



GSE2F-F5121

G2

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
GSE2F-F5121	1095453

Other models and accessories → www.sick.com/G2

Detailed technical data

Features

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	10 mm x 27 mm x 3.5 mm
Housing design (light emission)	Rectangular
Minimum detectable object (MDO)	0.5 mm
Sensing range max.	0 mm ... 200 mm
Sensing range	0 mm ... 150 mm
Type of light	Visible red light
Light source	PinPoint LED ¹⁾
Light spot size (distance)	Ø 20 mm (150 mm)
Wave length	660 nm
Adjustment	None

¹⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage U _B	10 V DC ... 30 V DC
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- ¹⁾ May not fall below or exceed U_y tolerances.
- ²⁾ Without load.
- ³⁾ Signal transit time with resistive load.
- ⁴⁾ With light/dark ratio 1:1.
- ⁵⁾ Do not bend below 0 °C.
- ⁶⁾ A = V_S connections reverse-polarity protected.
- ⁷⁾ C = interference suppression.
- ⁸⁾ D = outputs overcurrent and short-circuit protected.

Ripple	< 5 V _{pp} ¹⁾
Current consumption	20 mA ²⁾
Switching output	PNP
Switching mode	Dark switching
Output current I_{max}	≤ 50 mA
Response time	< 0.625 ms ³⁾
Switching frequency	800 Hz ⁴⁾
Connection type	Cable with connector M8, 3-pin, 200 mm ⁵⁾
Cable material	Plastic, PVC
Cable diameter	Ø 2.3 mm
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Weight	23 g
Housing material	Plastic, VISTAL®
Optics material	Plastic, MABS
Enclosure rating	IP67
Ambient operating temperature	-20 °C ... +50 °C
Ambient temperature, storage	-40 °C ... +70 °C
UL File No.	NRKH.E348498 & NRKH7.E348498
Repeatability (T_a not constant)	0.1 mm

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Certificates

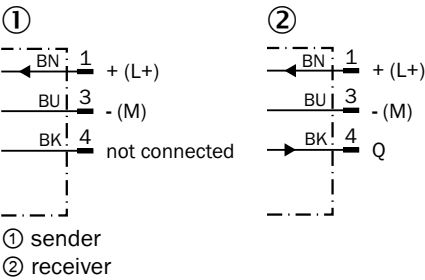
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cRUus certificate	✓

Classifications

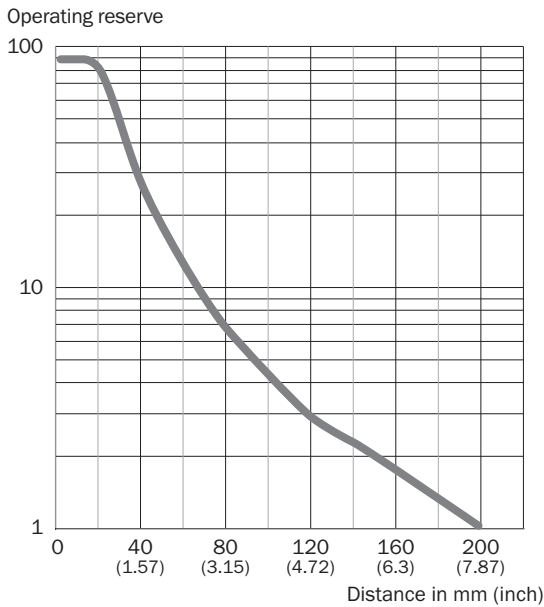
ECLASS 5.0	27270901
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901

ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Connection diagram Cd-051



Characteristic curve GSE2 Flat, GSE2 Flat Side, 150 mm



Distance (mm)	Distance (inch)	Diameter (mm)	Diameter (inch)
0	0	2	0.08
70	2.76	7	0.28
150	5.91	20	0.79

Figure 10 is a horizontal bar chart illustrating the sensing range of the sensor. The x-axis represents distance in millimeters (mm) and inches (inch). The scale is marked at 0, 40 (1.57), 80 (3.15), 120 (4.72), 160 (6.3), and 200 (7.87). The bar is divided into two segments: a dark gray segment labeled 'Sensing range' extending from 0 to 150 mm (5.91 inch), and a light gray segment labeled 'Sensing range max.' extending from 150 mm (5.91 inch) to 200 mm (7.87 inch). A circled '1' is located at the start of the bar (0 mm).

Distance (mm)	Distance (inch)	Range Type
0	0	Start
150	5.91	Sensing range max.
200	7.87	Sensing range max.

Technical drawing of a mechanical part, showing front and side views with dimensions in mm and inches.

Front View Dimensions:

- Overall width: 10 (0.39)
- Distance from left edge to center of hole 1: 5.5 (0.22)
- Radius of top right corner: 2.2 (0.09)
- Distance from top edge to center of hole 2: 4 (0.16)
- Distance from center of hole 2 to center of hole 1: 11 (0.43)
- Distance from center of hole 1 to bottom edge: 1 (0.04)
- Overall height: 27 (1.06)
- Radius of bottom right corner: 2.2 (0.09)
- Bottom hole diameter: $\varnothing 2.3$ (0.09)

Side View Dimensions:

- Overall width: 3.5 (0.14)

Feature Callouts:

- ①: Hole 1 (top left)
- ②: Hole 2 (center left)

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Subject to change without notice

Recommended accessories

Other models and accessories → www.sick.com/G2

	Brief description	Type	part no.
Mounting systems			
	Description: Mounting plate for direct mounting, from the rear, on wall or machine, not adjustable. 10 Piece ,Black ,Plastic, VISTAL®. Suitable for GTB2F and GSE2F Packing unit: 10 pieces	BEF-G2F-FLAT-SPACER-M2	2107263
connectors and cables			
	Connection type head A: Female connector, M8, 3-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 3-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF8U13-050VA1XLEAX	2095884
	Connection type head A: Male connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322

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