



# IQ40-20BPPKC0S

IQG

INDUCTIVE PROXIMITY SENSORS

**SICK**  
Sensor Intelligence.



## Ordering information

Type	Part no.
IQ40-20BPPKC0S	1071862

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



## Detailed technical data

### Features

<b>Housing</b>	Rectangular
<b>Housing</b>	Standard design
<b>Dimensions (W x H x D)</b>	40 mm x 40 mm x 132 mm
<b>Sensing range <math>S_n</math></b>	20 mm
<b>Safe sensing range <math>S_a</math></b>	16.2 mm
<b>Installation type</b>	Flush
<b>Switching frequency</b>	150 Hz
<b>Connection type</b>	Male connector M12, 4-pin
<b>Switching output</b>	PNP
<b>Output function</b>	Complementary
<b>Electrical wiring</b>	DC 4-wire
<b>Enclosure rating</b>	IP67, IP68, IP69K
<b>Special applications</b>	Difficult application conditions

### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Ripple</b>	$\leq 10 V_{pp}^{1)}$
<b>Voltage drop</b>	$\leq 2 V$
<b>Time delay before availability</b>	$\leq 50 ms$
<b>Hysteresis</b>	$3 \% \dots 15 \%^{2)}$
<b>Reproducibility</b>	$\leq 2 \%$
<b>Temperature drift (of <math>S_n</math>)</b>	$\pm 10 \%$
<b>Continuous current <math>I_a</math></b>	$\leq 200 mA$
<b>Short-circuit protection</b>	✓
<b>Reverse polarity protection</b>	✓

<sup>1)</sup> Of  $U_b$ .

<sup>2)</sup> Of  $S_r$ .

<sup>3)</sup> Reference voltage: 50 V DC.

<b>Power-up pulse protection</b>	✓
<b>Shock and vibration resistance</b>	30 g, 11 ms / 10 ... 55 Hz, 1 mm
<b>Ambient operating temperature</b>	-25 °C ... +85 °C
<b>Ambient temperature, storage</b>	-40 °C ... +85 °C
<b>Housing material</b>	Plastic, PA 66
<b>Sensing face material</b>	Plastic, PA 66
<b>Tightening torque, max.</b>	1.8 Nm
<b>Protection class</b>	II <sup>3)</sup>
<b>UL File No.</b>	E348498

<sup>1)</sup> Of Ub.

<sup>2)</sup> Of S<sub>r</sub>.

<sup>3)</sup> Reference voltage: 50 V DC.

### Safety-related parameters

<b>MTTF<sub>D</sub></b>	1,406 years
<b>DC<sub>avg</sub></b>	0 %

### Reduction factors

<b>Note</b>	The values are reference values which may vary
<b>Stainless steel (V2A, 304)</b>	Approx. 0.71
<b>Aluminum (Al)</b>	Approx. 0.3
<b>Copper (Cu)</b>	Approx. 0.25
<b>Brass (Br)</b>	Approx. 0.36

### Installation note

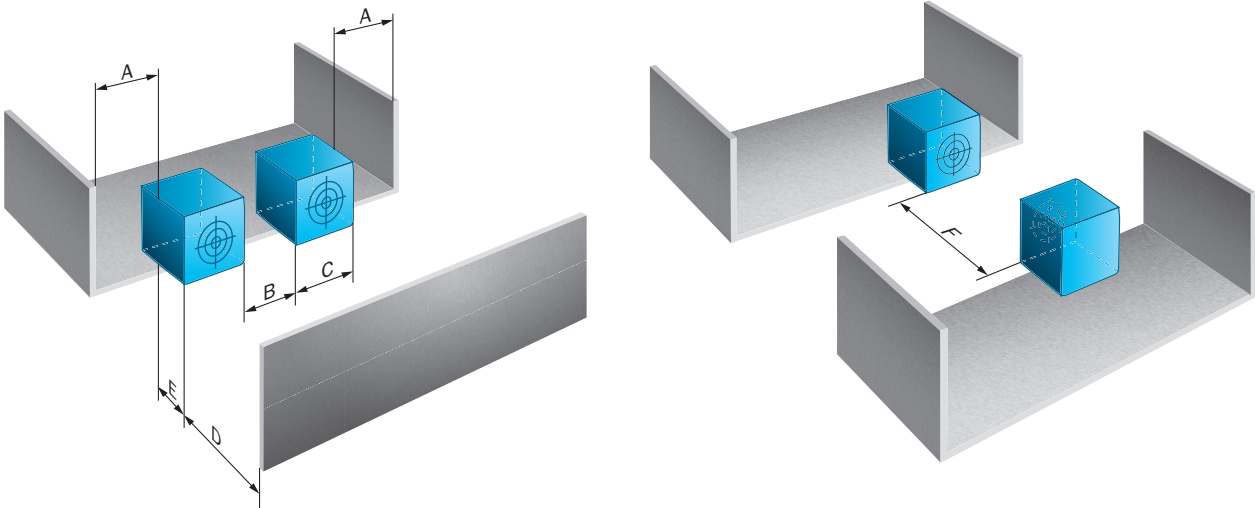
<b>Remark</b>	Associated graphic see "Installation"
<b>A</b>	0 mm
<b>B</b>	40 mm
<b>C</b>	40 mm
<b>D</b>	60 mm
<b>E</b>	0 mm
<b>F</b>	70 mm

### Classifications

<b>ECl@ss 5.0</b>	27270101
<b>ECl@ss 5.1.4</b>	27270101
<b>ECl@ss 6.0</b>	27270101
<b>ECl@ss 6.2</b>	27270101
<b>ECl@ss 7.0</b>	27270101
<b>ECl@ss 8.0</b>	27270101
<b>ECl@ss 8.1</b>	27270101
<b>ECl@ss 9.0</b>	27270101
<b>ECl@ss 10.0</b>	27270101
<b>ECl@ss 11.0</b>	27270101
<b>ETIM 5.0</b>	EC002714

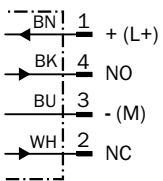
<b>ETIM 6.0</b>	EC002714
<b>ETIM 7.0</b>	EC002714
<b>ETIM 8.0</b>	EC002714
<b>UNSPSC 16.0901</b>	39122230

Installation note



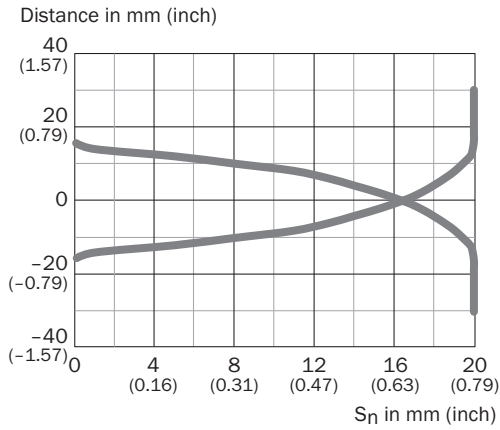
Connection diagram

Cd-009



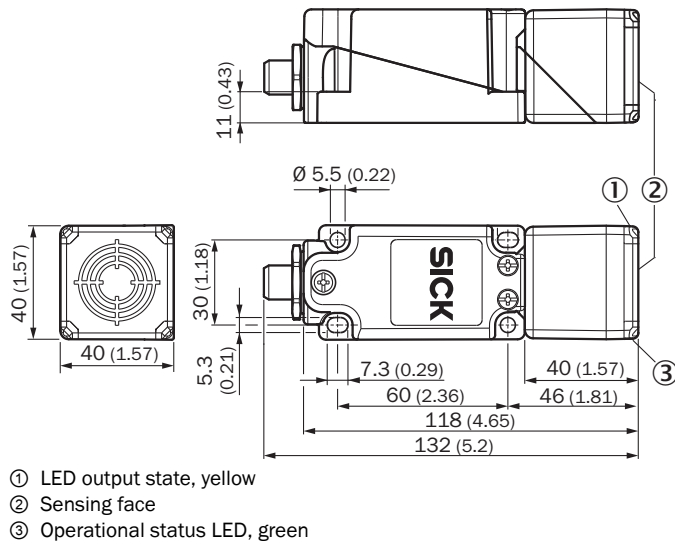
### Characteristic curve

IQ40-20Bxxxx




### Dimensional drawing (Dimensions in mm (inch))




IQG Standard, connector M12



### Recommended accessories

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

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235

	<b>Brief description</b>	<b>Type</b>	<b>Part no.</b>
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG2A14-050VB3XLEAX	2095897
	Head A: female connector, M12, 4-pin, straight Head B: - Cable: unshielded	DOS-1204-G	6007302
	Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	STE-1204-G	6009932

## 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)