HTB18-P1G2BB

SureSense

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	Part no.
HTB18-P1G2BB	1073432

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

Detailed technical data

Features

Sensor/detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	16.2 mm x 45.5 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)
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]
Output type	PNP [5]
Output function	Complementary
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, 4-wire, 2 m [8]
Cable material	PVC
Circuit protection	A [9] B [10] D [11]
Protection class	III [12]
Weight	18 g
Housing material	VISTAL®plastic
Optics material	Plastic, PMMA
Enclosure rating	IP 67 IP 69K
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 = light switching; Q2 = dark switching.

[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.
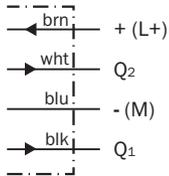
[12] Reference voltage: 50 V DC.

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-297

brn	+ (L+)
wht	Q₂
blu	- (M)
blk	Q₁

Characteristic curve
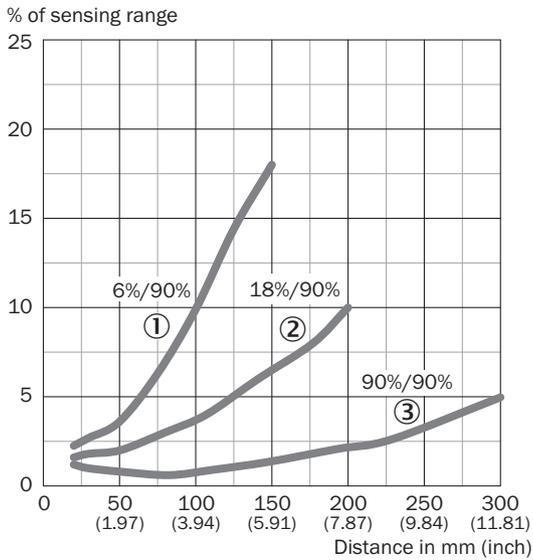
% of sensing range

① 6%/90%
② 18%/90%
③ 90%/90%

Distance in mm (inch)
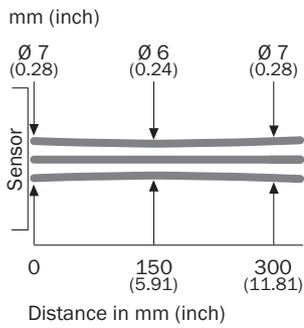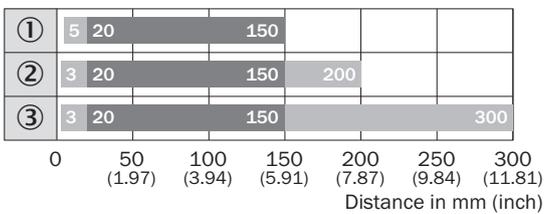
① Sensing range on black, 6% remission
② Sensing range on gray, 18 % remission
③ Sensing range on white, 90% remission

Light spot size

mm (inch)

Ø 7
(0.28)

Ø 6
(0.24)

Ø 7
(0.28)

Sensor

0

150
(5.91)

300
(11.81)

Distance in mm (inch)

Sensing range diagram

①	5	20	150				
②	3	20	150	200			
③	3	20	150				300

0   50 (1.97)   100 (3.94)   150 (5.91)   200 (7.87)   250 (9.84)   300 (11.81)
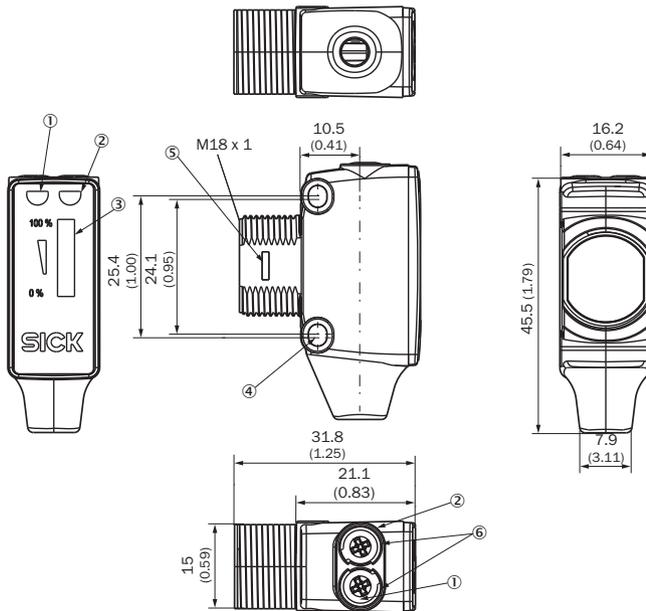
Distance in mm (inch)

▉ 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

Sensing range min.

Set switching point

Sensing range max.
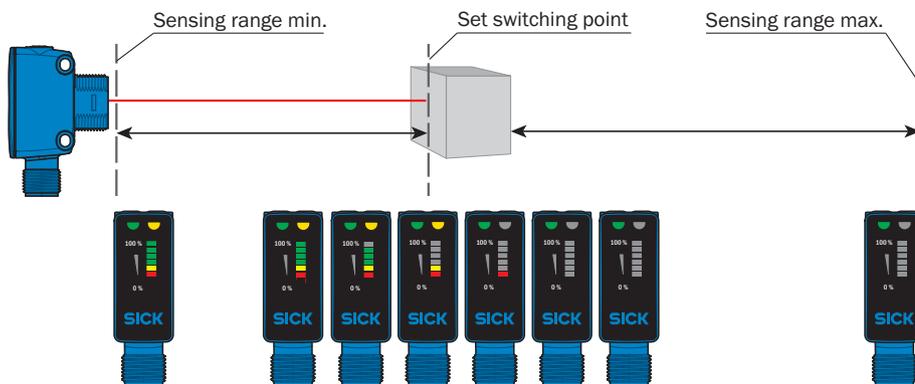
Dimensional drawing (Dimensions in mm (inch))

H18, DC, cable

① LED indicator green: power on
② LED indicator yellow: Status of received light beam
③ Signal strength light bar
④ Fixing hole
⑤ Snap Connection for flush ring (sold seperatly)
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 mounting plates			
	Mounting plate for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M18	5321870
	Mounting bracket, M18 thread, 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
	Fixation ring for SureSense sensors, plastic	Mounting ring, SureSense	4083611
Terminal and alignment brackets			

	Brief description	Type	Part no.
	Clamping block for round sensors M18, without fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KH-M18	2051481
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight Head B: - Cable: unshielded	DOS-1204-G	6007302
	Head A: female connector, M12, 4-pin, angled Head B: - Cable: unshielded	DOS-1204-W	6007303
	Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	STE-1204-G	6009932
	Head A: male connector, M12, 4-pin, angled Head B: - Cable: unshielded	STE-1204-W	6022084

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:

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