

ONLINE DATA SHEET
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Photoelectric sensors
W14-2, Photoelectric proximity sensor, Background suppression

WT14-2P422



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Model Name > WT14-2P422
Part No. > 1026052



Illustration may differ

At a glance

- Emitter LED with infrared light
- Background suppression
- Sensing range can be set via potentiometer
- High immunity to ambient light
- Rugged plastic housing

Your benefits

- Reliable object detection with background suppression
- Quick and easy sensing range adjustment due to 4-speed potentiometer
- Crosstalk and ambient light immunity reduces false trips and downtime
- High availability in the field

Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
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.:	20 mm ... 500 mm [1]
Sensing range:	80 mm ... 500 mm [2]
Type of light:	Infrared light
Light source:	LED [3]
Wave length:	870 nm
Adjustment:	Potentiometer, 4 turns
Light spot size (distance):	Ø 14 mm (300 mm)

[1] [2] Object with 90 % reflectance (referred to standard white DIN 5033) [3] Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

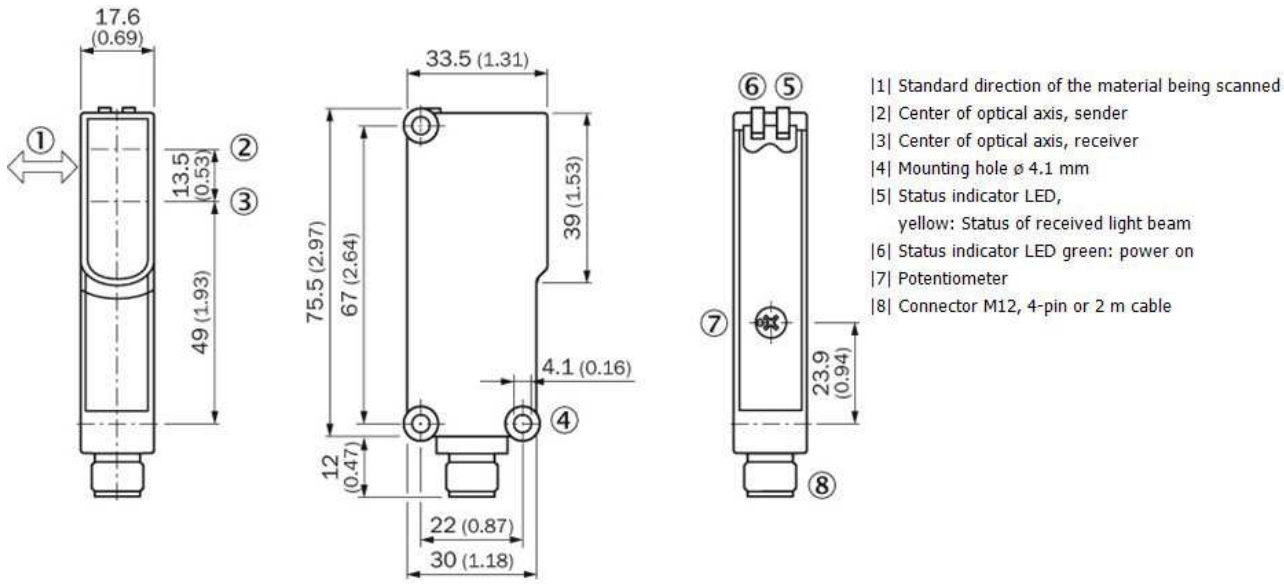
Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	5 Vpp [2]
Power consumption:	≤ 30 mA [3]
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current Imax.:	≤ 100 mA
Response time:	≤ 2.5 ms [4]
Switching frequency:	200 Hz [5]

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Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D [6) 7) 8)]
Weight:	40 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 70 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

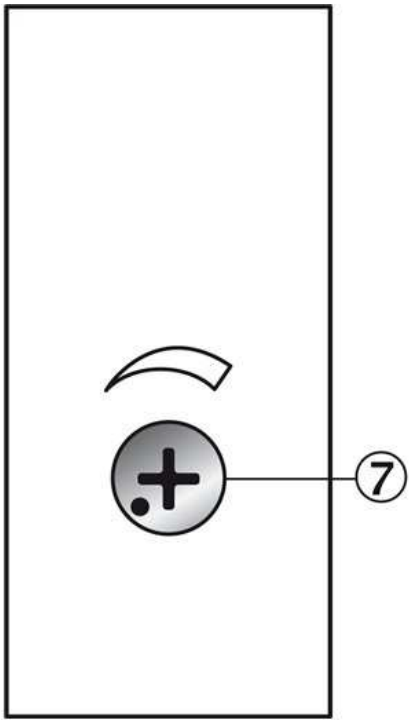
[1)] Limit values, operation in short-circuit protected network max. 8 A [2)] May not exceed or fall short of V_S tolerances [3)] Without load [4)] Signal transit time with resistive load [5)] With light/dark ratio 1:1 [6)] A = V_S connections reverse-polarity protected [7)] C = interference suppression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

Dimensional drawing

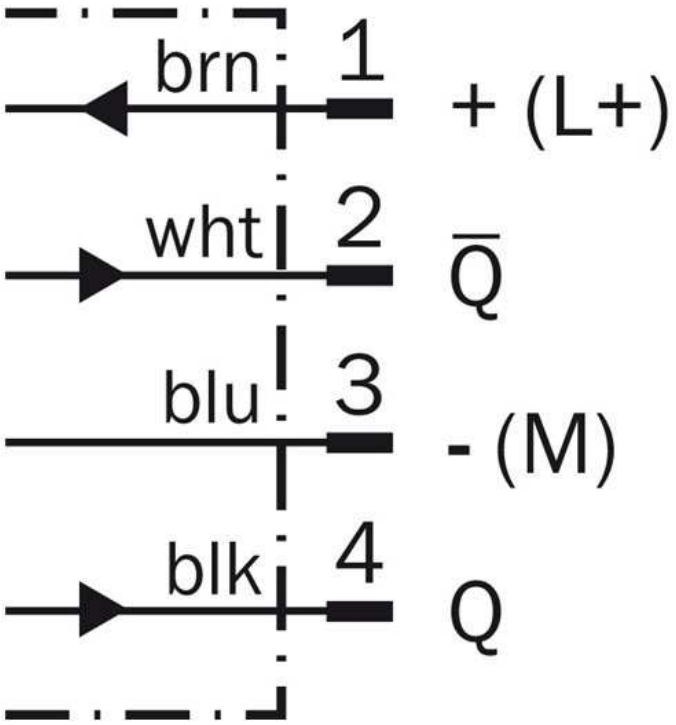


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Adjustments possible

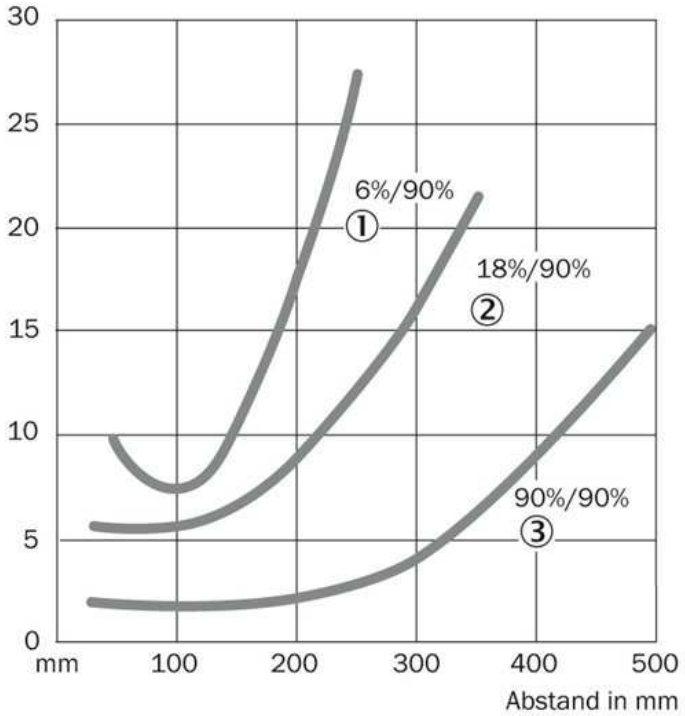


Connection diagram



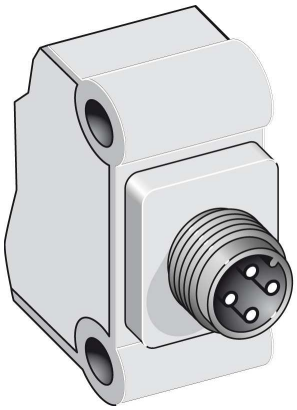
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Characteristic curve

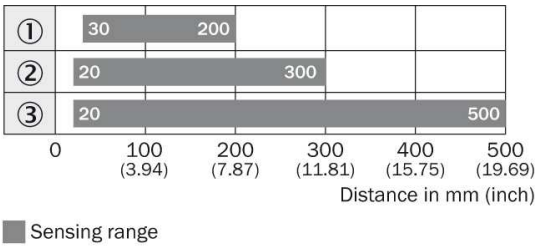


|1| Sensing range on black, 6 % remission
|2| Sensing range on grey, 18 % remission
|3| Sensing range on white, 90 % remission

Connection type



Sensing range diagram



① Sensing range on black, 6 % remission
② Sensing range on gray, 18 % remission
③ Sensing range on white, 90 % remission

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