



# HTB18-P1G2BB

H18 Sure Sense

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
HTB18-P1G2BB	1073432

Other models and accessories → [www.sick.com/H18\\_Sure\\_Sense](http://www.sick.com/H18_Sure_Sense)

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor	
Functional principle detail	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	
Mounting system type	M18, head/side (24.1 ... 25.4 mm)	
Housing color	Blue	
Sensing range max.	5 mm ... 300 mm <sup>1)</sup>	
Sensing range	5 mm ... 150 mm <sup>2)</sup>	
Type of light	Visible red light	
Light source	PinPoint LED <sup>3)</sup>	
Light spot size (distance)	7 mm (300 mm)	
Wave length	631 nm	
Adjustment	Potentiometer, right	Sensing range
	Potentiometer, left	None
Special features	Signal strength light bar	

<sup>1)</sup> Object with 90% remission (based on standard white, DIN 5033).  
<sup>2)</sup> Object with 6 % reflectance (referred to standard black, DIN 5033).  
<sup>3)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

## Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Ripple</b>	< 5 V <sub>pp</sub> <sup>1)</sup>
<b>Current consumption</b>	≤ 20 mA <sup>2)</sup>
<b>Switching output</b>	PNP
<b>Output function</b>	Complementary
<b>Switching mode</b>	Light/dark switching
<b>Switching output detail</b>	
Switching output Q1	PNP, Light switching
Switching output Q2	PNP, Dark switching
<b>Output current I<sub>max</sub></b>	≤ 100 mA
<b>Response time</b>	≤ 0.5 ms <sup>3)</sup>
<b>Switching frequency</b>	1,000 Hz <sup>4)</sup>
<b>Connection type</b>	Cable open end, 2,000 mm
<b>Cable material</b>	Plastic, PVC
<b>Conductor cross section</b>	0.2 mm <sup>2</sup>
<b>Circuit protection</b>	A <sup>5)</sup> B <sup>6)</sup> D <sup>7)</sup>
<b>Protection class</b>	III
<b>Weight</b>	18 g
<b>Housing material</b>	Plastic, VISTAL®
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP67 IP69K
<b>Items supplied</b>	Fastening nut (1x), M18, plastic, black, flat
<b>Electromagnetic compatibility (EMC)</b>	EN 60947-5-2 (The sensor complies with the Radio Safety Requirements (EMC) for the industrial sector (Radio Safety Class A). It may cause radio interference if used in a residential area.)
<b>Ambient operating temperature</b>	-40 °C ... +65 °C
<b>Ambient temperature, storage</b>	-40 °C ... +75 °C
<b>UL File No.</b>	E189383

<sup>1)</sup> May not fall below or exceed U<sub>y</sub> tolerances.

<sup>2)</sup> Without signal strength light bar and load.

<sup>3)</sup> Signal transit time with resistive load.

<sup>4)</sup> With light/dark ratio 1:1.

<sup>5)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>6)</sup> B = inputs and output reverse-polarity protected.

<sup>7)</sup> D = outputs overcurrent and short-circuit protected.

## Safety-related parameters

<b>MTTF<sub>D</sub></b>	523.9 years
<b>DC<sub>avg</sub></b>	0 %

## Connection type/pinouts

<b>Connection type</b>	
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<b>Connection type Detail</b>		Cable open end, 2,000 mm
Cable material		Plastic
Conductor cross section		0.2 mm <sup>2</sup>
<b>Pinouts</b>		
	BN	+ (L+)
	WH	Q <sub>2</sub>
	BU	- (M)
	BK	Q <sub>1</sub>

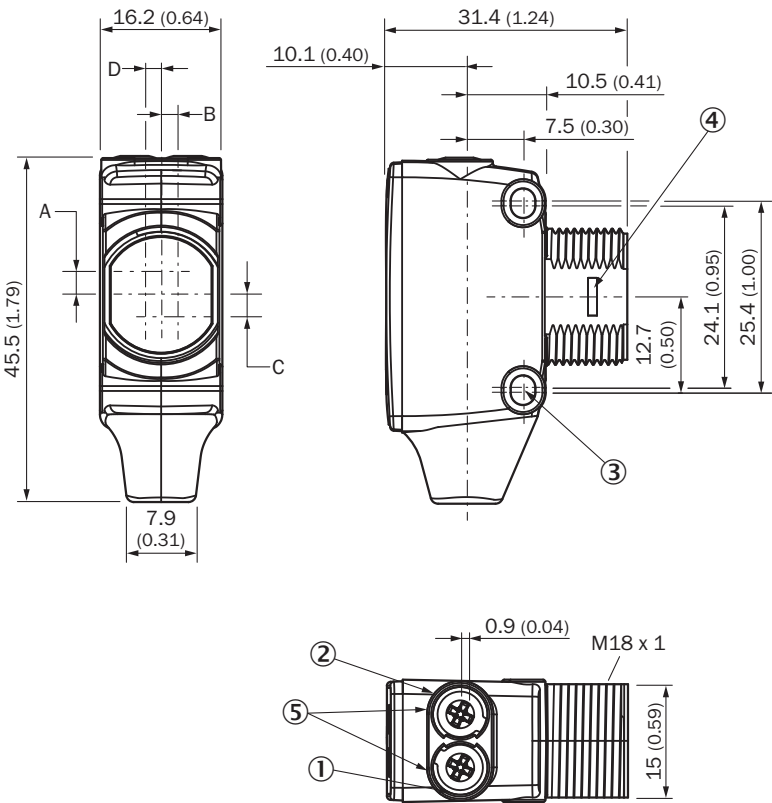
### Certificates

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>cULus certificate</b>	✓

### Classifications

<b>ECLASS 5.0</b>	27270904
<b>ECLASS 5.1.4</b>	27270904
<b>ECLASS 6.0</b>	27270904
<b>ECLASS 6.2</b>	27270904
<b>ECLASS 7.0</b>	27270904
<b>ECLASS 8.0</b>	27270904
<b>ECLASS 8.1</b>	27270904
<b>ECLASS 9.0</b>	27270904
<b>ECLASS 10.0</b>	27270904
<b>ECLASS 11.0</b>	27270904
<b>ECLASS 12.0</b>	27270904
<b>ETIM 5.0</b>	EC002719
<b>ETIM 6.0</b>	EC002719
<b>ETIM 7.0</b>	EC002719
<b>ETIM 8.0</b>	EC002719
<b>UNSPSC 16.0901</b>	39121528

Dimensional drawing



- Dimensions in mm (inch)
- ① LED indicator yellow: Status of received light beam
  - ② LED indicator green: power on
  - ③ M3 mounting hole
  - ④ Snap Connection for flush ring (sold seperatly)
  - ⑤ Potentiometer (if selected) or LED Indicators

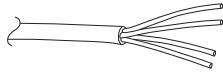
Dimensions in mm (inch)	Receiver		Sender	
	A	B	C	D
HTB18 / HTF18	- 1.1 (0.04)	1.1 (0.04)	4.7 (0.19)	0.6 (0.02)
HTE18 / HL18 / HSE18	2.5 (0.1)	0.0 (0.0)	4.0 (0.16)	0.0 (0.0)
HTB18L / HTF18L / HL18L / HSE18L	2.5 (0.1)	0.0 (0.0)	3.5 (0.14)	0.0 (0.0)

Adjustments



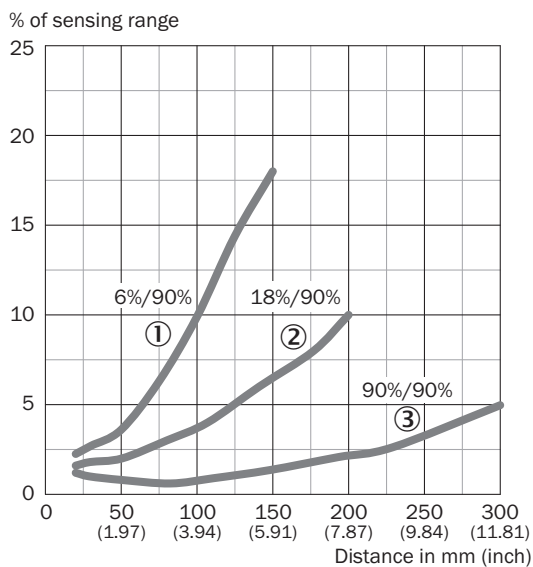
- ① LED indicator yellow: Status of received light beam
- ② LED indicator green: power on
- ③ Signal strength light bar

Pinouts, see table [Technical data: Connection type/pinouts](#)



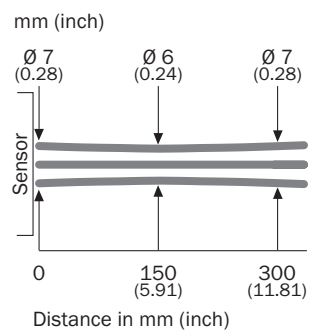
Cable with flying leads, 4-wire, AWG 26, 0.15 mm<sup>2</sup>

### Characteristic curve

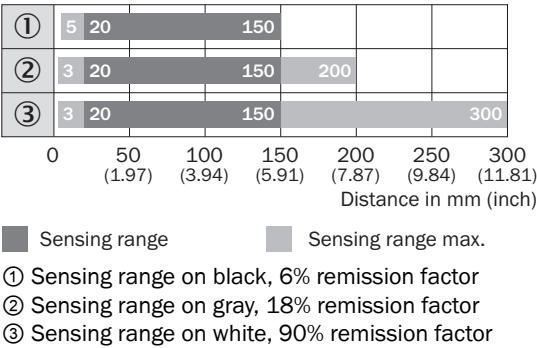


- ① Sensing range on black, 6% remission factor
- ② Sensing range on gray, 18% remission factor
- ③ Sensing range on white, 90% remission factor

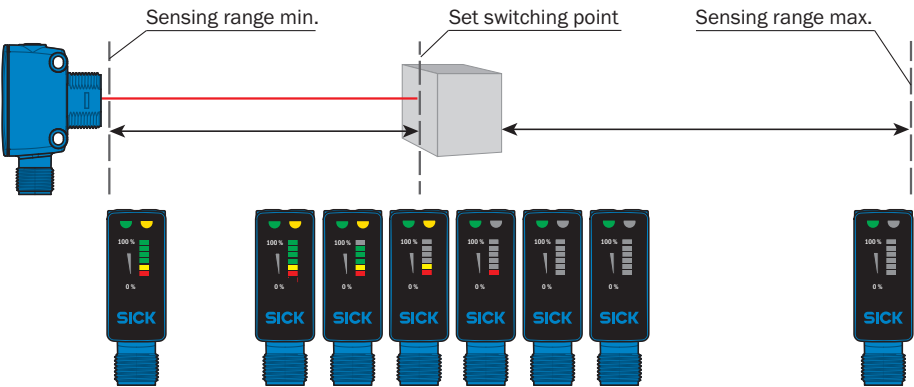
### Light spot size



Sensing range diagram




Functions



Recommended accessories

Other models and accessories → [www.sick.com/H18\\_Sure\\_Sense](http://www.sick.com/H18_Sure_Sense)

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"><li>• <b>Description:</b> Mounting bracket for M18 sensors</li><li>• <b>Material:</b> Steel</li><li>• <b>Details:</b> Steel, zinc coated</li><li>• <b>Items supplied:</b> Without mounting hardware</li><li>• <b>Suitable for:</b> GR18, V180-2, V18, W15, Z1, Z2</li></ul>	BEF-WN-M18	5308446

## 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)