ET3-N3228
ELF3

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

ET3-N3228 | ELF3
PHOTOELECTRIC SENSORS

Ordering information

Type	part no.
ET3-N3228	1045210

Other models and accessories ➜ www.sick.com/ELF3

Illustration may differ

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	23.8 mm x 43.4 mm x 33.6 mm
Housing design (light emission)	Hybrid
Thread diameter (housing)	M18
Sensing range max.	0 mm ... 50 mm [1]
Sensing range	0 mm ... 50 mm [1]
Type of light	Infrared light
Light source	LED [2]
Light spot size (distance)	10.5 mm x 10.5 mm (50 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

[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.

Output current I$_{max.}$	≤ 50 mA
Switching frequency	200 Hz [4]
Connection type	Male connector M12, 4-pin
Circuit protection	A [5] D [6]
Protection class	III [7]
Weight	0.014 kg, 0.03 lbs
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

[1] Limit values.

[2] May not exceed or fall below U$_V$ tolerances.

[3] Without load.

[4] With light/dark ratio 1:1.
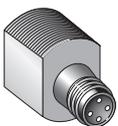
[5] A = V$_S$ connections reverse-polarity protected.

[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-066

Wire	Pin	Signal
BN	1	+ (L+)
WH	2	not connected
BU	3	- (M)
BK	4	Q
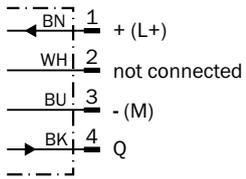
Sensing range diagram ET3, ET4, 50 mm

①	5	46
②	2	48
③	0	50

Sensing range in mm (inch)
0 — 10 (0.39) — 20 (0.79) — 30 (1.18) — 40 (1.57) — 50 (1.97)
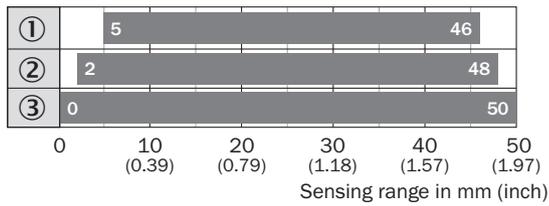
① sensing range on black, 6% remission
② Sensing range on gray, 18 % remission
③ sensing range on white, 90% remission

Dimensional drawing ET3, EL3, connector M12

M18
10 (0.39)
23.8 (0.94)
12.4 (0.49)
24.3 (0.96)
M18
12 (0.49)
10.4 (0.41)
13.6 (0.54)
21.1 (0.83)
33.6 (1.32)
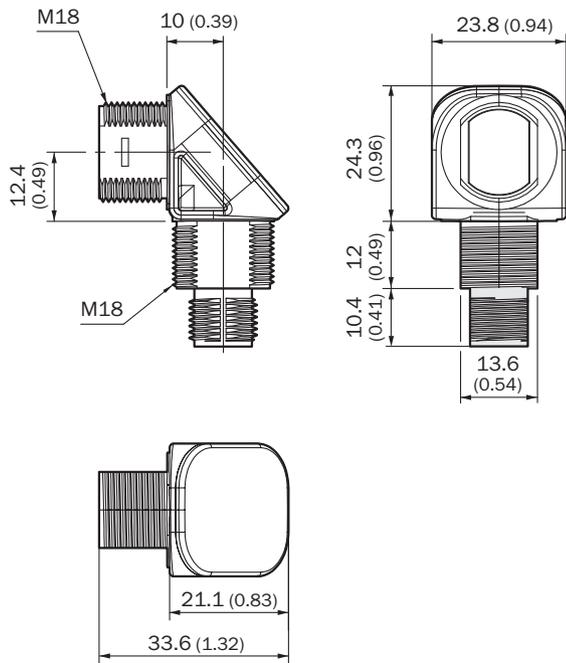
Dimensions in mm (inch)

Recommended accessories

Other models and accessories ➜ www.sick.com/ELF3

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Mounting bracket for M18 sensors • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Without mounting hardware • **Suitable for:** GR18, V180-2, V18, W15, Z1, Z2	BEF-WN-M18	5308446
	• **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, M12, 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	YF2A14-050VB3XLEAX	2096235
	• **Connection type head A:** Male connector, M12, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	STE-1204-G	6009932
	• **Connection type head A:** Female connector, M12, 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	YF2A14-050UB3XLEAX	2095608

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."

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