



VSE180-2P32432

V180-2

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
VSE180-2P32432	6044034

Other models and accessories → www.sick.com/V180-2

Detailed technical data

Features

Dimensions (W x H x D)	18 mm x 18 mm x 69.8 mm
Housing design (light emission)	Cylindrical
Housing length	69.8 mm
Thread diameter (housing)	M18 x 1
Sensing range max.	0 m ... 28 m
Sensing range	0 m ... 20 m
Type of light	Visible red light
Light source	LED ¹⁾
Light spot size (distance)	Ø 1,100 mm (20 m)
Angle of dispersion	Approx. 5°
Wave length	645 nm
Adjustment	Potentiometer, 270° (Sensitivity) ²⁾

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

²⁾ Receiver.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	± 10 % ²⁾
Switching output	PNP
Switching mode	Dark switching
Signal voltage PNP HIGH/LOW	Approx. V _S - 1.8 V / 0 V
Output current I_{max.}	≤ 100 mA

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not exceed or fall below U_V tolerances.

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.

Response time	≤ 0.5 ms ³⁾
Switching frequency	1,000 Hz ⁴⁾
Circuit protection	A ⁵⁾ B ⁶⁾ D ⁷⁾
Protection class	III
Weight	94 g
Housing material	Metal, Nickel-plated brass and PC
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	Fastening nuts (4 x)
Ambient operating temperature	-25 °C ... +55 °C
Ambient storage temperature	-40 °C ... +70 °C

1) Limit values when operated in short-circuit protected network: max. 8 A.

2) May not exceed or fall below U_V tolerances.

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

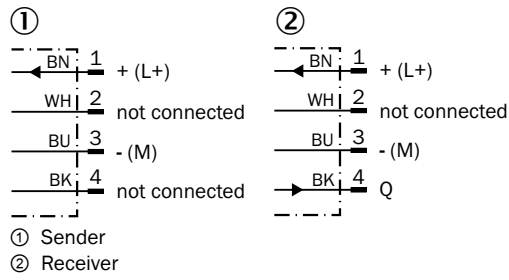
MTTF_D	1,296 years
DC_{avg}	0 %

Classifications

ECI@ss 5.0	27270901
ECI@ss 5.1.4	27270901
ECI@ss 6.0	27270901
ECI@ss 6.2	27270901
ECI@ss 7.0	27270901
ECI@ss 8.0	27270901
ECI@ss 8.1	27270901
ECI@ss 9.0	27270901
ECI@ss 10.0	27270901
ECI@ss 11.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
UNSPSC 16.0901	39121528

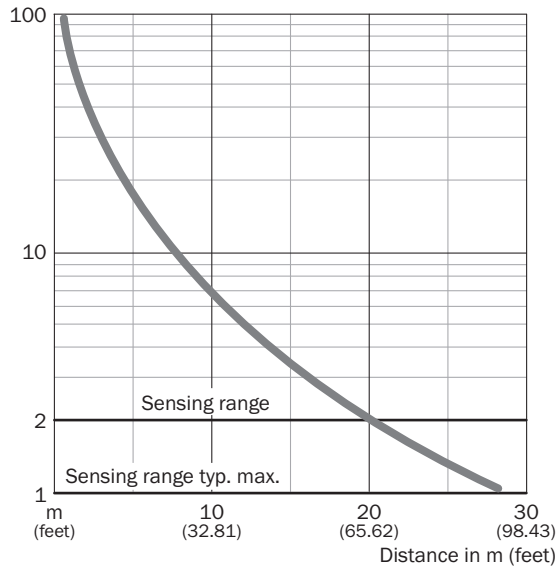
Connection diagram

Cd-057



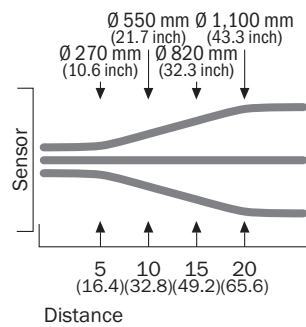
Characteristic curve

VSE180-2, 28 m, axial



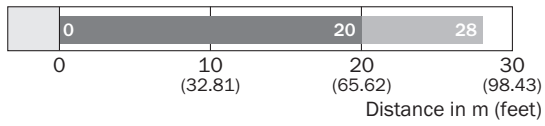
Light spot size

VSE180-2, 28 m, axial



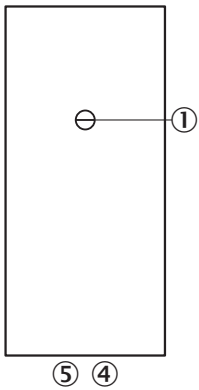
Sensing range diagram

VSE180-2, 28 m, axial



■ Sensing range ■ Sensing range typ. max.

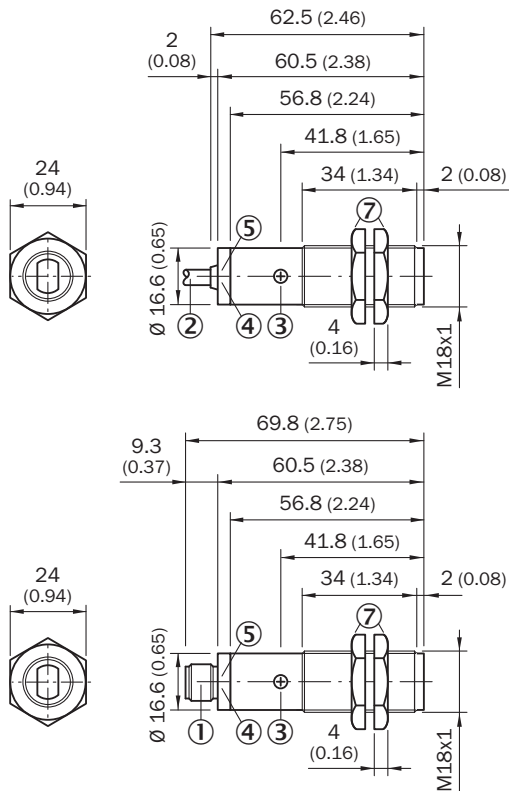
Adjustments



- ③ Sensitivity control 270°
- ④ LED indicator orange: switching output active
- ⑤ LED indicator green

Dimensional drawing (Dimensions in mm (inch))

VSE180-2, metal, axial



- ① M12 male device connector, 4-pin
- ② Connection cable 2 m
- ③ Sensitivity control 270°
- ④ LED indicator orange: switching output active
- ⑤ LED indicator green: strength indicator
- ⑦ Fastening nuts (2x); width across 24, metal

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