



Photoelectric sensors
W100-2, Photoelectric proximity sensor,
energetic

WT100-2P0409S45



Type > [WT100-2P0409S45](#)
Part No. > [6052409](#)



Illustration may differ

At a glance

- Standard miniature housing with integrated M3 threaded mounting holes
- Bright emitted light spot and clearly visible indicator LEDs
- Light/dark switching and sensitivity adjustment possible
- Long sensing ranges of up to 1.2 m

Your benefits

- Long sensing ranges of up to 1.2 m thanks to a high functional reserve
- Straightforward alignment thanks to bright light spot and clearly visible indicator LEDs
- Compatibility with a number of common mounting systems due to standard housing with 1-inch hole spacing and integrated M3 threaded mounting hole
- Highly reliable and durable despite optical interference and mechanical loads



Features

Sensor/detection principle:	Photoelectric proximity sensor, energetic
Dimensions (W x H x D):	11 mm x 31 mm x 20 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 mm ... 1,200 mm ¹⁾
Sensing range:	0 mm ... 750 mm ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Wave length:	632 nm
Adjustment:	Potentiometer
Light spot size (distance):	Ø 75 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

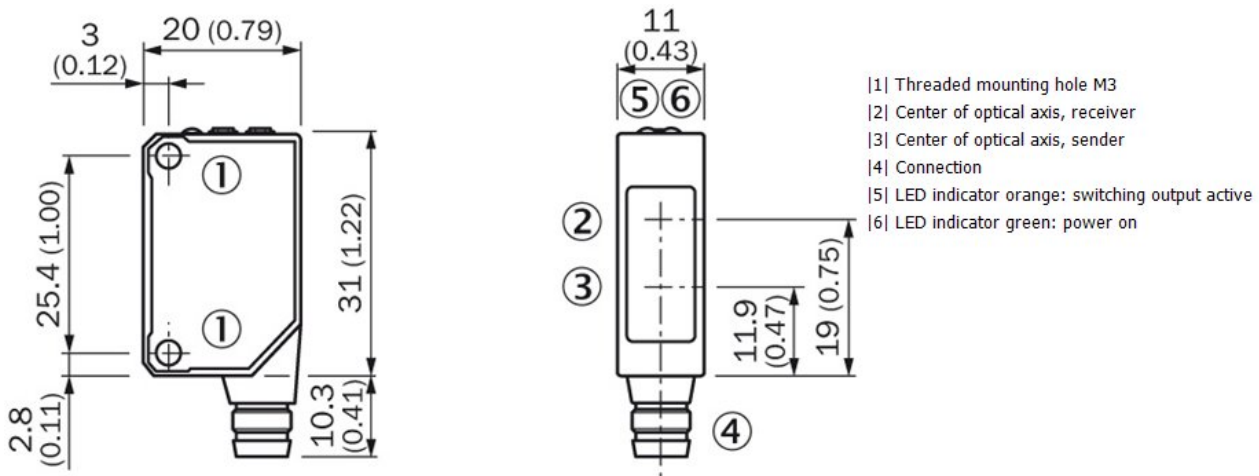
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	± 10 % ²⁾
Current consumption:	≤ 30 mA ³⁾
Output type:	PNP
Switching mode:	Light/dark switching
Switching mode selector:	Selectable via light/dark rotary switch
Output current I _{max.} :	100 mA
Response time:	≤ 0.5 ms ⁴⁾

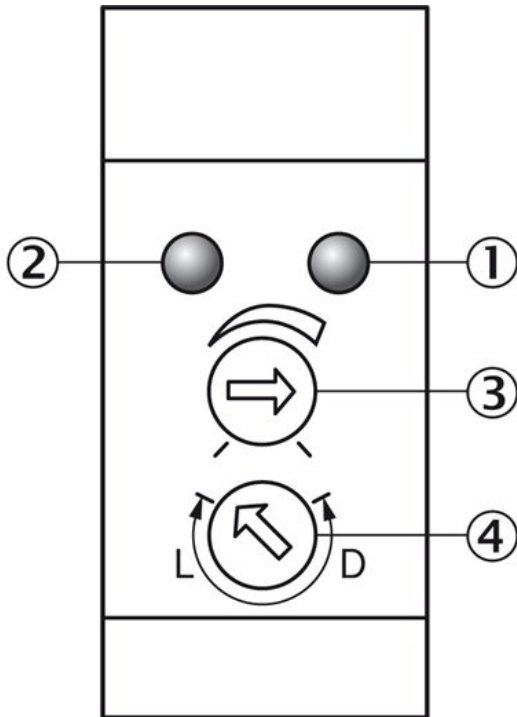
Switching frequency:	1,000 Hz ⁵⁾
Connection type:	Cable with M8 male connector, 4-pin, 300 mm ⁶⁾
Cable material:	PVC
Circuit protection:::	A, B, D ^{7) 8) 9)}
Protection class:	III
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Mounting bracket BEF-W100-A
Ambient operating temperature:	-25 °C ... +55 °C
Ambient storage temperature:	-40 °C ... +70 °C
Signal voltage PNP HIGH/LOW:	UV - 1,8 V/ca. 0 V
Housing material:	ABS/PC/POM, Plastic

1) Limit values 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) Do not bend below 0 °C 7) A = V_S connections reverse-polarity protected 8) B = output reverse-polarity protected 9) D = outputs overcurrent and short-circuit protected

Dimensional drawing

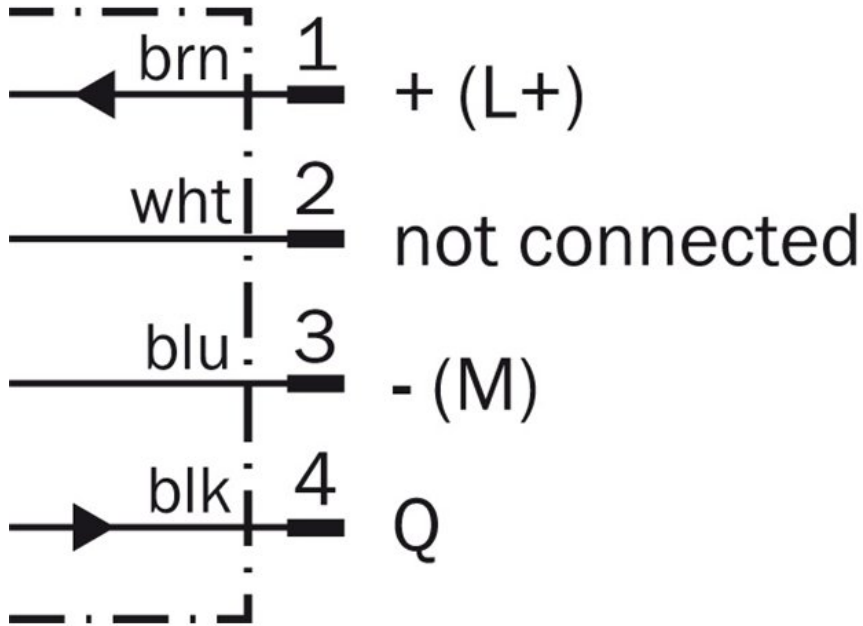


Adjustments possible

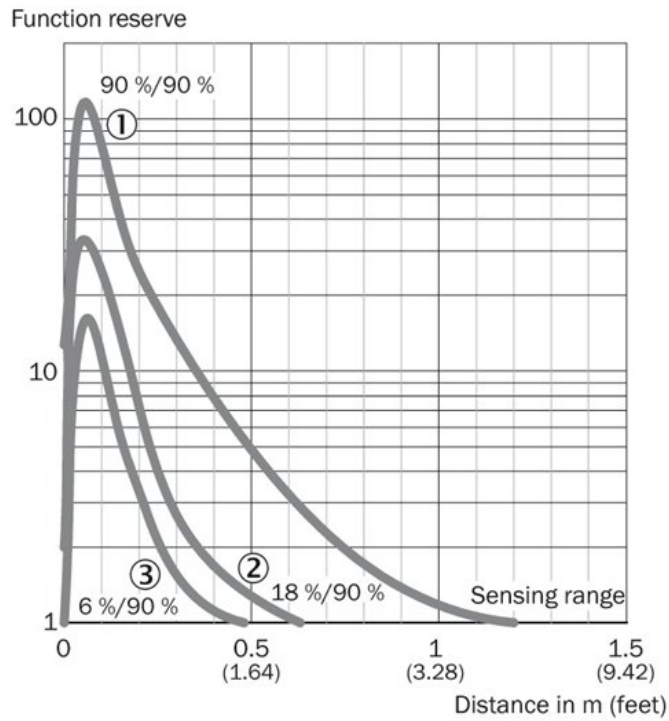


- |1| LED indicator orange: switching output active
- |2| LED indicator green: power on
- |3| Sensing range adjustment: potentiometer
- |4| Light/ dark rotary switch: L = light switching, D = dark switching

Connection diagram

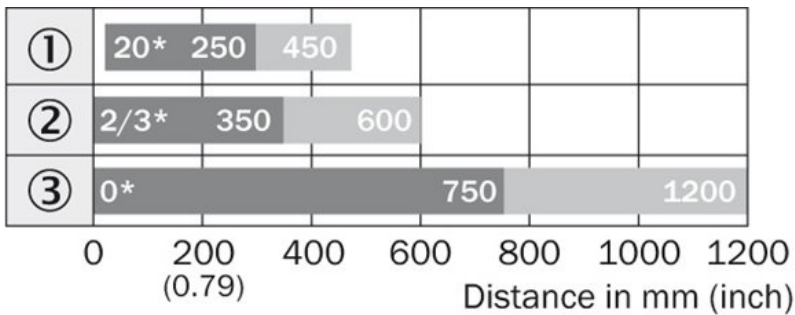


Characteristic curve



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

Sensing range diagram

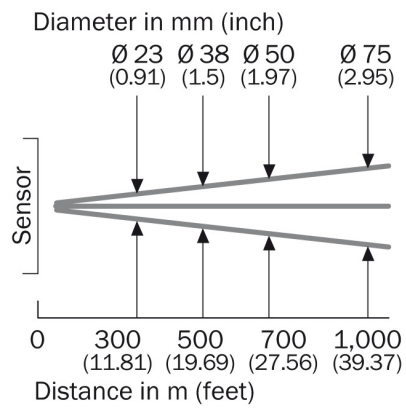


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on gray, 18 % remission
- |3| Sensing range on white, 90 % remission

■ Sensing range ■ Sensing range max.

*Close-up range at maximum sensitivity

Light spot size



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