



ENGLISH

Datasheet

RS PRO Retroreflective Photoelectric Sensor with Block Sensor

Stock No: 729-5205





Illustration may differ



Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	Dual lens
Sensing range max.	$\leq 6 \text{ m}^{1)}$
Sensing range	$\leq 5 \text{ m}^{1)}$
Polarisation filters	Yes
Key LED figures	
Wave length	650 nm
Adjustment	None

¹⁾ Reflector PL80A.

Safety-related parameters

MTTF_D	2,325 years
DC_{avg}	0 %

Electrical data

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	$\pm 10 \%^{2)}$

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⁾ At U_v > 24 V, I_A max. = 50 mA.

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⁾ D = outputs overcurrent and short-circuit protected.

Power consumption	30 mA ³⁾
Protection class	III
Digital output	
Type	PNP
Signal voltage PNP HIGH/LOW	$V_S - (\leq 3 \text{ V}) / \text{ approx. } 0 \text{ V}$
Output current I_{max}	$\leq 100 \text{ mA}$ ⁴⁾
Response time	$< 625 \mu\text{s}$ ⁵⁾
Switching frequency	$1,000 \text{ Hz}$ ⁶⁾
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark selector
Circuit protection	A ⁷⁾ B ⁸⁾ D ⁹⁾

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) At $U_V > 24 \text{ V}$, $I_A \text{ max.} = 50 \text{ mA}$.

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) D = outputs overcurrent and short-circuit protected.

Mechanical data

Housing	Rectangular
Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Connection	Cable, 3-wire, 2 m ¹⁾
Connection detail	
Conductor size	0.14 mm ²
Length of cable	2 m
Material	
Housing	Plastic, ABS/PC
Front screen	Plastic, PMMA
Cable	PVC
Weight	60 g
Items supplied	Stainless steel mounting bracket (1.4301/304) BEF-W100-A, Reflector P250

1) Do not bend below 0 °C.

Ambient data

Enclosure rating	IP67
Ambient operating temperature	-25 °C ... +55 °C ¹⁾
Ambient temperature, storage	-40 °C ... +70 °C
UL File No.	NRKH.E348498 & NRKH7.E348498

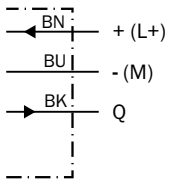
1) Temperature stability following adjustment +/- 10 °C.

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

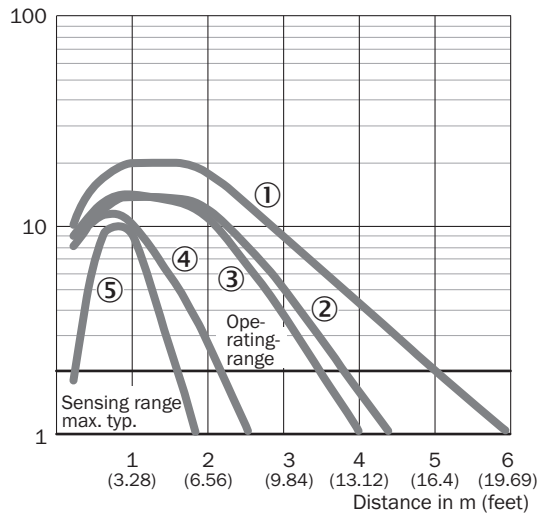
Cd-043



Characteristic curve

GL6

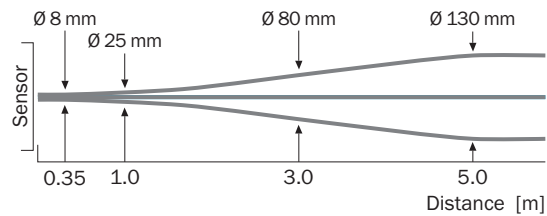
Operating reserve



- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector P250
- ④ Reflector PL20A
- ⑤ Reflective tape REF-IRF-56

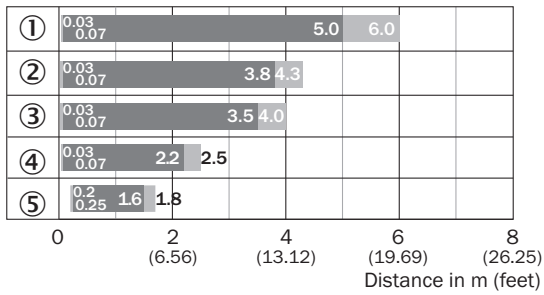
Light spot size

GL6, GL6G



Sensing range diagram

GL6, GL6G

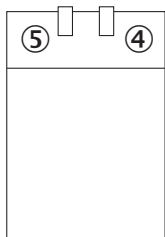


■ Sensing range ■ Sensing range max.

- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector P250
- ④ Reflector PL20A
- ⑤ Reflective tape REF-IRF-56

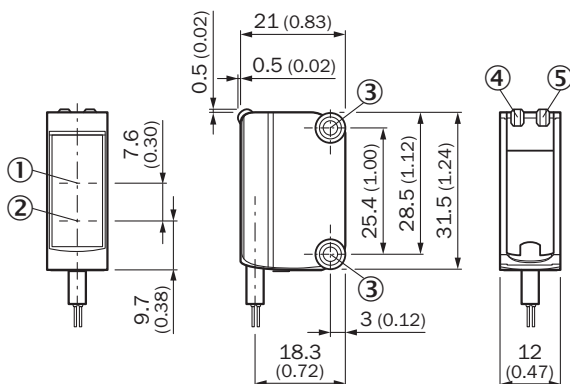
Adjustments

No adjustment possibility



- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

Dimensional drawing (Dimensions in mm (inch))



- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting holes M3
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

Brief description	
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Mounting brackets and plates	
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	Stainless steel (1.4301)
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	Universal mounting bracket for reflectors, steel, zinc coated
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Reflectors	
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	Rectangular, screw connection, 51 mm x 61 mm, PMMA/ABS, Screw-on, 2 hole mounting
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Plug connectors and cables	
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	Head A: male connector, M8, 3-pin, straight Head B: - Cable: unshielded
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