



VS/VE12-2N132

V12

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|---------------|----------|
| VS/VE12-2N132 | 6026221 |

Other models and accessories → www.sick.com/V12

Detailed technical data

Features

| | |
|----------------------------------------|-----------------------------------|
| Functional principle | Through-beam photoelectric sensor |
| Dimensions (W x H x D) | 12 mm x 12 mm x 55.3 mm |
| Housing design (light emission) | Cylindrical |
| Housing length | 55.3 mm |
| Thread diameter (housing) | Round connector M12 x 1 |
| Sensing range max. | 0 m ... 5 m |
| Sensing range | 0 m ... 4 m |
| Focus | Approx. 1.4° |
| Type of light | Infrared light |
| Light source | LED ¹⁾ |
| Light spot size (distance) | Ø 100 mm (4 m) |
| Angle of dispersion | Approx. 1.4° |
| Wave length | 880 nm |
| Adjustment | None |

¹⁾ Average service life: 100,000 h at T_J = +25 °C.

Mechanics/electronics

| | |
|----------------------------|-----------------------------------|
| Supply voltage | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | ± 10 % ²⁾ |
| Current consumption | 20 mA ³⁾ |

¹⁾ Limit values.

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ Do not bend below 0 °C.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = inputs and output reverse-polarity protected.

⁹⁾ C = interference suppression.

¹⁰⁾ D = outputs overcurrent and short-circuit protected.

| | |
|---------------------------------------------|---------------------------------------------------------------------------|
| Switching output | NPN |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via L/D control cable |
| Output current I_{\max} | $\leq 100 \text{ mA}$ ³⁾ |
| Response time | $\leq 2 \text{ ms}$ ⁴⁾ |
| Switching frequency | 250 Hz ⁵⁾ |
| Connection type | Cable, 4-wire, 2 m ⁶⁾ |
| Cable material | PVC |
| Conductor cross section | 0.14 mm ² |
| Cable diameter | Ø 3.75 mm |
| Circuit protection | A ⁷⁾ B ⁸⁾ C ⁹⁾ D ¹⁰⁾ |
| Protection class | III |
| Weight | 108 g |
| Housing material | Metal, Nickel-plated brass/PA |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP67 |
| Ambient operating temperature | -25 °C ... +70 °C |
| Ambient temperature, storage | -25 °C ... +70 °C |
| UL File No. | NMFT2.E175606 |

1) Limit values.

2) May not exceed or fall below U_v tolerances.

3) Without load.

4) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

6) Do not bend below 0 °C.

7) A = V_S connections reverse-polarity protected.

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

9) C = interference suppression.

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

Classifications

| | |
|---------------------|----------|
| eCl@ss 5.0 | 27270901 |
| eCl@ss 5.1.4 | 27270901 |
| eCl@ss 6.0 | 27270901 |
| eCl@ss 6.2 | 27270901 |
| eCl@ss 7.0 | 27270901 |
| eCl@ss 8.0 | 27270901 |
| eCl@ss 8.1 | 27270901 |
| eCl@ss 9.0 | 27270901 |
| eCl@ss 10.0 | 27270901 |
| eCl@ss 11.0 | 27270901 |

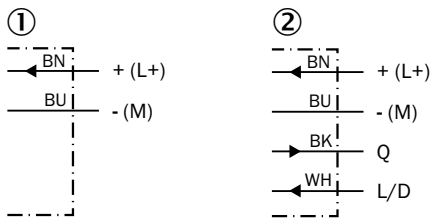
| | |
|-----------------------|----------|
| eCl@ss 12.0 | 27270901 |
| ETIM 5.0 | EC002716 |
| ETIM 6.0 | EC002716 |
| ETIM 7.0 | EC002716 |
| ETIM 8.0 | EC002716 |
| UNSPSC 16.0901 | 39121528 |

Connection type



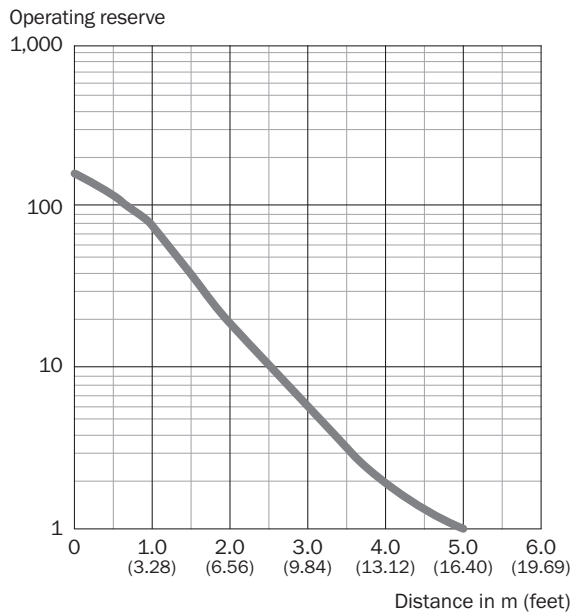
Connection diagram

Cd-058

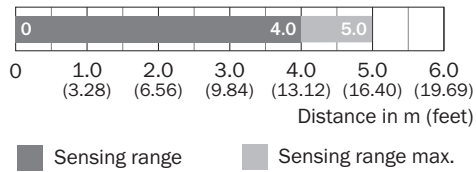


- ① Sender
- ② Receiver

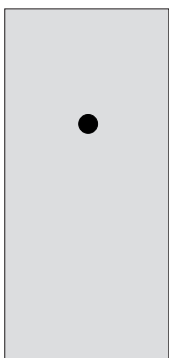
Characteristic curve



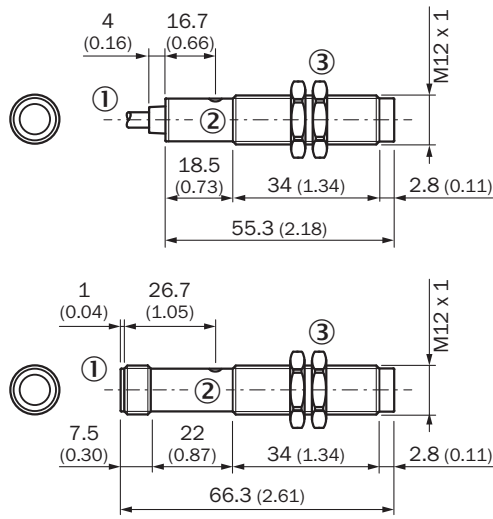
Sensing range diagram



Adjustments





Dimensional drawing (Dimensions in mm (inch))



- ① Cable or connector M12, 4-pin
- ② Yellow LED indicator (permanent) sender VS12-2 power on, sender active receiver VE 12-2 light reception>switching threshold 1
- ③ Fastening nuts (2x); width across 17, metal

Recommended accessories

Other models and accessories → www.sick.com/V12

| | Brief description | Type | Part no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------|----------|
| Mounting brackets and plates | | | |
|  | Mounting bracket for M12 sensors, steel, zinc coated, without mounting hardware | BEF-WN-M12 | 5308447 |
| Plug connectors and cables | | | |
|  | Head A: male connector, M12, 4-pin, straight Cable: unshielded | STE-1204-G | 6009932 |

SICK AT A GLANCE

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com