



Ordering information

Type	Part no.
VL12-2P430	6026220

Other models and accessories → www.sick.com/V12-2

Illustration may differ



Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor
Dimensions (W x H x D)	12 mm x 12 mm x 66 mm
Housing design (light emission)	Cylindrical
Housing length	66 mm
Thread diameter (housing)	Round connector M12 x 1
Sensing range max.	0.03 m ... 2.8 m ¹⁾
Sensing range	0.03 m ... 2.3 m ¹⁾
Focus	Approx. 2.3°
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 80 mm (2 m)
Angle of dispersion	Approx. 2.3°
Wave length	660 nm
Adjustment	None

¹⁾ Reflector PL80A.

²⁾ Average service life: 100,000 h at T_J = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	± 10 % ²⁾
Current consumption	20 mA ³⁾
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via L/D control cable
Output current I_{max}	≤ 100 mA ³⁾
Response time	≤ 1.25 ms ⁴⁾
Switching frequency	400 Hz ⁵⁾
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	III
Weight	18 g
Polarisation filter	✓
Housing material	Metal, Nickel-plated brass/PA
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	-25 °C ... +70 °C
Ambient temperature, storage	-25 °C ... +70 °C
UL File No.	NMFT2.E175606

¹⁾ Limit values.

²⁾ May not exceed or fall below U_v 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.

Safety-related parameters

MTTF_D	1,139 years
DC_{avg}	0 %

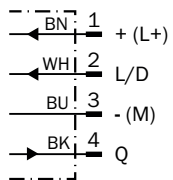
Classifications

ECl@ss 5.0	27270902
ECl@ss 5.1.4	27270902
ECl@ss 6.0	27270902
ECl@ss 6.2	27270902
ECl@ss 7.0	27270902
ECl@ss 8.0	27270902

ECl@ss 8.1	27270902
ECl@ss 9.0	27270902
ECl@ss 10.0	27270902
ECl@ss 11.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
UNSPSC 16.0901	39121528

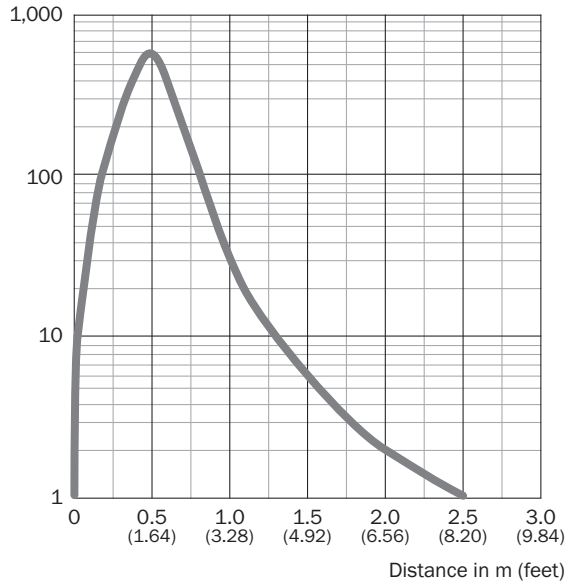
Connection diagram

Cd-087

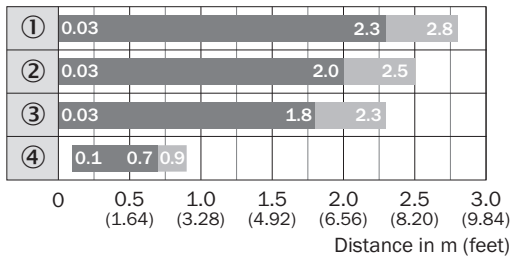


Characteristic curve

Operating reserve



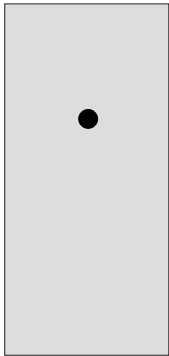
Sensing range diagram



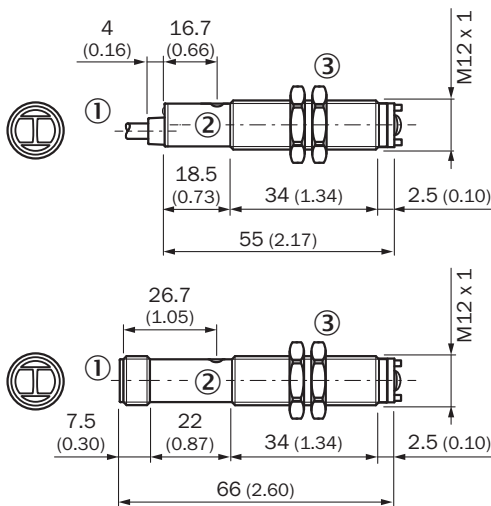
■ Sensing range ■ Sensing range max.

- ① Reflector PL80A
- ② Reflector C110
- ③ Reflector PL50A, PL40A, P250
- ④ Reflective tape Diamond Grade

Adjustments








Dimensional drawing (Dimensions in mm (inch))



- ① Cable or connector M12, 4-pin
- ② Yellow LED indicator: - lights continuously: Reception signal > reserve factor 2 - blinks: Reception signal < reserve factor 2 but > switching threshold 1
- ③ Fastening nuts (2x); width across 17, metal

Recommended accessories

Other models and accessories → www.sick.com/V12-2

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for M12 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M12	5308447
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Reflectors			
	Rectangular, screw connection, 51 mm x 61 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	STE-1204-G	6009932

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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