

VT180-N142

V180

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
VT180-N142	6008792

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



Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Energetic
Housing design (light emission)	Cylindrical
Housing length	63.3 mm
Thread diameter (housing)	M18 x 1
Optical axis	Axial
Sensing range max.	0 mm ... 450 mm ¹⁾
Sensing range	0 mm ... 400 mm ²⁾
Type of light	Infrared light
Light source	LED ³⁾
Light spot size (distance)	Ø 30 mm (400 mm)
Wave length	920 nm
Adjustment	Potentiometer, 270° (Sensing range)

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

²⁾ With right-angle adapter, the sensing range is reduced from 400 mm to 280 mm.

³⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	± 5 V _{pp} ²⁾
Power consumption	30 ³⁾
Switching output	NPN ⁴⁾
Switching mode	Light/dark switching ⁴⁾

¹⁾ Limit values.

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Without load.

⁴⁾ Control wire open: light switching L.ON.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

⁷⁾ Do not bend below 0 °C.

⁸⁾ A = V_S connections reverse-polarity protected.

⁹⁾ C = interference suppression.

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

Switching mode selector	Selectable via L/D control cable
Signal voltage NPN HIGH/LOW	Approx. V_S / < 1.0 V
Output current I_{max}	≤ 100 mA
Response time	≤ 1.5 ms ⁵⁾
Switching frequency	333 Hz ⁶⁾
Connection type	Cable, 4-wire, 2 m ⁷⁾
Cable material	PVC
Conductor cross-section	0.34 mm ²
Cable diameter	$\varnothing 5$ mm
Circuit protection	A ⁸⁾ C ⁹⁾ D ¹⁰⁾
Protection class	III
Weight	125 g
Housing material	Metal, Nickel-plated brass, PBT/PC
Optics material	Plastic, PMMA
Enclosure rating	IP66
Items supplied	Fastening nuts (2 x)
Ambient operating temperature	-25 °C ... +55 °C
Ambient storage temperature	-40 °C ... +70 °C
UL File No.	NRNT2.E128350 & NRNT8.E128350

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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
ETIM 5.0	EC002719

ETIM 6.0	EC002719
ETIM 7.0	EC002719
UNSPSC 16.0901	39121528

Recommended accessories

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

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: male connector, M12, 4-pin, straight Head B: - 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