Data sheet

VS/VE18-4P3312

V18

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
VS/VE18-4P3312	6013711

Other models and accessories ➜ www.sick.com/V18

Detailed technical data

Features

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	18 mm x 18 mm x 60.6 mm
Housing design (light emission)	Cylindrical
Housing length	60.6 mm
Thread diameter (housing)	M18 x 1
Optical axis	Radial
Sensing range max.	0 m ... 20 m
Sensing range	0 m ... 14 m
Focus	Approx. 2.8°
Type of light	Infrared light
Light source	LED [1]
Light spot size (distance)	Ø 700 mm (14 m)
Angle of dispersion	Approx. 2.8°
Adjustment	None

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

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC [1]

[1] Limit values.
[2] May not fall below or exceed U_V tolerances.
[3] Without load.
[4] Control wire open: dark switching D.ON.
[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.

Ripple	± 10 % [2]
Current consumption	30 mA [3]
Switching output	PNP [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 mm²
Cable diameter	Ø 5 mm
Circuit protection	A [8] B [9] C [10] D [11]
Protection class	III
Weight	240 g
Housing material	Metal, Nickel-plated brass
Enclosure rating	IP67
Test input sender off	TE to 0 V
Ambient operating temperature	–25 °C ... +70 °C
UL File No.	NMFT2.E175606

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Certificates

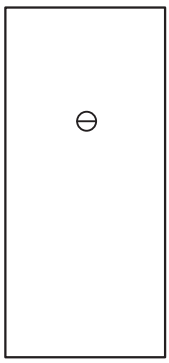
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cRUus certificate	✓

Classifications

ECLASS 5.0	27270901

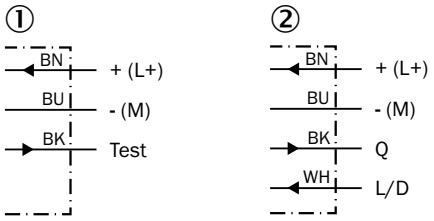
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Adjustments



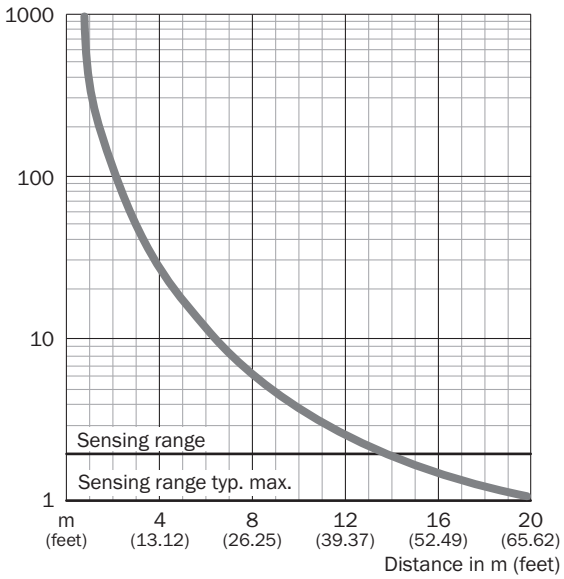
Connection type

Connection diagram Cd-221

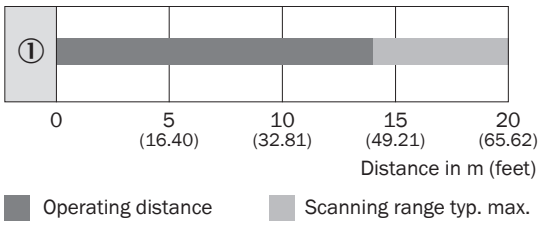


① sender
② receiver

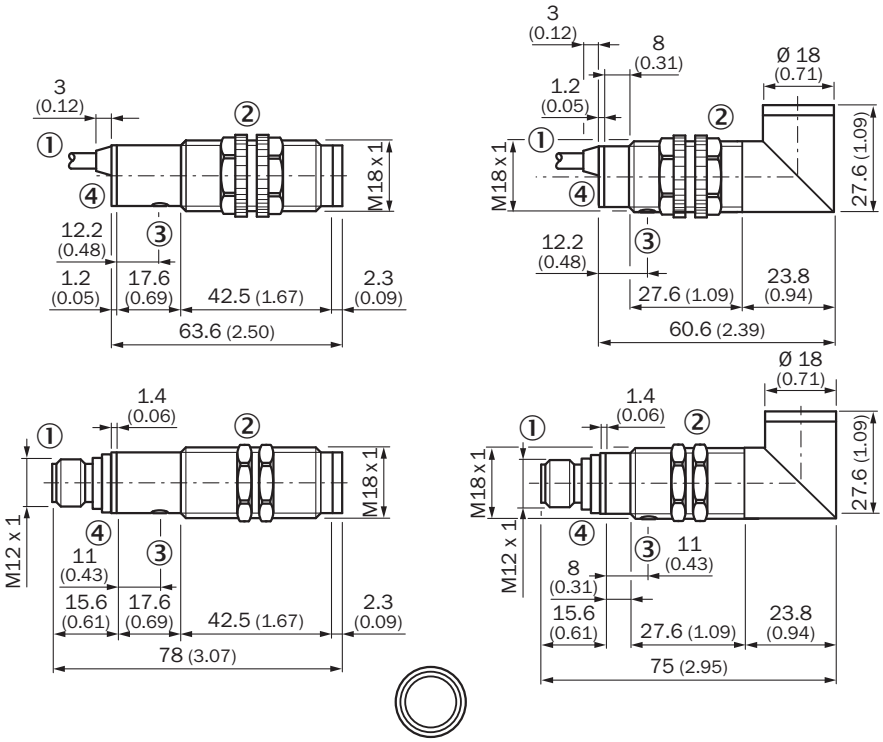
Characteristic curve



Sensing range diagram



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 status indicator for VS, yellow LED
④ Receive indicator for VE, yellow LED

Recommended accessories

Other models and accessories ➜ www.sick.com/V18

	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
connectors and cables			
	• **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

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:

Contacts and other locations –www.sick.com

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