

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

WS/WE18-3P130



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Photoelectric sensors
W18-3, Through-beam photoelectric sensor

Type > WS/WE18-3P130
Part No. > 1025922



Illustration may differ

At a glance

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

Your benefits

- Quick installation due to visible red light saves time
- Very high operating reserves for trouble-free operation, even at long distances
- Reliable operation due to integrated system diagnostics
- 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:	Visible red light
Light source:	LED [1)]
Angle of dispersion:	1.5 °
Adjustment:	Potentiometer, 1 turn
Light spot size (distance):	Ø 450 mm (15 m)
Continuous threshold adaption:	-

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

Mechanics/electronics

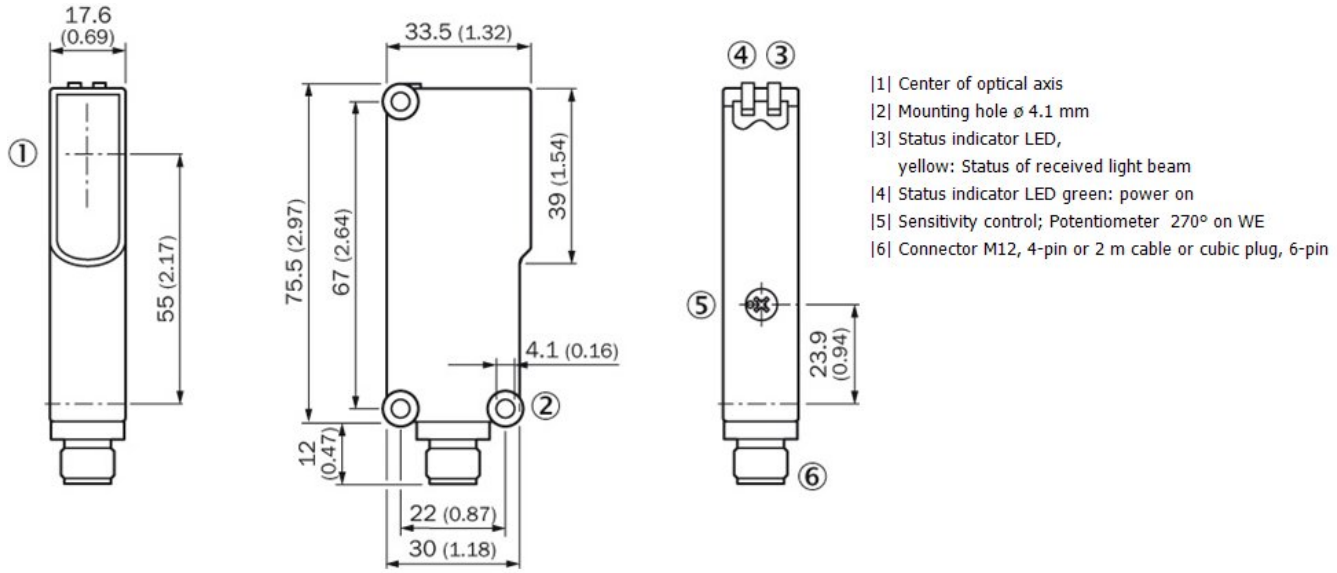
Supply voltage:	10 V DC ... 30 V DC [1)]
Ripple:	< 5 Vpp [2)]
Power consumption, sender:	< 45 mA [3)]
Power consumption, receiver:	< 35 mA [4)]
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current Imax.:	100 mA
Response time:	< 500 µs [5)]

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Switching frequency:	1,000 Hz [6]
Angle of reception:	2 °
Connection type:	Cable, 4-wire, 2 m [7]
Cable material:	PVC
Circuit protection:::	A, C, D [8] [9] [10]
Weight:	120 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, WE18-3P130, 2030986, Sender, WS18-3D130, 2030985
UL File No.:	NRKH.E181493 & NRKH7.E181493

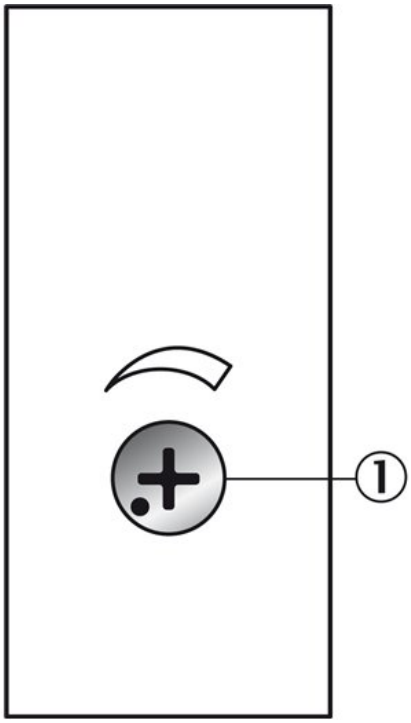
[1] Limit values, operation in short-circuit protected network max. 8 A [2] May not exceed or fall short of V_S tolerances [3] [4] Without load [5] Signal transit time with resistive load [6] With light/dark ratio 1:1 [7] Do not bend below 0 °C [8] A = V_S connections reverse-polarity protected [9] C = interference suppression [10] D = outputs overcurrent and short-circuit protected

Dimensional drawing



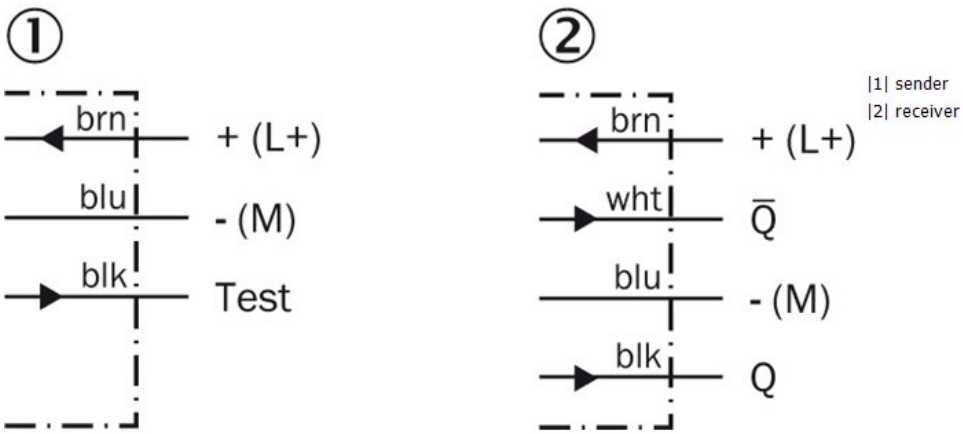
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Adjustments possible



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

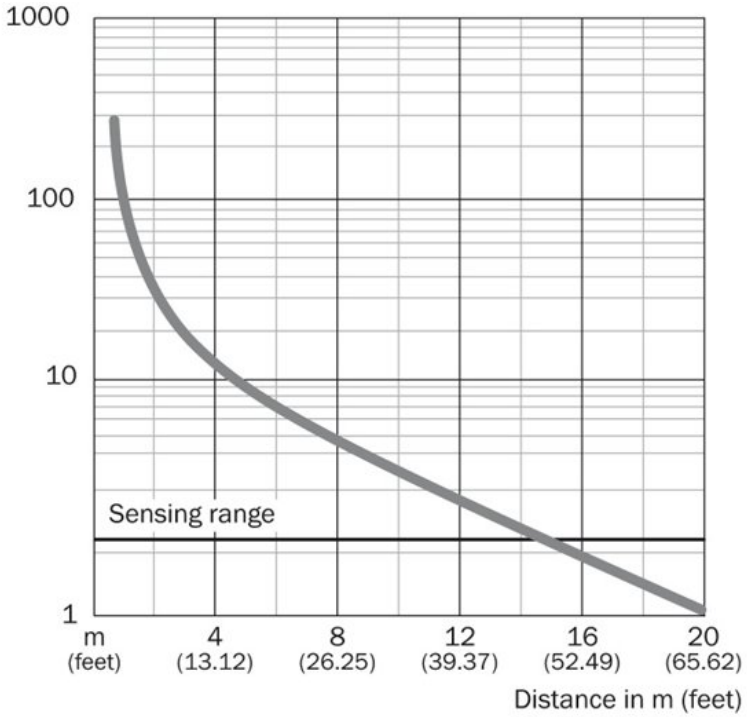
Connection diagram



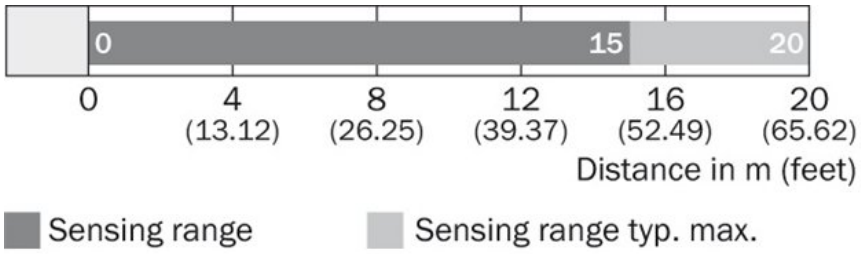
|1| sender
|2| receiver

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Characteristic curve

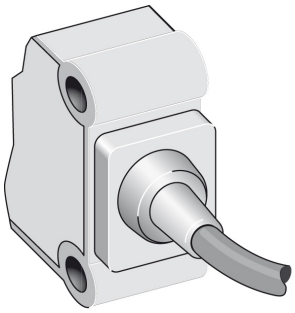


Sensing range diagram



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Connection type



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