Data sheet

OPR20G-RB417537

Glare

GLARE SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
OPR20G-RB417537	1068823

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

Detailed technical data

Features

Sensor principle	Delta-S-Technology®
Dimensions (W x H x D)	42.5 mm x 44 mm x 43.4 mm
Sensing distance	≤ 50 mm
Sensing distance tolerance	± 5 mm
Housing design	Rectangular
Tilt angle tolerance	± 5°
Minimum detectable object (MDO)	12 x 14 mm
Light source	LED, Red [1]
Wave length	640 nm
Light spot size	10 mm x 12 mm
Object speed max.	2 m/s [2]
Sensitivity	Fine, middle, coarse
Adjustment	Potentiometer (Sensitivity (Q, Q/, teach-in)) [3] Cable, IO-Link (Teach-in / Keylock) [4] Single teach-in button (Teach-in)
Teach-in mode	Static 1-point teach-in Static 2-point teach-in Dynamic 2-point teach-in Static 3-point teach-in

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

[2] Minimum object size.

[3] HIGH = > V_S - 2 V / LOW = open or < 2 V.

[4] Default: keylock.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	≤ 5 V_{pp} [2]
Current consumption	< 150 mA [3]
Switching frequency	500 Hz [4]
Response time	1 ms [5]
Jitter	500 µs
Number of switching outputs	2 (Q_1, Q_2)
Switching output	Push-pull: PNP/NPN
Switching output (voltage)	Push-pull: PNP/NPN (High: V_S - 3 V, Low: < 3 V)
Output current $I_{max.}$	< 100 mA [6]
Initialization time	< 2.5 s
On delay	0 s ... 30 s
Off delay	0 s ... 30 s
Pulse duration	≤ 30 s
Connection type	Male connector M12, 5-pin
Circuit protection	A [7] C [8] D [9]
Protection class	III
Enclosure rating	IP67
Weight	130 g
Housing material	Plastic, ABS

[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] With light/dark ratio 1:1.
[5] Signal transit time with resistive load.
[6] Consumption count Q1 / Q2.
[7] A = V_S connections reverse-polarity protected.
[8] C = interference suppression.
[9] D = outputs overcurrent and short-circuit protected.

Communication interface

IO-Link	✓
VendorID	26
DeviceID HEX	800058
DeviceID DEC	8388696
Cycle time	2.3 ms
Process data structure	Bit 0 = switching signal Q_{L1} Bit 1 = switching signal Q_{L2} Bit 2 = Quality of Run Alarm Bit 3 = Teach successful Bit 4 = Teach busy Bit 5 ... 15 = empty

Ambient data

Ambient operating temperature	–10 °C ... +55 °C
Ambient temperature, storage	–25 °C ... +75 °C
Ambient light immunity	> 50 klx
Shock load	According to EN 60068-2-27, single shock (30 g/11 MS), continuous shock (25 g/11 MS)
UL File No.	NRKH.E181493

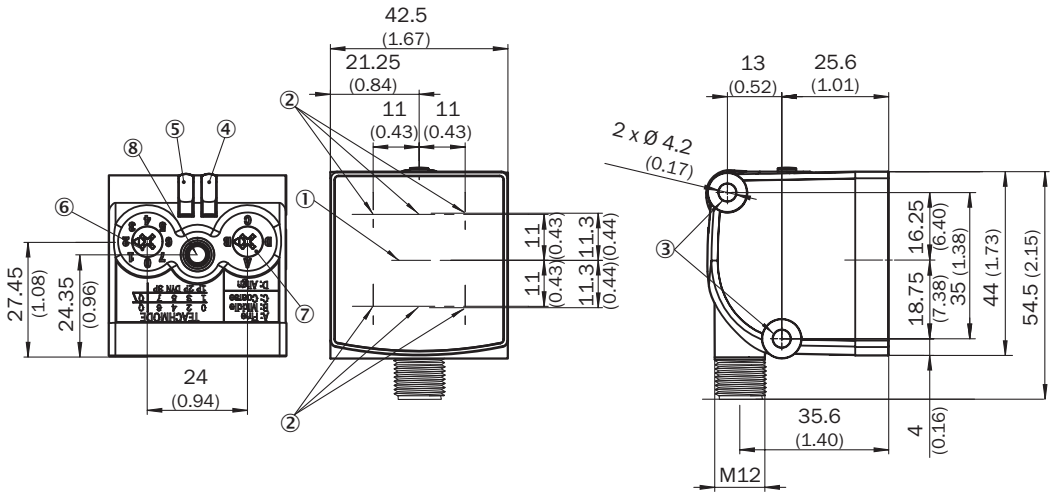
Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
IO-Link certificate	✓
Photobiological safety (IEC EN 62471)	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

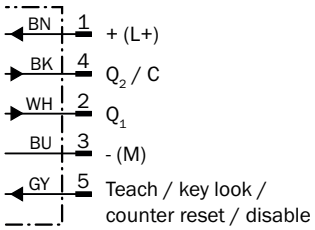
ECLASS 5.0	27270906
ECLASS 5.1.4	27270906
ECLASS 6.0	27270906
ECLASS 6.2	27270906
ECLASS 7.0	27270906
ECLASS 8.0	27270906
ECLASS 8.1	27270906
ECLASS 9.0	27270906
ECLASS 10.0	27270906
ECLASS 11.0	27270906
ECLASS 12.0	27270906
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820
ETIM 8.0	EC001820
UNSPSC 16.0901	39121528

Dimensional drawing



Dimensions in mm (inch)
① Center of optical axis, sender
② Center of optical axis, receiver
③ fixing hole
④ LED indicator green: Supply voltage active
⑤ Status indicator LED, yellow: Detection of gloss level 1
⑥ Teach-in mode, inverting switching output
⑦ Sensitivity adjustment (A, B, C) / Operating mode (D)
⑧ Teach-in button

Connection diagram Cd-281



Recommended accessories

Other models and accessories ➜ www.sick.com/Glare

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Plate N11N for universal clamp bracket • **Material:** Stainless steel • **Details:** Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) • **Items supplied:** Universal clamp (5322627), mounting hardware • **Usable for:** DeltaPac, Glare, WTD20E	BEF-KHS-N11N	2071081

	Brief description	Type	part no.
network devices			
		IOLA2US-01101 (SiLink2 Master)	1061790
		SIG200-0A0412200	1089794
		SIG200-0A0G12200	1102605

	Brief description	Type	part no.
connectors and cables			
	• **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YG2A15-020VB5XLEAX	2096215
	• **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YG2A15-050VB5XLEAX	2096216
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A15-020VB5XLEAX	2096239
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A15-050VB5XLEAX	2096240
	• **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 0.6 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YG2A15-C60VB5XLEAX	2145573
	• **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 1 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YG2A15-010VB5XLEAX	2145574
	• **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 3 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YG2A15-030VB5XLEAX	2145575
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 0.6 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A15-C60VB5XLEAX	2145570
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 3 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A15-030VB5XLEAX	2145572
	• **Connection type head A:** Male connector, M12, 5-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm² • **Note:** For field bus technology	STE-1205-G	6022083

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.”

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