



GRTB30-F2326

GR30

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
GRTB30-F2326	6058872

Other models and accessories → www.sick.com/GR30

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	30 mm x 30 mm
Housing design (light emission)	Cylindrical
Thread diameter (housing)	M30 x 1
Optical axis	Axial
Sensing range max.	20 mm ... 120 mm ¹⁾
Sensing range	25 mm ... 100 mm ¹⁾
Type of light	Infrared light
Light source	LED ²⁾
Light spot size (distance)	Ø 40 mm (1,000 mm)
Black / white shift	< 10 mm
Wave length	650 nm
Adjustment	None
Background suppression	> 120 mm

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 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⁾ At U_v > 24 V or ambient temperature > 49 °C, I_A max. = 50 mA.

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.

Current consumption	35 mA
Switching output	PNP
Switching mode	Dark switching
Signal voltage PNP HIGH/LOW	$V_S - (\leq 3 \text{ V}) / \text{approx. } 0 \text{ V}$
Output current I_{max}	$\leq 100 \text{ mA}^{3)}$
Response time	$< 10 \text{ ms}^{4)}$
Switching frequency	$50 \text{ Hz}^{5)}$
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾
Protection class	III
Weight	75 g
Housing material	Plastic, PBT
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	Fastening nuts (2 x)
Electromagnetic compatibility (EMC)	EN 60947-5-2
Ambient operating temperature	$-25 \text{ }^{\circ}\text{C} \dots +70 \text{ }^{\circ}\text{C}$
Ambient temperature, storage	$-30 \text{ }^{\circ}\text{C} \dots +75 \text{ }^{\circ}\text{C}$

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

2) May not exceed or fall below U_V tolerances.

3) At $U_V > 24 \text{ V}$ or ambient temperature $> 49 \text{ }^{\circ}\text{C}$, $I_A \text{ max.} = 50 \text{ mA}$.

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.

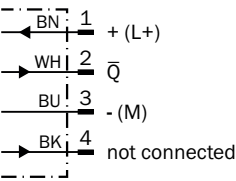
Classifications

eCl@ss 5.0	27270904
eCl@ss 5.1.4	27270904
eCl@ss 6.0	27270904
eCl@ss 6.2	27270904
eCl@ss 7.0	27270904
eCl@ss 8.0	27270904
eCl@ss 8.1	27270904
eCl@ss 9.0	27270904
eCl@ss 10.0	27270904
eCl@ss 11.0	27270904
eCl@ss 12.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719

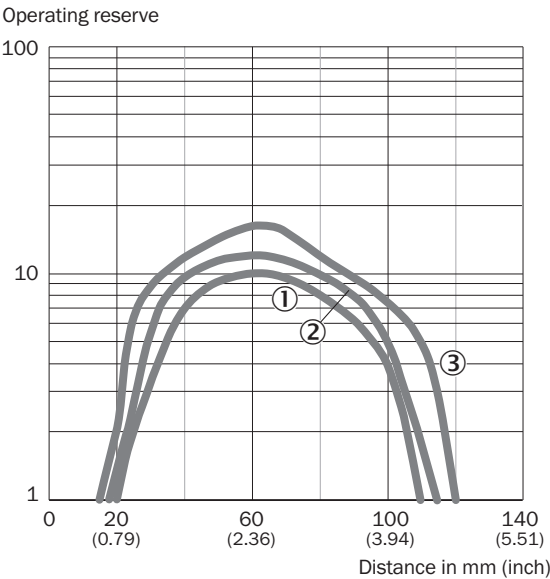
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram

Cd-444

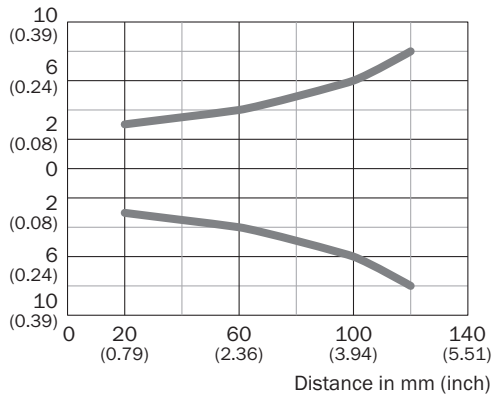


Characteristic curve

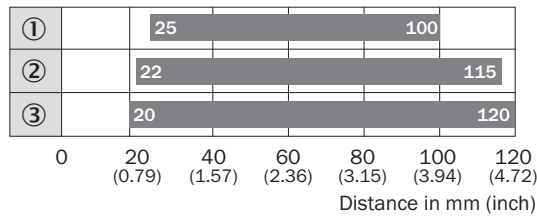


Light spot size

Light spot diameter in mm (inch)



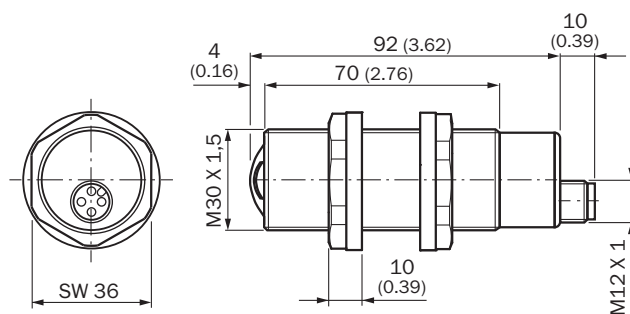
Sensing range diagram



■ Sensing range




- ① Sensing range on black, 6% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90% remission

Dimensional drawing (Dimensions in mm (inch))



Recommended accessories

Other models and accessories → www.sick.com/GR30

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for M30 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M30	5308445
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 Cable: unshielded	STE-1204-G	6009932

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com