



Photoelectric sensors
W14-2, Photoelectric proximity sensor, energetic

WT14-2P411



Model Name > [WT14-2P411](#)
Part No. > [1026059](#)



Illustration may differ

At a glance

- BGS sensing range of up to 500 mm
- Energetic proximity sensors with a sensing range up to 1500 mm with teach-in pushbutton
- IR or red LED available
- Devices with complementary output and 4-pin M12 connector or 4-wire 2 m cable
- Rugged plastic housing

Your benefits

- Reliable detection of objects due to outstanding background suppression (BGS) and a high immunity to ambient light
- Wide product portfolio gives users a variety of choices to fit their application requirements
- Reliable object detection up to 500 mm with BGS performance



Features

Sensor/detection principle:	Photoelectric proximity sensor, energetic
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.:	50 mm ... 1,500 mm ¹⁾
Sensing range:	300 mm ... 1,500 mm ²⁾
Type of light:	Infrared light
Light source:	LED ³⁾
Wave length:	870 nm
Adjustment:	Single teach-in button
Light spot size (distance):	Ø 56 mm (1,000 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

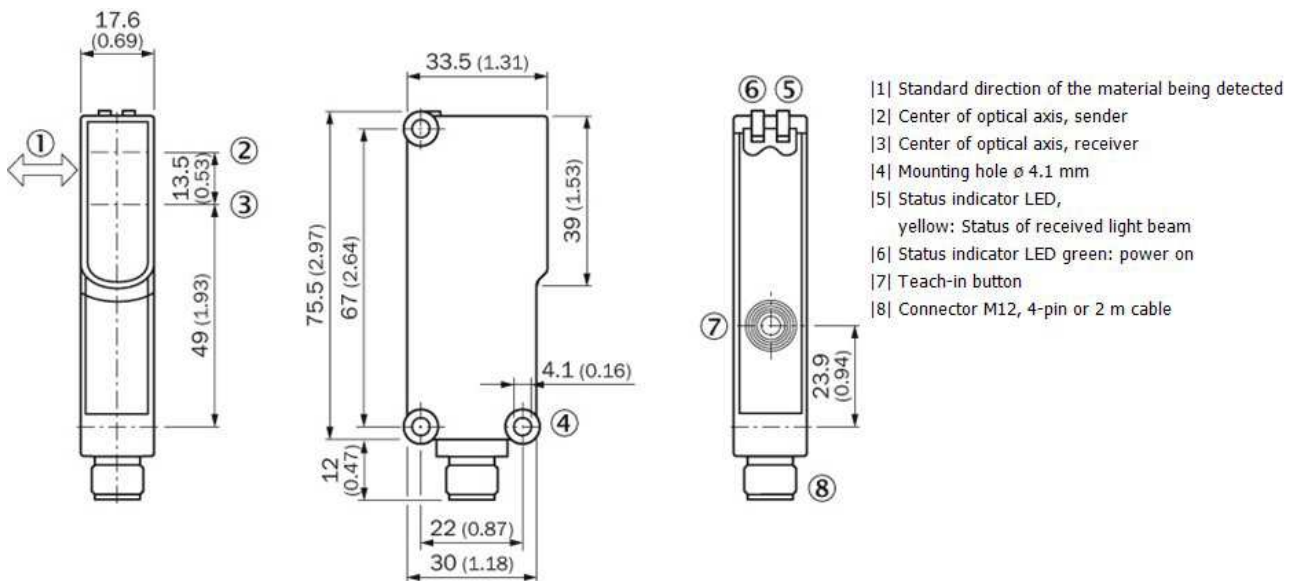
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	5 V _{pp} ²⁾
Power consumption:	≤ 55 mA ³⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current I _{max} .:	≤ 100 mA

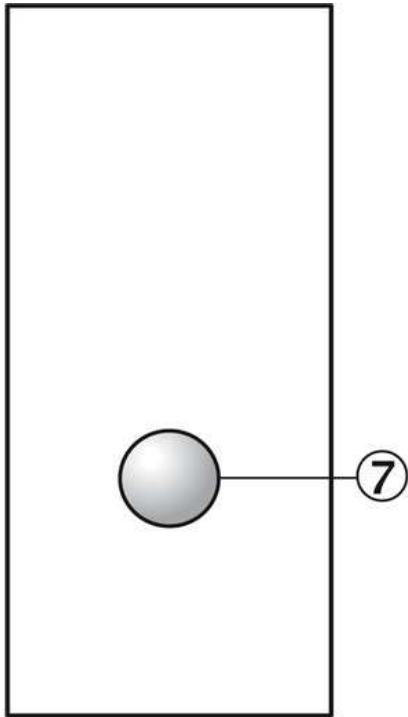
Response time:	$\leq 2.5 \text{ ms}$ ⁴⁾
Switching frequency:	200 Hz ⁵⁾
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D ^{6) 7) 8)}
Weight:	40 g
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +70 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493
Housing material:	ABS, Plastic

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

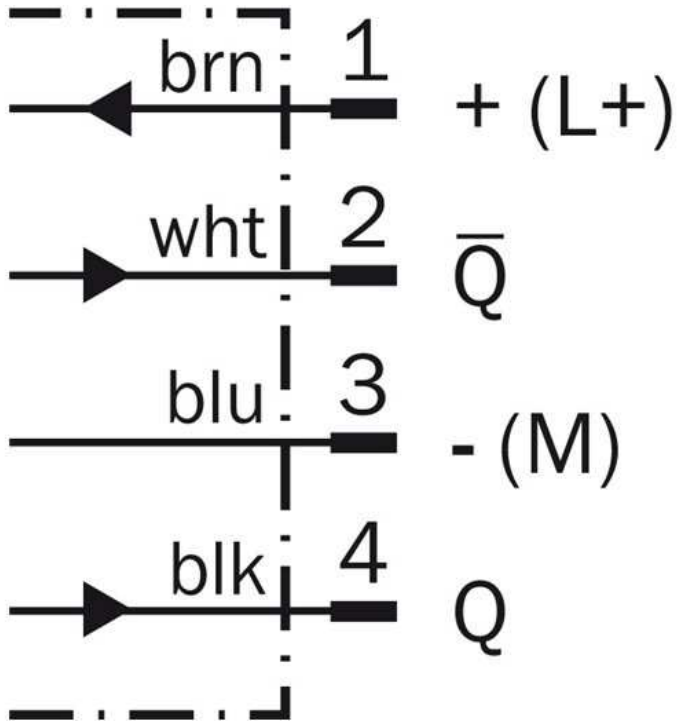


Adjustments possible

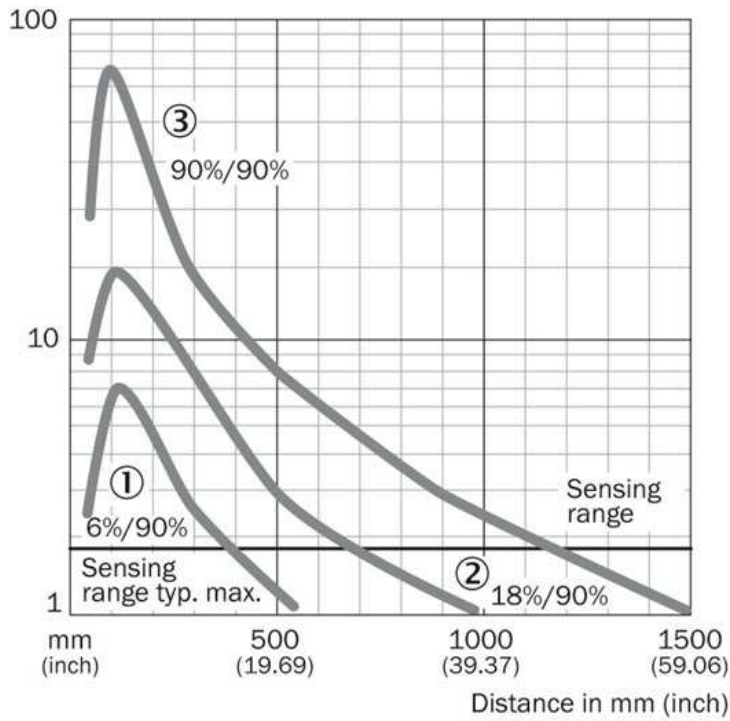


|1| Teach-in button

Connection diagram

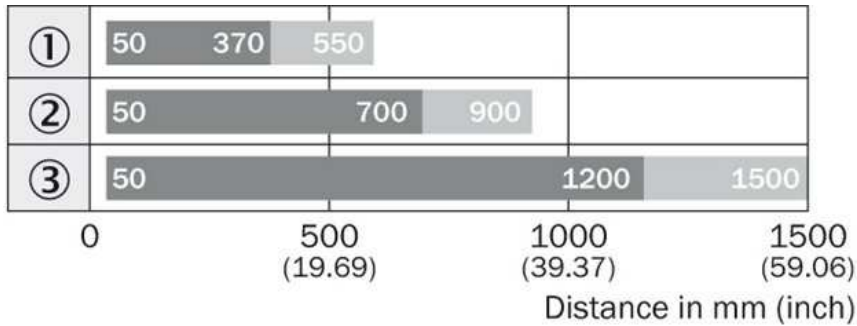


Characteristic curve



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

Sensing range diagram

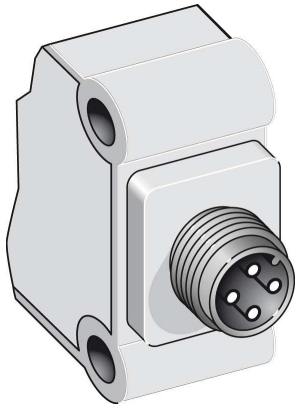


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on gray, 18 % remission
- |3| Sensing range on white, 90 % remission

■ Sensing range ■ Sensing range typ. max.

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

Connection type



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