



Photoelectric sensors V12-2, Photoelectric retro-reflective sensor

VL12-2N430



Model Name > [VL12-2N430](#)
Part No. > [6026218](#)



Illustration may differ

At a glance

- Sensing distance up to 2.8 m (with PL80A reflector)
- Switching reliability with highly-reflective objects
- Adjustable light or dark switching at control input
- Operating reserve display
- M12 device connector, 4-pin or 2 m connection line
- M12 metal housing with an IP 67 enclosure rating

Your benefits

- Economical solution for reliably detecting reflective objects up to 2.8 m (with PL80A reflector)
- Standard M12 miniature housing saves installation space on the machine
- Simple design and time-saving installation due to a standard M12 housing
- Polarizing filter prevents false readings on reflective surfaces, reducing downtime
- Fast and simple alignment to the reflector due to visible red light
- Fast response times ensure reliable detection of objects at high speeds, increasing machine throughput
- Tough metal housing provides a long service life, reducing maintenance time and costs



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor
Housing design (light emission):	Cylindrical, straight
Housing length:	66 mm
Thread diameter (housing):	M12 x 1
Sensing range max.:	0.03 m ... 2.8 m ¹⁾
Sensing range:	0.03 m ... 2.3 m ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Wave length:	660 nm
Light spot diameter (distance):	Ø 80 mm (2 m)
Angle of dispersion:	Ca. 2.3 °

^{1) 2)} PL80A ³⁾ Average service life of 100,000 h at T_A = +25 °C

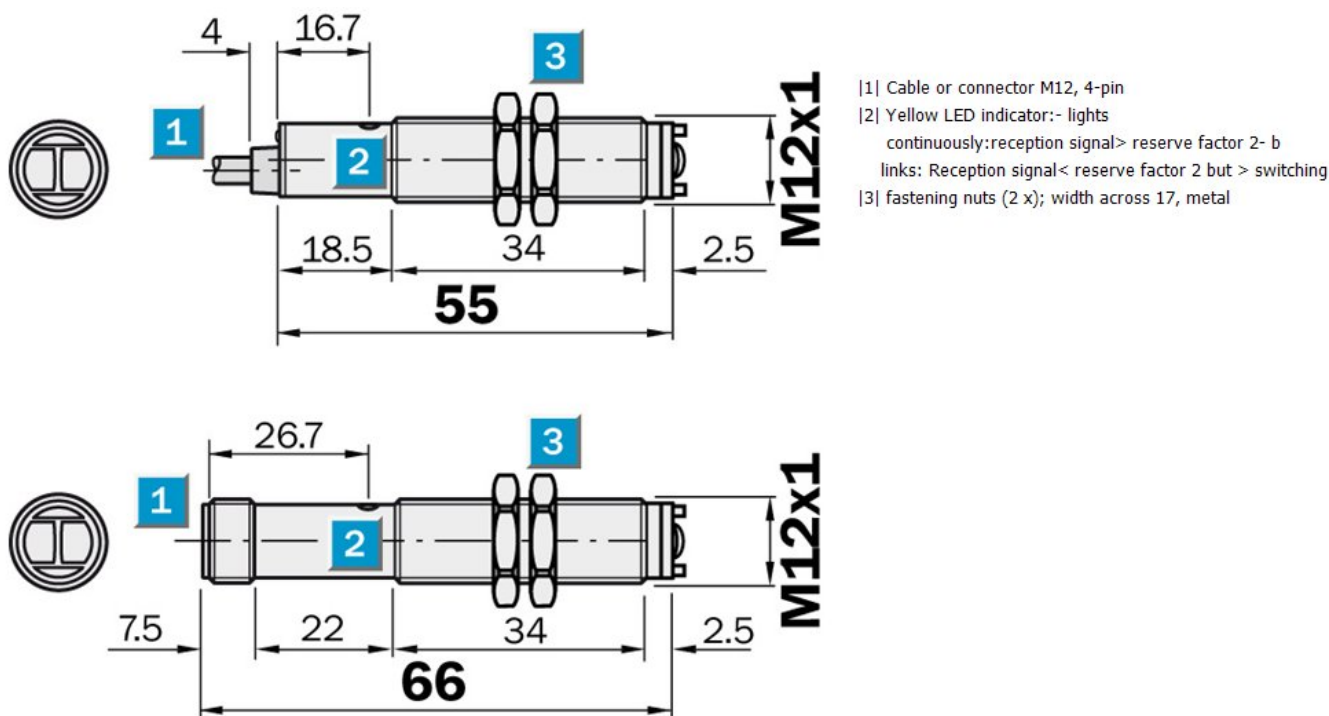
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V ¹⁾
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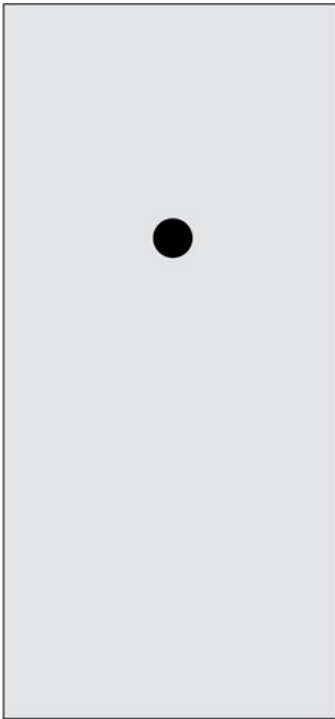
Ripple:	$\leq 10\%$ ²⁾
Power consumption:	$\leq 20\text{ mA}$ ³⁾
Output type:	NPN, Light/dark-switching, Selectable via L/D control wire
Output current I _{max} :	$\leq 100\text{ mA}$ ⁴⁾
Response time:	$\leq 1.25\text{ ms}$ ⁵⁾
Switching frequency:	400 Hz ⁶⁾
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, C, D ^{7) 8) 9) 10)}
Protection class:	III
Weight:	18 g
Polarisation filter:	✓
Special device:	-
Housing material:	Nickel-plated brass/PA
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °C ... 70 °C
Ambient storage temperature:	-25 °C ... 70 °C

¹⁾ Limit values ²⁾ May not exceed or fall short of V_S tolerances ^{3) 4)} Without load 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

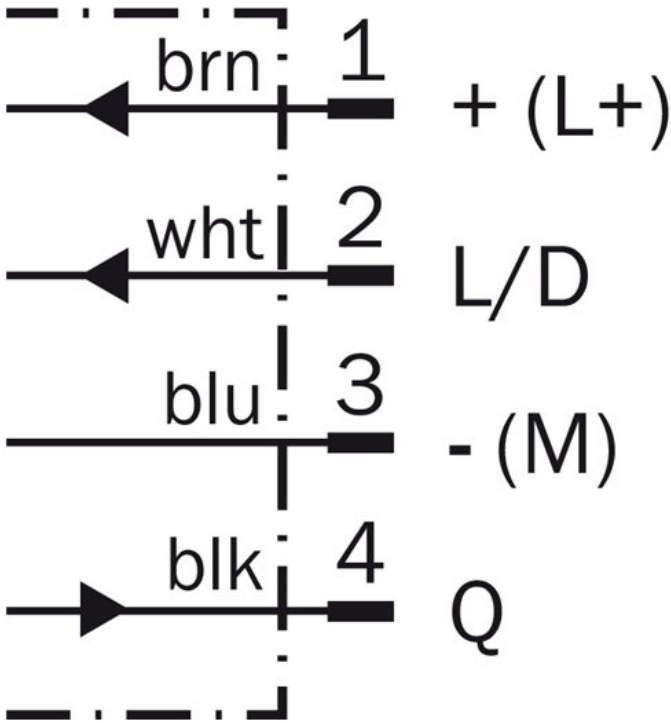
Dimensional drawing



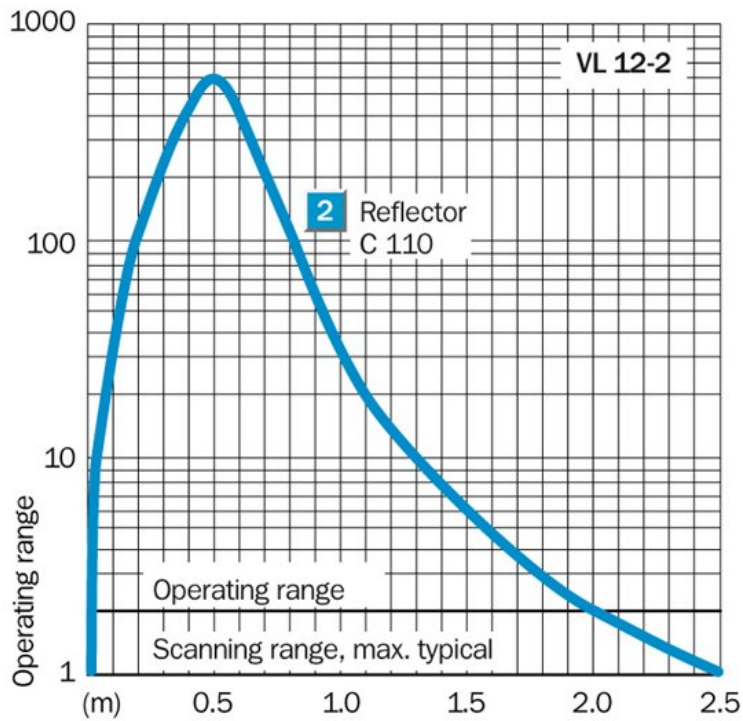
Adjustments possible



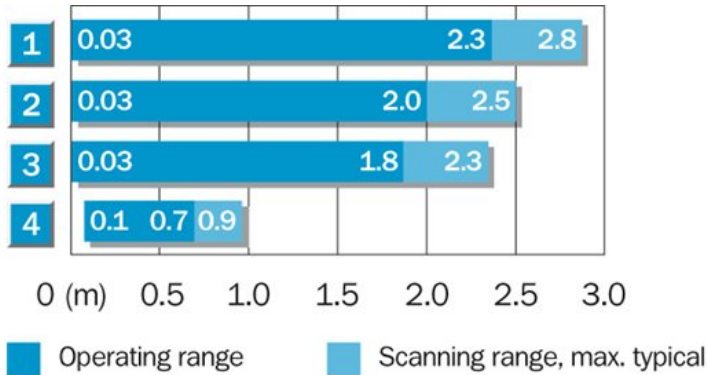
Connection diagram



Characteristic curve



Sensing range diagram



	Reflector type	Operating range
1	PL 80 A	0.03 ... 2.3 m
2	C 110	0.03 ... 2.0 m
3	PL 50 A/PL 40 A/P 250	0.03 ... 1.8 m
4	Reflective tape Diamond Grade	0.1 ... 0.7 m

Connection type



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