

ONLINE DATA SHEET
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Photoelectric sensors

VTF18-4P1240



SICK
Sensor Intelligence.

Model Name > VTF18-4P1240
Part No. > 6012831





At a glance

- Standard photoelectric proximity sensor in M18 cylindrical housing
- Scanning distance up to 50 mm or 100 mm
- Background suppression
- 3-wire technology
- Axial or radial optics output

Your benefits

- Standardized design enables simple assembly and alignment and simple replacement of the device
- Reliable detection of objects regardless of the color
- Suitable for signal processing e.g. with AS-i coupling modules or M12 distributor islands
- Flexibility in case of restricted installation space

Features

Sensing range max.:	3 mm ... 100 mm [1]
Sensing range:	3 mm ... 90 mm
Housing desig (light emission):	straight
Light source:	LED [2]
Type of light:	Infrared light
Adjustment:	adjustable
Sensitivity adjustment:	Potentiometer, 270°
Housing length:	78 mm
Thread diameter (housing):	M18 x 1
Sensor/detection principle:	Photoelectric proximity sensor, Background blanking
Light spot (distance):	3 mm (50 mm)
Optical axis:	axial

[1] Object with 90 % reflectance (referred to standard white DIN 5033) [2] Average service life 100,000 h at Ta = +25 °C

Mechanics/electronics

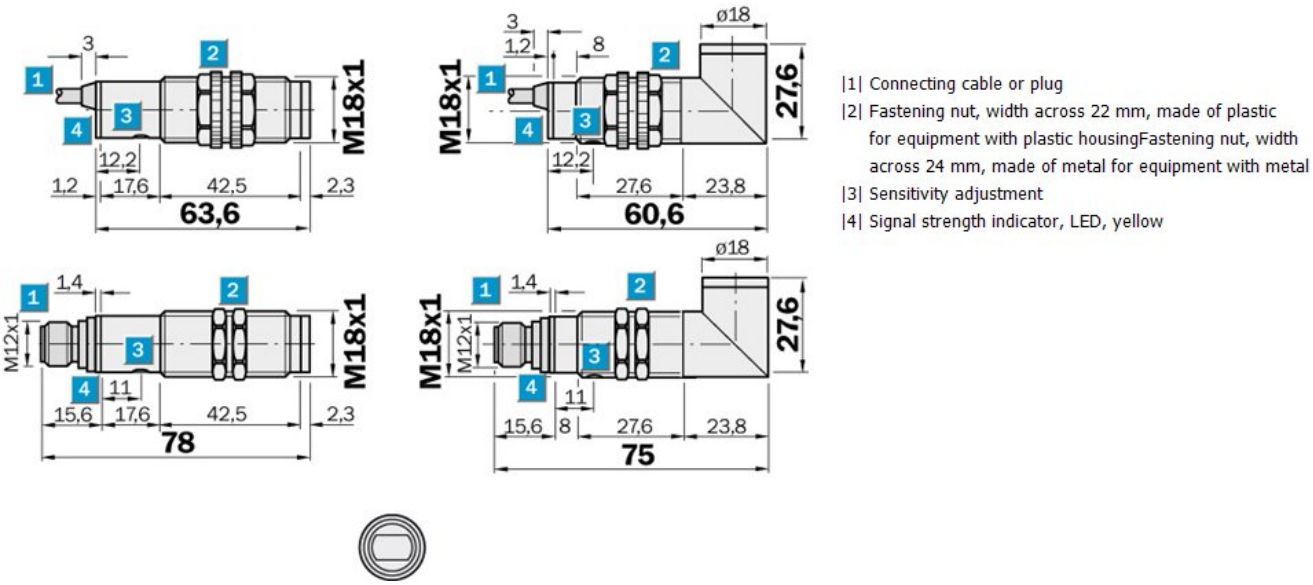
Enclosure rating:	IP 67
Supply voltage:	10 V DC ... 30 V DC [1]
Residual ripple:	≤ 10 % [2]
Power consumption:	≤ 30 mA [3]
Switching output:	PNP, light/dark-switching, Selectable via L/D control wire, open collector [4]

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Output current Imax.:	100 mA
Response time:	≤ 2 ms [5]
Switching frequency:	250 Hz with light/dark ratio 1:1
Connection type:	Connector M12, 4-pin
Protection class:	III
Circuit protection::::	A B C D [6] [7] [8] [9]
Weight:	120 g
Housing material:	Nickel-plated brass
Optics material:	PMMA
Ambient temperature, operation:	-25 °C ... 70 °C
Special Design:	focused optics
Angle of dispersion:	Focused, focus at 50 mm

[1] Limit values [2] [3] Without load [4] Control wire open: dark-switching D.ON [5] Signal transit time with resistive load [6] A = VS connections reverse-polarity protected [7] B = inputs and output reverse-polarity protected [8] C = interference suppression [9] D = outputs overcurrent and short-circuit protected

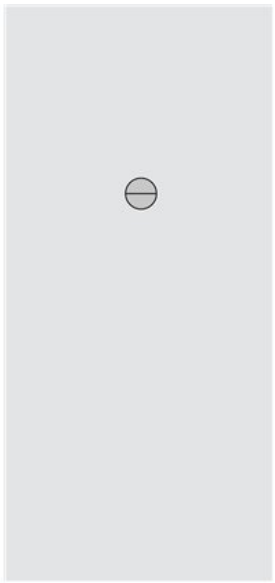
Dimensional drawing



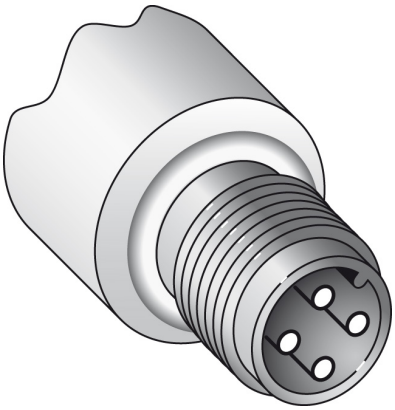
|1| Connecting cable or plug
|2| Fastening nut, width across 22 mm, made of plastic for equipment with plastic housingFastening nut, width across 24 mm, made of metal for equipment with metal
|3| Sensitivity adjustment
|4| Signal strength indicator, LED, yellow

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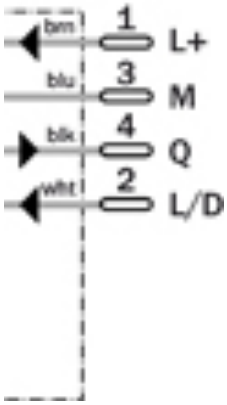
Adjustment possible



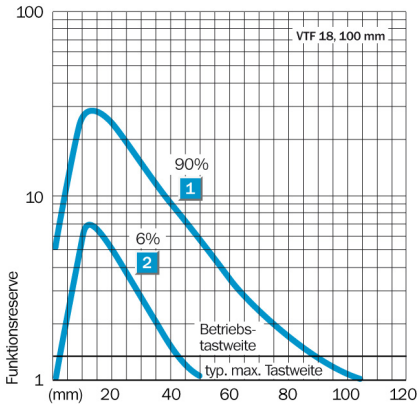
Connection type



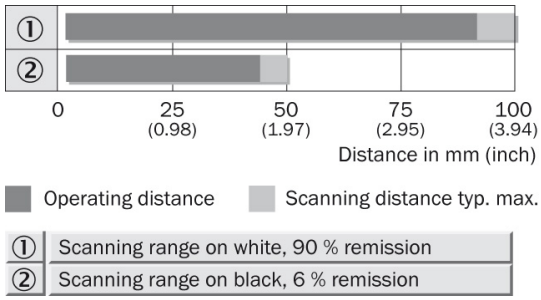
Connection diagram



Characteristic curve



Sensing range diagram



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