available in the pre-installed Quality Inspection SensorApp.

Type of fieldbus integration	Optional over external fieldbus module CDF600-2
Remark	Not yet available in the pre-installed Quality Inspection SensorApp
<b>Operator interfaces</b>	Web server
<b>Configuration software</b>	Web GUI (SensorApp configuration), SICK AppStudio (programming)
<b>Data storage and retrieval</b>	Image and data logging via microSD memory card and external FTP (FTP is not yet available in the pre-installed Quality Inspection SensorApp)
<b>Inputs/outputs</b>	2 opto-decoupled inputs, 4 inputs/outputs, configurable
<b>Output current</b>	≤ 100 mA
<b>Maximum encoder frequency</b>	300 Hz
<b>External illumination</b>	Via digital output (max. 24 V trigger)
<b>Control elements</b>	2 buttons <sup>1)</sup>
<b>Optical indicators</b>	16 LEDs (5 status displays, 10 LED bar graphs, 1 green/red feedback spot)
<b>Acoustic indicators</b>	Beeper <sup>1)</sup>

<sup>1)</sup> Not yet available in the pre-installed Quality Inspection SensorApp.

### Ambient data

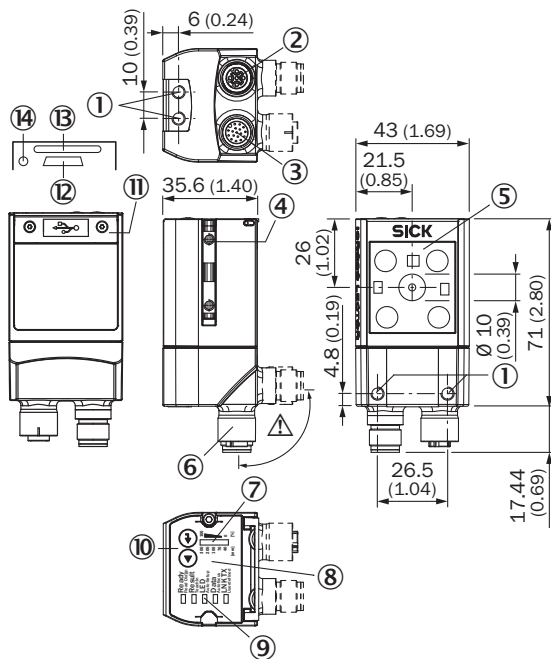
<b>Shock load</b>	EN 60068-2-27:2009-05
<b>Vibration load</b>	EN 60068-2-6:2008-02
<b>Ambient operating temperature</b>	0 °C ... +50 °C <sup>1)</sup>
<b>Storage temperature</b>	-20 °C ... +70 °C <sup>1)</sup>

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

### Classifications

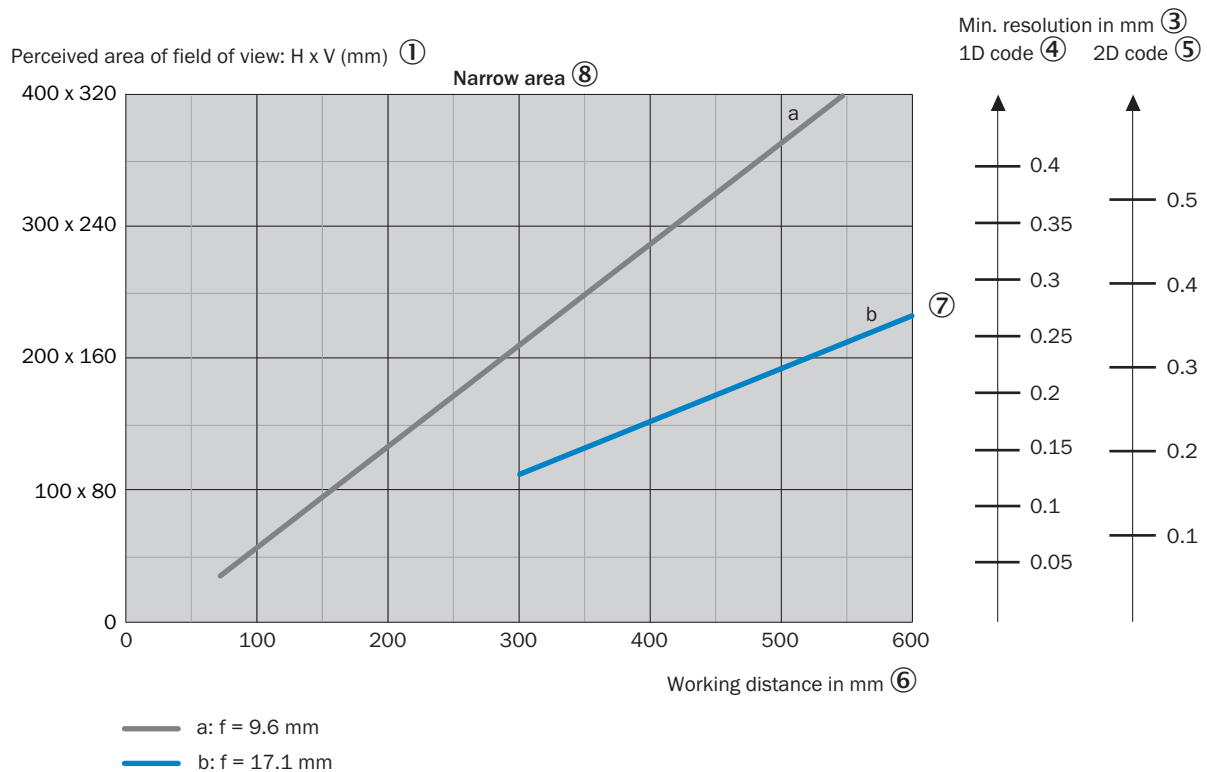
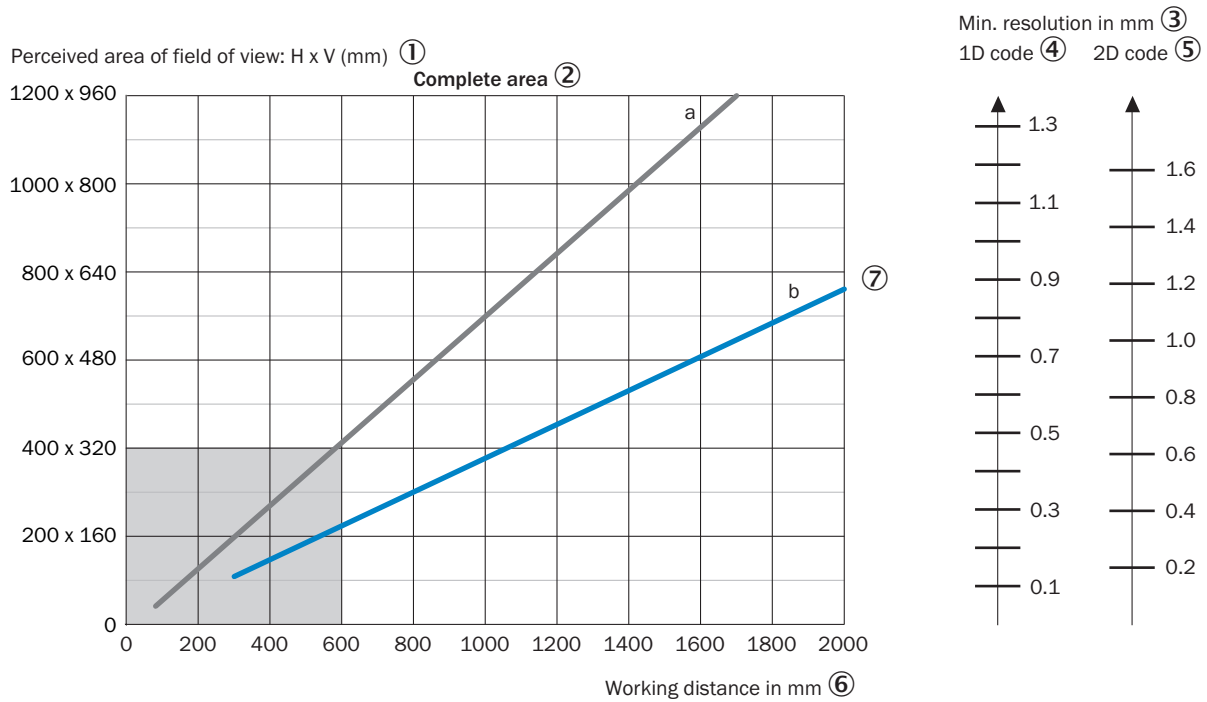
<b>ECLASS 5.0</b>	27310205
<b>ECLASS 5.1.4</b>	27310205
<b>ECLASS 6.0</b>	27310205
<b>ECLASS 6.2</b>	27310205
<b>ECLASS 7.0</b>	27310205
<b>ECLASS 8.0</b>	27310205
<b>ECLASS 8.1</b>	27310205
<b>ECLASS 9.0</b>	27310205
<b>ECLASS 10.0</b>	27310205
<b>ECLASS 11.0</b>	27310205
<b>ECLASS 12.0</b>	27310205
<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))



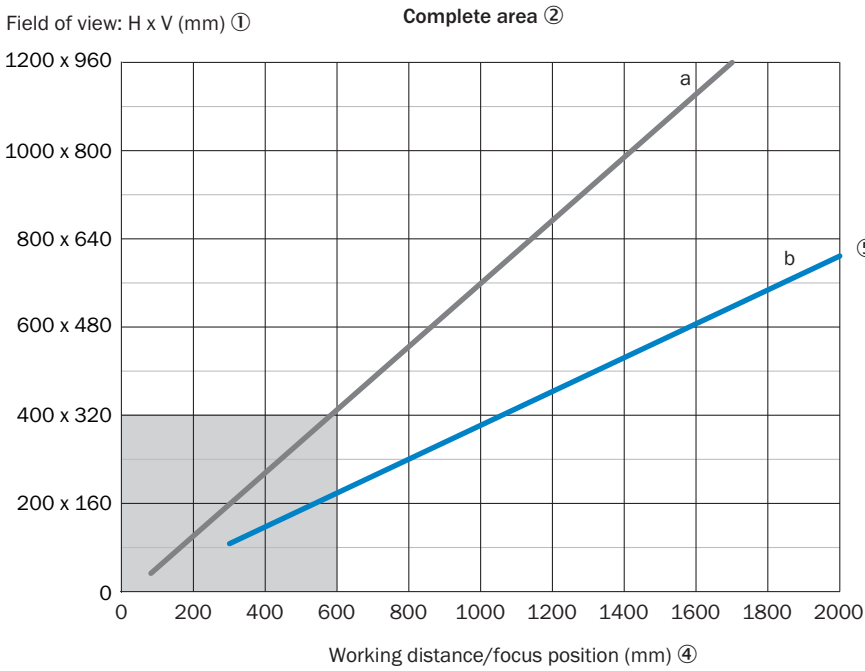
- ① M5 blind tapped holes, 5 mm deep (4 x), for mounting the sensor
- ② "Ethernet" connection, 4-pin M12 female connector, D-coded
- ③ "Power/Serial Data/CAN/I/O" connection, 17-pin M12 male connector, A-coded
- ④ Sliding nut M5, 5.5 mm deep (2 x), for mounting (as alternative)
- ⑤ Reading window with internal illumination LEDs (4 x)
- ⑥ Swivel connector unit
- ⑦ Bar graph
- ⑧ Beeper (under housing cover)
- ⑨ LEDs for status display (2 levels), 5 x
- ⑩ Function button (2 x)
- ⑪ Cover (flap)
- ⑫ "USB" connection (female connector, 5-pin, type Micro-B) interface for temporary use (service)
- ⑬ Slot for microSD memory card
- ⑭ LED for microSD memory card

### Field of view

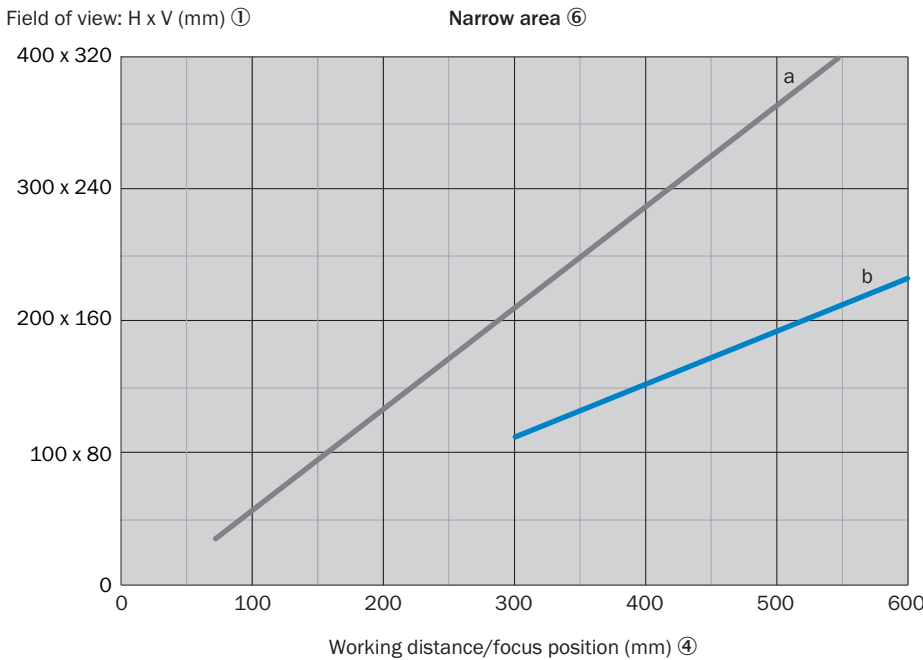
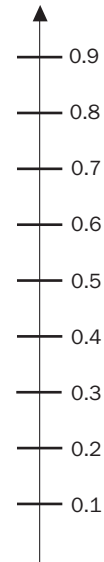


- ① Perceived field of view area: horizontal x vertical (mm)
- ② Complete area
- ③ Minimum resolution in mm
- ④ 1D code
- ⑤ 2D code
- ⑥ Working distance in mm
- ⑦ Focal length of lens, here example for f = 17.1 mm

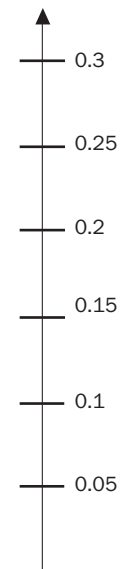
③ Close range



Approx. resolution (mm/px) ③



Approx. resolution (mm/px) ③



- a: f = 9.6 mm
- b: f = 17.1 mm

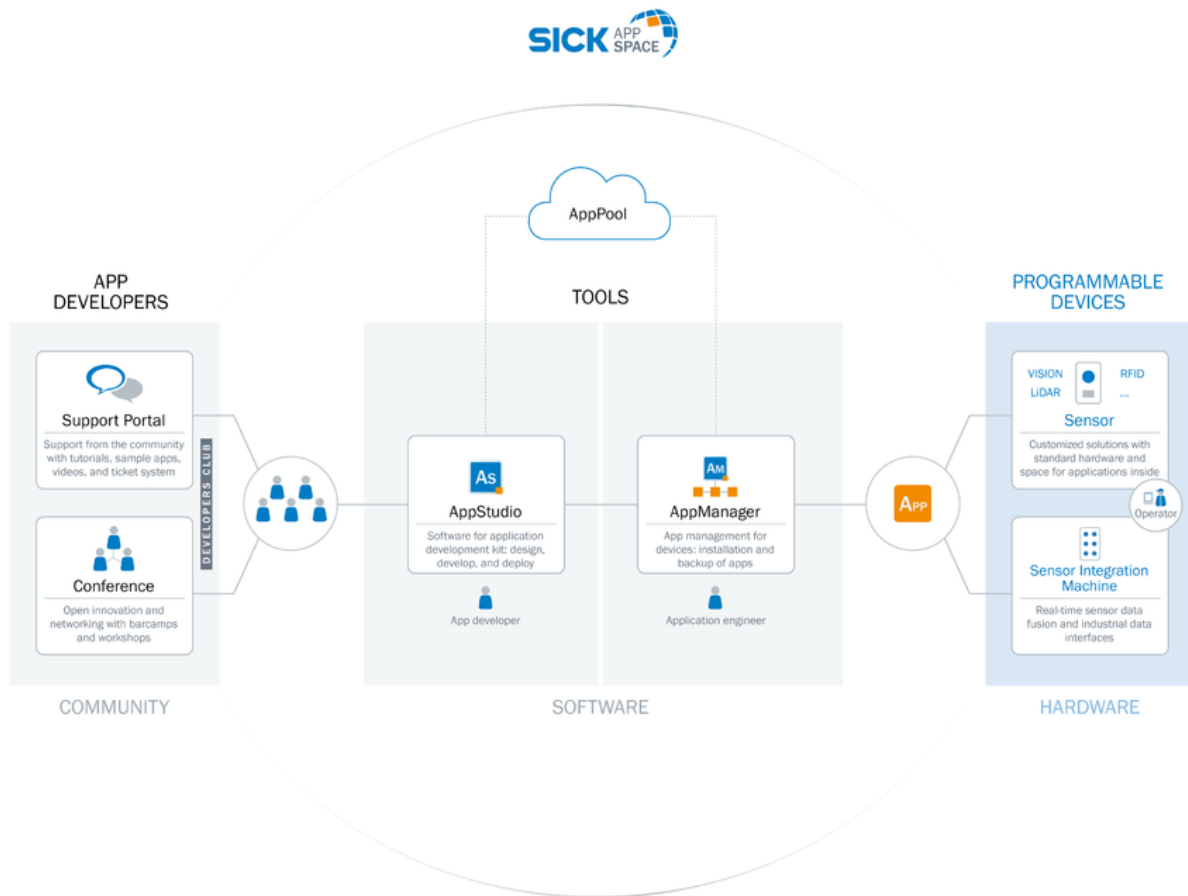
Take into account the following aspects when designing the application: the field of view geometry of the device, and the position of the field of view in the space in front of the device. Possible angles at which the objects can arise in relation to the device. For the planned working distance: resultant field of view length and width as well as the approximate resolution.

- ① Field of view: Horizontal x vertical in mm
- ② Complete area

- ③ Approximate resolution in mm/px
- ④ Working distance/Focus position in mm
- ⑤ Focal length of lens, here example for  $f = 17.1$  mm
- ⑥ Narrow range


### Overview

SICK AppSpace






### Recommended accessories

Other models and accessories → [www.sick.com/InspectorP62x](http://www.sick.com/InspectorP62x)

	Brief description	Type	Part no.
Mounting brackets and plates			
	Bracket with adapter board	Mounting bracket	2042902



	Brief description	Type	Part no.
Others			
	<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> Male connector, M12, 17-pin, straight, A-coded</li> <li>• <b>Signal type:</b> Power, serial, CAN, digital I/Os</li> <li>• <b>Cable:</b> 3 m, 17-wire</li> <li>• <b>Description:</b> Power, serial, CAN, digital I/Os, suitable for 2 A, shielded, to connection module CDB650</li> <li>• <b>Application:</b> Drag chain operation</li> </ul>	YM2A8D-030XXXF2A8D	6051194
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li> <li>• <b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li>• <b>Signal type:</b> Ethernet, PROFINET</li> <li>• <b>Cable:</b> 2 m, 4-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Ethernet, PROFINET, shielded</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants</li> </ul>	YM2D24-020PN1MRJA4	2106182
Modules			
	<ul style="list-style-type: none"> <li>• <b>Accessory group:</b> 4DproConnectivity</li> <li>• <b>Product family:</b> Connection Device Basic</li> <li>• <b>Sub product family:</b> CDB650</li> <li>• <b>Supported products:</b> Lector series, CLV62x - CLV64x (depending on type), CLV69x, RFID read/write device, InspectorP series</li> <li>• <b>Brief description:</b> Connection device basic for connecting one sensor with 2 A fuse, 5 cable glands and RS-232 interface to sensor via M12, 17-pin female connector, all outputs available on screw/spring-loaded terminals.</li> </ul>	CDB650-204	1064114

## Recommended services

Additional services → [www.sick.com/InspectorP62x](http://www.sick.com/InspectorP62x)

	Type	Part no.
Extended warranty		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> Machine vision, LiDAR sensors, safety camera sensors, Safety laser scanners, Safety radar sensors, Radar sensors, Fixed mount barcode scanners, Image-based code readers, RFID, Mobile handheld scanners</li> <li>• <b>Range of services:</b> The services correspond to the scope of the statutory manufacturer warranty (SICK general terms of delivery).</li> <li>• <b>Duration:</b> Five-year warranty from delivery date.</li> </ul>	Extended warranty for a total of five years from delivery date	1680671

## 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)