



RAY26P-34162330A00

Reflex Array

MULTITASK PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	Part no.
RAY26P-34162330A00	1221943

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



Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor, autocollimation Reflex Array
Dimensions (W x H x D)	24.6 mm x 82.5 mm x 53.3 mm
Housing design (light emission)	Rectangular
Minimum object size	3 mm, position-independent detection within the light array (factory setting) ¹⁾ 5 mm, position-independent detection within the light array ¹⁾ 10 mm, position-independent detection within the light array ¹⁾
Detection height	55 mm
Sensing range max.	0 m ... 2 m ^{2) 3)} 0 m ... 3 m ^{2) 4)} 0 m ... 4.5 m ^{2) 5)}
Distance of the sensor to reflector	≥ 0 m
Type of light	Visible red light
Light source	PinPoint LED ⁶⁾
Light spot size (distance)	55 mm x 9 mm (1 m)

¹⁾ Adjustable via IO-Link incl. adjustable conveyor belt suppression.

²⁾ Reflector PL80A.

³⁾ At minimum object size 3 mm.

⁴⁾ At minimum object size 5 mm.

⁵⁾ At minimum object size 10 mm.

⁶⁾ Average service life: 100,000 h at T_U = +25 °C.

Wave length	635 nm
Adjustment	BluePilot: Teach-in IO-Link
Pin 2 configuration	External Input (test), Teach-in, switching signal
AutoAdapt	✓
Special applications	Detecting objects with position tolerances, Detecting perforated objects, Detecting uneven, shiny objects, Detecting transparent objects, Detecting flat objects

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4) At minimum object size 5 mm.

5) At minimum object size 10 mm.

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Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	$\leq 5 V_{pp}$
Power consumption	25 mA ²⁾ 40 mA ³⁾
Switching output	PUSH/PULL PNP NPN
Output: Q_{L1} / C	Switching output or IO-Link mode
Output function	Factory setting: Pin 2 / white (MF): NPN normally closed (light switching), PNP normally open (dark switching), Pin 4 / black (QL1 / C): NPN normally open (dark switching), PNP normally closed (light switching), IO-Link
Switching mode	Light/dark switching
Switching mode selector	Via IO-Link
Signal voltage PNP HIGH/LOW	Approx. $V_S - 2.5 \text{ V} / 0 \text{ V}$
Signal voltage NPN HIGH/LOW	Approx. $V_S / < 2.5 \text{ V}$
Output current I_{max.}	$\leq 100 \text{ mA}$
Response time	$\leq 3 \text{ ms}$ ⁴⁾
Switching frequency	170 Hz ⁵⁾
Connection type	Cable with M12 male connector, 4-pin, 270 mm ⁶⁾
Cable material	PVC
Circuit protection	A ⁷⁾ B ⁸⁾

1) Limit values.

2) 16 V DC ... 30 V DC, without load.

3) 10 V DC ... 16 V DC, without load.

4) Signal transit time with resistive load in switching mode. Different values possible in COM2 mode.

5) With light/dark ratio 1:1 in switching mode. Different values possible in IO-Link mode.

6) Do not bend below 0 °C.

7) A = V_S connections reverse-polarity protected.

8) B = inputs and output reverse-polarity protected.

9) C = interference suppression.

10) D = outputs overcurrent and short-circuit protected.

11) Avoid condensation on the front screen of the sensor and on the reflector.

12) Allowed temperature change after Teach +/- 20 K.

	C ⁹⁾ D ¹⁰⁾
Protection class	III
Weight	100 g
Housing material	Plastic, VISTAL®
Optics material	Plastic, PMMA
Enclosure rating	IP66 IP67
Ambient operating temperature	-40 °C ... +60 °C ¹¹⁾ ¹²⁾
Ambient storage temperature	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

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11) Avoid condensation on the front screen of the sensor and on the reflector.

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Safety-related parameters

MTTF_D	709 years
DC_{avg}	0%

Communication interface

Communication interface	IO-Link V1.1
Communication Interface detail	COM2 (38,4 kBaud)
Cycle time	2.3 ms
Process data length	16 Bit
Process data structure	Bit 0 = switching signal Q _{L1} Bit 1 = switching signal Q _{L2} Bit 2 ... 15 = empty
VendorID	26
DeviceID HEX	0x800217
DeviceID DEZ	8389143

Smart Task

Smart Task name	Base logics
Logic function	Direct AND OR Window

1) SIO Direct: sensor operation in standard I/O mode without IO-Link communication and without using internal sensor logic or time parameters (set to "direct"/"deactivated").

2) SIO Logic: Sensor operation in standard I/O mode without IO-Link communication. Sensor-internal logic or timing parameters plus Automation Functions used.

3) IOL: Sensor operation with full IO-Link communication and usage of logic, timing and Automation Function parameters.

	Hysteresis
Timer function	Deactivated On delay Off delay ON and OFF delay Impulse (one shot)
Inverter	Yes
Switching frequency	SIO Direct: 170 Hz ¹⁾ SIO Logic: 170 Hz ²⁾ IOL: 170 Hz ³⁾
Response time	SIO Direct: 3 ms ¹⁾ SIO Logic: 3 ms ²⁾ IOL: 3 ms ³⁾
Repeatability	SIO Direct: 1,5 ms ¹⁾ SIO Logic: 1,5 ms ²⁾ IOL: 1,5 ms ³⁾
Switching signal Q_{L1}	Switching output
Switching signal Q_{L2}	Switching output

¹⁾ SIO Direct: sensor operation in standard I/O mode without IO-Link communication and without using internal sensor logic or time parameters (set to "direct"/"deactivated").

²⁾ SIO Logic: Sensor operation in standard I/O mode without IO-Link communication. Sensor-internal logic or timing parameters plus Automation Functions used.

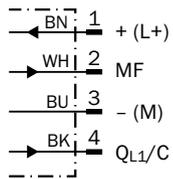
³⁾ IOL: Sensor operation with full IO-Link communication and usage of logic, timing and Automation Function parameters.

Classifications

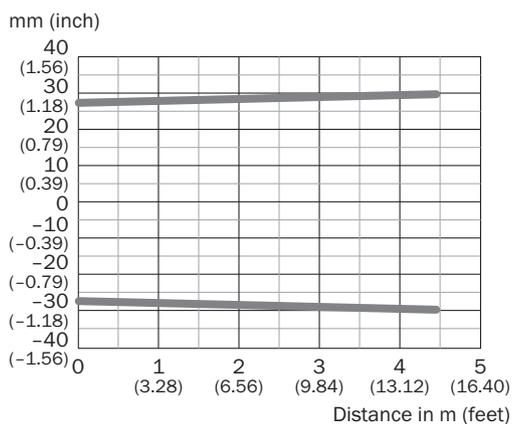
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ECl@ss 8.1	27270902
ECl@ss 9.0	27270902
ECl@ss 10.0	27270902
ECl@ss 11.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
UNSPSC 16.0901	39121528

Connection diagram

Cd-390

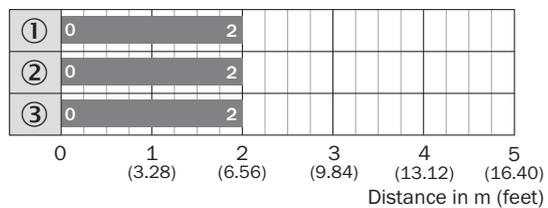


Light spot size



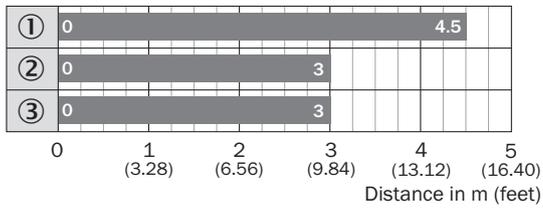
Sensing range diagram

Sensing range diagram (MDO 3 mm)



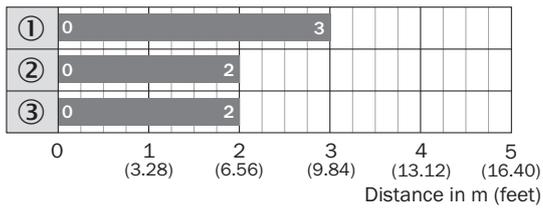
- Sensing range
- ① Reflector PL80A
- ② Reflector PL81
- ③ Reflector PL100

Sensing range diagram (MDO 10 mm)



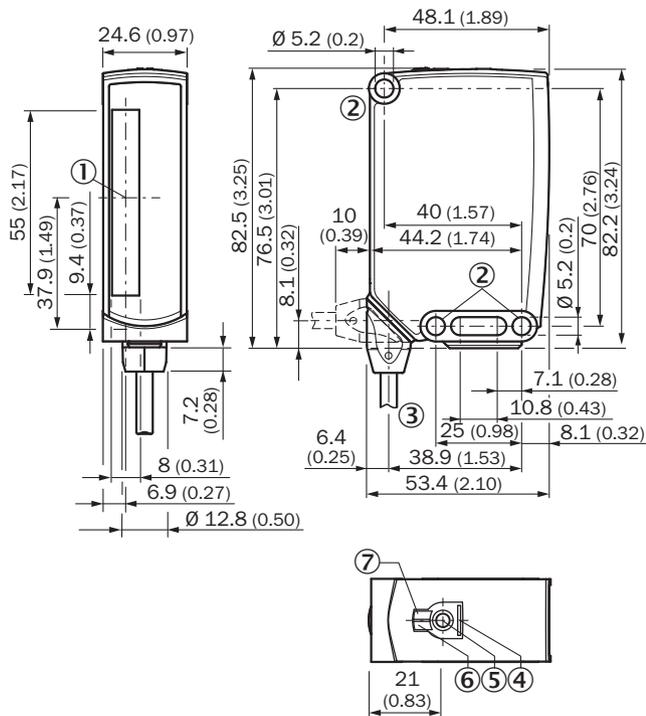
- Sensing range
- ① Reflector PL80A
- ② Reflector PL81
- ③ Reflector PL100

Sensing range diagram (MDO 5 mm)



- Sensing range
- ① Reflector PL80A
- ② Reflector PL81
- ③ Reflector PL100

Dimensional drawing (Dimensions in mm (inch))



- ① Center of optical axis
- ② Mounting hole, \varnothing 5.2 mm
- ③ Connection
- ④ BluePilot blue: AutoAdapt indicator during run mode
- ⑤ Teach-in button
- ⑥ LED indicator yellow: Status of received light beam
- ⑦ LED indicator green: Supply voltage active

Recommended accessories

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

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded	STE-1204-G	6009932
Reflectors			
	Rectangular, screw connection, 80 mm x 80 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865

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For us, that is “Sensor Intelligence.”

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