



HTB18-B4B2BH

SureSense

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
HTB18-B4B2BH	1077093

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

Illustration may differ



Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	16.2 mm x 48.5 mm x 31.8 mm
Housing design (light emission)	Hybrid
Thread diameter (housing)	M18
Sensing range max.	5 mm ... 300 mm ¹⁾
Sensing range	5 mm ... 150 mm ²⁾
Type of light	Visible red light
Light source	PinPoint LED ³⁾
Light spot size (distance)	Ø 7 mm (300 mm)
Wave length	631 nm
Adjustment	Potentiometer (Sensing range) Potentiometer (light/dark switching)
Special features	Signal strength light bar

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033).

²⁾ Object with 6 % reflectance (referred to standard black, DIN 5033).

³⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ^{1) 2)}
Ripple	< 5 V _{pp} ³⁾
Power consumption	≤ 20 mA ⁴⁾
Switching output	PNP, NPN ⁵⁾
Switching mode	Light/dark switching ⁵⁾
Output current I_{max}	≤ 100 mA
Response time	≤ 0.5 ms ⁶⁾
Switching frequency	1,000 Hz ⁷⁾
Connection type	Cable with M12 male connector, 4-pin, 150 mm ⁸⁾
Circuit protection	A ⁹⁾ B ¹⁰⁾ D ¹¹⁾
Protection class	III ¹²⁾
Weight	18 g
Housing material	Plastic, VISTAL®
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP69K
Ambient operating temperature	-40 °C ... +65 °C
Ambient storage temperature	-40 °C ... +75 °C
UL File No.	E189383

¹⁾ Above T_a 55 °C, max. voltage = 24 V and max. current = 50 mA.

²⁾ Limit values when operated in short-circuit protected network: max. 8 A.

³⁾ May not exceed or fall below U_v tolerances.

⁴⁾ Without signal strength light bar and load.

⁵⁾ Q1 = PNP; Q2 = NPN.

⁶⁾ Signal transit time with resistive load.

⁷⁾ With light/dark ratio 1:1.

⁸⁾ Do not bend below 0 °C.

⁹⁾ A = V_S connections reverse-polarity protected.

¹⁰⁾ B = inputs and output reverse-polarity protected.

¹¹⁾ D = outputs overcurrent and short-circuit protected.

¹²⁾ Reference voltage: 50 V DC.

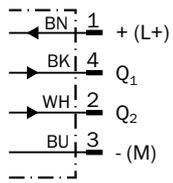
Classifications

ECl@ss 5.0	27270904
ECl@ss 5.1.4	27270904
ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ETIM 5.0	EC002719

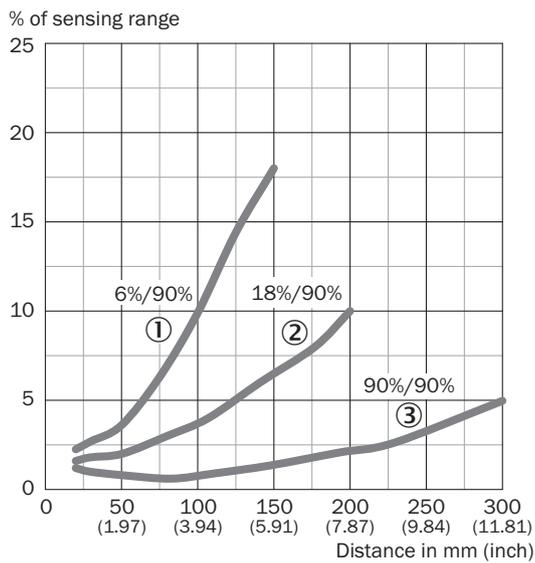
ETIM 6.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram

cd-243

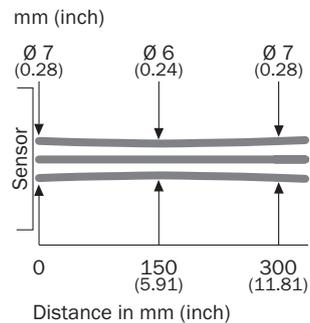


Characteristic curve

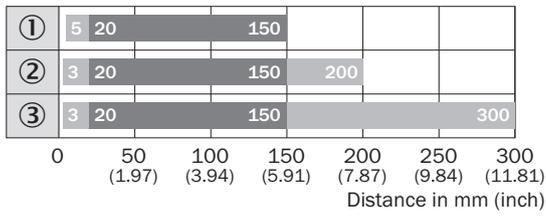


- ① Sensing range on black, 6% remission
- ② Sensing range on gray, 18% remission
- ③ Sensing range on white, 90% remission

Light spot size

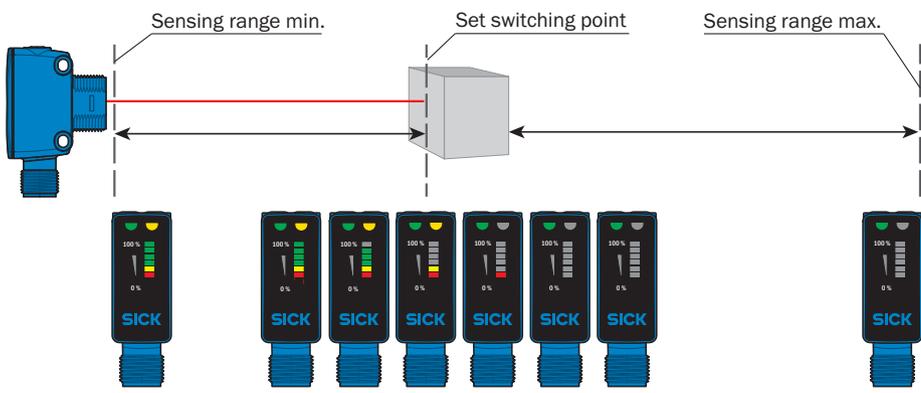


Sensing range diagram



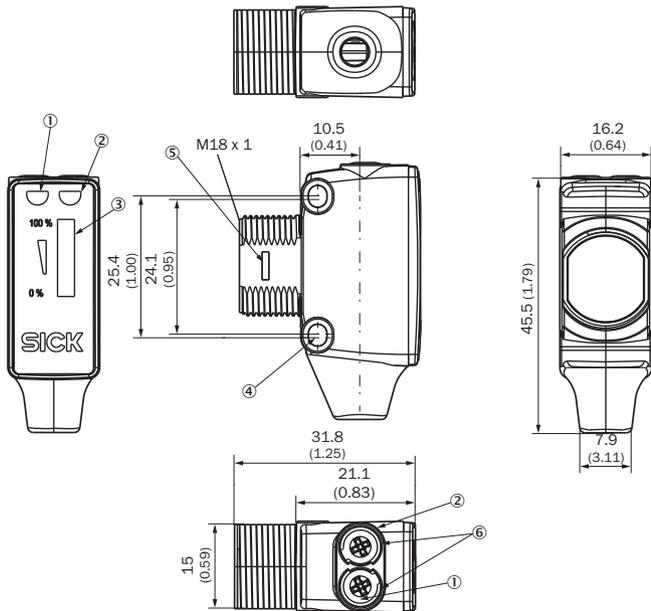
- Sensing range ■ Sensing range max.
- ① Sensing range on black, 6% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90% remission

Functions



Dimensional drawing (Dimensions in mm (inch))

H18, DC, cable



- ① LED indicator green: power on
- ② LED indicator yellow: Status of received light beam
- ③ Signal strength light bar
- ④ M3 mounting hole
- ⑤ Snap Connection for flush ring (sold separately)
- ⑥ Potentiometer (if selected) or LED Indicators

Recommended accessories

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

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting plate for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M18	5321870
	Mounting bracket for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M18	5308446
	Bottom M18 mounting bracket SureSense sensors	MB-M18-H18	2085820
Other mounting accessories			
	Spherical bearing M18	Ball holder	4057409
	Mounting bracket	MB-BS18MM-M4	2049694
Terminal and alignment brackets			
	Clamping block for round sensors M18, without fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KH-M18	2051481

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