



ET3-P4228
ELF3

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
ET3-P4228	1045215

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

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Energetic
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.	1 mm ... 100 mm ¹⁾
Sensing range	1 mm ... 100 mm ¹⁾
Type of light	Infrared light
Light source	LED ²⁾
Light spot size (distance)	20 mm x 20 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	PNP
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.

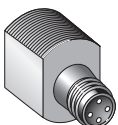
6) D = outputs overcurrent and short-circuit protected.

7) Reference voltage: 50 V DC.

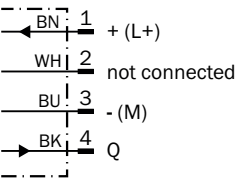
Classifications

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

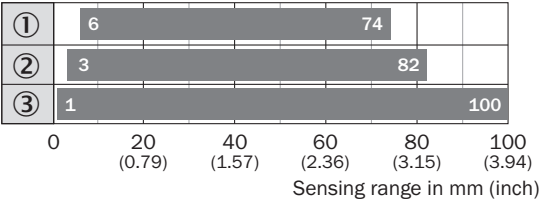
Connection type



Connection diagram Cd-066

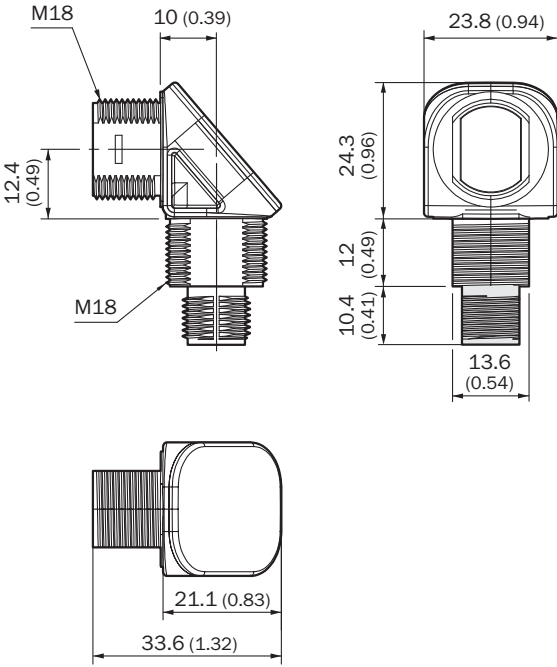


Sensing range diagram ET3, ET4, 100 mm



- 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



Dimensions in mm (inch)

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
 	<ul style="list-style-type: none"> 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
	<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, 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
	<ul style="list-style-type: none"> 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
	<ul style="list-style-type: none"> 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.”

WORLDWIDE PRESENCE:

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