HTB18-M1G2AAD02

H18 Sure Sense

HYBRID PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

HTB18-M1G2AAD02 | H18 Sure Sense

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Illustration may differ

Ordering information

Type	Part no.
HTB18-M1G2AAD02	1077796

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	None
Potentiometer, left	None
Special features	Sensing range pre-set: 50 mm

[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	21.6 V DC ... 250 V DC, 96 V AC ... 250 V AC [1]
Current consumption	≤ 10 mA [2]
Switching output	MOSFET
Switching mode	Dark switching
Switching output detail	
Switching output Q1	MOSFET, 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	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 %

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	L1
BU	N
BK	Q

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

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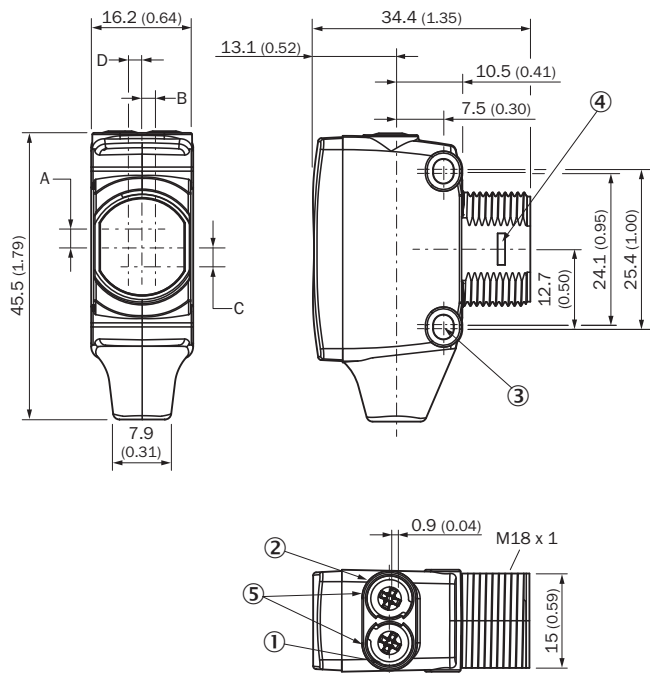
① LED indicator yellow: Status of received light beam
② LED indicator green: power on
③ M3 mounting hole
④ Snap Connection for flush ring (sold seperatly)
⑤ Potentiometer (if selected) or LED Indicators

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

Pinouts, see table Technical data: **Connection type/pinouts**
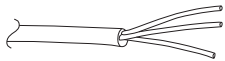
Cable, 3-wire

Characteristic curve

% of sensing range

6%/90% ①
18%/90% ②
90%/90% ③

Distance in mm (inch)

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

mm (inch)

Ø 7 (0.28)   Ø 6 (0.24)   Ø 7 (0.28)

Sensor

Distance in mm (inch)

Sensing range diagram

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

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.
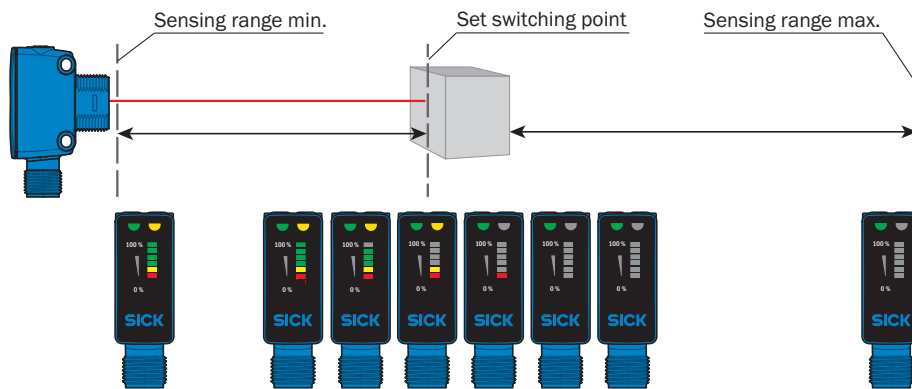
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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

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