



Photoelectric sensors  
V18, Photoelectric proximity sensor, Background  
suppression

VTB18-4N1240S01



**Model Name** > [VTB18-4N1240S01](#)  
**Part No.** > [6037543](#)



*Illustration may differ*

**At a glance**

- Cylindrical M18 housing
- Background suppression
- Sensing distance up to 140 mm
- 3- or 4-wire
- Metal or plastic housing

**Your benefits**

- Simple, standardized design ensures easy mounting, alignment and replacement
- Precise background suppression ensures reliable detection and increases throughput
- Compact, space-saving design easily fits in tight application spaces



**Features**

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Housing design (light emission):	Cylindrical, straight, straight
Housing length:	79.4 mm
Thread diameter (housing):	M18 x 1
Optical axis:	axial
Sensing range max.:	25 mm ... 140 mm <sup>1)</sup>
Sensing range:	30 mm ... 130 mm
Type of light:	Visible red light
Light source:	LED <sup>2)</sup>
Light spot (distance):	12 mm (130 mm)
Wave length:	660 nm
Adjustment of operating distance:	Potentiometer, 270°
Angle of dispersion:	5 °

<sup>1)</sup> Object with 90 % reflectance (referred to standard white DIN 5033) <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

**Mechanics/electronics**

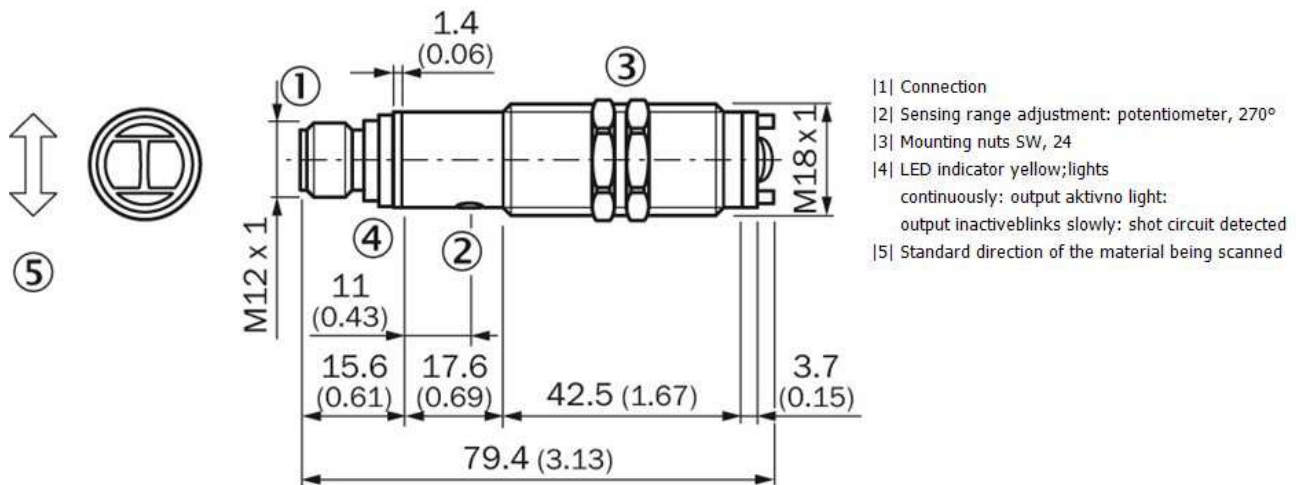
Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Residual ripple:	≤ 10 % <sup>2)</sup>
Power consumption:	≤ 30 mA <sup>3)</sup>
Output type:	NPN, Light/dark-switching, open collector <sup>4)</sup>
Output current I <sub>max.</sub> :	100 mA
Response time:	≤ 0.5 ms <sup>5)</sup>

Switching frequency:	1,000 Hz <sup>6)</sup>
Electrical connection:	Connector M12, 4-pin
Circuit protection:::::	A, B, C, D <sup>7) 8) 9) 10)</sup>
Protection class:	III
Weight:	200 g
Special device:	✓
Housing material:	Nickel-plated brass
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient temperature operation:	-25 °C ... 70 °C
Ambient storage temperature:	-55 °C ... 80 °C

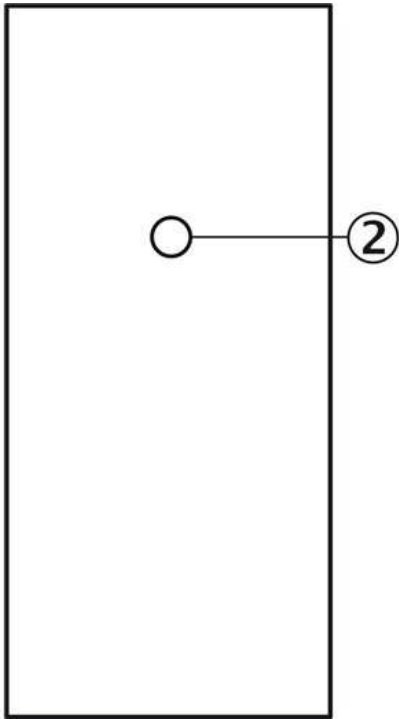
PIN 4 light-switching, PIN 2 dark-switching;

1) Limit values 2) May not exceed or fall short of  $V_S$  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

### Dimensional drawing

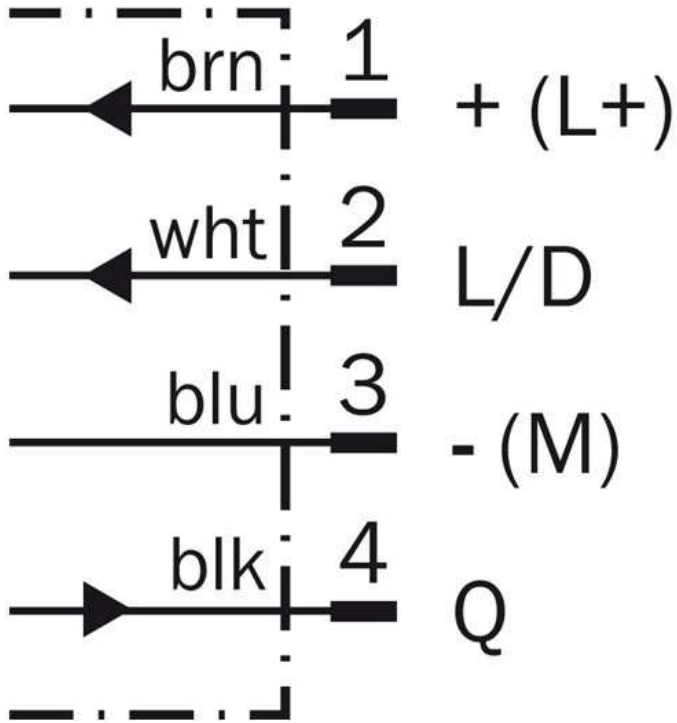


Adjustments possible

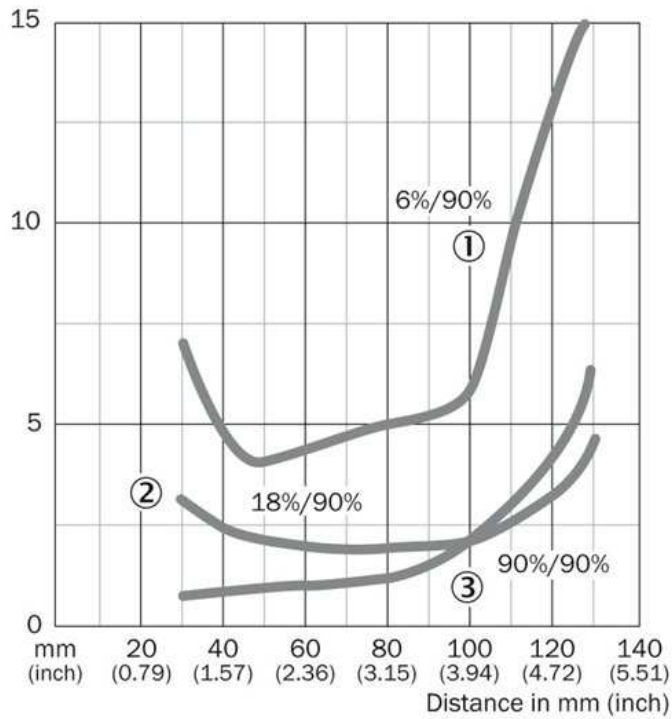


[2] Sensing range adjustment: potentiometer, 270°

Connection diagram



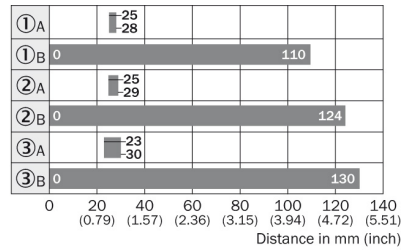
## Characteristic curve



## Connection type



## Sensing range diagram



■ Sensing range

- ① Sensing range on black, 6 % remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90 % remission
- A Sensing range adjuster on MIN
- B Sensing range adjuster on MAX

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