



Photoelectric sensors V18, Photoelectric proximity sensor, Background blanking

VTF18-4P1412



Model Name > [VTF18-4P1412](#)
Part No. > [6012865](#)



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 blanking
Housing design (light emission):	Cylindrical, angled, angled 90°
Housing length:	60.6 mm
Thread diameter (housing):	M18 x 1
Optical axis:	Radial
Sensing range max.:	3 mm ... 100 mm ¹⁾
Sensing range:	3 mm ... 90 mm
Type of light:	Infrared light
Light source:	LED ²⁾
Light spot (distance):	3 mm (50 mm)
Sensitivity adjustment:	Potentiometer, 270°

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

Mechanics/electronics

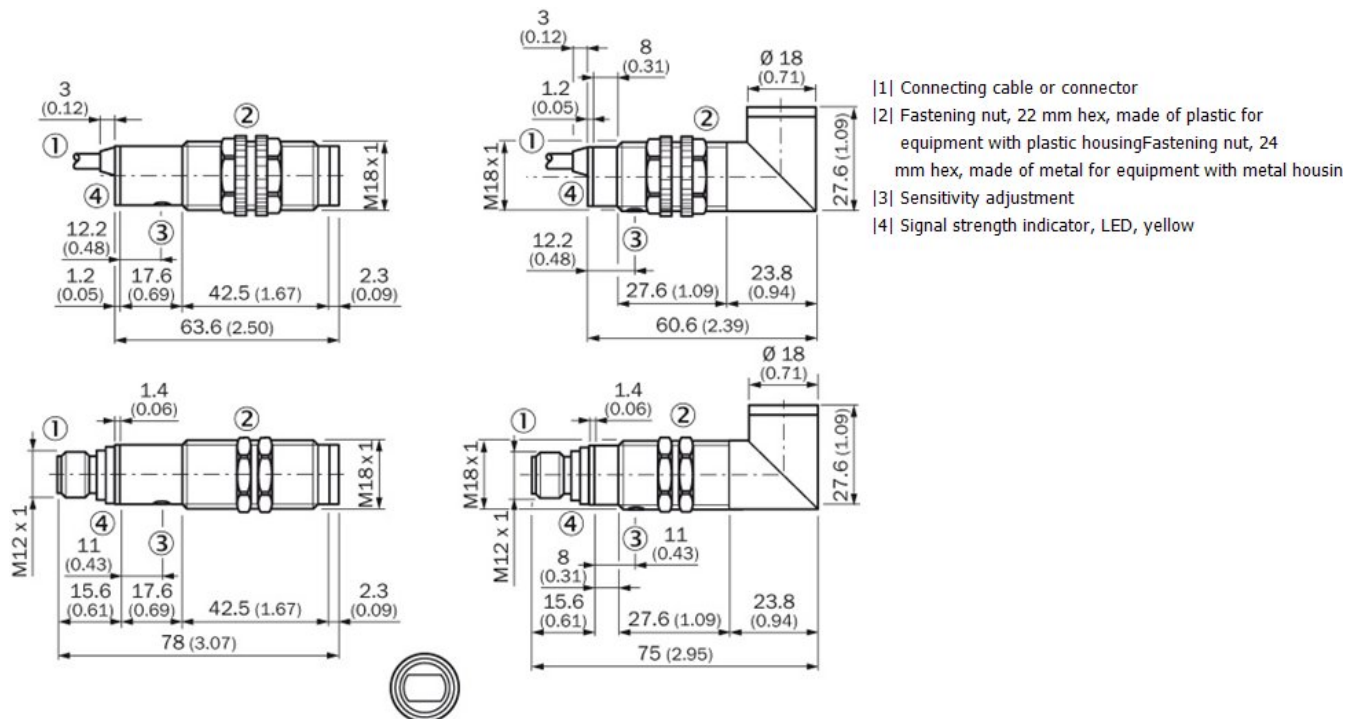
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 10 % ²⁾
Power consumption:	≤ 30 mA ³⁾
Output type:	NPN, Light/dark-switching, Selectable via L/D control wire, open collector
Output current I _{max.} :	100 mA
Response time:	≤ 2 ms ⁵⁾
Switching frequency:	250 Hz ⁶⁾
Connection type:	Cable, 4-wire, 2 m ⁷⁾

Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Cable diameter:	5 mm
Circuit protection:::	A, B, C, D ^{8) 9) 10) 11)}
Protection class:	III
Weight:	120 g
Housing material:	Nickel-plated brass
Optics material:	PMMA
Enclosure rating:	IP 67
Special feature:	Focused optics
Ambient operating temperature:	-25 °C ... 70 °C
UL File-No.:	UL No. NMFT2.E175606

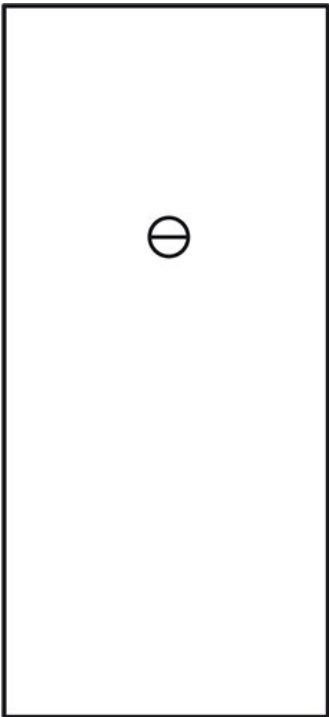
Control wire open: dark-switching D.ON;

1) Limit values 2) May not exceed or fall short of V_{S8} tolerances 3) Without load 4) Control wire open: dark-switching D.ON 5) Signal transit time with resistive load 6)
 With light/dark ratio 1:1 7) Do not bend below 0 °C 8) $A = V_S$ connections reverse-polarity protected 9) B = inputs and output reverse-polarity protected 10) C =
 interference suppression 11) D = outputs overcurrent and short-circuit protected

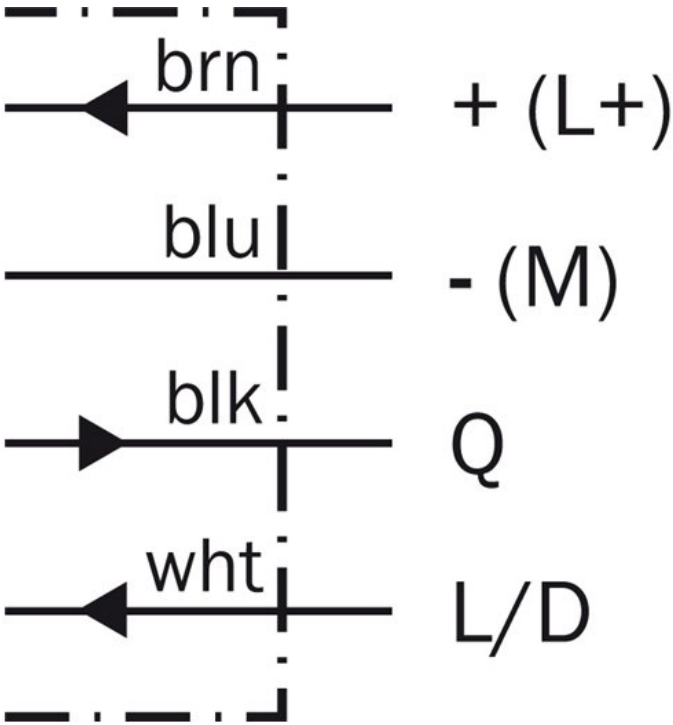
Dimensional drawing



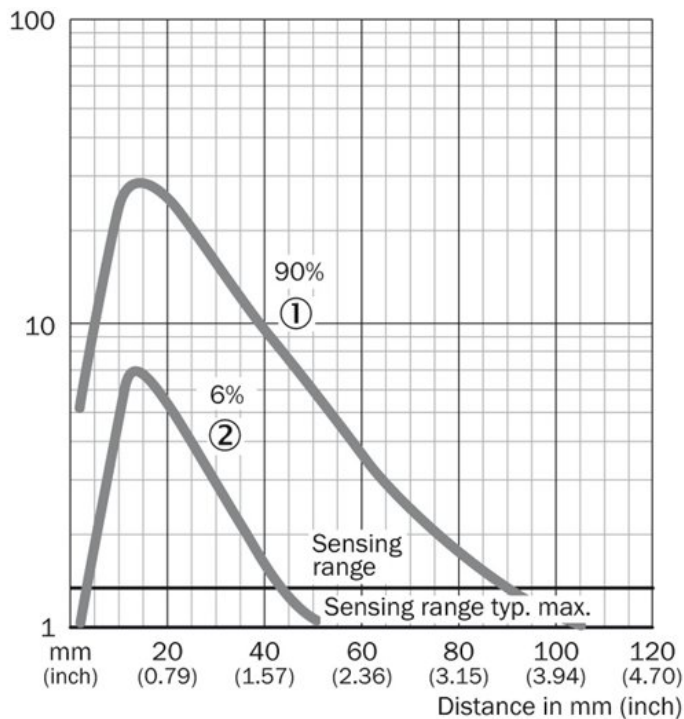
Adjustments possible



Connection diagram



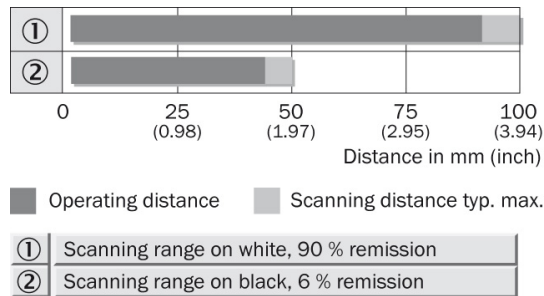
Characteristic curve



Connection type



Sensing range diagram



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