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Product data sheet



VTB18-0P0240S01

V18

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

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VTB18-0P0240S01 | V18

CYLINDRICAL PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
VTB18-0P0240S01	6032862

Other models and accessories → www.sick.com/V18

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	18 mm x 18 mm x 79.4 mm
Housing design (light emission)	Cylindrical
Housing length	79.4 mm
Thread diameter (housing)	M18 x 1
Optical axis	Axial
Sensing range max.	30 mm ... 92 mm [1]
Sensing range	30 mm ... 90 mm [2]
Type of light	Visible red light
Light source	LED [3]
Light spot size (distance)	Ø 3 mm (90 mm)
Wave length	660 nm
Adjustment	Potentiometer, 270° (Sensing range) Potentiometer, 270°, red sealed to Datacode 1025
Special features	Potentiometer, 270°, red sealed to Datacode 1025

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

[2] Background suppression starting at 92 mm.

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

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Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	± 10 % [2]
Current consumption	30 mA [3]
Switching output	PNP [4]
Switching mode	Light/dark switching [4]
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 1.25 ms [5]
Switching frequency	400 Hz [6]
Connection type	Male connector M12, 4-pin
Circuit protection	A [7] B [8] C [9] D [10]
Protection class	III
Weight	120 g
Special device	✓
Housing material	Metal, Nickel-plated brass
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	–25 °C ... +70 °C
Ambient temperature, storage	–55 °C ... +80 °C
UL File No.	NMFT2.E175606

[1] Limit values.
[2] May not exceed or fall below U_V tolerances.
[3] Without load.
[4] PIN 4 light switching, PIN 2 dark switching.
[5] Signal transit time with resistive load.
[6] With light/dark ratio 1:1.
[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.

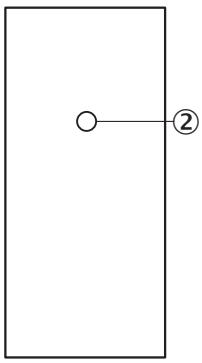
Classifications

eCl@ss 5.0	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

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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

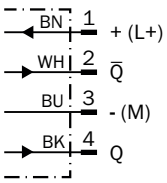
Adjustments



② Sensing range adjustment: potentiometer, 270°

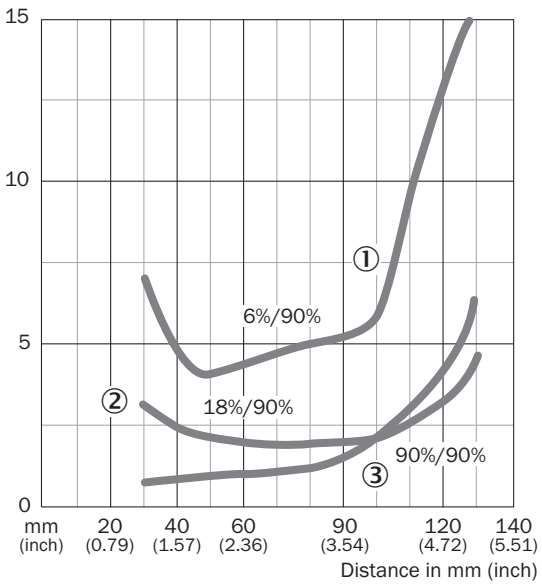
Connection diagram

Cd-083

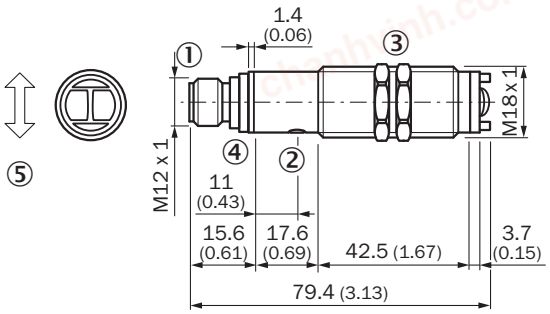


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Characteristic curve



Dimensional drawing (Dimensions in mm (inch))



① Connection
② Sensing range adjustment: potentiometer, 270°
③ Mounting nuts SW, 24
④ LED indicator yellow;Lights continuously: output aktivNo light: output inactiveBlinks slowly: shot circuit detected
⑤ Standard direction of the material being detected

Recommended accessories

Other models and accessories ➜ www.sick.com/V18

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M18	5308446

	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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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