

ONLINE DATA SHEET
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Photoelectric sensors
W18-3, Through-beam photoelectric sensor

WS/WE18-3P410



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W18-3, Through-beam photoelectric sensor

Type > WS/WE18-3P410
Part No. > 1025927



Illustration may differ

At a glance

- Sender LED with infrared light
- High operational reliability
- Immune to ambient light
- Test input for system diagnostics
- Rugged plastic housing

Your benefits

- Very high operating reserves for trouble-free operation, even at long distances
- Reliable operation due to integrated system diagnosis
- High availability in the field

Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	17.6 mm x 75.5 mm x 33.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 20 m
Type of light:	Infrared light
Light source:	LED [1]
Angle of dispersion:	4.5 °
Adjustment:	Potentiometer, 1 turn
Light spot size (distance):	Ø 950 mm (15 m)
Continuous threshold adaption:	-

[1] Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

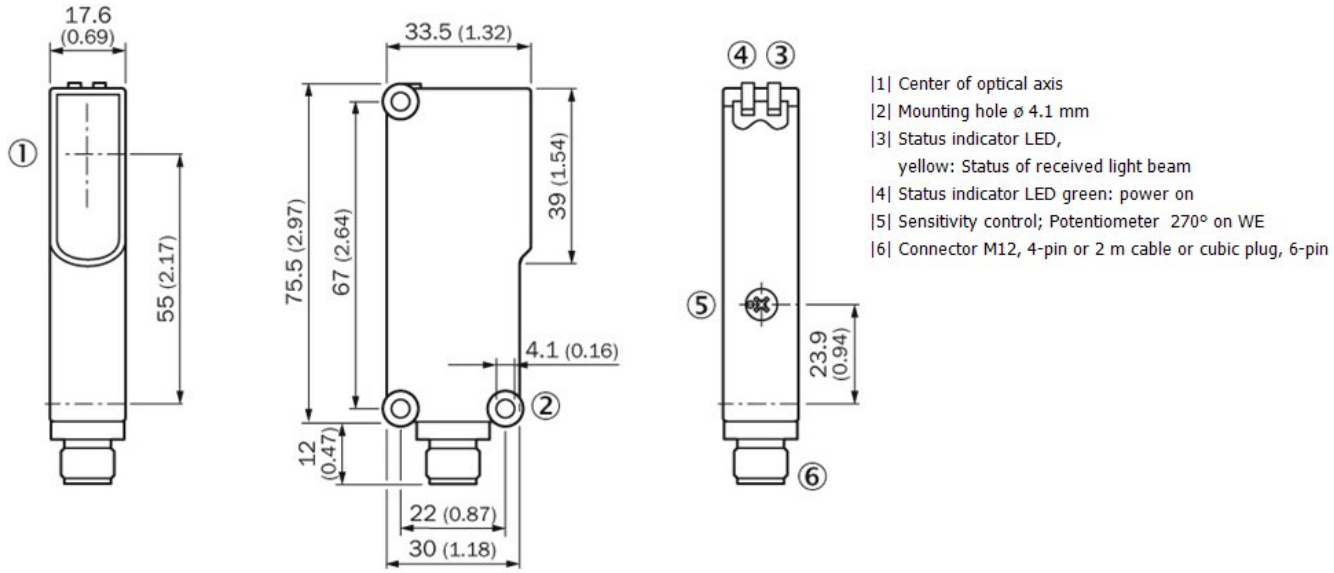
Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	< 5 Vpp [2]
Power consumption, sender:	< 45 mA [3]
Power consumption, receiver:	< 35 mA [4]
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current Imax.:	100 mA
Response time:	< 500 µs [5]
Switching frequency:	1,000 Hz [6]

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Angle of reception:	6 °
Connection type:	M12, 4-pin male connector
Circuit protection:::	A, C, D [7) 8) 9)]
Weight:	40 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Test input sender off:	TE to 0 V
Ambient operating temperature:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
Part number of individual components:	Receiver, WE18-3P410, 2031009, Sender, WS18-3D410, 2031008
UL File No.:	NRKH.E181493 & NRKH7.E181493

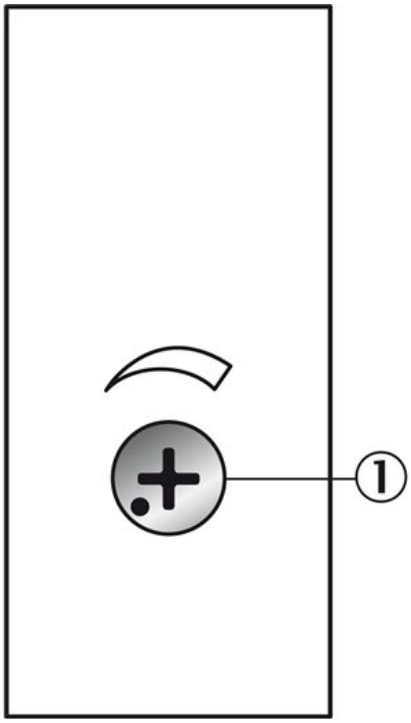
[1)] Limit values, operation in short-circuit protected network max. 8 A [2)] May not exceed or fall short of V_S tolerances [3) 4)] Without load [5)] Signal transit time with resistive load [6)] With light/dark ratio 1:1 [7)] A = V_S connections reverse-polarity protected [8)] C = interference suppression [9)] D = outputs overcurrent and short-circuit protected

Dimensional drawing



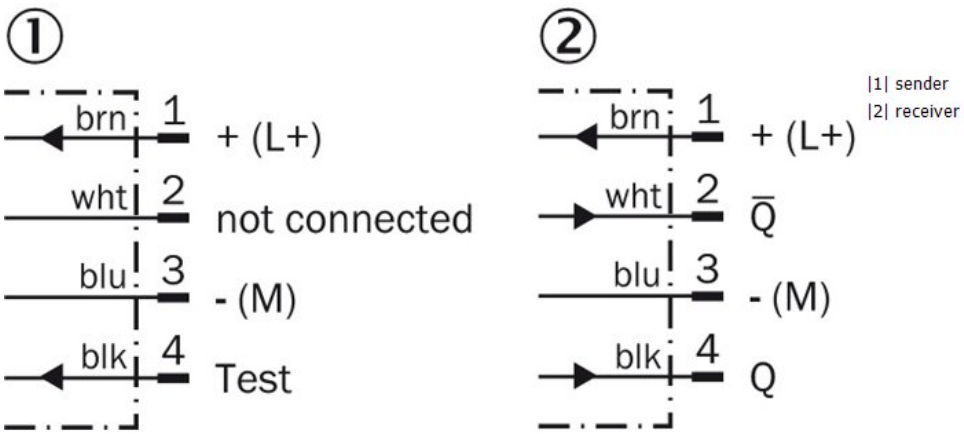
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Adjustments possible



|1| Sensing range adjustment: potentiometer, 4-turn

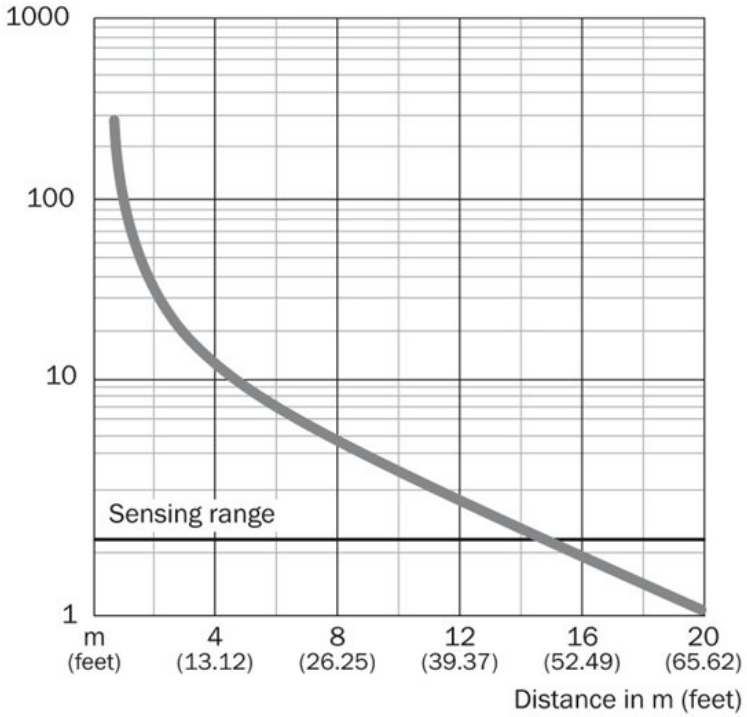
Connection diagram



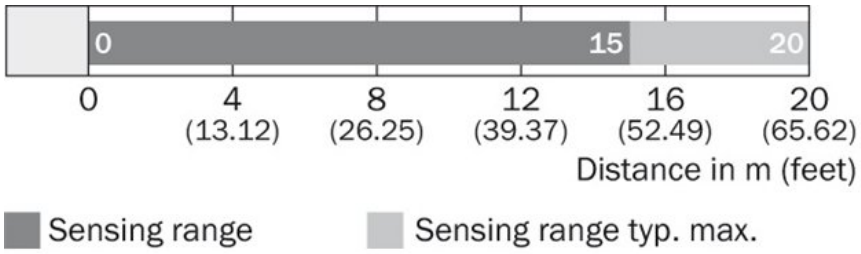
|1| sender
|2| receiver

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Characteristic curve

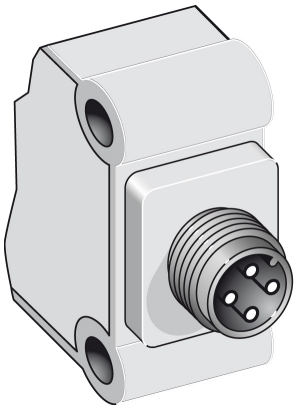


Sensing range diagram



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Connection type



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