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DATA SHEET

VT12T-2P410

V12
Photoelectric sensors

SICK
Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

VT12T-2P410

ORDERING INFORMATION

Type	part no.
VT12T-2P410	6026212

Further device versions and accessories at www.sick.com/V12

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor
Functional principle detail	Energetic
Dimensions (W x H x D)	12 mm x 12 mm x 65.5 mm
Housing design (light emission)	Cylindrical
Housing length	65.5 mm
Thread diameter (housing)	Round connector M12 x 1
Sensing range max.	0 mm ... 115 mm [1]
Sensing range	2 mm ... 100 mm
Focus	Approx. 11.4°
Type of light	Infrared light
Light source	LED [2]
Light spot size (distance)	Ø 20 mm (100 mm)
Angle of dispersion	Approx. 11.4°
Wave length	880 nm
Adjustment	Single teach-in button, Selectable via control input C (Sensing range, Sensing range) [3] [4]

[1] Object with 90% remission (based on standard white, DIN 5033).

[2] Average service life: 100,000 h at T_U = +25 °C.

[3] Manual, via teach-in button.

[4] Electronically via control input C (0 V).

MECHANICS/ELECTRONICS

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	± 10 % [2]
Current consumption	20 mA [3]
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via control input C
Output current $I_{max.}$	≤ 100 mA [3]
Response time	≤ 1.25 ms [4]
Switching frequency	400 Hz [5]
Connection type	Male connector M12, 4-pin
Circuit protection	A [6] B [7] C [8] D [9]
Protection class	III
Weight	18 g
Housing material	Metal, Nickel-plated brass/PA
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	–25 °C ... +70 °C
Ambient temperature, storage	–25 °C ... +70 °C
UL File No.	E175606

[1] Limit values.

[2] May not fall below or exceed U_V tolerances.

[3] Without load.

[4] Signal transit time with resistive load.

[5] With light/dark ratio 1:1.

[6] A = V_S connections reverse-polarity protected.

[7] B = inputs and output reverse-polarity protected.

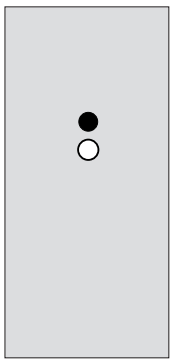
[8] C = interference suppression.

[9] 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	✓

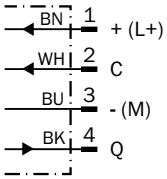
ADJUSTMENTS



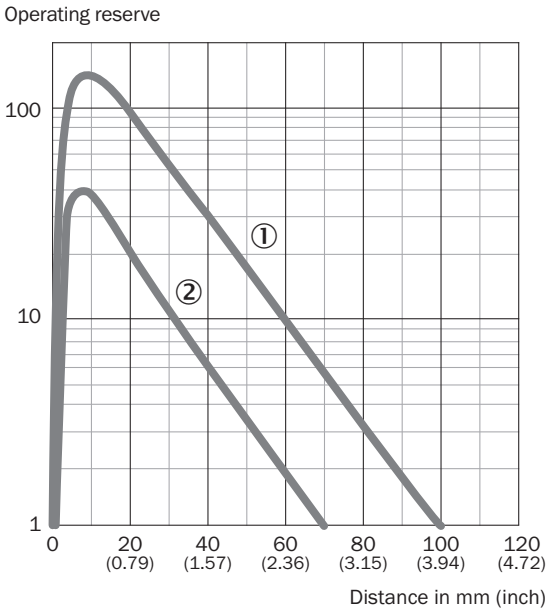
CONNECTION TYPE



CONNECTION DIAGRAM CD-099

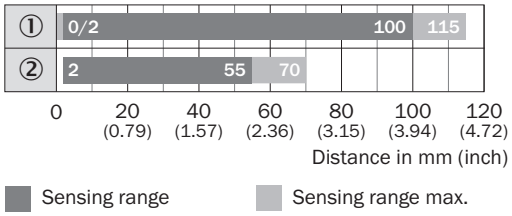


CHARACTERISTIC CURVE



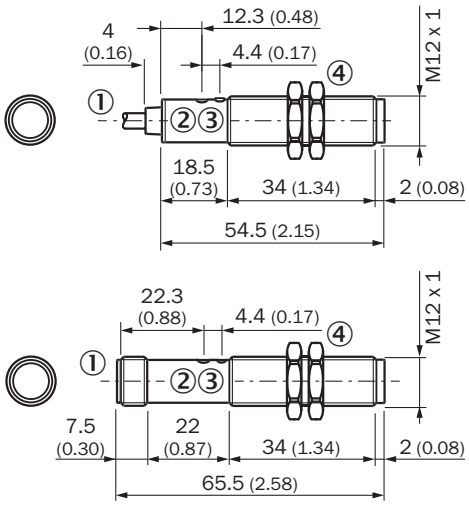
① Sensing range on white, 90% remission factor
② Sensing range on gray, 18% remission factor

SENSING RANGE DIAGRAM



① Sensing range on white, 90% remission factor
② Sensing range on gray, 18% remission factor

DIMENSIONAL DRAWING



Dimensions in mm (inch)
① Cable or connector M12, 4-pin
② Sensitivity setting: single teach-in button
③ Yellow LED indicator:
③ - lights continuously:
③ reception signal> reserve factor 2
③ - blinks: Reception signal< reserve factor 2 but > switching threshold 1
④ Fastening nuts (2x); width across 17, metal

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/6026212

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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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