



DATA SHEET

VTB18-0P0240S01

V18
Photoelectric sensors

SICK Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

VTB18-OP0240S01

ORDERING INFORMATION

Type	part no.
VTB18-OP0240S01	6032862

Further device versions and accessories at 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.

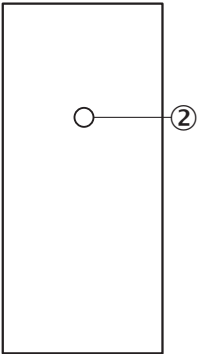
MECHANICS/ELECTRONICS

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	$\pm 10\%$ 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 fall below or exceed 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_{SS} connections reverse-polarity protected.⁸⁾ B = inputs and output reverse-polarity protected.⁹⁾ C = interference suppression.¹⁰⁾ D = outputs overcurrent and short-circuit protected.**CERTIFICATES**

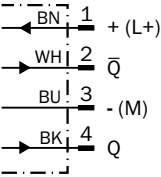
EU declaration of conformity	✓
UK declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cRUus certificate	✓

ADJUSTMENTS

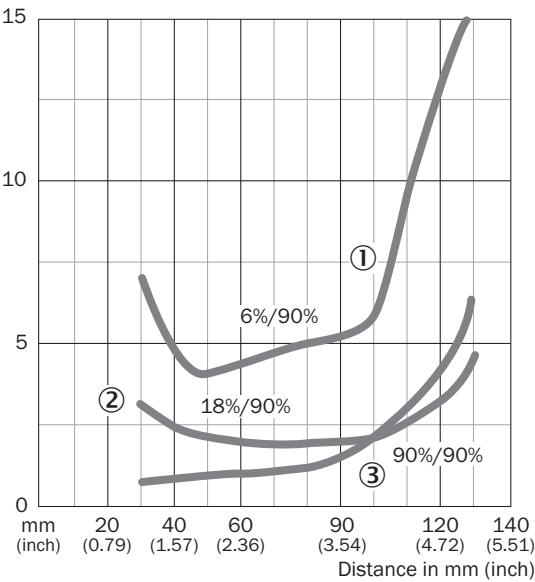


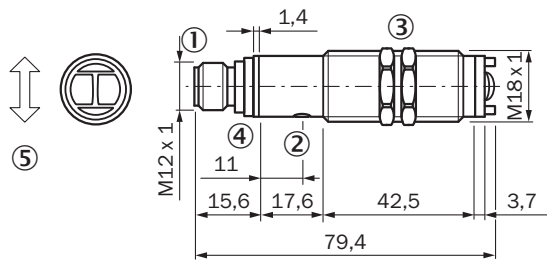
② Sensing range adjustment: potentiometer, 270°

CONNECTION DIAGRAM CD-083



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;
- ④ lights continuously: output aktiv
- ④ no light: output inactive
- ④ blinks slowly: shot circuit detected
- ⑤ Standard direction of the material being detected

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6032862



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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