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DATA SHEET

VTF18-4N1712

V18
Photoelectric sensors

SICK

Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

VTF18-4N1712

ORDERING INFORMATION

Type	part no.
VTF18-4N1712	6012892

Further device versions and accessories at www.sick.com/V18



DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	18 mm x 18 mm x 63.6 mm
Housing design (light emission)	Cylindrical
Housing length	63.6 mm
Thread diameter (housing)	M18 x 1
Optical axis	Axial
Sensing range max.	3 mm ... 100 mm ¹⁾
Sensing range	3 mm ... 90 mm
Type of light	Infrared light
Light source	LED ²⁾
Light spot size (distance)	Ø 3 mm (50 mm)
Adjustment	Potentiometer, 270° (Sensing range)
Special feature	Focused optics

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 U_s	10 V DC ... 30 V DC ¹⁾
Ripple	$\pm 10\%$ ²⁾
Current consumption	30 mA ³⁾
Switching output	NPN ⁴⁾
Switching mode	Light/dark switching ⁴⁾
Switching mode selector	Selectable via L/D control cable
Output current I_{max}	≤ 100 mA
Response time	≤ 2 ms ⁵⁾
Switching frequency	250 Hz ⁶⁾
Connection type	Cable, 4-wire, 2 m ⁷⁾
Cable material	Plastic, PVC
Conductor cross section	0.14 mm ²
Cable diameter	$\varnothing 5$ mm
Circuit protection	A ⁸⁾ B ⁹⁾ C ¹⁰⁾ D ¹¹⁾
Protection class	III
Weight	100 g
Housing material	Plastic, PBT/PC
Optics material	Plastic, PMMA
Enclosure rating	IP67
Special feature	Focused optics
Ambient operating temperature	-25 °C ... +70 °C
UL File No.	NMFT2.E175606

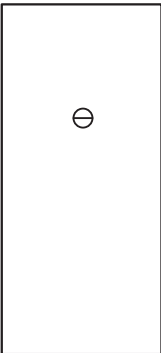
¹⁾ Limit values.²⁾ May not fall below or exceed U_s tolerances.³⁾ Without load.⁴⁾ Control wire open: light switching LON.⁵⁾ Signal transit time with resistive load.⁶⁾ With light/dark ratio 1:1.⁷⁾ Do not bend below 0 °C.⁸⁾ A = V_s connections reverse-polarity protected.⁹⁾ B = inputs and output reverse-polarity protected.¹⁰⁾ C = interference suppression.¹¹⁾ D = outputs overcurrent and short-circuit protected.**CERTIFICATES**

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓

cRUus certificate

✓

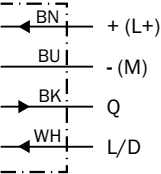
ADJUSTMENTS



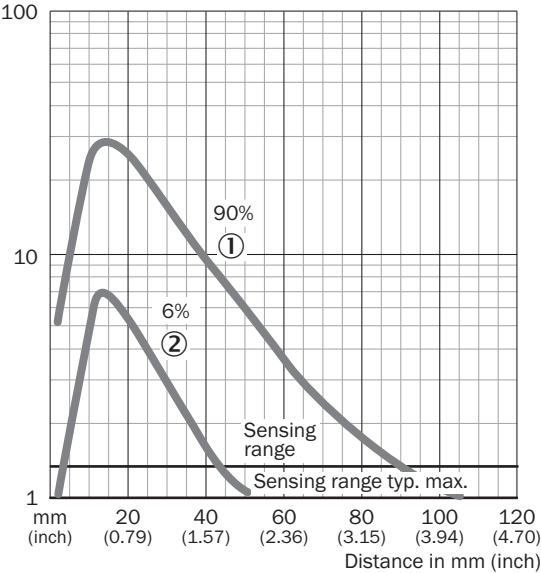
CONNECTION TYPE



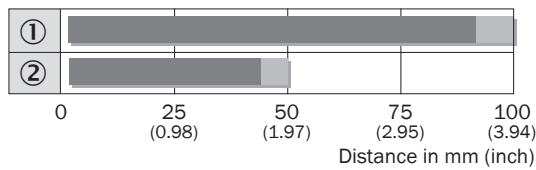
CONNECTION DIAGRAM CD-089



CHARACTERISTIC CURVE



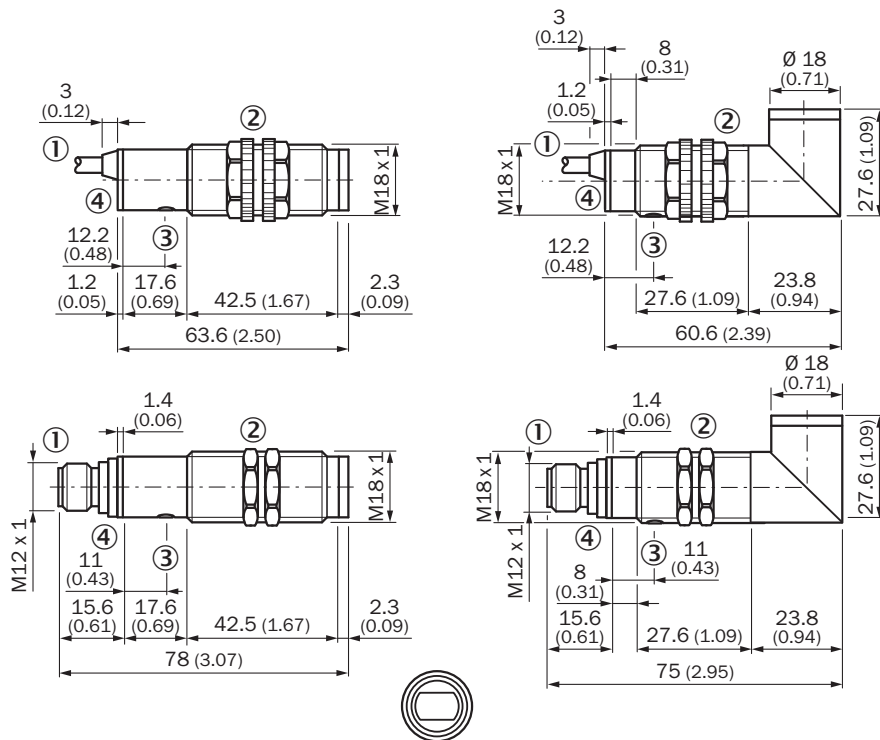
SENSING RANGE DIAGRAM



■ Operating distance ■ Scanning distance typ. max.

①	Scanning range on white, 90 % remission
②	Scanning range on black, 6 % remission

DIMENSIONAL DRAWING



Dimensions in mm (inch)

- ① Connecting cable or connector
- ② Fastening nut, 22 mm hex, made of plastic for equipment with plastic housing
- ② Fastening nut, 24 mm hex, made of metal for equipment with metal housing
- ③ sensitivity control
- ④ Signal strength indicator, LED, yellow

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6012892



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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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