G10

Powerful detection, smart installation - down to the last detail

SICK
Sensor Intelligence.

G10

Technical data overview

Dimensions (W x H x D)	20 mm x 50 mm x 39 mm 20 mm x 50 mm x 51.5 mm
Sensing range max.	
Photoelectric proximity sensor	20 mm ... 2,000 mm [1]
Photoelectric retro-reflective sensor	0.08 m ... 17 m [2] 0.08 m ... 12.5 m [3] 0.15 m ... 5 m [4]
Through-beam photoelectric sensor	0 m ... 80 m (depends on variant)
Light source	LED / PinPoint LED (depends on variant)
Type of light	Infrared light / visible red light (depends on variant)
Enclosure rating	IP67
Housing material	Plastic

[1] Object with 90% remission (based on standard white, DIN 5033).
[2] Reflector PL80A.
[3] Reflector P250.
[4] Reflective tape REF-IRF-56.

Product description

The G10 product family is characterized by optimum detection performance wherever space is at a premium. It supports numerous different options for optics, electronics, principles of operation, power supplies, and switching outputs. Combined with an extensive range of accessories, these sensors are able to support a wide variety of applications. The patented Q-Lock assembly system for the G10 reduces the time required to install and align the sensor with an assembly rod to just a few seconds, making this the ideal product for logistics applications. Summary: The G10 product family provides quick and flexible sensor installation, ensures error-free operation, and keeps costs under control.

At a glance

- Long sensing ranges: 1,200 mm with background suppression; 15 m on PL80A reflector
- PinPoint LED with bright and precise light spot
- Small housing design
- 10 ... 30 VDC or 24 ... 240 VAC/VDC power supply with PNP/NPN or relay output
- Rugged sensor housing with metal-reinforced holes for assembly
- Q-Lock assembly system for mounting the sensor within a few seconds

Your benefits

- Long sensing ranges for maximum operating reserves
- Efficient installation: The G10 and the Q-Lock assembly system save valuable hours when mounting and commissioning multiple sensors
- A single sensor family for all industrial and commercial fields of application
- Universal DC or AC/DC power supply for even greater application flexibility
- Highly reliable and durable despite optical interference or mechanical loads
- Wide range of accessories simplifies sensor integration: aids for assembly, connecting cables, and reflectors

Fields of application

- Logistics: Storage & Conveyor, especially pallet detection
- Machine builders (e.g. packaging, handling, wood processing, paper)
- Automotive
- Automated car park systems
- Doors and gates
- Distribution

Ordering information

Other models and accessories → www.sick.com/G10

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
20 mm … 1,200 mm	NPN	Potentiometer	Cable, 3-wire, 2 m [1]	GTB10-N1221	1108635
	PNP	Potentiometer	Cable with M12 male connector, 4-pin, 300 mm [1]	GTB10-P7221	1154487
			Cable with connector M8, 3-pin, 150 mm [1]	GTB10-P5221S21	1111570
			Cable, 3-wire, 2 m [1]	GTB10-P1221	1064695
			Male connector M12, 4-pin	GTB10-P4221	1081296
20 mm … 1,700 mm	PNP	Potentiometer	Male connector M12, 4-pin	GTB10-P4201S22	1112671

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
20 mm … 1,600 mm	PNP	Potentiometer	Male connector M12, 4-pin	GTB10-F4431S12	1102277

[1] Do not bend below 0 °C.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
20 mm ... 950 mm	NPN	Potentiometer	Cable, 3-wire, 2 m [1]	GTB10-N1211	1065858
				GTB10-N1212	1065859
			Male connector M12, 4-pin	GTB10-N4211	1065860
				GTB10-N4212	1065861
	PNP	Potentiometer	Cable with M12 male connector, 4-pin, 1.2 m	GTB10-P7211S06	1082828
			Cable with M12 male connector, 4-pin, 2.5 m [1]	GTB10-P7211S15	1109629
			Cable with M12 male connector, 4-pin, 300 mm [1]	GTB10-P7211	1068091
				GTB10-P7211P11	2099256
			Cable, 3-wire, 2 m [1]	GTB10-P1011S19	1110712
				GTB10-P1211	1065854
				GTB10-P1212	1065856
			Cable, 3-wire, 5 m [1]	GTB10-P8211	1070559
			Male connector M12, 4-pin	GTB10-P4210P10	1090375
				GTB10-P4211	1064694
				GTB10-P4212	1065857
				GTB10-P4214	1071686

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
–	PNP	None	Cable with connector, JST EHR-6, 6-pin, 350 mm [1]	GTB10-P0421S07	1083158
20 mm ... 1,200 mm	PNP	Potentiometer	Male connector M12, 4-pin	GTB10-F4421	1115948

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
20 mm ... 1,600 mm	PNP	Potentiometer	Cable with M12 male connector, 4-pin, 300 mm [1]	GTB10-F7431S14	1107223
20 mm ... 950 mm	NPN	Potentiometer	Cable, 3-wire, 2 m [1]	GTB10-N1411S02	1066853
	PNP	Potentiometer	Cable with M12 male connector, 4-pin, 300 mm [1]	GTB10-P7411S08	1084653
			Male connector M12, 4-pin	GTB10-F4411	1089223
				GTB10-F4412	1089224
				GTB10-P4401P04	1082388
				GTB10-P4401S05	1082228
				GTB10-P4411P03	1079318
				GTB10-P4411S01	1066852

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
20 mm ... 1,600 mm	PNP	Potentiometer	Male connector M12, 4-pin	GTB10-P4631S13	1102412
20 mm ... 950 mm	PNP	Potentiometer	Male connector M12, 4-pin	GTB10-P4001S23	1122172
				GTB10-P4611S03	1069042

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
20 mm ... 1,200 mm	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	GTB10-R3821	1065863
				GTB10-R3822	1065864
			Cable, 5-wire, 5 m [1]	GTB10-R9821	1084214
				GTB10-R9822	1084215

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** PinPoint LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
20 mm … 950 mm	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	GTB10-R3811	1064686
				GTB10-R3812	1065862

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
20 mm … 2,000 mm	NPN	Potentiometer	Cable, 3-wire, 2 m [1]	GTE10-N1221	1085297
	PNP	Potentiometer	Cable, 3-wire, 2 m [1]	GTE10-P1221	1085298
			Cable, 4-wire, 2 m [1]	GTE10-F2221	1102211
			Male connector M12, 4-pin	GTE10-F4221	1102212
				GTE10-F4221P14	1116285

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
20 mm … 1,300 mm	NPN	Potentiometer	Cable, 3-wire, 2 m [1]	GTE10-N1211	1065868
				GTE10-N1212	1065869
			Male connector M12, 4-pin	GTE10-N4211	1065871
				GTE10-N4212	1065872
	PNP	Potentiometer	Cable, 3-wire, 2 m [1]	GTE10-P1211	1065865
				GTE10-P1212	1065866
			Male connector M12, 4-pin	GTE10-P4211	1064697
				GTE10-P4212	1065867

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** PinPoint LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
20 mm ... 1,300 mm	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	GTE10-R3811	1064688
				GTE10-R3812	1065873

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Energetic
- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
20 mm ... 2,000 mm	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	GTE10-R3821	1065874
				GTE10-R3822	1065875

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0.08 m ... 15 m 0.08 m ... 12 m	NPN	Potentiometer	Cable, 3-wire, 2 m [1]	GL10-N1211	1065888
				GL10-N1212	1065889
			Male connector M12, 4-pin	GL10-N4211	1064700
				GL10-N4212	1065891
		None	Cable, 3-wire, 2 m [1]	GL10-N1111	1065880
				GL10-N1112	1065882
			Male connector M12, 4-pin	GL10-N4111	1065883
				GL10-N4112	1065884

[1] Do not bend below 0 °C.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
	PNP	Potentiometer	Cable with M12 male connector, 4-pin, 1.2 m [1]	GL10-P0211S17	1117145
			Cable with M12 male connector, 4-pin, 300 mm [1]	GL10-P7210P08	1101319
				GL10-P7211	1071510
			Cable, 3-wire, 2 m [1]	GL10-P1211	1065885
				GL10-P1212	1065886
			Male connector M12, 4-pin	GL10-P4211	1065890
				GL10-P4212	1065887
		None	Cable with M12 male connector, 4-pin, 300 mm [1]	GL10-P7111	1120776
			Cable, 3-wire, 2 m [1]	GL10-P1111	1065876
				GL10-P1112	1065877
			Cable, 3-wire, 5 m [1]	GL10-P8110P18	1126961
				GL10-P8111	1071896
				GL10-P8112	1071897
			Male connector M12, 4-pin	GL10-F4111	1095246
				GL10-P4110P03	1071687
				GL10-P4110P14	1121079
				GL10-P4111	1065878
				GL10-P4112	1065879
	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	GL10-03811S01	1069477
				GL10-03812S02	1074294

[1] Do not bend below 0 °C.

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0.15 m ... 12 m 0.15 m ... 10 m	NPN	Potentiometer	Cable, 3-wire, 2 m [1]	GL10G-N1250P09	1101721
				GL10G-N1251	1064705
				GL10G-N1252	1065895
			Male connector M12, 4-pin	GL10G-N4251	1138263
	PNP	Potentiometer	Cable with M12 male connector, 4-pin, 300 mm [1]	GL10G-P7251	1151295
			Male connector M12, 4-pin	GL10G-P4251	1064704
				GL10G-P4252	1065894
		None	Cable with M12 male connector, 4-pin, 300 mm [1]	GL10-F7551	1077821
				GL10-F7551P07	2099257
				GL10-P7151	1089963
			Male connector M12, 4-pin	GL10-F4550P10	1102512
				GL10-F4550P12	1105478
				GL10-F4550P13	1114550
				GL10-F4551	1071153
				GL10-F4551P05	1081472
				GL10-F4554	1071170
				GL10-P4151	1069860
				GL10-P4151P02	1069937
0.15 m ... 17 m 0.15 m ... 12.5 m	PNP	Potentiometer	Male connector M12, 4-pin	GL10-F4631S11	1102890
				GL10-F4633S12	1102891
0.15 m ... 17 m 0.15 m ... 5 m	PNP	Potentiometer	Cable with M12 male connector, 4-pin, 300 mm [1]	GL10-F7431S08	1102887
		None	Male connector M12, 4-pin	GL10-F4531S09	1102888
0.1 m ... 8 m 0.1 m ... 6.4 m	PNP	None	Male connector M12, 4-pin	GL10-P4101P15	1123872

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0.08 m ... 15 m 0.08 m ... 12.5 m	NPN	Potentiometer	Cable, 3-wire, 2 m [1]	GL10-N1221	1064701

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0.08 m ... 15 m 0.08 m ... 12 m	PNP	None	Cable with M12 male connector, 4-pin, 300 mm [1]	GL10-P7313	1124568
			Male connector M12, 4-pin	GL10-P4311	1130251
0.15 m ... 12 m 0.15 m ... 10 m	PNP	None	Cable with M12 male connector, 4-pin, 300 mm [1]	GL10-P7351	1084654
				GL10-P7351S05	1084772

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0.15 m ... 12 m 0.15 m ... 10 m	NPN	None	Cable, 3-wire, 2 m [1]	GL10-N1551	1065892
	PNP	None	Cable with M12 male connector, 4-pin, 1.2 m [1]	GL10-P7551S03	1082829
			Cable with M12 male connector, 4-pin, 2.5 m [1]	GL10-P7551S16	1109630
			Cable with M12 male connector, 4-pin, 300 mm [1]	GL10-P7551	1069046
				GL10-P7551S04	1084771
			Male connector M12, 4-pin	GL10-P4551	1064702
				GL10-P4551P04	1079315
				GL10-P4551P06	1082709
				GL10-P4554	1065893
0.15 m ... 17 m 0.15 m ... 5 m	PNP	None	Cable with plug M12, 5-pin, 300 mm [1]	GL10-00531S13	1102892
			Male connector M12, 4-pin	GL10-P4531S10	1102889
0.1 m ... 8 m 0.1 m ... 6.4 m	PNP	None	Male connector M12, 4-pin	GL10-P4551S06	1085726

[1] Do not bend below 0 °C.

- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Light source:** PinPoint LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0.08 m ... 15 m 0.08 m ... 12 m	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	GL10-R3811	1064689
				GL10-R3811S07	1087004
				GL10-R3812	1065898
			Cable, 5-wire, 5 m [1]	GL10-R9811	1076129
				GL10-R9811P16	1125850
				GL10-R9812	1076130
		None	Cable, 5-wire, 2 m [1]	GL10-R3711	1065896
				GL10-R3712	1065897

[1] Do not bend below 0 °C.

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** PinPoint LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 40 m	NPN	Potentiometer	Cable, 3-wire, 2 m [1]	GSE10-N1211	1065904
				GSE10-N1212	1065905
			Male connector M12, 4-pin	GSE10-N4211	1088390
		None	Cable, 3-wire, 2 m [1]	GSE10-N1111	1065901
				GSE10-N1112	1065902
	PNP	Potentiometer	Cable, 3-wire, 2 m [1]	GSE10-P1211	1070734
				GSE10-P1212	1070732
			Male connector M12, 4-pin	GSE10-P4211	1064706
				GSE10-P4212	1065903
		None	Cable with M12 male connector, 4-pin, 300 mm [1]	GSE10-P7111	1120777
			Cable, 3-wire, 2 m [1]	GSE10-P1111	1071898
				GSE10-P1112	1071899
			Male connector M12, 4-pin	GSE10-P4111	1065899
				GSE10-P4111P01	1082728
				GSE10-P4112	1065900
0 m ... 80 m	NPN	Potentiometer	Cable, 3-wire, 2 m [1]	GSE10-N1231S01	1095561

[1] Do not bend below 0 °C.

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** LED
- **Voltage type:** DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 40 m	NPN	Potentiometer	Cable, 3-wire, 2 m [1]	GSE10-N1221	1065908
				GSE10-N1222	1065909
	PNP	Potentiometer	Male connector M12, 4-pin	GSE10-P4221	1065906
				GSE10-P4222	1065907

[1] Do not bend below 0 °C.

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** PinPoint LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 40 m	Relay	Potentiometer	Cable, 5-wire, 2 m [1]	GSE10-R3811	1064691
				GSE10-R3812	1065912
			Cable, 5-wire, 5 m [1]	GSE10-R9812	1105594
		None	Cable, 5-wire, 2 m [1]	GSE10-R3711	1065910
				GSE10-R3712	1065911

[1] Do not bend below 0 °C.

- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** LED
- **Voltage type:** AC/DC
- **Switching mode:** Light/dark switching
- **Type of light:** Infrared light

Sensing range max.	Switching output	Adjustment	Connection type	Type	Part no.
0 m ... 40 m	Relay	None	Cable, 5-wire, 2 m [1]	GSE10-R3721	1065913
				GSE10-R3722	1065914

[1] Do not bend below 0 °C.

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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