



RT-N2427

ZoneControl

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
RT-N2427	1063154

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

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	20.6 mm x 99.2 mm x 48.9 mm
Sensing range max.	60 mm ... 900 mm
Sensing range	60 mm ... 900 mm
Focus	7°
Type of light	Infrared light
Light source	LED ¹⁾
Light spot size (distance)	Ø 20 mm (500 mm)
Angle of dispersion	7°
Adjustment	Potentiometer, 9 turns
Special applications	ZoneControl

¹⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	20 mA ³⁾
Switching output	NPN

¹⁾ Limit values.

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Without load and valve deenergized.

⁴⁾ Do not bend below 0 °C.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ C = interference suppression.

⁷⁾ D = outputs overcurrent and short-circuit protected.

Switching mode	Dark switching
Signal voltage PNP HIGH/LOW	Approx. $V_S - 0.5 \text{ V} / 0 \text{ V}$
Output current $I_{\max}$	$\leq 100 \text{ mA}$
Response time	2 ms
Switching frequency	250 Hz
Connection type	Cable with M8 male connector, 4-pin, 2 m ⁴⁾
Circuit protection	A ⁵⁾ C ⁶⁾ D ⁷⁾
Protection class	III
Weight	175 g
Housing material	Plastic, ABS
Enclosure rating	IP67
Shock and vibration resistance	According to IEC 68
Ambient operating temperature	-40 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E189383 & NRKH7.E189383

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Safety-related parameters

MTTF_D	1,525 years
DC_{avg}	0 %

Certificates

EU declaration of conformity	✓
China RoHS	✓

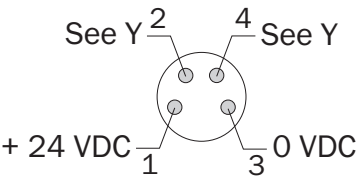
Classifications

ECLASS 5.0	27270904
ECLASS 5.1.4	27270904
ECLASS 6.0	27270904
ECLASS 6.2	27270904
ECLASS 7.0	27270904
ECLASS 8.0	27270904
ECLASS 8.1	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903

ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

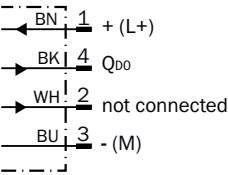
PIN assignment

M8

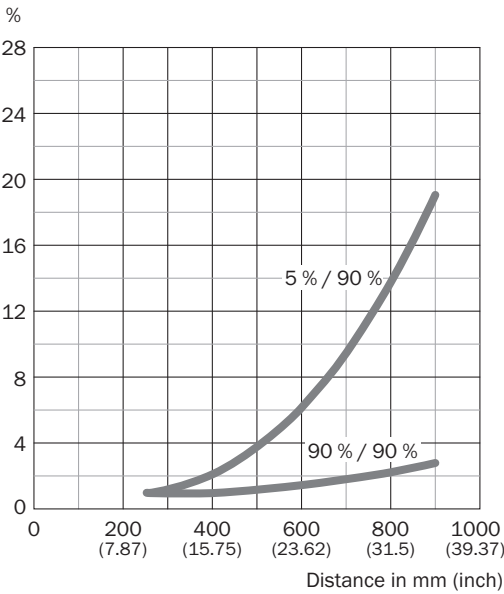


	Rx-(P/N)Y22x Rx-(P/N)Y32x Rx-(P/N)Y42x	P = PNP N = NPN	Rx-(P/N)Y23x Rx-(P/N)Y33x Rx-(P/N)Y43x	P = PNP N = NPN	Rx-BY22x Rx-BY32x Rx-BY42x	B = PNP / NPN
Y	PIN4	PIN2	PIN4	PIN2	PIN4	PIN2
1	Q _{L0}	not connected	not connected	Q _{L0}	QP _{L0}	QN _{L0}
2	Q _{D0}	not connected	not connected	Q _{D0}	QP _{D0}	QN _{D0}
3	Q _{L0}	Q _{D0}	Q _{D0}	Q _{L0}	-	-
4	Q _{L0}	Alarm	Alarm	Q _{L0}	-	-
5	Q _{L0}	Health	Health	Q _{L0}	-	-
6	Q _{D0}	Alarm	Alarm	Q _{D0}	-	-
7	Q _{D0}	Health	Health	Q _{D0}	-	-

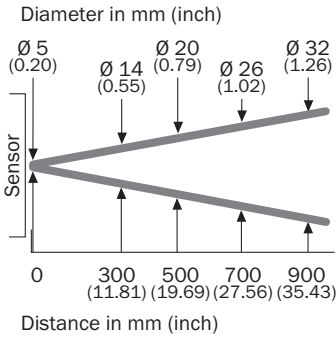
Connection diagram Cd-254



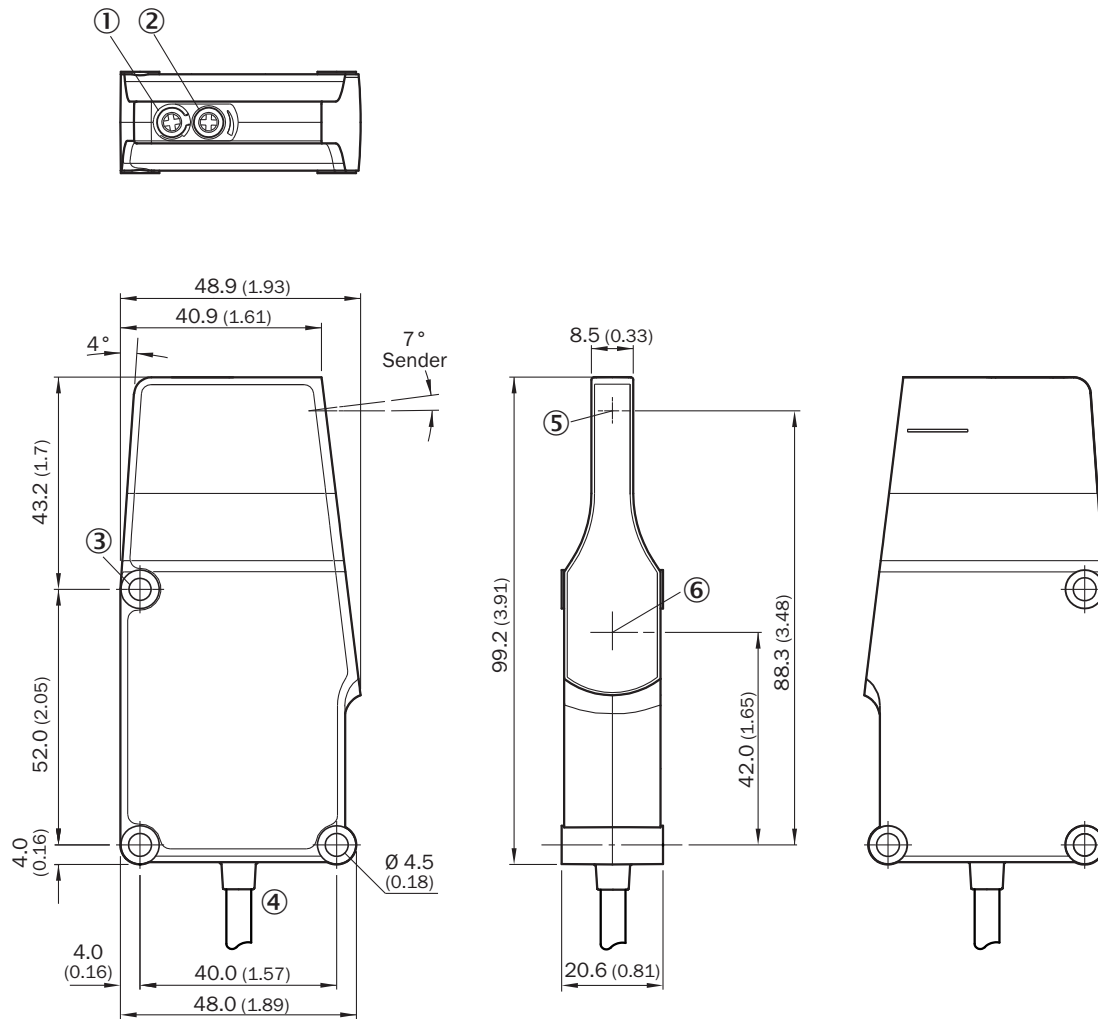
Characteristic curve



Light spot size



Dimensional drawing R cable



Dimensions in mm (inch)

- ① LED
- ② Potentiometer
- ③ fixing hole
- ④ cable
- ⑤ Center of optical axis, sender
- ⑥ Center of optical axis, receiver

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	Description: Mounting bracket Material: Steel Details: Steel, zinc coated Items supplied: Mounting hardware included	BEF-WN-RT/IRT	2074621
	Description: Mounting bracket Material: Steel Details: Steel, zinc coated Items supplied: Mounting hardware included Usable for: WTR/WLR, IRT	BEF-WK-WTR	2051786
	Description: Plate N11N for universal clamp bracket Material: Stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: DeltaPac, Glare, WTD20E	BEF-KHS-N11N	2071081
connectors and cables			
	Connection type head A: Female connector, M8, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF8U14-050VA3XLEAX	2095889
	Connection type head A: Male connector, M8, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0804-G	6037323
	Connection type head A: Female connector, M8, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF8U14-050UA3XLEAX	2094792

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.”

WORLDWIDE PRESENCE:

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