



ZTB18-2AB4B1D04

Z18 Simple Sense

HYBRID PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-----------------|----------|
| ZTB18-2AB4B1D04 | 1095790 |

Included in delivery: BEF-MU-M18*1 (1)

Other models and accessories → www.sick.com/Z18_Simple_Sense

Detailed technical data

Features

| | |
|--|-----------------------------------|
| Functional principle | Photoelectric proximity sensor |
| Functional principle detail | Background suppression |
| Dimensions (W x H x D) | 13.6 mm x 34.8 mm x 21.9 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 ... 100 mm ¹⁾ |
| Sensing range | 5 mm ... 100 mm ¹⁾ |
| Type of light | Infrared light |
| Light source | PinPoint LED |
| Light spot size (distance) | Ø 8 mm (100 mm) |
| Wave length | 850 nm |

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

Mechanics/electronics

| | |
|-------------------------------------|-----------------------|
| Supply voltage U_B | 10 V DC ... 30 V DC |
| Ripple | < 10 % |
| Current consumption | ≤ 15 mA ¹⁾ |
| Switching output | Push-pull: PNP/NPN |
| Switching mode | Light switching |

¹⁾ Without load.

²⁾ Signal transit time with resistive load.

³⁾ With light/dark ratio 1:1.

⁴⁾ A = V_S connections reverse-polarity protected.

⁵⁾ B = inputs and output reverse-polarity protected.

⁶⁾ D = outputs overcurrent and short-circuit protected.

| | |
|---|---|
| | Dark switching |
| Switching output detail | |
| Switching output Q1 | Push-pull: PNP/NPN, Light switching |
| Switching output Q2 | Push-pull: PNP/NPN, Dark switching |
| Output current I_{\max} | 100 mA |
| Response time | $\leq 1 \text{ ms}^{2)}$ |
| Switching frequency | 500 kHz ³⁾ |
| Connection type | Cable with M12 male connector, 4-pin, 150 mm |
| Cable material | PVC |
| Conductor cross section | 0.13 mm ² |
| Circuit protection | A ⁴⁾ B ⁵⁾ D ⁶⁾ |
| Protection class | III |
| Weight | 4.54 g |
| Housing material | Plastic, ABS |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP67 |
| Ambient operating temperature | -40 °C ... +55 °C |
| Ambient temperature, storage | -40 °C ... +70 °C |
| UL File No. | E189383 |

¹⁾ Without load.

²⁾ Signal transit time with resistive load.

³⁾ With light/dark ratio 1:1.

⁴⁾ A = V_S connections reverse-polarity protected.

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Classifications

| | |
|---------------------|----------|
| eCl@ss 5.0 | 27270904 |
| eCl@ss 5.1.4 | 27270904 |
| eCl@ss 6.0 | 27270904 |
| eCl@ss 6.2 | 27270904 |
| eCl@ss 7.0 | 27270904 |
| eCl@ss 8.0 | 27270904 |
| eCl@ss 8.1 | 27270904 |
| eCl@ss 9.0 | 27270904 |
| eCl@ss 10.0 | 27270904 |
| eCl@ss 11.0 | 27270904 |
| eCl@ss 12.0 | 27270903 |
| ETIM 5.0 | EC002719 |
| ETIM 6.0 | EC002719 |
| ETIM 7.0 | EC002719 |
| ETIM 8.0 | EC002719 |

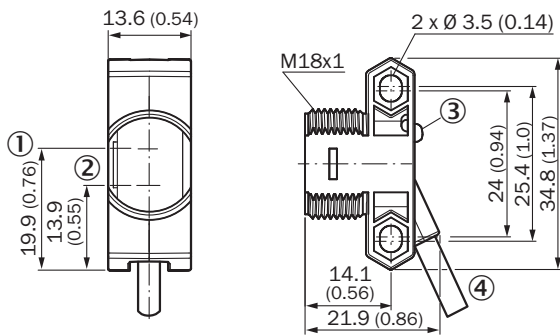
UNSPSC 16.0901

39121528

Connection/Pin assignment

| | |
|-------------------------------|--|
| Connection type | Cable with M12 male connector, 4-pin, 150 mm |
| Connection type Detail | |
| Conductor cross section | 0.13 mm ² |
| Cable material | PVC |
| Pin assignment | |
| BN 1 | + (L+) |
| WH 2 | Q ₂ |
| BU 3 | - (M) |
| BK 4 | Q ₁ |

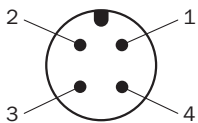
Dimensional drawing (Dimensions in mm (inch))



- ① Optical axis, sender
- ② Optical axis, receiver
- ③ LED status indicator
- ④ Connection

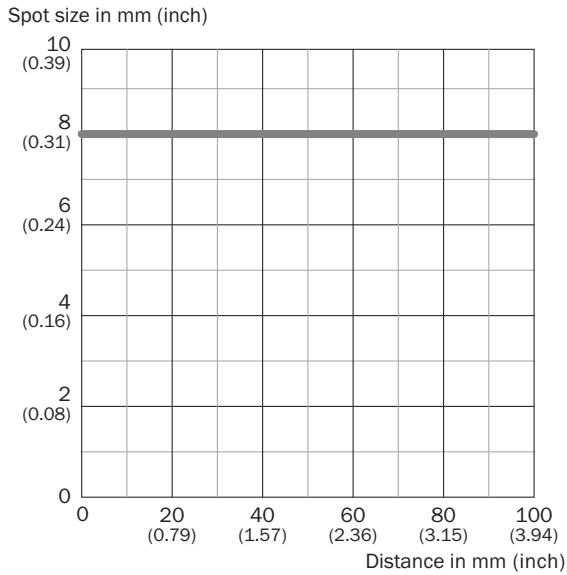
Connection type

Connection type. see table: Connection/PIN assignment



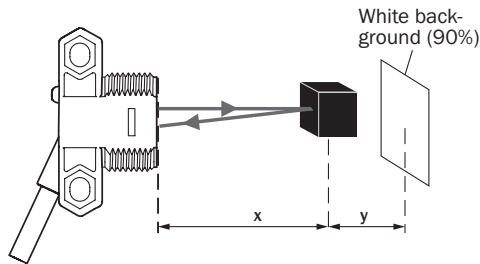
M12 male connector, 4-pin, A-coding

Light spot size



Functions

Sensing range on black, 6% remission factor





ZTB18-xxxxxD02: x = 47 mm / y = 4 mm

ZTB18-xxxxxD04: x = 93 mm / y = 8 mm

ZTB18-xxxxxD06: x = 139 mm / y = 12 mm

Recommended accessories

Other models and accessories → www.sick.com/Z18_Simple_Sense

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
| Plug connectors and cables | | | |
|  | Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YF2A14-050VB3XLEAX | 2096235 |
|  | Head A: male connector, M12, 4-pin, straight Cable: unshielded | STE-1204-G | 6009932 |

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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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