



IQB2S12-04B4DW2

IQB2S

NON-CONTACT SAFETY SWITCHES / INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
IQB2S12-04B4DW2	1091955

Other models and accessories → www.sick.com/IQB2S



Detailed technical data

Features

Sensor principle	Inductive
Number of safe outputs	2
Sensing range S_n	4 mm ¹⁾
Safe switch on distance S_{ao}	3.2 mm ¹⁾
Safe switch off distance S_{ar}	6 mm ¹⁾
Active sensor surfaces	1
Actuation frequency	≤ 100 Hz

¹⁾ Values apply for steel (FE360).

Safety-related parameters

Safety integrity level	SIL2 (IEC 61508), SILCL2 (EN 62061)
Category	Category 2 (ISO 13849-1)
Performance level	PL d (ISO 13849-1)
PFH_D (mean probability of a dangerous failure per hour)	6.0×10^{-8} (IEC 61508) ¹⁾
T_M (mission time)	20 years (ISO 13849-1)
Type	Type 3 (ISO 13849-1)
Actuator coding level	Uncoded (EN ISO 14119)
Safe state in the event of a fault	At least one safety-related semiconductor output (OSSD) is in the OFF state.

¹⁾ At 40 °C and 1000 m above sea level.

Functions

Safe series connection	No
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Interfaces

Connection type	Cable, 4-wire
Diagnostics indicator	✓
Status display	✓

Electrical data

Protection class	III (IEC 61140)
Rated insulation voltage U_i	28.8 V
Rated impulse withstand voltage U_{imp}	1,500 V
Supply voltage V_s	24 V DC (19.2 V DC ... 28.8 V DC)
Power consumption	≤ 20 mA
Type of output	Semiconductor (OSSD)
Response time	≤ 1 ms
Enable time	≤ 2 ms
Risk time	≤ 20 ms
Switch-on time	≤ 1 s

Mechanical data

Design	Rectangular
Dimensions	12 mm x 40 mm x 26 mm
Material	
	Housing VISTAL®
	Sensor surface VISTAL®
	Cable PVC
Installation type	Flush

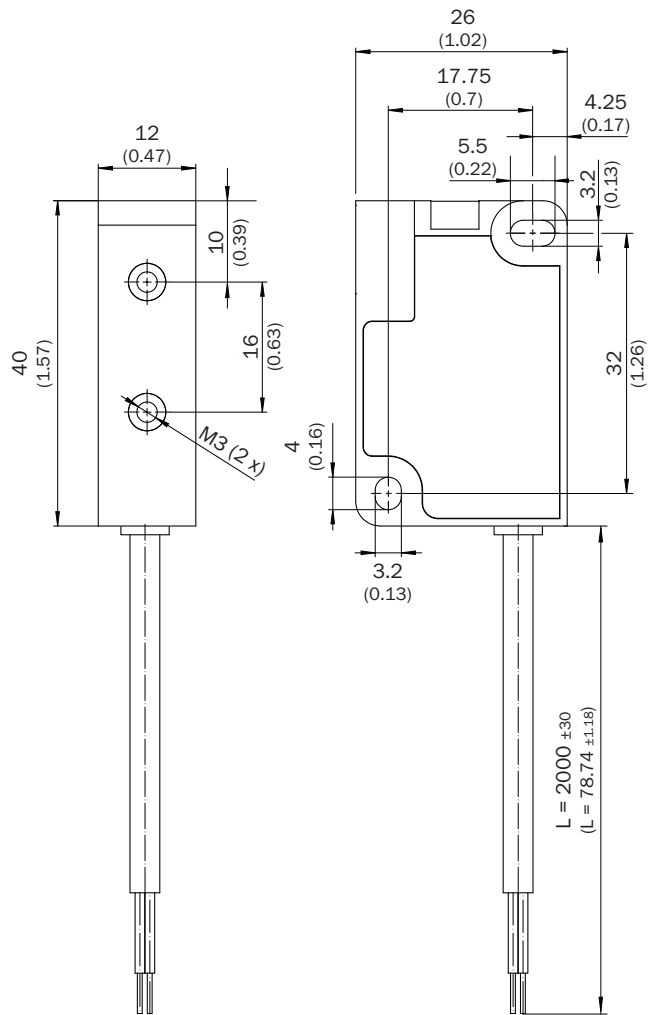
Ambient data

Enclosure rating	IP67 (IEC 60529)
Ambient operating temperature	-25 °C ... +70 °C
Storage temperature	-25 °C ... +70 °C
Relative humidity	50 %, at 70 °C (IEC 60947-5-2)
Vibration resistance	10 Hz ... 55 Hz, 1 mm (IEC 60947-5-2)
EMC	IEC 60947-5-2 IEC 61000-6-7 IEC 60947-5-3

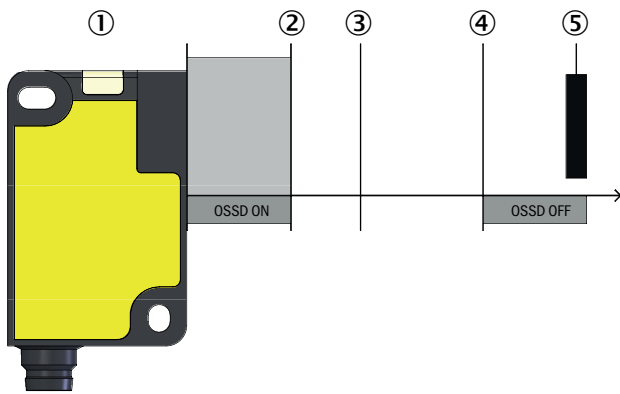
Classifications

ECl@ss 5.0	27272401
ECl@ss 5.1.4	27272401
ECl@ss 6.0	27272401
ECl@ss 6.2	27272401
ECl@ss 7.0	27272401
ECl@ss 8.0	27272401
ECl@ss 8.1	27272401
ECl@ss 9.0	27272401
ETIM 5.0	EC001818
ETIM 6.0	EC001818
UNSPSC 16.0901	39122205

Dimensional drawing (Dimensions in mm (inch))

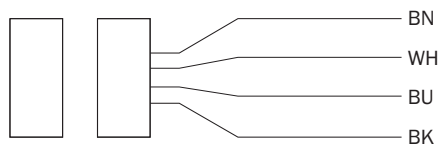


Response range



- ① Safety switch
- ② Safe switch on distance S_{ao}
- ③ Sensing range S_n
- ④ Safe switch off distance S_{ar}
- ⑤ Actuating element

Connection diagram



Wire color	Description	Description
Brown	+24 V DC	24 V DC voltage supply
White	OSSD 1	OSSD 1 output
Blue	0 V DC	0 V DC voltage supply
Black	OSSD 2	OSSD 2 output

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