M12 Flush Capacitive Proximity Sensors 1–6 mm



M12 flush capacitive proximity sensors. Rated sensing distances adjustable 1–3 mm, 1–6 mm; NPN, PNP outputs; 2 m cable, M12 connector. 36 part numbers, each a fixed SEGMENsensor order code.

Sensing distance **1–6 mm** Outputs **NPN • PNP**

Connection **2 m cable • M12 connector** Part numbers **36**

Key facts

- Rated sensing distances: adjustable 1–3 mm, 1–6 mm.
- Supply: 10–30 V DC.
- Outputs: NPN, PNP. 12 NPN/PNP models have complementary NO + NC outputs.
- Connections: 2 m cable (24), M12 connector (12). Housing: Nickel-plated brass (24), PBT (12).
- Qualification samples of 1–5 pcs ship in 5–7 days; production is planned around your annual volume.

Family data

Housing	M12 thread, Nickel-plated brass (24), PBT (12)
Mounting	Flush (embeddable)
Rated sensing distance	adjustable 1–3 mm, 1–6 mm
Outputs	NPN, PNP
Supply	10–30 V DC
Connection	2 m cable, M12 connector
Targets	Metal and non-metal materials
Other electrical data	Per part-number datasheet, sent with the quotation

Reading the part number

SGC-GP12S-A060PA-C2

SGC SEGMENsensor capacitive

12 · S M12 flush (U = non-flush)

P · A PNP • NO (N = NPN, P = PNP, D = DC 2-wire, J = AC 2-wire, U = AC/DC; A = NO, B = NC, C = NO + NC)

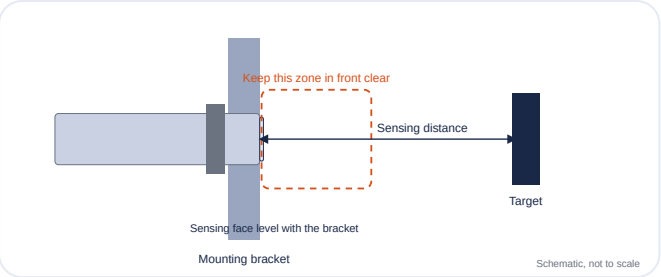
+ PL = plastic housing

GP General-purpose series

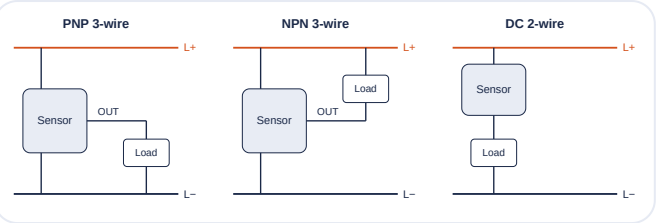
A060 Sensing distance in 0.1 mm: 1–6 mm (adj.); A = adjustable

C2 C2 = 2 m cable, Q4 = M12 connector

Mounting



Wiring



All part numbers

Part number	Sensing distance	Output	Supply	Connection	Housing
SGC-GP12S-A030NA-C2	1–3 mm (adj.)	NPN NO	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A030NA-C2-PL	1–3 mm (adj.)	NPN NO	10–30 V DC	2 m cable	PBT
SGC-GP12S-A030NA-Q4	1–3 mm (adj.)	NPN NO	10–30 V DC	M12 connector	Nickel-plated brass
SGC-GP12S-A030NB-C2	1–3 mm (adj.)	NPN NC	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A030NB-C2-PL	1–3 mm (adj.)	NPN NC	10–30 V DC	2 m cable	PBT
SGC-GP12S-A030NB-Q4	1–3 mm (adj.)	NPN NC	10–30 V DC	M12 connector	Nickel-plated brass
SGC-GP12S-A030NC-C2	1–3 mm (adj.)	NPN NO + NC	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A030NC-C2-PL	1–3 mm (adj.)	NPN NO + NC	10–30 V DC	2 m cable	PBT
SGC-GP12S-A030NC-Q4	1–3 mm (adj.)	NPN NO + NC	10–30 V DC	M12 connector	Nickel-plated brass
SGC-GP12S-A030PA-C2	1–3 mm (adj.)	PNP NO	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A030PA-C2-PL	1–3 mm (adj.)	PNP NO	10–30 V DC	2 m cable	PBT
SGC-GP12S-A030PA-Q4	1–3 mm (adj.)	PNP NO	10–30 V DC	M12 connector	Nickel-plated brass
SGC-GP12S-A030PB-C2	1–3 mm (adj.)	PNP NC	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A030PB-C2-PL	1–3 mm (adj.)	PNP NC	10–30 V DC	2 m cable	PBT
SGC-GP12S-A030PB-Q4	1–3 mm (adj.)	PNP NC	10–30 V DC	M12 connector	Nickel-plated brass
SGC-GP12S-A030PC-C2	1–3 mm (adj.)	PNP NO + NC	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A030PC-C2-PL	1–3 mm (adj.)	PNP NO + NC	10–30 V DC	2 m cable	PBT
SGC-GP12S-A030PC-Q4	1–3 mm (adj.)	PNP NO + NC	10–30 V DC	M12 connector	Nickel-plated brass
SGC-GP12S-A060NA-C2	1–6 mm (adj.)	NPN NO	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A060NA-C2-PL	1–6 mm (adj.)	NPN NO	10–30 V DC	2 m cable	PBT
SGC-GP12S-A060NA-Q4	1–6 mm (adj.)	NPN NO	10–30 V DC	M12 connector	Nickel-plated brass
SGC-GP12S-A060NB-C2	1–6 mm (adj.)	NPN NC	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A060NB-C2-PL	1–6 mm (adj.)	NPN NC	10–30 V DC	2 m cable	PBT
SGC-GP12S-A060NB-Q4	1–6 mm (adj.)	NPN NC	10–30 V DC	M12 connector	Nickel-plated brass
SGC-GP12S-A060NC-C2	1–6 mm (adj.)	NPN NO + NC	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A060NC-C2-PL	1–6 mm (adj.)	NPN NO + NC	10–30 V DC	2 m cable	PBT
SGC-GP12S-A060NC-Q4	1–6 mm (adj.)	NPN NO + NC	10–30 V DC	M12 connector	Nickel-plated brass
SGC-GP12S-A060PA-C2	1–6 mm (adj.)	PNP NO	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A060PA-C2-PL	1–6 mm (adj.)	PNP NO	10–30 V DC	2 m cable	PBT
SGC-GP12S-A060PA-Q4	1–6 mm (adj.)	PNP NO	10–30 V DC	M12 connector	Nickel-plated brass

Part number	Sensing distance	Output	Supply	Connection	Housing
SGC-GP12S-A060PB-C2	1–6 mm (adj.)	PNP NC	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A060PB-C2-PL	1–6 mm (adj.)	PNP NC	10–30 V DC	2 m cable	PBT
SGC-GP12S-A060PB-Q4	1–6 mm (adj.)	PNP NC	10–30 V DC	M12 connector	Nickel-plated brass
SGC-GP12S-A060PC-C2	1–6 mm (adj.)	PNP NO + NC	10–30 V DC	2 m cable	Nickel-plated brass
SGC-GP12S-A060PC-C2-PL	1–6 mm (adj.)	PNP NO + NC	10–30 V DC	2 m cable	PBT
SGC-GP12S-A060PC-Q4	1–6 mm (adj.)	PNP NO + NC	10–30 V DC	M12 connector	Nickel-plated brass

Questions and answers

What can an M12 capacitive proximity sensor detect?

Capacitive sensors detect both metal and non-metal targets, for example liquids, wood, plastics and paper. The switching distance depends on the target material, so test with your actual material before fixing the position.

What does flush mean for an M12 sensor?

A flush (shielded) sensor can be mounted level with the surrounding metal; keep the area in front of the sensing face clear.

Which sensing distances are available?

This family has 36 part numbers with these rated sensing distances: adjustable 1–3 mm, 1–6 mm.

Which supply voltages are available?

Supply ranges in this family: 10–30 V DC.

Which connections are available?

Connection options: 2 m cable (24 models), M12 connector (12 models).

Can I order with the SEGMENsensor part number?

Yes. Each part number is one fixed configuration. Click Quote in the model table or enter the part number in the form; the datasheet and lead time are confirmed with the quotation.

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