G20

The reliable sensors in dusty environments and for applications with long sensing range

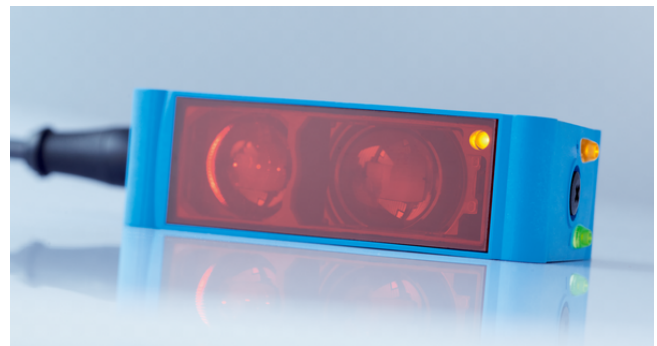**PHOTOELECTRIC SENSORS**

SICK
Sensor Intelligence.

Advantages

Extended range in a compact housing for DC and AC/DC applications

The G20 family of photoelectric sensors offers reliable object detection over extended distances. G20 sensors are compact, economical, and offer an outstanding price-performance ratio. Sensing range can be adjusted easily via sensitivity knob. In addition, they are fully installation compatible because DC and AC/DC devices are available in the same design and with various mechanical connections.

Extended range: compact and yet with the longest sensing range. G20 photoelectric sensors are used among other things in crane anticollision control tasks where long sensing ranges are required.

Flexibility: G20 sensors are available in four detection principles, three mechanical connection types, two electrical options of DC, AC/DC and optional adjustable signal delay. The comprehensive product family offers greatest flexibility with light/dark switching, sensitivity adjustment and various mechanical connections. All variants of G20 are mounting compatible. Only one bracket is needed.

Minimal effort with reliable object detection. The G20 family of photoelectric switches is characterized by high cost-effectiveness. This is due, among other things, to the attractive price/performance ratio, high level of flexibility and fast commissioning.
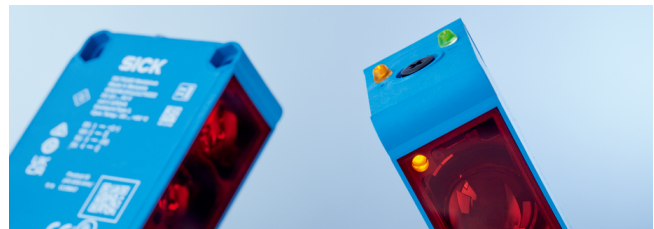
Made for dusty environments

Thanks to the high functional reserve, the G20 photoelectric sensors provide reliable operation, especially in dusty environments. This reduces plant downtime in the wood and steel industries, for example. The additional front LED and rotary switches make it easier to commission the system and check the functions. These stand-alone sensors can be used in a wide range of applications thanks to the light/dark changeover switch, adjustable sensitivity, and selectable signal delay as an option. Together with the superior price/performance ratio, this results in high cost-effectiveness.

High functional reserve: dusty and dirty environments? No problem, thanks to their huge functional reserve, the G20 sensors continue to detect reliably and thus reduce plant downtime.

Front LED: an additional front LED indicates the status of received light beam, even if it is installed some distance away. Thanks to the BrightLight LED, the highly visible red light also makes it easier to put the sensor into operation.

+ Simple commissioning and reliable sensor technology, even under challenging conditions. The G20 family of photoelectric sensors minimizes installation effort and plant downtime. Especially when dusty and dirty environments make detection difficult.

Technical data overview

Dimensions (W x H x D)	23.5 mm x 74.5 mm x 52.5 mm 23.5 mm x 74.5 mm x 63 mm
Light source	LED
Type of light	Visible red light / Infrared light (depending on type)
Enclosure rating	IP67
Housing material	Plastic
Adjustment	Potentiometer

Product description

The G20 sensors enable reliable object detection over longer distances and are particularly well-suited for use in dusty environments thanks to the high operating reserve. They are compact, economical and offer an excellent price-performance ratio. The additional front LED and the rotary switches facilitate commissioning and operational checks. The light/dark switching, adjustable sensitivity and configurable signal delay make the photoelectric sensors flexible for use in numerous applications. They are also fully compatible with each other in terms of mounting, as DC and AC/DC devices are available in the same design and with different mechanical mounting options.

At a glance

• Additional front LED provides information on light reception status
• Large sensing range with high operating reserve
• M12 male connector, cable and connection chamber
• DC and AC/DC voltage supply
• Operating temperature range from –30 °C to +60 °C
• Optionally with time delay

Your benefits

• Reduced downtime thanks to high reliability and operating reserve, especially in dirty environments
• Reliable object detection over longer distances
• Excellent price/performance ratio thanks to proven technology
• Intuitive and fast commissioning thanks to light/dark switching, additional front LED and adjustable signal delay
• Compact design and availability for DC and AC/DC ensure compatibility when it comes to installation

Ordering information

Other models and accessories → www.sick.com/G20

- **Sensing range min. / max.:** 0.005 m / 3 m
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Setting Method:** For setting the sensing range, 7 rotations

Switching output	Type of light	Connection type	Type	Part no.
Relay, SPDT, electrically isolated	Infrared light	Cable, 5-wire, 2 m	GTB20M-1IR-C1160ZZZ	1120798
		Terminal connection, 5 terminals	GTB20M-QL-RC1160ZZZ	1119846
	Visible red light	Cable, 5-wire, 2 m	GTB20G-1IR-C1160ZZZ	1119842
		Terminal connection, 5 terminals	GTB20G-QL-RC1160ZZZ	1119871
Push-pull: PNP/NPN	Infrared light	Cable, 4-wire, 2 m	GTB20M-1H111160ZZZ	1120795
		Male connector M12, 4-pin	GTB20M-24111160ZZZ	1119843
		Terminal connection, 4 terminals	GTB20M-QK111160ZZZ	1119844
	Visible red light	Cable, 4-wire, 2 m	GTB20G-1H111160ZZZ	1120789
		Male connector M12, 4-pin	GTB20G-24111160ZZZ	1119840
		Terminal connection, 4 terminals	GTB20G-QK111160ZZZ	1120790

- **Sensing range min. / max.:** 0.02 m / 2 m
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** LED
- **Type of light:** visible red light
- **Setting Method:** for sensitivity adjustment, 270°

Switching output	Connection type	Type	Part no.
Relay, SPDT, electrically isolated	Cable, 5-wire, 2 m	GTE20G-1IR-C1170ZZZ	1120835
	Terminal connection, 5 terminals	GTE20G-QL-RC1170ZZZ	1120836
Push-pull: PNP/NPN	Cable, 4-wire, 2 m	GTE20G-1H111170ZZZ	1120834
	Male connector M12, 4-pin	GTE20G-24111170ZZZ	1119847
	Terminal connection, 4 terminals	GTE20G-QK111170ZZZ	1119849

- **Sensing range min. / max.:** 0.005 m / 3.5 m
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** LED
- **Type of light:** Infrared light
- **Setting Method:** for sensitivity adjustment, 270°

Switching output	Connection type	Type	Part no.
Relay, SPDT, electrically isolated	Cable, 5-wire, 2 m	GTE20M-1IR-C1170ZZZ	1120839
	Terminal connection, 5 terminals	GTE20M-QL-RC1170ZZZ	1120840
Push-pull: PNP/NPN	Cable, 4-wire, 2 m	GTE20M-1H111170ZZZ	1120837
	Male connector M12, 4-pin	GTE20M-24111170ZZZ	1119850
	Terminal connection, 4 terminals	GTE20M-QK111170ZZZ	1120838

- **Sensing range min. / max.:** 0.03 m / 20 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Light source:** LED
- **Type of light:** visible red light
- **Setting Method:** for sensitivity adjustment, 270°

Switching output	Connection type	Type	Part no.
Relay, SPDT, electrically isolated	Cable, 5-wire, 2 m	GLD20G-1IR-C2170ZZZ	1119873
	Cable, 5-wire, 5 m	GLD20G-6IR-C2170ZZZ	1119874
	Terminal connection, 5 terminals	GLD20G-QL-RC2170ZZZ	1119876
Push-pull: PNP/NPN	Cable, 4-wire, 2 m	GLD20G-1H112170ZZZ	1119872
	Male connector M12, 4-pin	GLD20G-24112170ZZZ	1119870
	Terminal connection, 4 terminals	GLD20G-QK112170ZZZ	1120842

- **Sensing range min. / max.:** 0 m / 120 m
- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** LED
- **Setting Method:** for sensitivity adjustment, 270°

Switching output	Type of light	Connection type	Type	Part no.
Relay, SPDT, electrically isolated	Infrared light	Cable, 5-wire, 2 m	GSE20M-1IR-C2170ZZZ	1120854
		Terminal connection, 5 terminals	GSE20M-QL-RC2170ZZZ	1120855
	Visible red light	Cable, 5-wire, 2 m	GSE20G-1IR-C2170ZZZ	1120849
		Cable, 5-wire, 5 m	GSE20G-6IR-C2170ZZZ	1119933
		Terminal connection, 5 terminals	GSE20G-QL-RC2170ZZZ	1119878
Push-pull: PNP/NPN	Infrared light	Cable, 4-wire, 2 m	GSE20M-1H112170ZZZ	1120851
		Male connector M12, 4-pin	GSE20M-24112170ZZZ	1119879
		Terminal connection, 4 terminals	GSE20M-QK112170ZZZ	1120852
	Visible red light	Cable, 4-wire, 2 m	GSE20G-1H112170ZZZ	1120847
		Male connector M12, 4-pin	GSE20G-24112170ZZZ	1119877
		Terminal connection, 4 terminals	GSE20G-QK112170ZZZ	1120848

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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