



Photoelectric sensors
V18, Photoelectric proximity sensor, Background
blanking

VTF18-4P1740



Model Name > [VTF18-4P1740](#)
Part No. > [6012903](#)



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, straight, straight
Housing length:	78 mm
Thread diameter (housing):	M18 x 1
Optical axis:	axial
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

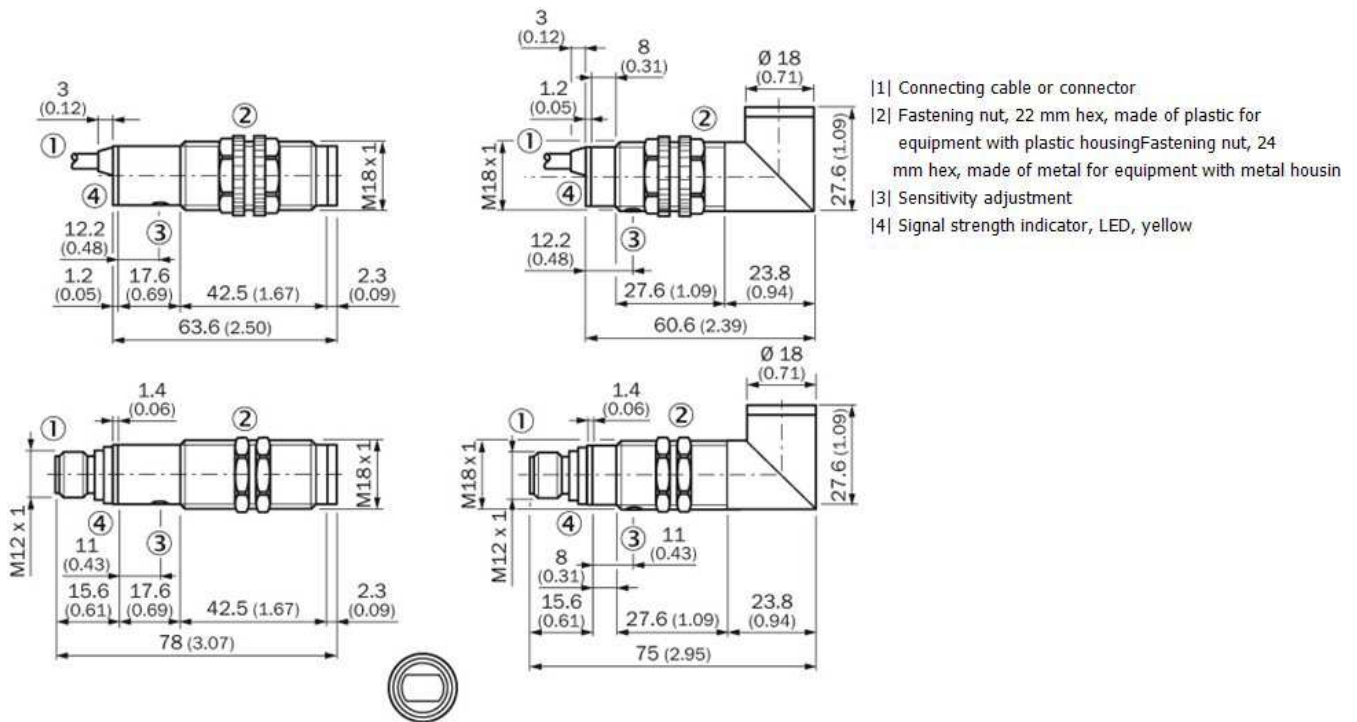
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	≤ 10 % ²⁾
Power consumption:	≤ 30 mA ³⁾
Output type:	PNP, Light/dark-switching, Selectable via L/D control wire, open collector
Output current I _{max} .:	100 mA
Response time:	≤ 2 ms ⁵⁾
Switching frequency:	250 Hz ⁶⁾
Electrical connection:	Connector M12, 4-pin

Circuit protection:::	A, B, C, D ^{7) 8) 9) 10)}
Protection class:	III
Weight:	100 g
Housing material:	PBT/PC
Optics material:	PMMA
Enclosure rating:	IP 67
Special feature:	Focused optics
Ambient temperature operation:	-25 °C ... 70 °C
UL File-No.:	UL No. NMFT2.E175606

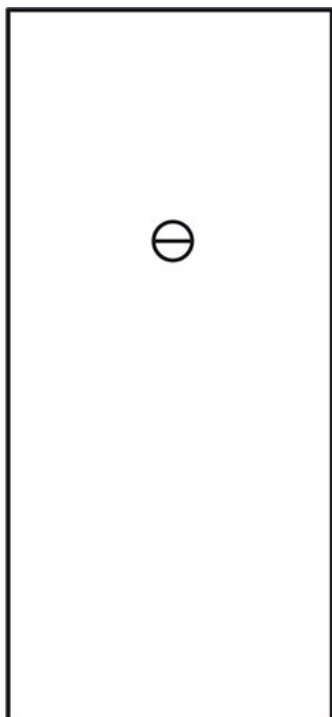
Control wire open: dark-switching D.ON;

1) Limit values 2) May not exceed or fall short of V_S 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) $A = V_S$ connections reverse-polarity protected 8) B = inputs and output reverse-polarity protected 9) C = interference suppression 10) D = outputs overcurrent and short-circuit protected

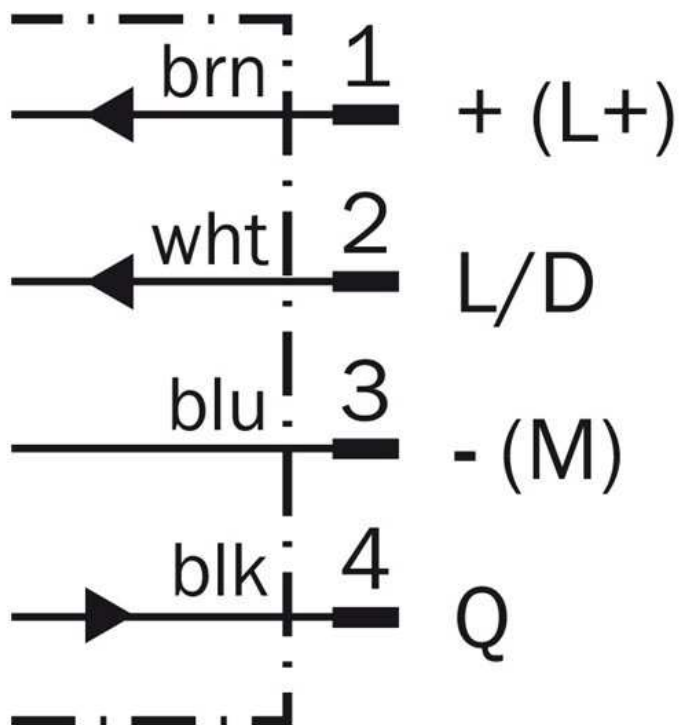
Dimensional drawing



Adjustments possible



Connection diagram



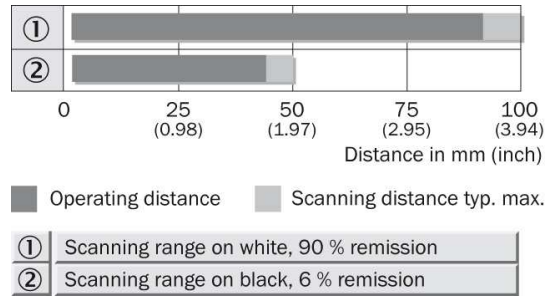
Characteristic curve



Connection type



Sensing range diagram



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