HTE18-N1G1BB

H18 Sure Sense

HYBRID PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

HTE18-N1G1BB | H18 Sure Sense

HYBRID PHOTOELECTRIC SENSORS

Illustration may differ

Ordering information

Type	Part no.
HTE18-N1G1BB	1078523

Other models and accessories ➔ www.sick.com/H18_Sure_Sense

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Energetic
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 ... 1,000 mm [1]
Sensing range	10 mm ... 250 mm [2]
Type of light	Infrared light
Light source	LED [3]
Light spot size (distance)	110 mm (800 mm)
Wave length	850 nm
Adjustment	
Potentiometer, right	Sensitivity
Potentiometer, left	None
Special features	Signal strength light bar

[1] Object with 90% remission (based on 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
Ripple	< 5 V_{pp} [1]
Current consumption	≤ 20 mA [2]
Switching output	NPN
Output function	Complementary
Switching mode	Light/dark switching
Switching output detail	
Switching output Q1	NPN, Light switching
Switching output Q2	NPN, Dark switching
Output current I$_{max.}$	≤ 100 mA
Response time	≤ 0.5 ms [3]
Switching frequency	1,000 Hz [4]
Connection type	Cable open end, 2,000 mm
Cable material	Plastic, PVC
Conductor cross section	0.2 mm²
Circuit protection	A [5] B [6] D [7]
Protection class	III
Weight	18 g
Housing material	Plastic, VISTAL®
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP69K
Items supplied	Fastening nut (1x), M18, plastic, black, flat
Electromagnetic compatibility (EMC)	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.)
Ambient operating temperature	–40 °C … +70 °C
Ambient temperature, storage	–40 °C … +75 °C
UL File No.	E189383

[1] May not fall below or exceed U_V tolerances.

[2] Without signal strength light bar and load.

[3] Signal transit time with resistive load.

[4] With light/dark ratio 1:1.

[5] A = V_S connections reverse-polarity protected.

[6] B = inputs and output reverse-polarity protected.

[7] D = outputs overcurrent and short-circuit protected.

Safety-related parameters

MTTF$_D$	681.6 years
DC$_{avg}$	0 %

Connection type/pinouts

Connection type	Cable open end, 2,000 mm

Connection type Detail	
Conductor cross section	0.2 mm²
Cable material	Plastic
Pinouts	
BN	+ (L+)
WH	Q_2
BU	- (M)
BK	Q_1

Classifications

ECLASS 5.0	27270903
ECLASS 5.1.4	27270903
ECLASS 6.0	27270903
ECLASS 6.2	27270903
ECLASS 7.0	27270903
ECLASS 8.0	27270903
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270903
ECLASS 11.0	27270903
ECLASS 12.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	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

Connection type

Pinouts, see table Technical data: **Connection type/pinouts**
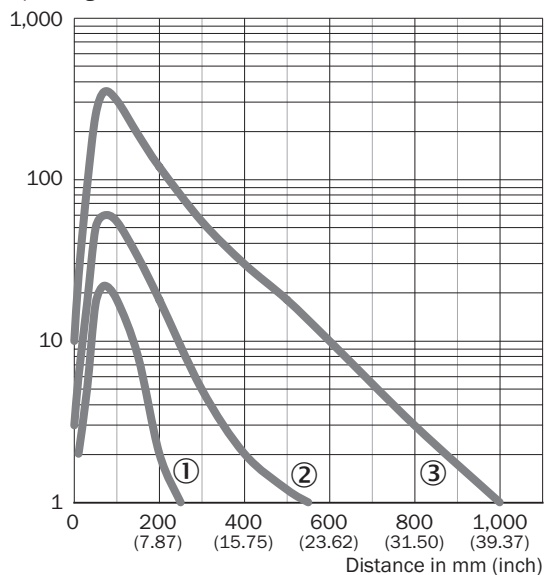
Cable with flying leads, 4-wire, AWG26 0.15 mm²
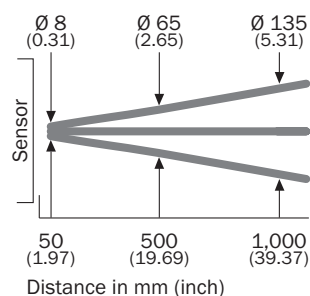
Characteristic curve

Infrared light

Operating reserve

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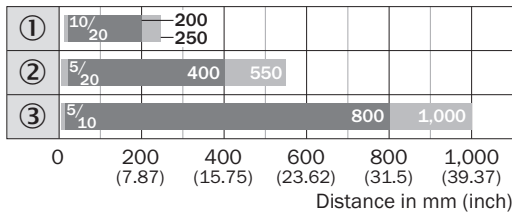③ Sensing range on white, 90% remission factor

Light spot size

Infrared light

Sensing range diagram

Infrared light

①	10/20	200 250					
②	5/20	400	550				
③	5/10		800		1,000		

0	200 (7.87)	400 (15.75)	600 (23.62)	800 (31.5)	1,000 (39.37)

Distance in mm (inch)

■ Sensing range   ■ Sensing range max.

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

Functions

Sensing range min.   Set switching point   Sensing range max.
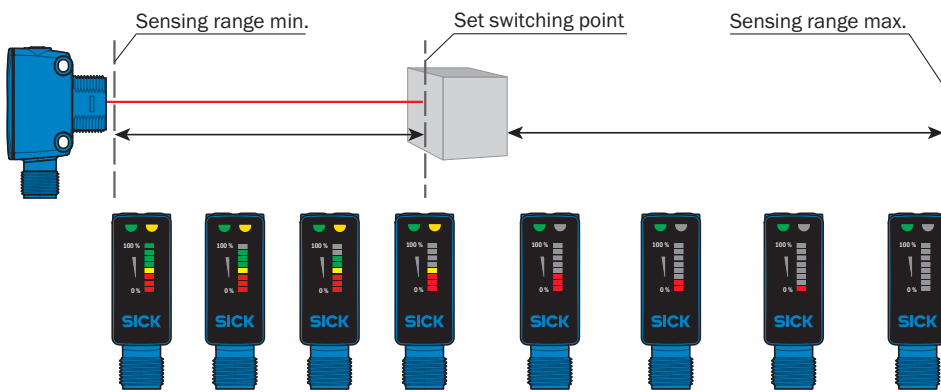
SICK AT A GLANCE

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**

SICK AG | Waldkirch | Germany | www.sick.com