



HTE18-K4A2AB

H18 Sure Sense

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
HTE18-K4A2AB	1145243

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 48.5 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 ... 600 mm ¹⁾
Sensing range		10 mm ... 200 mm ²⁾
Type of light		Visible red light
Light source		PinPoint LED ³⁾
Light spot size (distance)		10 mm x 18 mm (500 mm)
Wave length		631 nm
Adjustment		
	Potentiometer, right	Sensitivity
	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.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	< 5 V _{pp} ¹⁾
Current consumption	≤ 20 mA ²⁾
Switching output	NPN
Switching mode	Dark switching
Switching output detail	
Switching output Q1	NPN, Dark switching
Switching output Q2	NPN, Alarm output
Output current I_{max.}	≤ 100 mA
Response time	≤ 0.5 ms ³⁾
Switching frequency	1,000 Hz ⁴⁾
Connection type	Male connector M12, 4-pin
Cable material	Plastic, PVC
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_y 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.

Connection type/pinouts

Connection type	Male connector M12, 4-pin
Connection type Detail	
Cable material	Plastic
Pinouts	
BN 1	+ (L+)
WH 2	Q ₂

BU 3	- (M)
BK 4	Q ₁

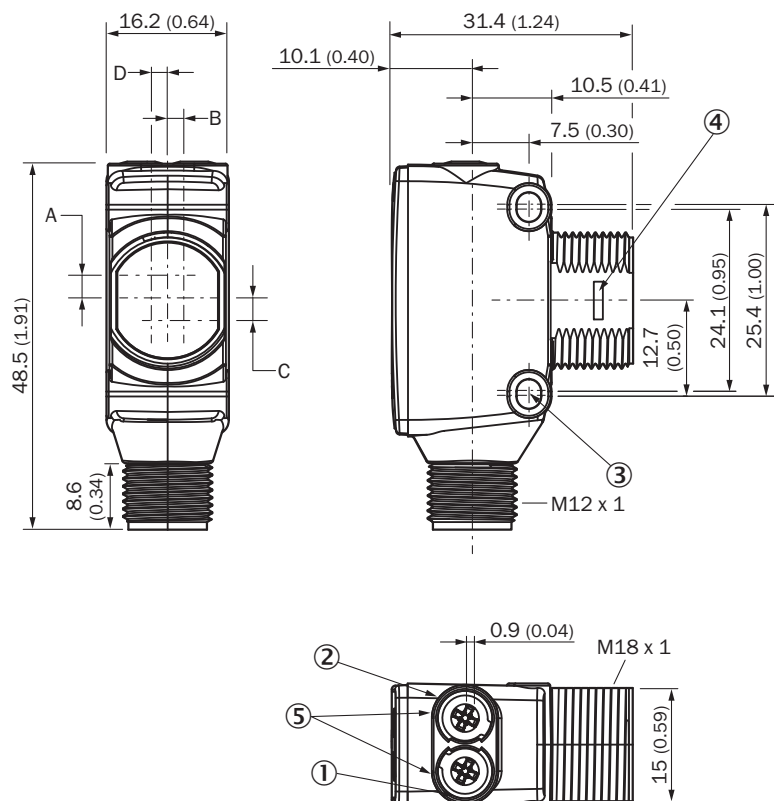
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓

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

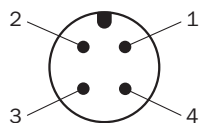


Dimensions in mm (inch)

- 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 separately)
- ⑤ Potentiometer (if selected) or LED Indicators

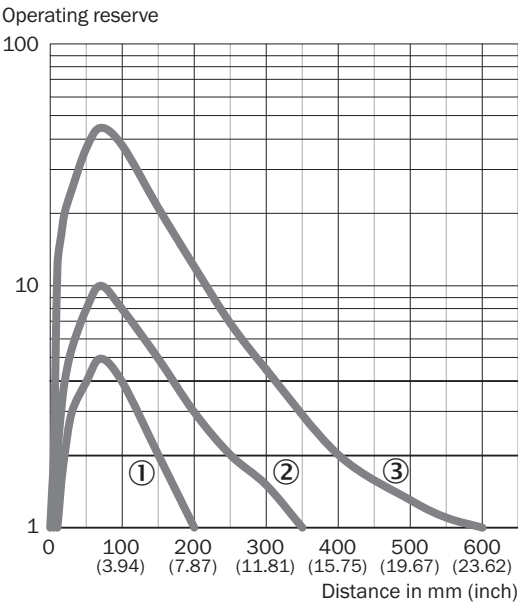
Dimensions in mm (inch)	Receiver		Sender	
	A	B	C	D
HTB18 / HTF18	- 1.1 (0.04)	1.1 (0.04)	4.7 (0.19)	0.6 (0.02)
HTE18 / HL18 / HSE18	2.5 (0.1)	0.0 (0.0)	4.0 (0.16)	0.0 (0.0)
HTB18L / HTF18L / HL18L / HSE18L	2.5 (0.1)	0.0 (0.0)	3.5 (0.14)	0.0 (0.0)

Pinouts, see table Technical data: **Connection type/pinouts**



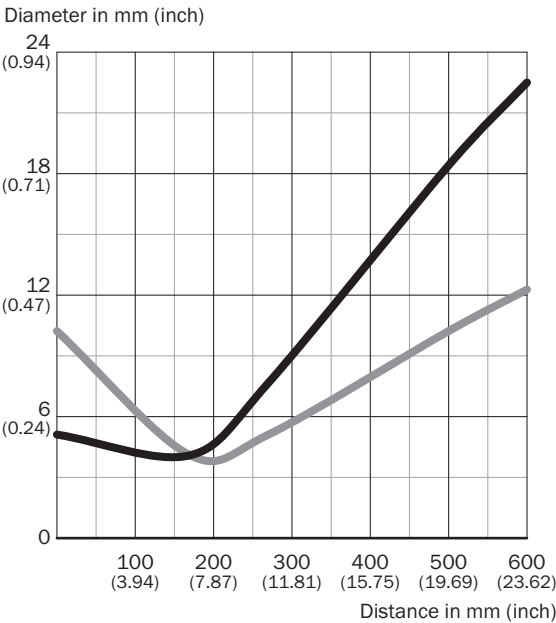
M12 male connector, 4-pin, A-coding

Characteristic curve Red light



- 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 Red light

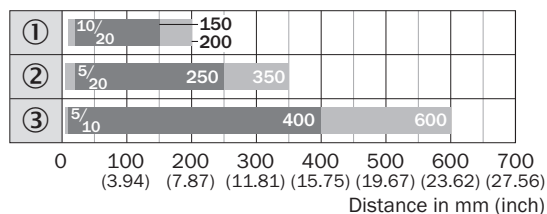


Dimensions in mm (inch)

Sensing range	Vertical	Horizontal
170 (6.69)	4 (0.16)	4 (0.16)
270 (10.63)	7.5 (0.30)	5 (0.20)
500 (19.69)	18 (0.71)	10 (0.39)
600 (23.62)	22 (0.87)	12 (0.47)

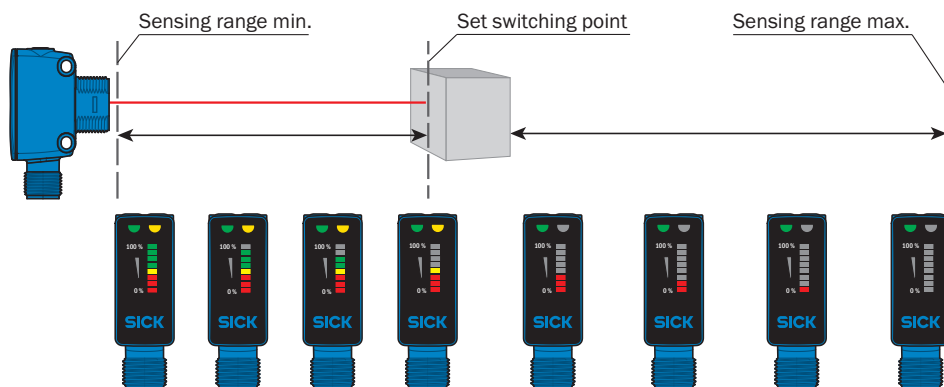
Vertical
Horizontal

Sensing range diagram Red light




- 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



Recommended accessories

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

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A14-050VB3XLEAX	2096235
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	STE-1204-G	6009932

SICK AT A GLANCE

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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.

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.”

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