



VTE18-4P8240V

V18V

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|---------------|----------|
| VTE18-4P8240V | 6035491 |

Other models and accessories → www.sick.com/V18V

Illustration may differ



Detailed technical data

Features

| | |
|--|--|
| Sensor/ detection principle | Photoelectric proximity sensor, energetic |
| Housing design (light emission) | Cylindrical |
| Housing length | 83 mm |
| Thread diameter (housing) | M18 x 1 |
| Optical axis | Axial |
| Sensing range max. | 0 mm ... 900 mm ¹⁾ |
| Sensing range | 5 mm ... 800 mm |
| Type of light | Infrared light |
| Light source | LED ²⁾ |
| Light spot size (distance) | Ø 100 mm (800 mm) |
| Angle of dispersion | Approx. 4.5° |
| Wave length | 880 nm |
| Adjustment | Single teach-in button (Sensing range)Manual, via Touch-Teach-in |
| Special applications | Hygienic and washdown zones |

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033).

²⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

| | |
|--|---|
| Supply voltage | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | ≤ 10 % ²⁾ |
| Power consumption | ≤ 35 mA ³⁾ |
| Switching output | PNP |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via L/D control cable |
| Signal voltage PNP HIGH/LOW | Approx. VS – 2.0 V / 0 V |
| Output current I_{max.} | ≤ 100 mA |
| Response time | ≤ 1 ms ⁴⁾ |
| Switching frequency | 500 Hz ⁵⁾ |
| Connection type | Male connector M12, 4-pin ⁶⁾ |
| Circuit protection | A ⁷⁾ B ⁸⁾ C ⁹⁾ D ¹⁰⁾ |
| Protection class | III |
| Weight | 120 g |
| Housing material | Stainless steel, Stainless steel V4A (1.4404, 316L) |
| Optics material | Plastic, Plan, PPS (Grilamid) |
| Enclosure rating | IP67, IP68, IP69K ¹¹⁾ |
| Ambient operating temperature | –25 °C ... +80 °C ¹²⁾ |
| Ambient storage temperature | –40 °C ... +80 °C |
| UL File No. | FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493 |

¹⁾ Limit values.

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Without load, at VS 30 V DC.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ With gold plated contact pins, PPS with FDA certificate.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = interference suppression.

⁹⁾ D = outputs overcurrent and short-circuit protected.

¹⁰⁾ D = inputs and output reverse-polarity protected.

¹¹⁾ With correct mounted IP69K connector.

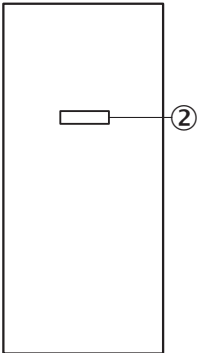
¹²⁾ +100 °C at max 15 minutes.

Classifications

| | |
|---------------------|----------|
| ECl@ss 5.0 | 27270903 |
| ECl@ss 5.1.4 | 27270903 |
| ECl@ss 6.0 | 27270903 |
| ECl@ss 6.2 | 27270903 |
| ECl@ss 7.0 | 27270903 |
| ECl@ss 8.0 | 27270903 |
| ECl@ss 8.1 | 27270903 |

| | |
|-----------------------|----------|
| ECl@ss 9.0 | 27270903 |
| ETIM 5.0 | EC001821 |
| ETIM 6.0 | EC001821 |
| UNSPSC 16.0901 | 39121528 |

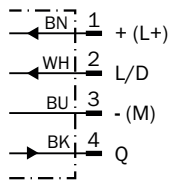
Adjustments possible



② Sensing range adjustment: Touch-Teach-In

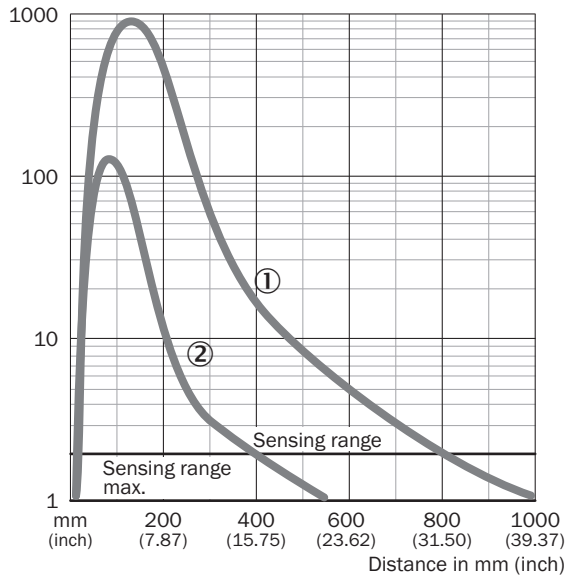
Connection diagram

cd-087



Characteristic curve

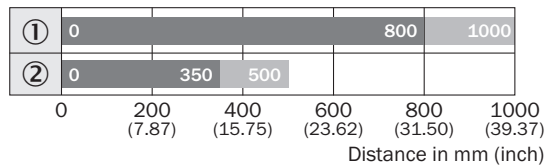
VTE18V, 900 mm



- ① Sensing range on white, 90% remission
- ② Sensing range on gray, 18 % remission

Sensing range diagram

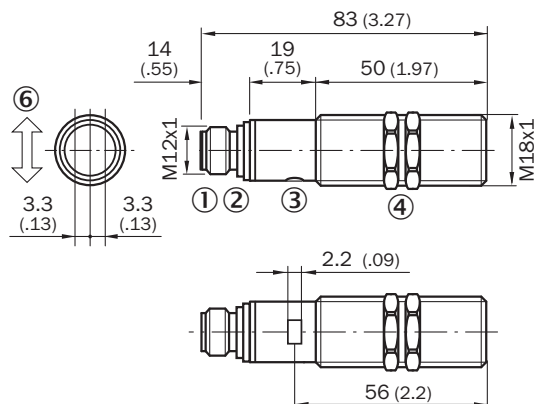
VTE18V, 900 mm



- Sensing range
- Sensing range max.
- ① Sensing range on white, 90% remission
- ② Sensing range on gray, 18 % remission

Dimensional drawing (Dimensions in mm (inch))







VTF18V, VTE18V



- ① M12 male device connector, 4-pin
- ② Sensing range adjustment: Touch-Teach-In
- ③ Status indicator LED, green: signaling Touch-Teach-in
- ④ Yellow LED indicator: lights continuously: Reception signal > reserve factor 2- blinks: Reception signal < reserve factor 2 but > switching threshold 1
- ⑤ Fastening nuts (2 x); width across 24, stainless steel

Recommended accessories

Other models and accessories → www.sick.com/V18V

| | Brief description | Type | Part no. |
|---|---|-----------------|----------|
| Universal bar clamp systems | | | |
|  | Plate N06N for universal clamp bracket, M18, Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp), Universal clamp (5322627), mounting hardware | BEF-KHS-N06N | 2051622 |
| Mounting brackets and plates | | | |
|  | Mounting plate for M18 sensors, stainless steel, without mounting hardware | BEF-WG-M18N | 5320948 |
|  | Mounting bracket for M18 sensors, stainless steel, without mounting hardware | BEF-WN-M18N | 5320947 |
| Terminal and alignment brackets | | | |
|  | Mounting bracket with ball-and-socket, Plastic, mounting hardware included | BEF-WN-M18-ST02 | 5312973 |
|  | Clamping block for round sensors M18, without fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included | BEF-KH-M18 | 2051481 |
| | Clamping block for round sensors M18, with fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included | BEF-KHF-M18 | 2051482 |
|  | Mounting ring, stainless steel, without mounting hardware | BEF-WN-MH15-2V | 4053358 |

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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.”

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