V12-2

Space-saving photoelectric sensors enclosed in a M12 housing

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Technical data overview

Dimensions (W x H x D)	12 mm x 12 mm x 54.5 mm 12 mm x 12 mm x 65.5 mm 12 mm x 12 mm x 55 mm 12 mm x 12 mm x 66 mm 12 mm x 12 mm x 55.3 mm 12 mm x 12 mm x 66.3 mm
Sensing range max.	0 mm … 115 mm [1] 0 mm … 340 mm [1] 0.03 m … 2.8 m [2] 0 m … 5 m
Light source	LED
Type of light	Infrared light / visible red light (depending on type)
Enclosure rating	IP67
Housing material	Metal Nickel-plated brass/PA
Adjustment	Single teach-in button Sensing range [3] Selectable via control input C Sensing range [4] None

[1] Object with 90 % reflectance (referred to standard white, DIN 5033).
[2] Reflector PL80A.
[3] Manual, via teach-in button.
[4] Electronically via control input C (0 V).

Product description

The V12 photoelectric sensor has a 12 mm housing that fits into confined spaces where installation space is at a premium, such as in tool and die detection. Two teach-in modes enable the sensor to solve various application solutions — one teach-in mode for standard applications and a precise mode for small movements. The compact V12 sensor is ideal for parts detection in the metal-forming and robotics industry. These sensors feature a variety of flexible options, including alternative connection systems (M12 connector or connecting cable), choice of interface (10 - 30 V DC, PNP or NPN output, light or dark switching output), and high switching frequencies. Many variants offer an operating reserve indicator to provide assistance during commissioning and maintenance. Plus, their rugged metal housing and large operating temperatures from –25 °C to +70 °C make them able to withstand harsh environments.

At a glance

• M12 metal housing with an IP 67 enclosure rating
• Long sensing distances, short response times
• 2 teach-in modes: Standard teach mode for basic applications and precise teach mode with small hysteresis for special applications
• Adjustable light or dark switching as complementary outputs
• PNP or NPN output available
• Complements inductive sensor portfolio with an M12 housing
• 4-pin M12 connector or 2 m cable

Your benefits

• Standard M12 miniature housing saves installation space on the machine
• Simple design and time-saving installation due to a standard M12 housing
• Operating reserve display simplifies commissioning and saves maintenance time
• Standardized connection technology and broad application use
• Fast response times ensure reliable detection of objects at high speeds, increasing machine throughput
• Tough metal housing provides a long service life, reducing maintenance time and costs

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Product family overview | 2021-05-01 01:23:42
Subject to change without notice

Ordering information

Other models and accessories → www.sick.com/V12-2

- **Sensor principle:** Photoelectric proximity sensor
- **Detection principle:** 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.
0 mm … 115 mm	NPN	Teach-in button, cable	Cable, 4-wire, 2 m [1]	VT12T-2N112	6026209
			Male connector M12, 4-pin	VT12T-2N410	6026210
	PNP	Teach-in button, cable	Cable, 4-wire, 2 m [1]	VT12T-2P112	6026211
			Male connector M12, 4-pin	VT12T-2P410	6026212
0 mm … 340 mm	NPN	Teach-in button, cable	Cable, 4-wire, 2 m [1]	VT12T-2N132	6026213
			Male connector M12, 4-pin	VT12T-2N430	6026214
	PNP	Teach-in button, cable	Cable, 4-wire, 2 m [1]	VT12T-2P132	6026215
			Male connector M12, 4-pin	VT12T-2P430	6026216

[1] Do not bend below 0 °C.

- **Sensor principle:** Photoelectric proximity sensor
- **Detection principle:** Energetic
- **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.
0 mm … 115 mm	PNP	None	Cable, 3-wire, 4 m [1]	VT12-2P110S01	6034337

[1] Do not bend below 0 °C.

- **Sensor principle:** Photoelectric retro-reflective sensor
- **Light source:** 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.
0.03 m … 2.8 m	NPN	None	Cable, 4-wire, 2 m [1]	VL12-2N132	6026217
			Male connector M12, 4-pin	VL12-2N430	6026218
	PNP	None	Cable, 4-wire, 2 m [1]	VL12-2P132	6026219
			Male connector M12, 4-pin	VL12-2P430	6026220

[1] Do not bend below 0 °C.

- **Sensor 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 ... 5 m	NPN	None	Cable, 4-wire, 2 m [1]	VS/VE12-2N132	6026221
			Male connector M12, 4-pin	VS/VE12-2N430	6026222
	PNP	None	Cable, 4-wire, 2 m [1]	VS/VE12-2P132	6026223
			Male connector M12, 4-pin	VS/VE12-2P430	6026224

[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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