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Product data sheet



HTB18-L1G2AB

H18 Sure Sense

HYBRID PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

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HTB18-L1G2AB | H18 Sure Sense

HYBRID PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
HTB18-L1G2AB	1078980

Other models and accessories → 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 34.4 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 [1]
Sensing range	5 mm ... 150 mm [2]
Type of light	Visible red light
Light source	PinPoint LED [3]
Light spot size (distance)	7 mm (300 mm)
Wave length	631 nm
Adjustment	
Potentiometer, right	Sensing range
Potentiometer, left	None
Special features	-

[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.

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Mechanics/electronics

Supply voltage	21.6 V DC ... 250 V DC, 96 V AC ... 250 V AC [1]
Current consumption	≤ 10 mA [2]
Switching output	MOSFET
Switching mode	Light switching
Switching output detail	
Switching output Q1	MOSFET, Light 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	PVC
Conductor cross section	0.2 mm²
Circuit protection	A [5] B [6] D [7]
Protection class	II [8]
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 ... +65 °C
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	E189383

[1] From T_u 60 °C, max. supply voltage = 120 V.
[2] Without load. The output load and sensor must use the same power source.
[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.
[8] Reference voltage: 250 V AC, overvoltage category 2.

Safety-related parameters

$MTTF_D$	393.8 years
DC_{avg}	0 %

Classifications

ECLASS 5.0	27270904
ECLASS 5.1.4	27270904
ECLASS 6.0	27270904

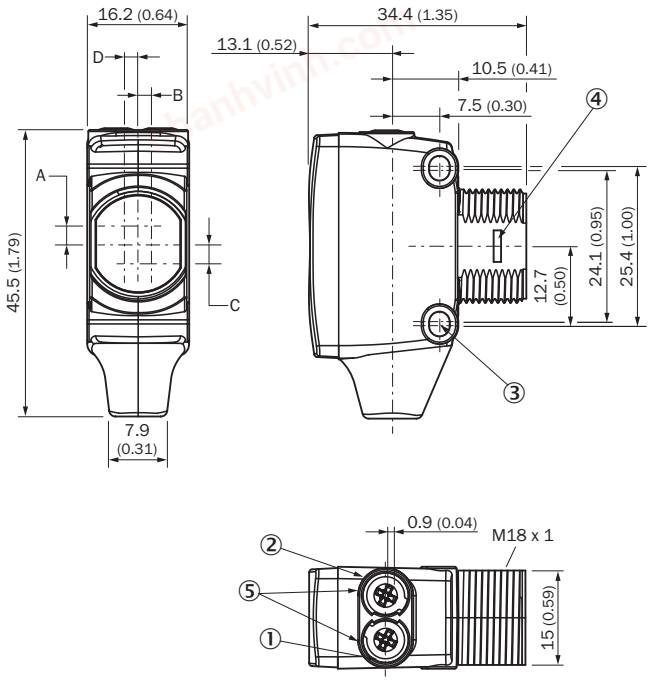
ECLASS 6.2	27270904
ECLASS 7.0	27270904
ECLASS 8.0	27270904
ECLASS 8.1	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection/Pin assignment

Connection type	Cable open end, 2,000 mm
Connection type Detail	
Conductor cross section	0.2 mm²
Cable material	PVC
Pin assignment	
BN	L1
BU	N
BK	Q

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Dimensional drawing (Dimensions in mm (inch))

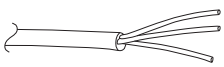


① LED indicator yellow: Status of received light beam
② LED indicator green: power on
③ M3 mounting hole
④ Snap Connection for flush ring (sold seperatly)
⑤ Potentiometer (if selected) or LED Indicators

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)

Connection type

See table: **Connection/pin assignment**



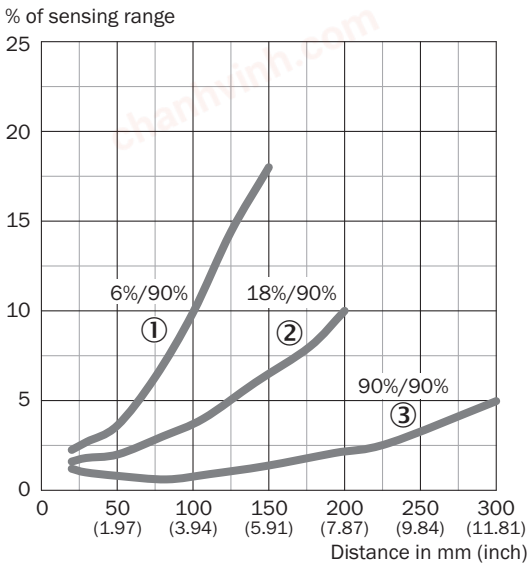
Cable, 3-wire

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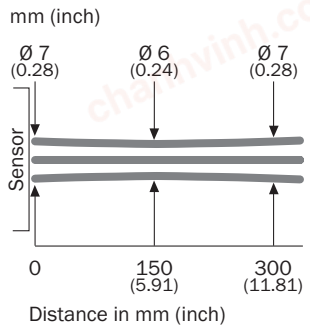
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Characteristic curve

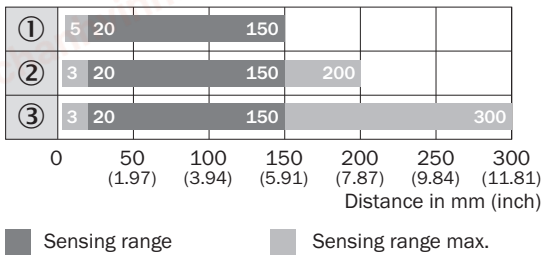


① Sensing range on black, 6% remission factor
② Sensing range on gray, 18% remission factor
③ Sensing range on white, 90% remission factor

Light spot size



Sensing range diagram

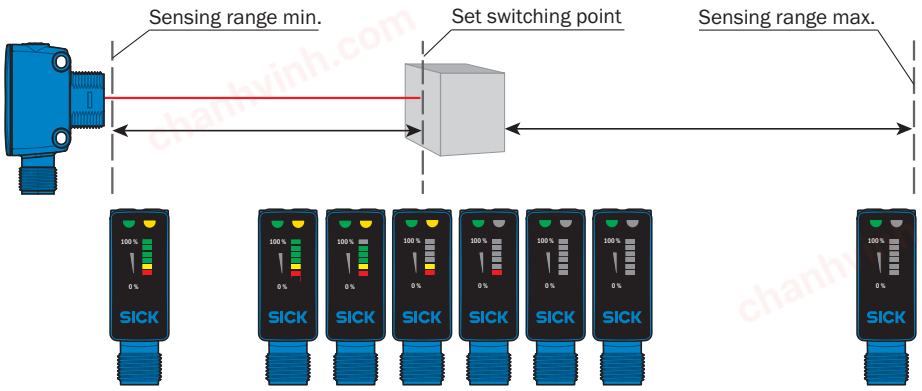


Sensing range
Sensing range max.

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

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Functions



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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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