



Photoelectric sensors V18, Photoelectric retro-reflective sensor

VL18-4N3940



Model Name > [VL18-4N3940](#)
Part No. > [6013650](#)



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

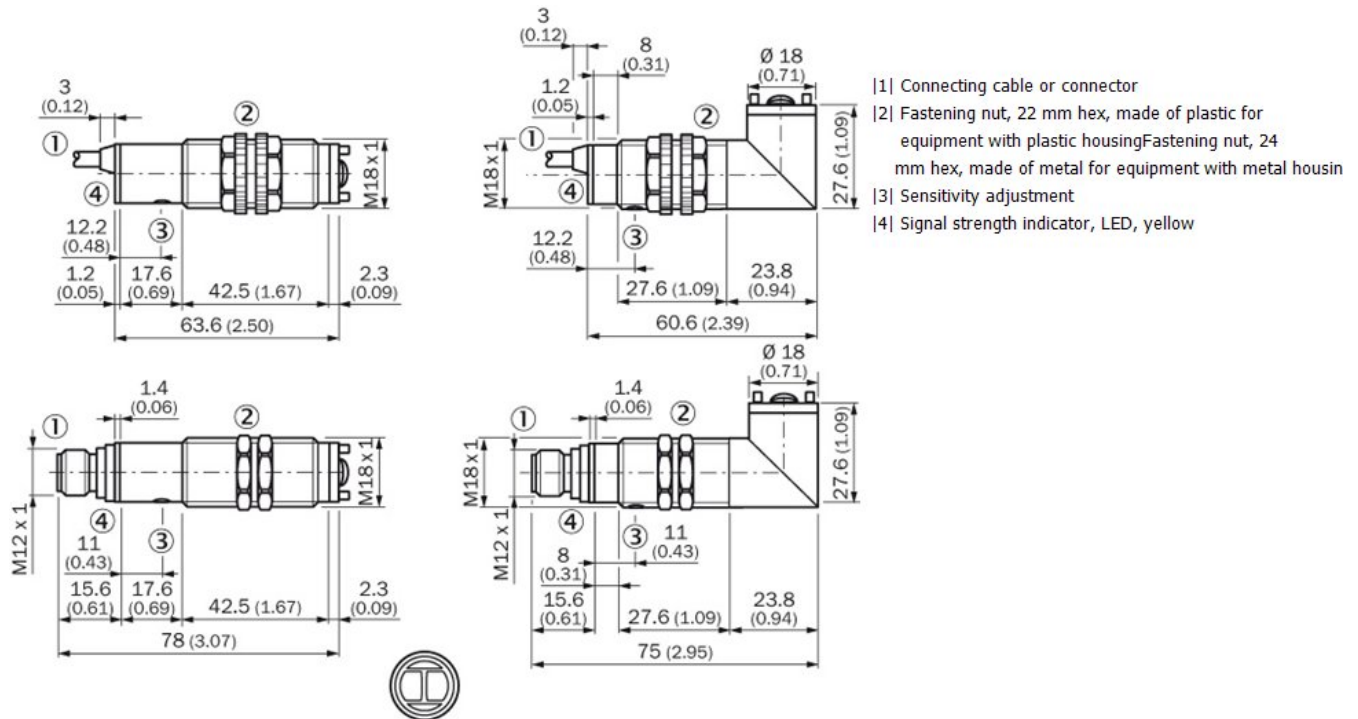
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 10 % ²⁾
Power consumption:	≤ 30 mA ³⁾
Output type:	NPN, Light/dark-switching, Selectable via L/D control wire, open collector
Output current I _{max} :	100 mA
Response time:	≤ 2 ms ⁵⁾
Switching frequency:	250 Hz ⁶⁾

Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, C, D ^{7) 8) 9) 10)}
Protection class:	III
Weight:	100 g
Polarisation filter:	✓
Housing material:	PBT/PC
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °C ... 70 °C
UL File-No.:	UL No. NMFT2.E175606

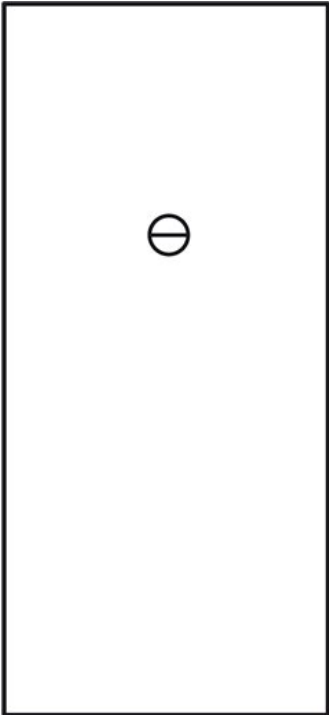
Control wire open: light-switching L.ON;

1) Limit values 2) May not exceed or fall short of V_S tolerances 3) Without load 4) Control wire open: light-switching L.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

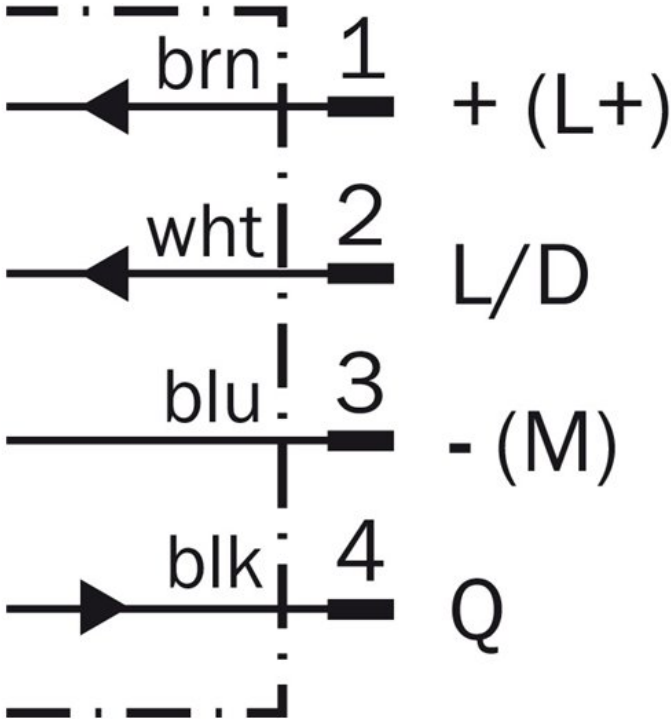
Dimensional drawing



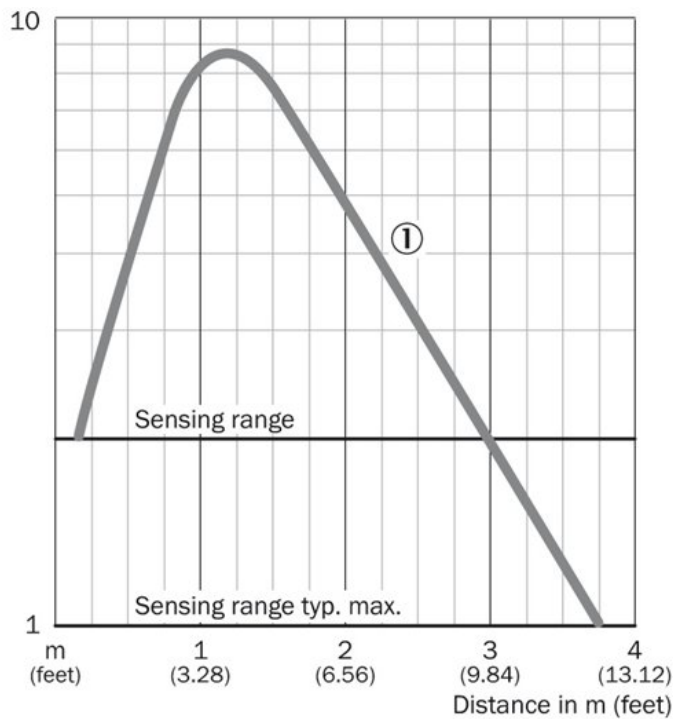
Adjustments possible



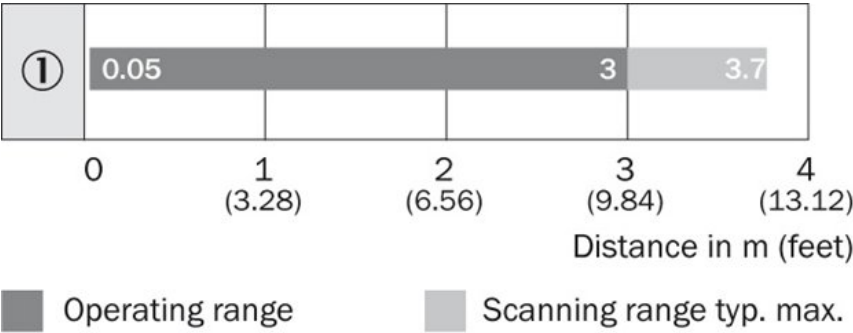
Connection diagram



Characteristic curve

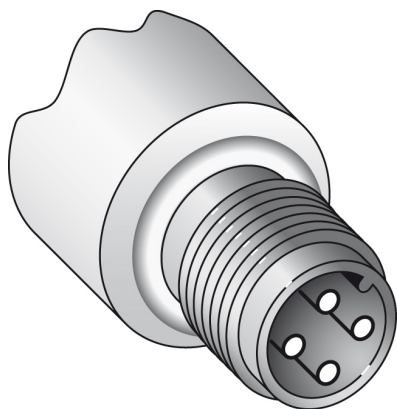


Sensing range diagram



① Reflector type C110

Connection type



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