



Photoelectric sensors V18, Photoelectric proximity sensor, Background suppression

VTF18-OP0040S01



Model Name > [VTF18-0P0040S01](#)
Part No. > [6022494](#)



Illustration may differ

At a glance

- Cylindrical M18 housing
- Sensing distance up to 50 mm or 100 mm
- Precise background blanking
- 3- or 4-wire
- Straight or right-angle housing
- Metal or plastic housing

Your benefits

- Simple, standardized design ensures easy mounting, alignment and replacement
- 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.:	30 mm ... 90 mm ¹⁾
Sensing range:	30 mm ... 90 mm
Type of light:	Visible red light
Light source:	LED ²⁾
Light spot (distance):	12 mm (130 mm)
Wave length:	660 nm
Adjustment of operating distance:	Potentiometer, 270°, red sealed
Angle of dispersion:	5 °

¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life of 100,000 h at $T_A = +25\text{ °C}$

Mechanics/electronics

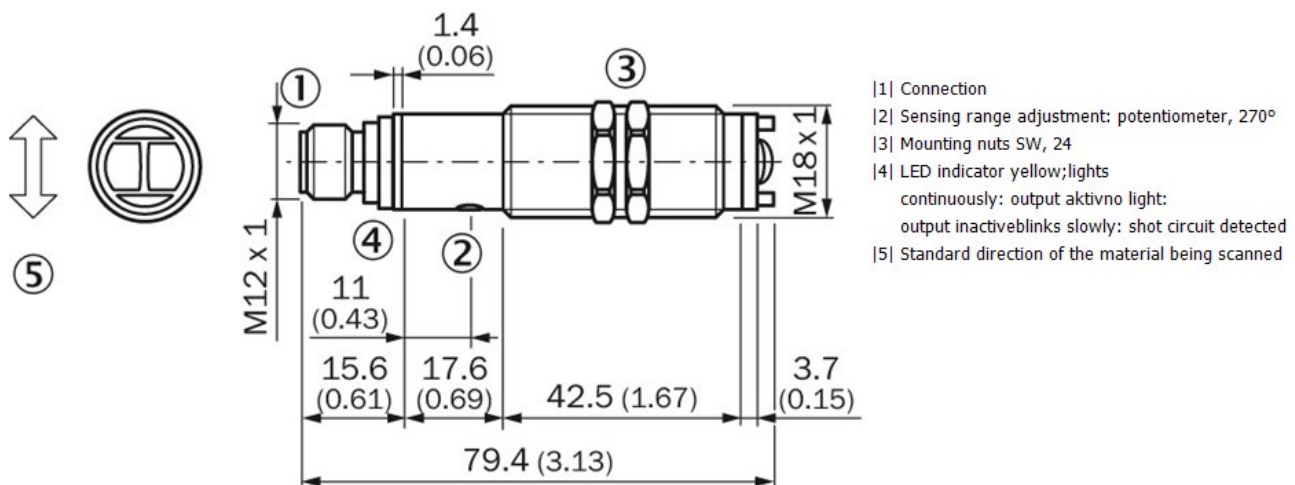
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 10 % ²⁾
Power consumption:	≤ 30 mA ³⁾
Output type:	PNP, Light/dark-switching, open collector ⁴⁾
Output current I _{max} :	100 mA
Response time:	≤ 0.5 ms ⁵⁾
Switching frequency:	1,000 Hz ⁶⁾

Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, C, D ^{7) 8) 9) 10)}
Protection class:	III
Weight:	200 g
Special device:	✓
Housing material:	Nickel-plated brass
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °C ... 70 °C
Ambient storage temperature:	-55 °C ... 80 °C
UL File-No.:	UL No. NMFT2.E175606

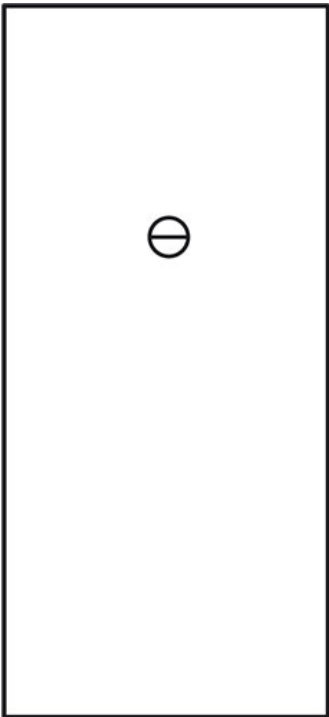
PIN 4 light-switching, PIN 2 dark-switching;

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

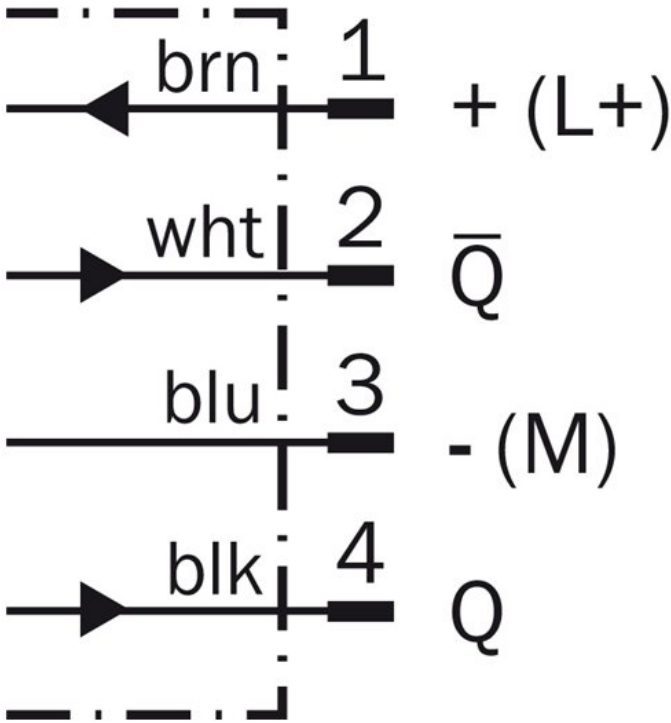
Dimensional drawing



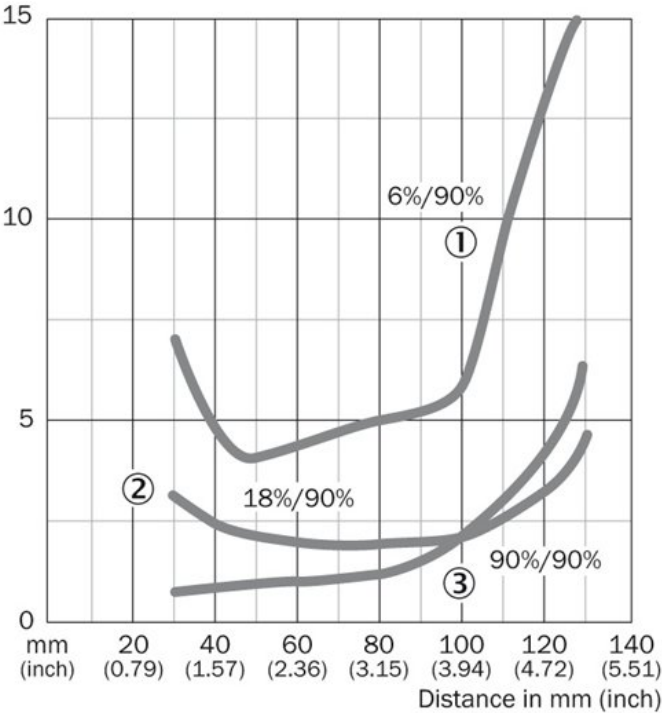
Adjustments possible



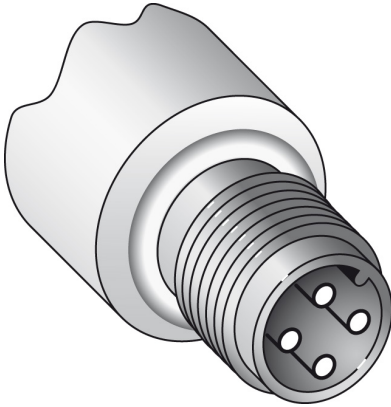
Connection diagram



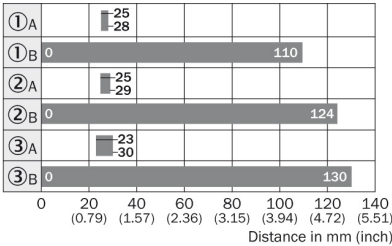
Characteristic curve



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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