



Photoelectric sensors V18, Photoelectric retro-reflective sensor

VL18-3F3940



Model Name > VL18-3F3940
Part No. > 6013656



Illustration may differ

At a glance

- Cylindrical M18 housing
- Sensing distance up to 3.7 m
- 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
- Polarizing filter prevents false readings on reflective surfaces, reducing downtime



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor
Housing design (light emission):	Cylindrical, angled, angled 90°
Housing length:	75 mm
Thread diameter (housing):	M18 x 1
Optical axis:	radial
Sensing range max.:	0.05 m ... 3.7 m ¹⁾
Sensing range:	0.05 m ... 3 m ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Light spot (distance):	150 mm (3 m)
Sensitivity adjustment:	Potentiometer, 270°
Angle of dispersion:	2.8 °

1) 2) C110A ³⁾ Average service life of 100,000 h at T_A = +25 °C

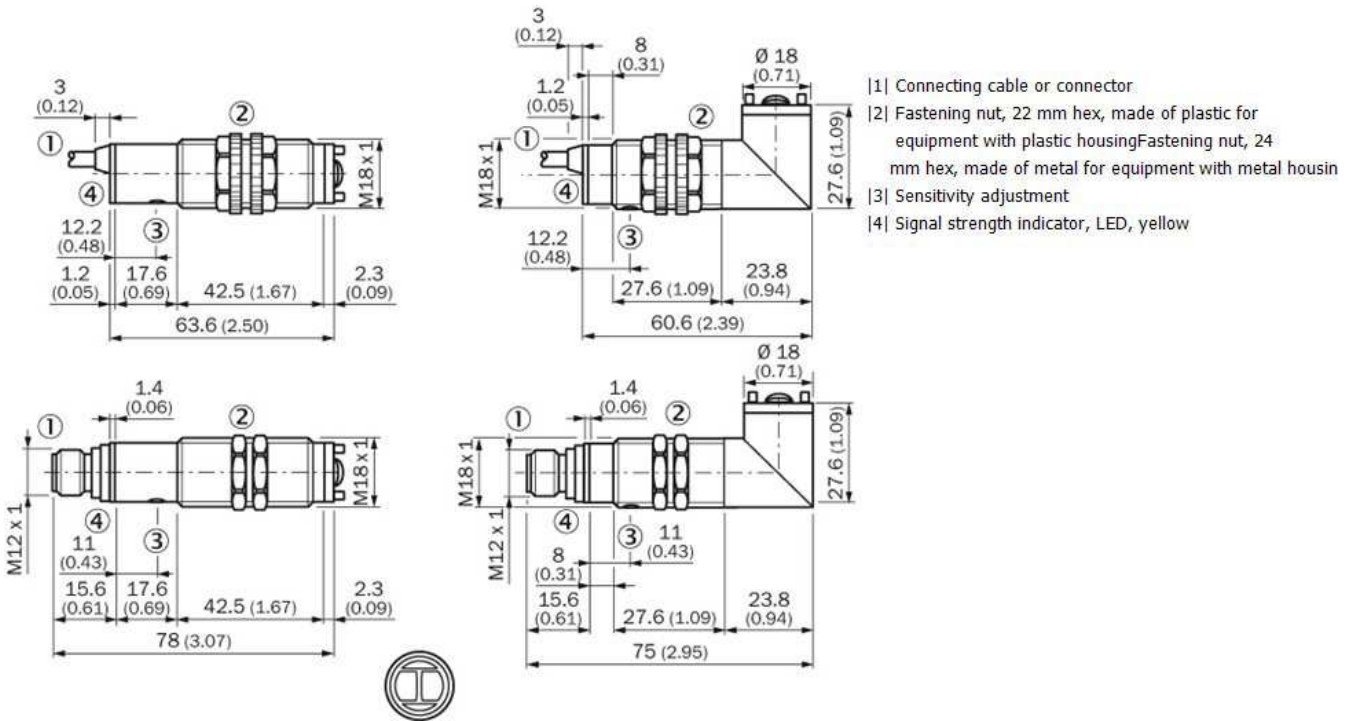
Mechanics/electronics

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

Circuit protection:::	A, B, C, D ^{6) 7) 8) 9)}
Protection class:	III
Weight:	100 g
Polarisation filter:	✓
Housing material:	PBT/PC
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient temperature operation:	-25 °C ... 70 °C
UL File-No.:	UL No. NMFT2.E175606

1) Limit values 2) May not exceed or fall short of V_S tolerances 3) Without load 4) Signal transit time with resistive load 5) With light/dark ratio 1:1 6) $A = V_S$
connections reverse-polarity protected 7) B = inputs and output reverse-polarity protected 8) C = interference suppression 9) D = outputs overcurrent and short-circuit
protected

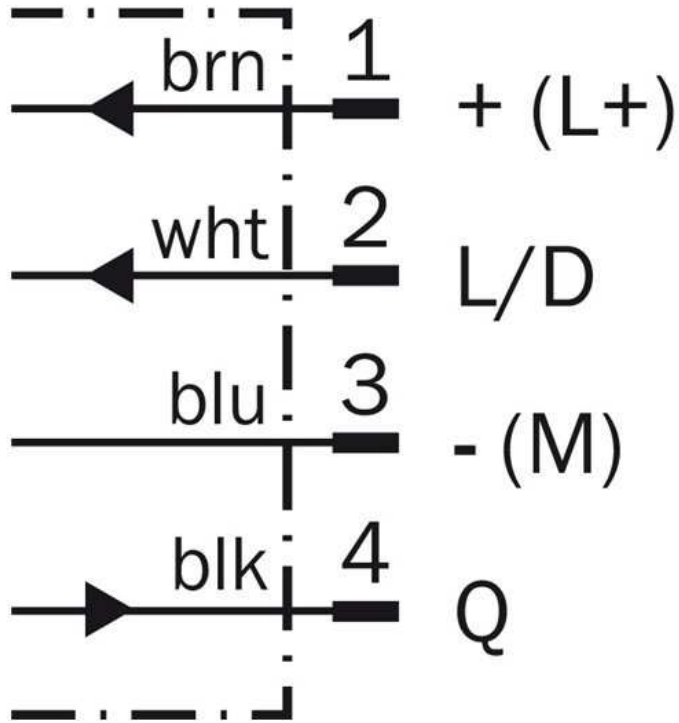
Dimensional drawing



Adjustments possible



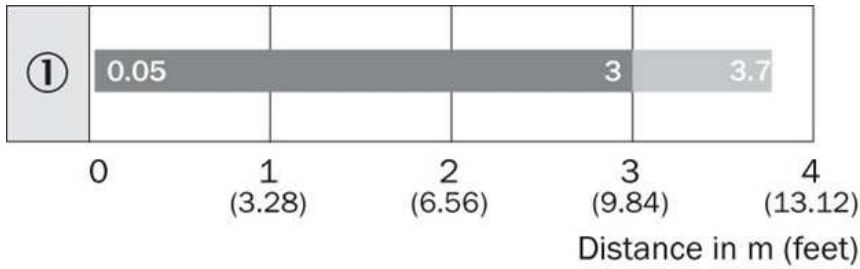
Connection diagram



Characteristic curve



Sensing range diagram



Operating range
 Scanning range typ. max.

① Reflector type C110

Connection type



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