



Photoelectric sensors V18, Photoelectric retro-reflective sensor

VL18-3N3412



Model Name > [VL18-3N3412](#)
Part No. > [6013570](#)



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:	60.6 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

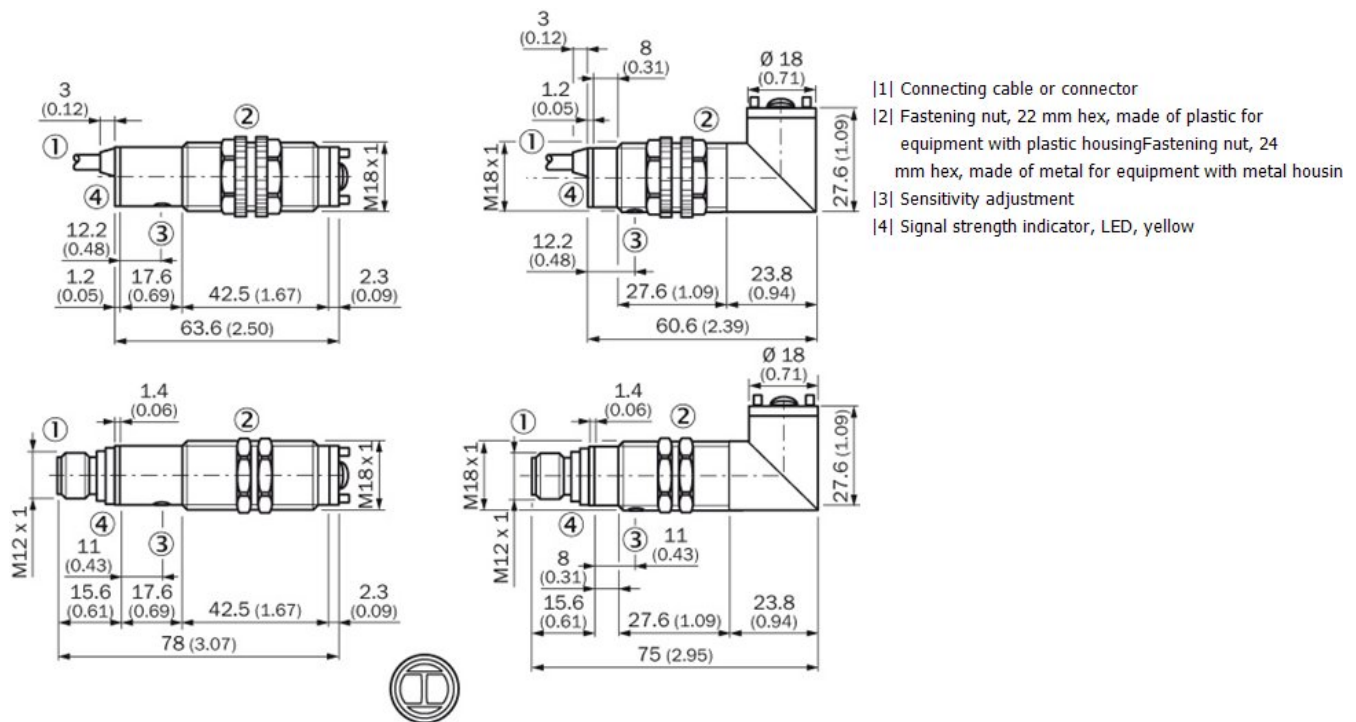
Mechanics/electronics

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

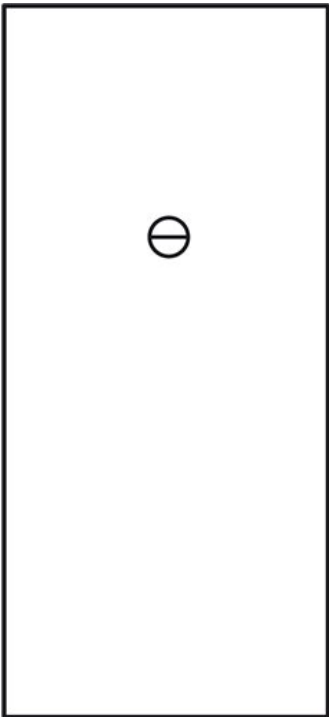
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Cable diameter:	3.1 mm
Circuit protection:::	A, B, C, D ⁷⁾ 8) 9) 10)
Protection class:	III
Weight:	120 g
Polarisation filter:	✓
Housing material:	Nickel-plated brass
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °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⁾ Do not bend
below 0 °C 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

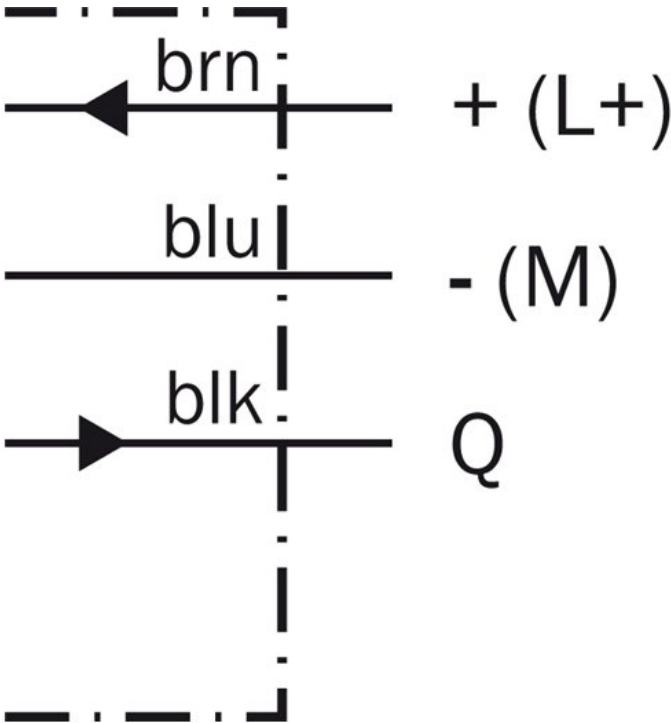
Dimensional drawing



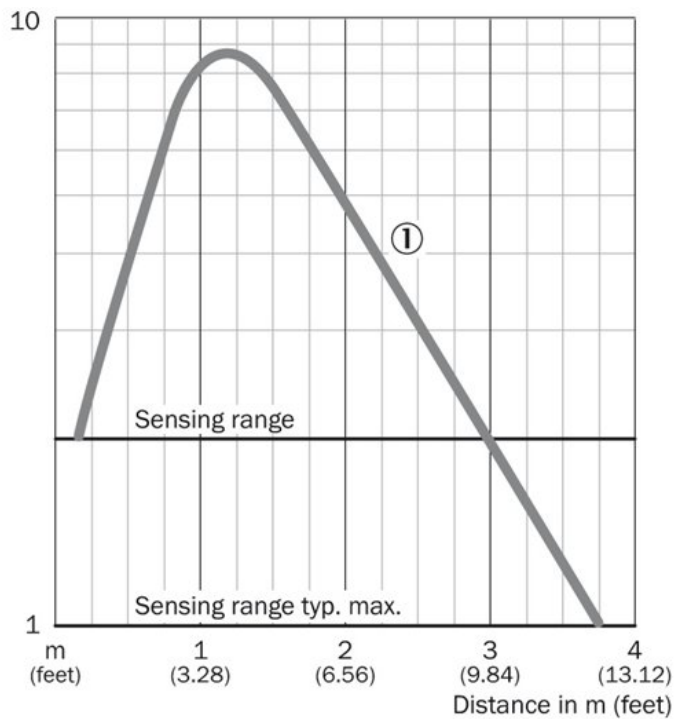
Adjustments possible



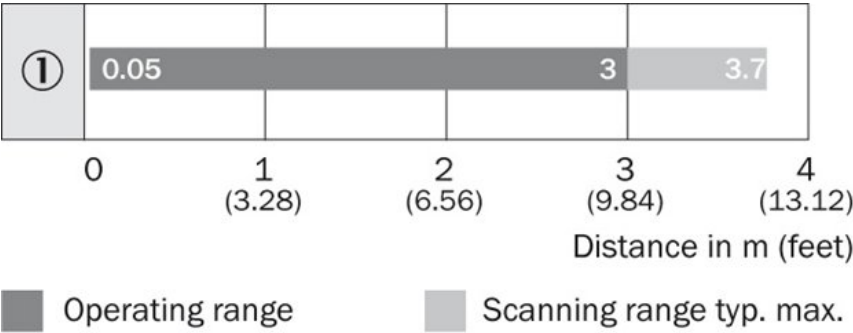
Connection diagram



Characteristic curve



Sensing range diagram



① Reflector type C110

Connection type



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