



RT-P6423

ZoneControl

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | part no. |
|----------|----------|
| RT-P6423 | 1063167 |

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 |
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| 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 | PNP |

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, 300 mm 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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⁴⁾ Do not bend below 0 °C.

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Safety-related parameters

| | |
|-------------------------|-------------|
| MTTF_D | 1,525 years |
| DC_{avg} | 0 % |

Certificates

| | |
|-------------------------------------|---|
| EU declaration of conformity | ✓ |
| China RoHS | ✓ |

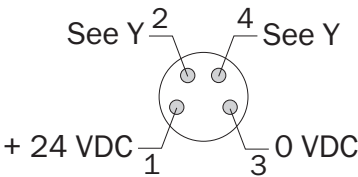
Classifications

| | |
|---------------------|----------|
| 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 |

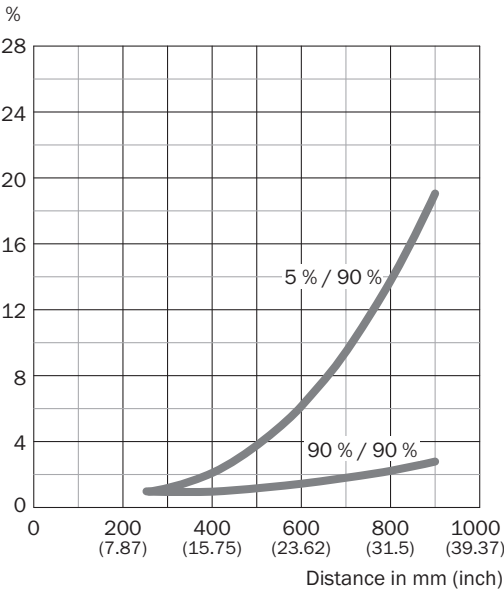
PIN assignment

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} | - | - |

Characteristic curve



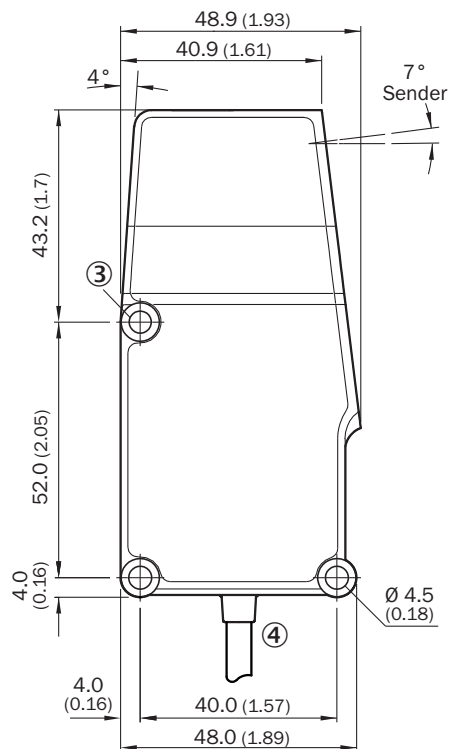
Diameter in mm (inch)

0 300 500 700 900
(11.81) (19.69) (27.56) (35.43)

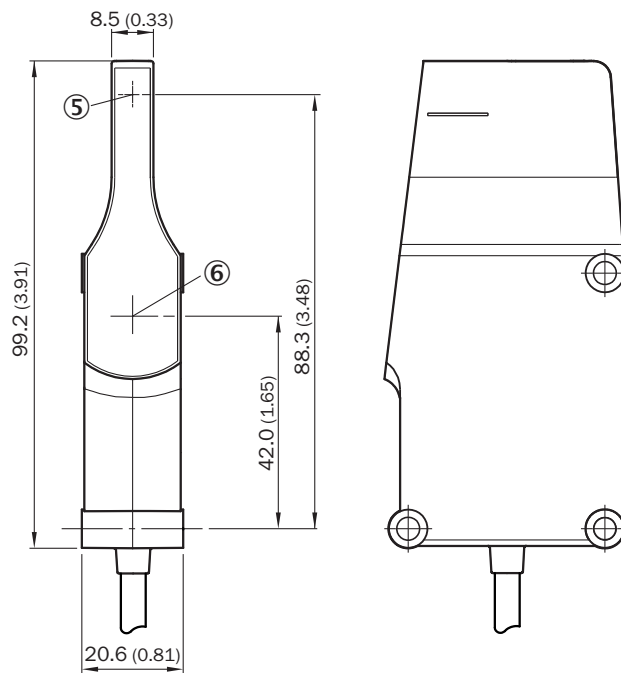
Distance in mm (inch)

Sensor

Ø 5 (0.20) Ø 14 (0.55) Ø 20 (0.79) Ø 26 (1.02) Ø 32 (1.26)




- 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 | | | |
|  | <ul style="list-style-type: none"> Description: Mounting bracket Material: Steel Details: Steel, zinc coated Items supplied: Mounting hardware included | BEF-WN-RT/IRT | 2074621 |
|  | <ul style="list-style-type: none"> Description: Mounting bracket Material: Steel Details: Steel, zinc coated Items supplied: Mounting hardware included Usable for: WTR/WLR, IRT | BEF-WK-WTR | 2051786 |
|  | <ul style="list-style-type: none"> 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 | | | |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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:

Contacts and other locations –www.sick.com