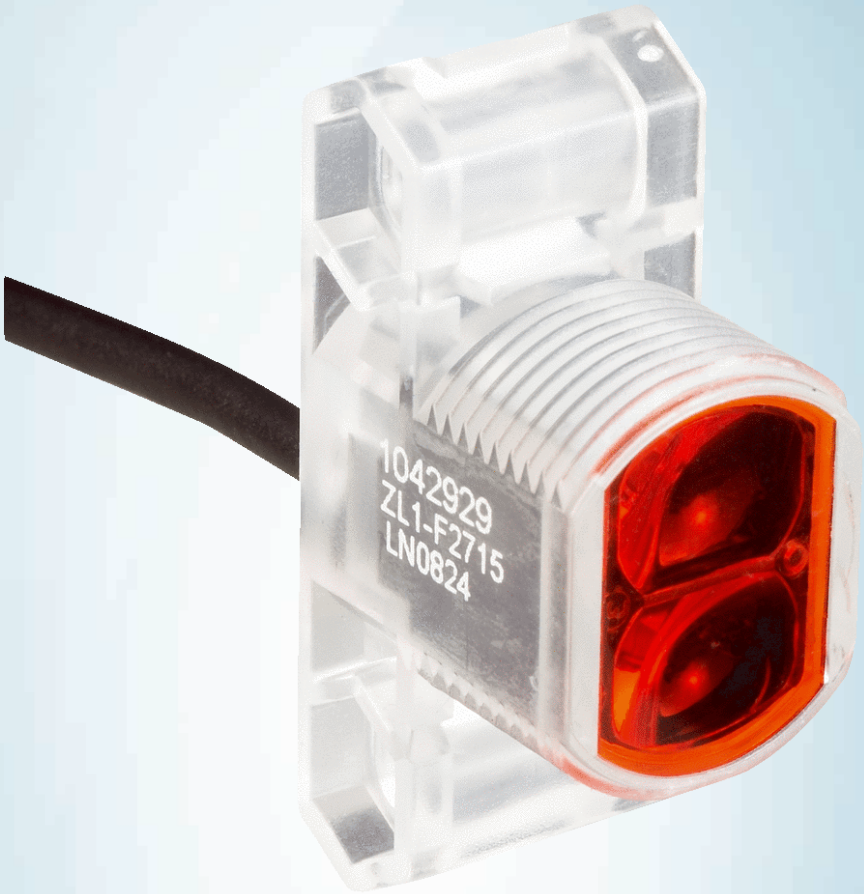
Data sheet




# ZT2-N5228

## Z-Sensor

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

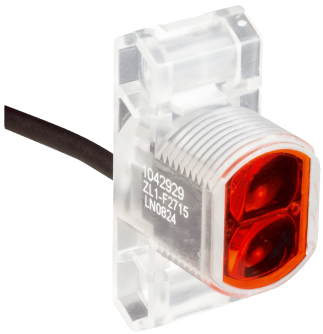


Illustration may differ

## Ordering information

| Type | part no. |
|---|---|
| ZT2-N5228 | 1045468 |

Other models and accessories ➜ www.sick.com/Z-Sensor

## Detailed technical data

### Features

| | |
|---|---|
| **Functional principle** | Photoelectric proximity sensor |
| **Functional principle detail** | Energetic |
| **Dimensions (W x H x D)** | 13.6 mm x 45.2 mm x 31.7 mm |
| **Housing design (light emission)** | Hybrid |
| **Thread diameter (housing)** | M18 x 1 |
| **Sensing range max.** | 5 mm ... 155 mm [1] |
| **Sensing range** | 5 mm ... 155 mm |
| **Type of light** | Infrared light |
| **Light source** | LED [2] |
| **Light spot size (distance)** | Ø 31 mm (100 mm) |
| **Wave length** | 880 nm |
| **Adjustment** | None |

[1] Object with 90% remission (based on standard white, DIN 5033).
[2] Average service life: 100,000 h at $T_U$ = +25 °C.

### Mechanics/electronics

| | |
|---|---|
| **Supply voltage** | 10 V DC ... 30 V DC [1] |
| **Ripple** | < 5 $V_{pp}$ [2] |
| **Current consumption** | 20 mA [3] |
| **Switching output** | NPN |
| **Switching mode** | Light switching |
| **Output current $I_{max.}$** | ≤ 50 mA |

[1] Limit values.
[2] May not exceed or fall below $U_V$ tolerances.
[3] Without load.
[4] With light/dark ratio 1:1.
[5] A = $V_S$ connections reverse-polarity protected.
[6] D = outputs overcurrent and short-circuit protected.
[7] Reference voltage: 50 V DC.

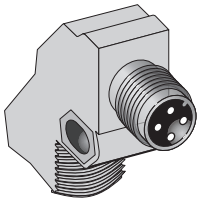
| | |
|---|---|
| **Switching frequency** | 200 Hz [4] |
| **Connection type** | Male connector M12, 4-pin |
| **Circuit protection** | A [5]<br>D [6] |
| **Protection class** | III [7] |
| **Housing material** | Plastic, Glass fiber reinforced ABS plastic |
| **Enclosure rating** | IP67 |
| **Items supplied** | Mounting nut M18 |
| **Ambient operating temperature** | –25 °C ... +50 °C |
| **Ambient temperature, storage** | –40 °C ... +70 °C |
| **UL File No.** | NRKH.E189383 & NRKH7.E189383 |

[1] Limit values.
[2] May not exceed or fall below $U_V$ tolerances.
[3] Without load.
[4] With light/dark ratio 1:1.
[5] A = $V_S$ connections reverse-polarity protected.
[6] D = outputs overcurrent and short-circuit protected.
[7] Reference voltage: 50 V DC.

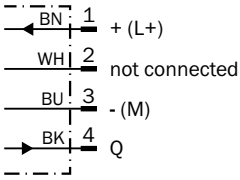
## Classifications

| | |
|---|---|
| **ECLASS 5.0** | 27270903 |
| **ECLASS 5.1.4** | 27270903 |
| **ECLASS 6.0** | 27270903 |
| **ECLASS 6.2** | 27270903 |
| **ECLASS 7.0** | 27270903 |
| **ECLASS 8.0** | 27270903 |
| **ECLASS 8.1** | 27270903 |
| **ECLASS 9.0** | 27270903 |
| **ECLASS 10.0** | 27270904 |
| **ECLASS 11.0** | 27270904 |
| **ECLASS 12.0** | 27270903 |
| **ETIM 5.0** | EC001821 |
| **ETIM 6.0** | EC001821 |
| **ETIM 7.0** | EC002719 |
| **ETIM 8.0** | EC002719 |
| **UNSPSC 16.0901** | 39121528 |

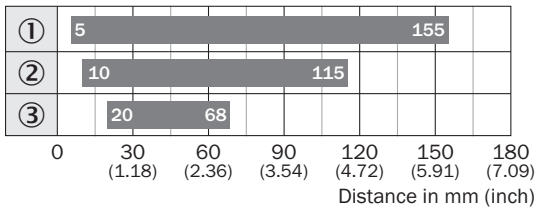
## Connection type



## Connection diagram Cd-067



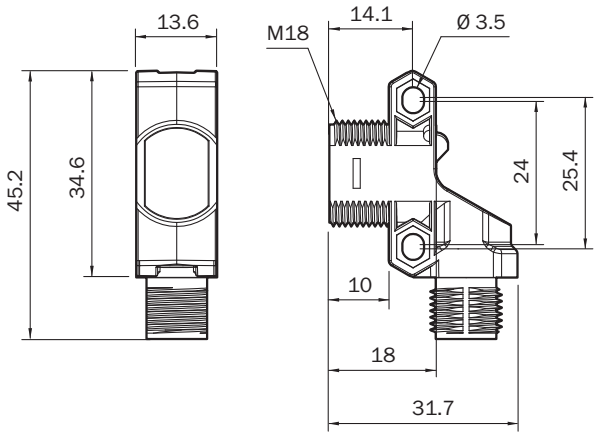

## Sensing range diagram ZT1, 155 mm




Sensing range  Sensing range max.

① sensing range on white, 90% remission
② Sensing range on gray, 18 % remission
③ sensing range on black, 6% remission

## Dimensional drawing ZT2, ZL2, Connector M12, 4-pin




Dimensions in mm (inch)

## Recommended accessories

Other models and accessories ➜ www.sick.com/Z-Sensor

| | Brief description | Type | part no. |
|---|---|---|---|
| connectors and cables | | | |
| | • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 5 m, 4-wire, PVC<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Zones with chemicals, Uncontaminated zones | YF2A14-050VB3XLEAX | 2096235 |
| | • **Connection type head A:** Male connector, M12, 4-pin, straight, A-coded<br>• **Description:** Unshielded<br>• **Connection systems:** Screw-type terminals<br>• **Permitted cross-section:** ≤ 0.75 mm² | STE-1204-G | 6009932 |
| | • **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded<br>• **Connection type head B:** Flying leads<br>• **Signal type:** Sensor/actuator cable<br>• **Cable:** 5 m, 4-wire, PUR, halogen-free<br>• **Description:** Sensor/actuator cable, unshielded<br>• **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation | YF2A14-050UB3XLEAX | 2095608 |
| Mounting systems | | | |
| | • **Description:** Plate N11N for universal clamp bracket<br>• **Material:** Stainless steel<br>• **Details:** Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)<br>• **Items supplied:** Universal clamp (5322627), mounting hardware<br>• **Usable for:** DeltaPac, Glare, WTD20E | BEF-KHS-N11N | 2071081 |

# SICK AT A GLANCE

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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.

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