Reflex Array

The photoelectric sensor with the 2D light array: multifaceted and economical

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Advantages

Easy and fast alignment thanks to PinPoint LED

Thanks to PinPoint LED, the light array of the Reflex Array MultiTask photoelectric sensor is highly visible. After aligning the photoelectric sensor, all that is required is to teach in the sensor, and then it is ready for detection.

Reflex Array

RAY10: Good visibility of the light array on the reflector

RAY26: Good visibility of the light array on the reflector

➕ Thanks to fast alignment and easy adjustment, the commissioning time of the photoelectric sensor is very brief

Predictive maintenance

During operation, blue LEDs indicate the degree of contamination of the sensor and reflector. IO-Link enables corresponding data transfer to the PLC. This ensures that maintenance or cleaning of the device is scheduled in a timely manner. This prevents unwanted downtimes.

Reflex Array

BluePilot for RAY10: The shorter the distance of the blue LEDs from each other, the higher the degree of contamination is
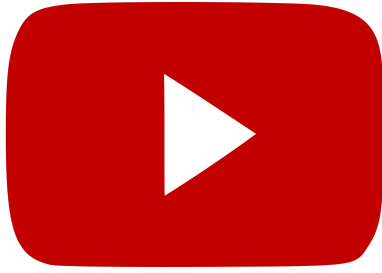

BluePilot for RAY26: The shorter the distance of the blue LEDs from each other, the higher the degree of contamination is
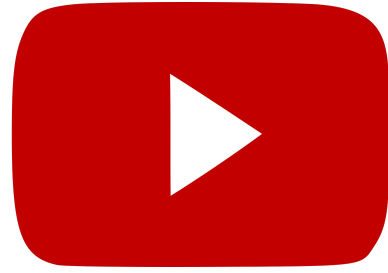
➕ Predictive maintenance prevents downtimes

Conveyor belt suppression

Conveyor belt suppression enables gradual deactivation of the detection zone (A) right above the conveyor belt. This suppresses the interference of the conveyor belt that causes the sensor to switch during system operation.

Conveyor belt suppression, manually

Conveyor belt suppression, via IO-Link

✚ Ensure plant availability quickly and easily with conveyor belt suppression

Technical data overview

Dimensions (W x H x D)	24.6 mm x 80 mm x 54.2 mm 21.5 mm x 36 mm x 37.7 mm 24.6 mm x 82.5 mm x 53.3 mm
Light source	PinPoint LED
Type of light	Visible red light
Enclosure rating	IP67 / IP66 / IP67 (depending on type)
Housing material	Plastic
Adjustment	Teach-in button / Potentiometer (depending on type)

Product description

In combination with a reflector, the Reflex Array MultiTask photoelectric sensor detects leading edges of small, flat, transparent or unevenly formed objects on conveyor belts within its light array. Detection takes place regardless of where and how the objects are positioned on a conveyor belt. The photoelectric sensor reliably detects objects such as glass bottles and polybags. The Reflex Array can even detect perforated objects easily without triggering multiple switching operations. This reduces the overall costs and accelerates the commissioning process. Compared to other solutions that involve use of individual photoelectric sensors or small light grids, Reflex Array offers substantial cost benefits.

At a glance

- RAY10: 25 mm-high light array, detects objects ≥ 5 mm
- RAY26: 55 mm-high light array, three variants, detects objects ≥ 3 mm, ≥ 5 mm or ≥ 10 mm
- Display for predictive maintenance on the sensor; transmits maintenance signals to the PLC via IO-Link
- Conveyor belt suppression for RAY26

Your benefits

- Reduces the overall costs for detection by up to 50% compared to other solutions
- Detection of objects with a size of ≥ 1 mm in a 20 mm-high light array or ≥ 3 mm, ≥ 5 mm or ≥ 10 mm in a 55 mm-high light array or ≥ 5 mm in a 25 mm-high light array
- Conveyor belt suppression: Manual or via IO-Link
- PinPoint LED enables great visibility of the light array and easy and fast optical alignment
- Predictive maintenance using AutoAdapt reduces downtime

Fields of application

- Conveyor belts: Detection of small, flat, perforated, unevenly formed or transparent objects
- Automotive industry
- Electronics industry
- Food and beverage industry
- Logistics
- Steel industry
- Wood industry

Reflex Array
PHOTOELECTRIC SENSORS

Ordering information

Other models and accessories ➔ www.sick.com/Reflex_Array

- **Minimum object size:** ≥ 12 mm
- **Sensing range max.:** 0 m ... 4.5 m, 0 m ... 2 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light
- **Adjustment:** Teach-in button

Switching output	Connection type	Type	Part no.
NPN	Cable with M12 male connector, 4-pin, 270 mm [1]	WL27-3N3402S23	1072772
	Cable, 4-wire, 2 m [1]	WL27-3N1102S25	1072979
PNP	Cable with M12 male connector, 4-pin, 270 mm [1]	WL27-3P3402S13	1046538
	Cable, 4-wire, 2 m [1]	WL27-3P1102S16	1050825
	Male connector M12, 4-pin	WL27-3P2402S18	1051577

[1] Do not bend below 0 °C.

- **Minimum object size:** ≥ 5 mm
- **Sensing range max.:** 0 m ... 1.5 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light
- **Adjustment:** Teach-in button

Switching output	Connection type	Type	Part no.
–	Cable with M12 male connector, 4-pin, 270 mm [1]	WL27-3N3402S24	1072773
NPN	Cable, 4-wire, 2 m [1]	WL27-3N1102S26	1072981
PNP	Cable with M12 male connector, 4-pin, 270 mm [1]	WL27-3P3402S17	1051529

[1] Do not bend below 0 °C.

- **Minimum object size:** ≥ 8 mm
- **Sensing range max.:** 0 m ... 4.5 m, 0 m ... 2 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching output:** PNP

Switching mode	Type of light	Adjustment	Connection type	Type	Part no.
Light/dark switching	Visible red light	Teach-in button	Cable with M12 male connector, 4-pin, 270 mm [1]	WL27-3P3402S20	1060755

[1] Do not bend below 0 °C.

- **Minimum object size:** ≥ 2 mm
- **Sensing range max.:** 0 m ... 1.5 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching output:** PNP

Switching mode	Type of light	Adjustment	Connection type	Type	Part no.
Light/dark switching	Visible red light	Teach-in button	Cable with M12 male connector, 4-pin, 270 mm [1]	WL27-3P3402S21	1061706

[1] Do not bend below 0 °C.

- **Minimum object size:** ≥ 16 mm
- **Sensing range max.:** 0 m ... 4.5 m, 0 m ... 2 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching output:** PNP

Switching mode	Type of light	Adjustment	Connection type	Type	Part no.
Light/dark switching	Visible red light	Teach-in button	Cable with M12 male connector, 4-pin, 270 mm [1]	WL27-3P3402S15	1048230

[1] Do not bend below 0 °C.

- **Minimum object size:** ≥ 5 mm
- **Sensing range max.:** 0 m ... 1.5 m
- **Detection height:** 25 mm
- **Functional principle detail:** Dual lens, Reflex Array
- **Functional principle:** Photoelectric retro-reflective sensor
- **Type of light:** visible red light
- **Adjustment:** Potentiometer

Switching output	Switching mode	Connection type	Type	Part no.
PNP	Dark switching	Cable with M8 male connector, 4-pin, 1,000 mm [1]	RAY10-KZ3EBLP06	1098291
	Light switching	Cable with M8 male connector, 4-pin, 1 m [1]	RAY10-PZ3EBL	1100989
		Cable with M8 male connector, 4-pin, 300 mm [1]	RAY10-PZ3CBL	1102078

[1] Do not bend below 0 °C.

Switching output	Switching mode	Connection type	Type	Part no.
Push-pull: PNP/NPN	Light switching	Cable with M12 male connector, 4-pin, 300 mm [1]	RAY10-AT4CBL	1102079
	Light/dark switching	Cable with M12 male connector, 4-pin, 1 m [1]	RAY10-AB4EBL	1093749
			RAY10-AB4EBLA00	1096103
		Cable with M12 male connector, 4-pin, 300 mm [1]	RAY10-AB4CBL	1091724
			RAY10-AB4CBLA00	1096100
		Cable, 4-wire, 2 m [1]	RAY10-AB1GBLA00	1095884
		Cable with flying leads, 4-wire, 2 m [1]	RAY10-AB1GBL	1093745
		Cable with male connector M8, 4-pin, snap, 1 m [1]	RAY10-AB5EBL	1093746
			RAY10-AB5EBLA00	1096101
		Cable with male connector M8, 4-pin, snap, 300 mm [1]	RAY10-AB5CBL	1093747
			RAY10-AB5CBLA00	1096102

[1] Do not bend below 0 °C.

- **Minimum object size:** ≥ 1 mm
- **Sensing range max.:** 0 m … 1.5 m
- **Detection height:** 20 mm
- **Functional principle detail:** autocollimation, Reflex Array
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light
- **Adjustment:** Teach-in button

Switching output	Connection type	Type	Part no.
PNP	Male connector M12, 4-pin	RAY26P-24862130A00	1120666
Push-pull: PNP/NPN	Cable with M12 male connector, 4-pin, 270 mm [1]	RAY26P-34162130A00	1106994
	Male connector M12, 4-pin	RAY26P-24162130A00	1106993

[1] Do not bend below 0 °C.

- **Minimum object size:** ≥ 3 mm, ≥ 5 mm, ≥ 10 mm
- **Sensing range max.:** 0 m, 0 m, 0 m … 2 m, 3 m, 4.5 m
- **Detection height:** 55 mm
- **Functional principle detail:** autocollimation, Reflex Array
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light
- **Adjustment:** Teach-in button

Switching output	Connection type	Type	Part no.
PNP	Cable with M12 male connector, 4-pin, 270 mm [1]	RAY26P-34862330A00	1120665
Push-pull: PNP/NPN		RAY26P-34162330A00	1221943
	Cable, 4-wire, 2 m [1]	RAY26P-1H162330A00	1221945
	Male connector M12, 4-pin	RAY26P-24162330A00	1221060

[1] Do not bend below 0 °C.

- **Minimum object size:** ≥ 5 mm
- **Sensing range max.:** 0 m … 3 m
- **Detection height:** 55 mm
- **Functional principle detail:** autocollimation, Reflex Array
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light
- **Adjustment:** Teach-in button

Switching output	Connection type	Type	Part no.
PNP	Cable with M12 male connector, 4-pin, 270 mm [1]	RAY26P-34862530A00	1121881
Push-pull: PNP/NPN		RAY26P-34162530A00	1221947
	Cable, 4-wire, 2 m [1]	RAY26P-1H162530A00	1221948
	Male connector M12, 4-pin	RAY26P-24162530A00	1221946

[1] Do not bend below 0 °C.

- **Minimum object size:** ≥ 10 mm
- **Sensing range max.:** 0 m ... 4.5 m
- **Detection height:** 55 mm
- **Functional principle detail:** autocollimation, Reflex Array
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light
- **Adjustment:** Teach-in button

Switching output	Connection type	Type	Part no.
PNP	Cable with M12 male connector, 4-pin, 270 mm [1]	RAY26P-34862930A00	1121370
Push-pull: PNP/NPN		RAY26P-34162930A00	1221950
		RAY26P-34162A30A00	1111102
			1113471
	Cable, 4-wire, 2 m [1]	RAY26P-1H162930A00	1221951
	Male connector M12, 4-pin	RAY26P-24162930A00	1221949

[1] Do not bend below 0 °C.

- **Minimum object size:** ≥ 2 mm
- **Sensing range max.:** 0 m ... 1.5 m
- **Detection height:** 10 mm
- **Functional principle detail:** autocollimation, Reflex Array
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching output:** push-pull: PNP/NPN

Switching mode	Type of light	Adjustment	Connection type	Type	Part no.
Light/dark switching	Visible red light	Teach-in button	Cable with M12 male connector, 4-pin, 270 mm [1]	RAY26P-34112C30ZZZ	1121282

[1] Do not bend below 0 °C.

- **Minimum object size:** ≥ 5 mm
- **Sensing range max.:** 0 m ... 4.5 m
- **Detection height:** 24 mm
- **Functional principle detail:** autocollimation, Reflex Array
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching output:** push-pull: PNP/NPN

Switching mode	Type of light	Adjustment	Connection type	Type	Part no.
Light/dark switching	Visible red light	Teach-in button	Cable with M12 male connector, 4-pin, 270 mm [1]	RAY26P-34137B30ZZZ	1121281

[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.

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For us, that is "Sensor Intelligence."

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