



ENGLISH

Datasheet

RS PRO Retroreflective Photoelectric Sensor with Block Sensor

Stock No: 729-5157





Illustration may differ



Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor, Dual lens
Dimensions (W x H x D)	15.6 mm x 48.5 mm x 42 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.15 m ... 10 m ¹⁾
Sensing range	0.15 m ... 8 m ¹⁾
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 50 mm (3 m)
Angle of dispersion	Approx. 2.2°
Wave length	640 nm
Adjustment	None

¹⁾ Reflector PL80A.

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
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¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

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⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

⁹⁾ Reference voltage DC 50 V.

Ripple	$\leq 5 V_{pp}^{2)}$
Current consumption	30 mA ³⁾
Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	$U_v - 2.5 V / \text{approx. } 0 V$
Output current $I_{max.}$	100 mA
Response time	$\leq 2.5 ms^{4)}$
Switching frequency	200 Hz ⁵⁾
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Protection class	II ⁹⁾
Weight	120 g
Polarisation filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP66 IP67 IP69K
Ambient operating temperature	-30 °C ... +60 °C
Ambient storage temperature	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

1) Limit values when operated in short-circuit protected network: max. 8 A.

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) C = interference suppression.

8) D = outputs overcurrent and short-circuit protected.

9) Reference voltage DC 50 V.

Safety-related parameters

MTTF_D	3,092 years
DC_{avg}	0%

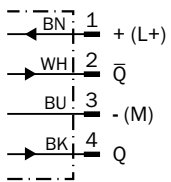
Classifications

ECI@ss 5.0	27270902
ECI@ss 5.1.4	27270902
ECI@ss 6.0	27270902
ECI@ss 6.2	27270902
ECI@ss 7.0	27270902
ECI@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

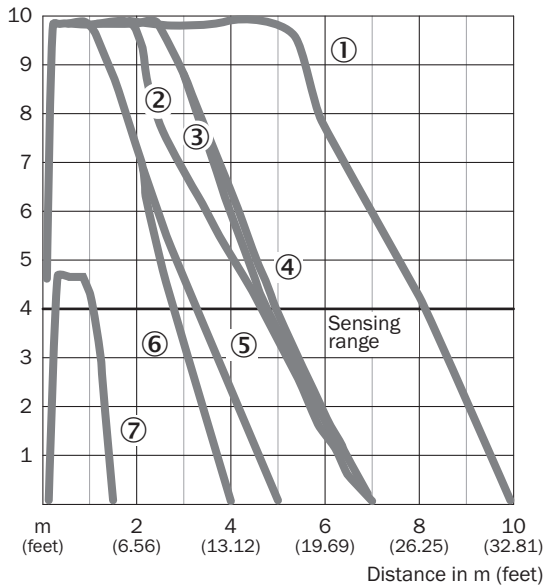
Connection diagram

Cd-083



Characteristic curve

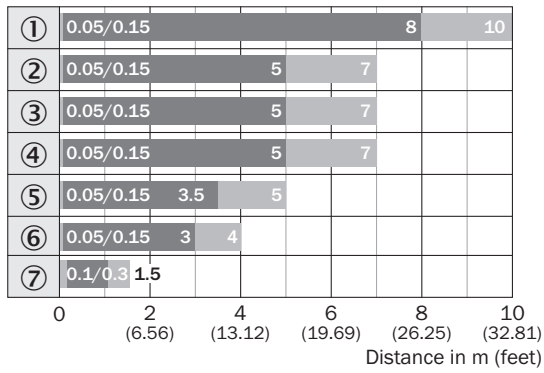
WL11-2



- ① Reflector PL80A
- ② Reflector C110A
- ③ Reflector PL50A
- ④ Reflector PL40A
- ⑤ Reflector PL30A
- ⑥ Reflector PL20A
- ⑦ Reflective tape Diamond Grade

Sensing range diagram

WL11-2

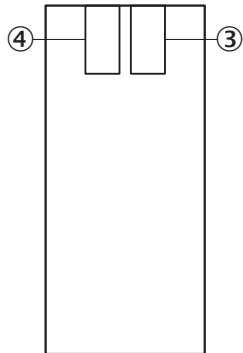


■ Sensing range ■ Sensing range typ. max.

- ① Reflector PL80A
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Adjustments

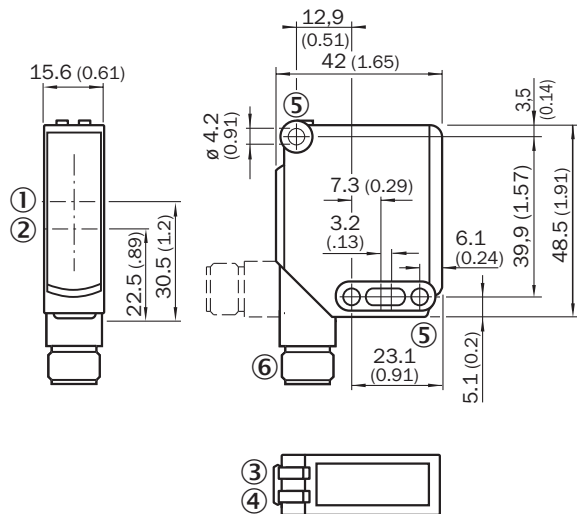
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- ③ LED indicator green: Supply voltage active
- ④ LED indicator yellow: Status of received light beam

Dimensional drawing (Dimensions in mm (inch))

WL11-2



- ① Optical axis, sender
- ② Optical axis, receiver
- ③ LED indicator green: Supply voltage active
- ④ LED indicator yellow: Status of received light beam
- ⑤ Mounting hole \varnothing 4.2 mm
- ⑥ M12 connector, 4-pin or cable

Brief description

Mounting brackets and plates

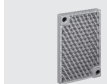


Mounting bracket, large, stainless steel, mounting hardware included



Universal mounting bracket for reflectors, steel, zinc coated

Reflectors



Rectangular, screw connection, 40 mm x 60 mm, PMMA/ABS, Screw-on, 2 hole mounting

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



Head A: male connector, M12, 4-pin, straight
 Head B: -
 Cable: unshielded