



IQ40-20BNPKK0S

IQG

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
IQ40-20BNPKK0S	1071861

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



Detailed technical data

Features

Housing	Rectangular
Housing	Standard design
Dimensions (W x H x D)	40 mm x 40 mm x 118 mm
Sensing range S_n	20 mm
Safe sensing range S_a	16.2 mm
Installation type	Flush
Switching frequency	150 Hz
Connection type	Cable gland
Switching output	NPN
Output function	Complementary
Electrical wiring	DC 4-wire
Enclosure rating	IP67, IP68, IP69K
Special applications	Difficult application conditions

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	$\leq 10 V_{pp}^{1)}$
Voltage drop	$\leq 2 V$
Time delay before availability	$\leq 50 ms$
Hysteresis	3 % ... 15 % ²⁾
Reproducibility	$\leq 2 %$
Temperature drift (of S_r)	$\pm 10 %$
Continuous current I_a	$\leq 200 mA$

¹⁾ Of U_b .

²⁾ Of S_r .

³⁾ Reference voltage: 50 V DC.

No load current	12.5 mA
Cable gland clamping area	M20 1.5
Wire size	≤ 2.5 mm ²
Short-circuit protection	✓
Reverse polarity protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	-25 °C ... +85 °C
Ambient temperature, storage	-40 °C ... +85 °C
Housing material	Plastic, PA 66
Sensing face material	Plastic, PA 66
Tightening torque, max.	1.8 Nm
Protection class	II ³⁾
UL File No.	E348498

¹⁾ Of Ub.

²⁾ Of S_r.

³⁾ Reference voltage: 50 V DC.

Safety-related parameters

MTTF_D	1,125 years
DC_{avg}	0 %
T_M (mission time)	20 years

Reduction factors

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

Installation note

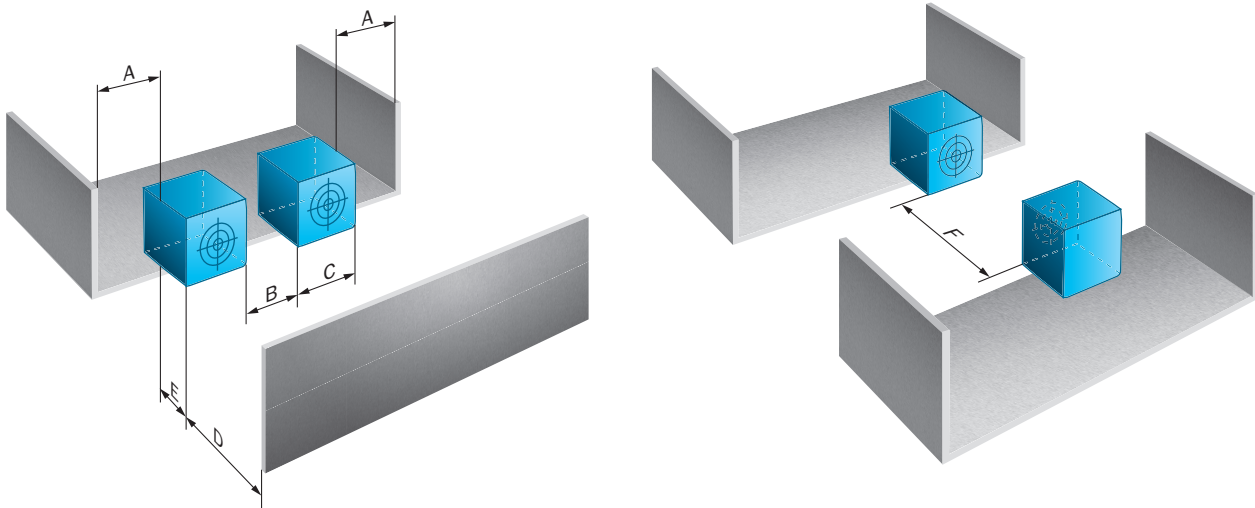
Remark	Associated graphic see "Installation"
A	0 mm
B	40 mm
C	40 mm
D	60 mm
E	0 mm
F	70 mm

Classifications

eCl@ss 5.0	27270101
eCl@ss 5.1.4	27270101
eCl@ss 6.0	27270101
eCl@ss 6.2	27270101

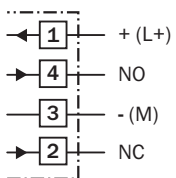
eCl@ss 7.0	27270101
eCl@ss 8.0	27270101
eCl@ss 8.1	27270101
eCl@ss 9.0	27270101
eCl@ss 10.0	27270101
eCl@ss 11.0	27270101
eCl@ss 12.0	27274001
ETIM 5.0	EC002714
ETIM 6.0	EC002714
ETIM 7.0	EC002714
ETIM 8.0	EC002714
UNSPSC 16.0901	39122230

Installation note



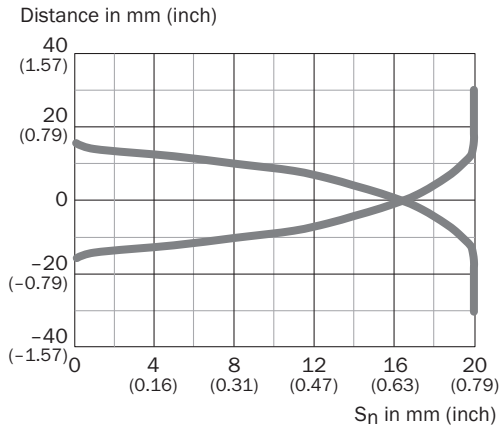
Connection diagram

Cd-030



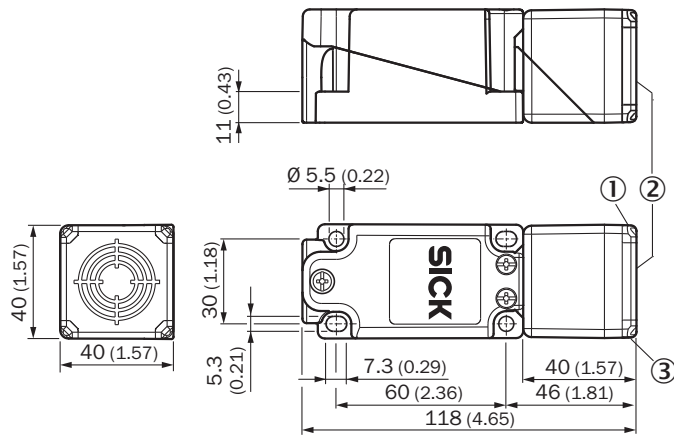
Characteristic curve

IQ40-20Bxxxx



Dimensional drawing (Dimensions in mm (inch))


IQG Standard, cable gland






- ① LED output state, yellow
- ② Sensing face
- ③ Operational status LED, green

Recommended accessories

Other models and accessories → 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

	Brief description	Type	Part no.
	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 Cable: unshielded	DOS-1204-G	6007302
	Head A: male connector, M12, 4-pin, straight 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