



HTB18-P4A2BAD06

H18 Sure Sense

HYBRID PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-----------------|----------|
| HTB18-P4A2BAD06 | 1076841 |

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 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 ... 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 | Signal strength light bar Sensing range pre-set: 150 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 | 10 V DC ... 30 V DC |
| Ripple | $< 5 V_{pp}^{1)}$ |
| Current consumption | $\leq 20 \text{ mA}^{2)}$ |
| Switching output | PNP |
| Output function | Complementary |
| Switching mode | Light/dark switching |
| Switching output detail | |
| Switching output Q1 | PNP, Light switching |
| Switching output Q2 | PNP, Dark switching |
| Output current I_{max} | $\leq 100 \text{ mA}$ |
| Response time | $\leq 0.5 \text{ ms}^{3)}$ |
| Switching frequency | 1,000 Hz ⁴⁾ |
| Connection type | Male connector M12, 4-pin |
| 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 ... +65 °C |
| Ambient temperature, storage | -40 °C ... +75 °C |
| UL File No. | E189383 |

¹⁾ May not exceed or fall below 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 | 523.9 years |
| DC_{avg} | 0 % |

Classifications

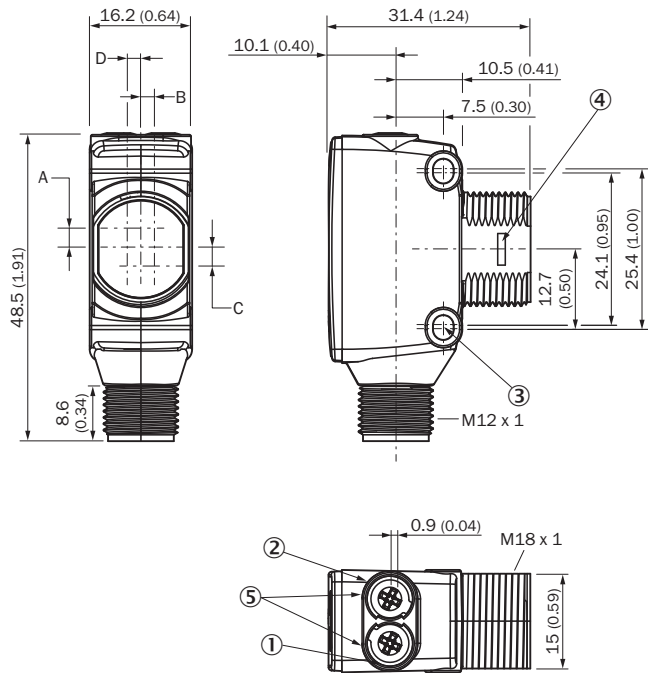
| | |
|---------------------|----------|
| ECLASS 5.0 | 27270904 |
| ECLASS 5.1.4 | 27270904 |
| ECLASS 6.0 | 27270904 |

| | |
|-----------------------|----------|
| 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 | Male connector M12, 4-pin |
| Pin assignment | |
| BN 1 | + (L+) |
| WH 2 | Q ₂ |
| BU 3 | - (M) |
| BK 4 | Q ₁ |

Dimensional drawing (Dimensions in mm (inch))

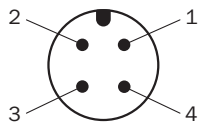


- ① LED indicator yellow: Status of received light beam
- ② LED indicator green: power on
- ③ M3 mounting hole
- ④ Snap Connection for flush ring (sold seperatly)
- ⑤ Potentiometer (if selected) or LED Indicators

| 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) |

Connection type

Connection type. see table: Connection/PIN assignment



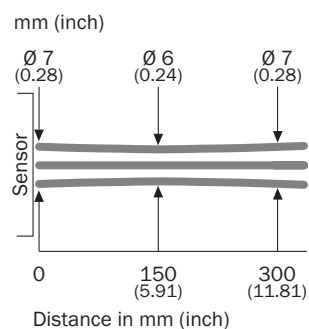
M12 male connector, 4-pin, A-coding

Adjustments possible

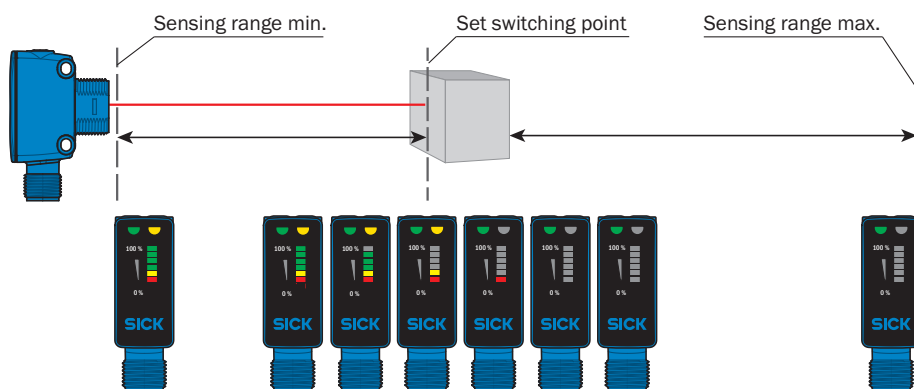


- ① LED indicator yellow: Status of received light beam
- ② LED indicator green: power on
- ③ Signal strength light bar

Light spot size





Functions



Recommended accessories

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

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
| Plug 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 | YF2A14-050VB3XLEAX | 2096235 |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, straight • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² | STE-1204-G | 6009932 |

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Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

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