



Photoelectric sensors
W280-2, Photoelectric proximity sensor,
energetic

WTE280-2R1531



Model Name > [WTE280-2R1531](#)
Part No. > [6044759](#)



Illustration may differ

At a glance

- Highly visible red light spot thanks to the BrightLight LED
- Potentiometer for adjusting sensing range
- Light/dark switching (DC devices only)
- Rotatable connector, cable connection or terminal chamber
- Versions for 10 - 30 V DC or 24 - 240 V DC/AC voltage supply
- Stainless steel mounting bracket included in delivery

Your benefits

- Simple and fast commissioning with the highly visible light spot of the BrightLight LED
- Simple operation via potentiometer
- Light/dark switching provides application flexibility
- All necessary mounting and operating accessories are included in delivery, enabling quick and easy setup: since mounting bracket (stainless steel 1.4301) is included in delivery scope
- DC devices and AC/DC devices available in the same housing, allowing electrical flexibility



Features

Sensor/detection principle:	Photoelectric proximity sensor, energetic
Dimensions (W x H x D):	23.5 mm x 74.5 mm x 63 mm
Housing design (light emission):	Rectangular
Sensing range max.:	10 mm ... 2,000 mm ¹⁾
Sensing range:	10 mm ... 1,500 mm
Type of light:	Visible red light
Light source:	BrightLight LED ²⁾
Adjustment:	Adjustable via sensing range adjustment, Potentiometer
Light spot size (distance):	Ø 45 mm (1,500 mm)

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

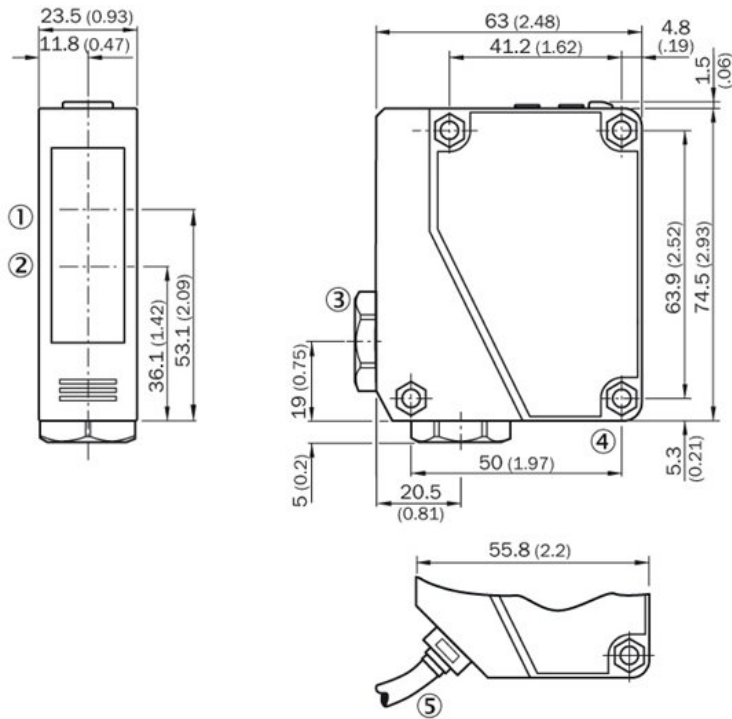
Mechanics/electronics

Supply voltage::	24 V AC ... 240 V AC, 24 V DC ... 240 V DC ^{1) 2)}
Power consumption:	≤ 5 VA
Output type:	Relay ³⁾
Output function:	Change-over contacts
Switching mode:	Light switching ⁴⁾

Output characteristic:	Electrically isolated
Switching current (switching voltage):	3 A (240 V AC), 3 A (30 V DC)
Response time:	≤ 15 ms
Switching frequency:	33 Hz ⁵⁾
Connection type:	Cable, 5-wire, 2 m ⁶⁾
Conductor cross-section:	0.76 mm ²
Circuit protection:	A, C ^{7) 8)}
Protection class:	II ⁹⁾
Overvoltage category:	3
Weight:	150 g
Interference emission:	EN 61000-6-3 (only -2Hxxxx) ¹⁰⁾
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67
Items supplied:	Mounting bracket BEF-W280
Usage category:	AC-15, DC-13, According to EN 60947-1
EMC:	EN 60947-5-2 ¹¹⁾
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C

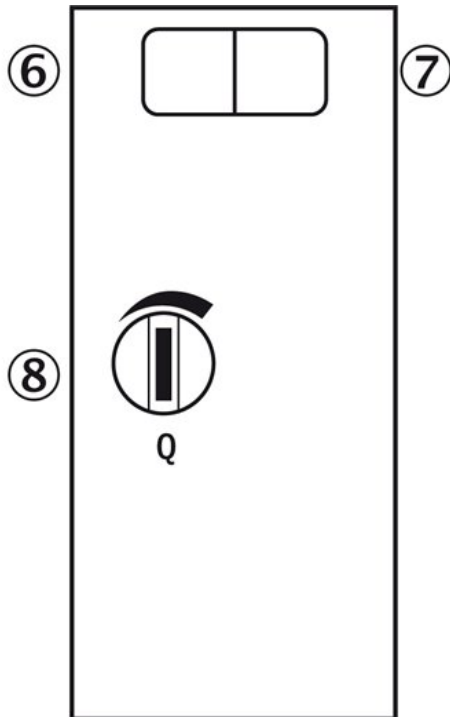
1) 2) ±10 % 3) 4) Provide suitable spark suppression for inductive or capacitive loads ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Do not bend below 0 °C ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ C = interference suppression ⁹⁾ Rated voltage 250 V AC/DC ¹⁰⁾ In the case of a DC supply (relating to EN 61000-6-3) the length of cable between the supply source and the sensor must be < 30 m ¹¹⁾ The AC/DC devices meet the interference suppression requirements for industrial use (interference suppression class A). When used in residential areas it can cause interference.

Dimensional drawing



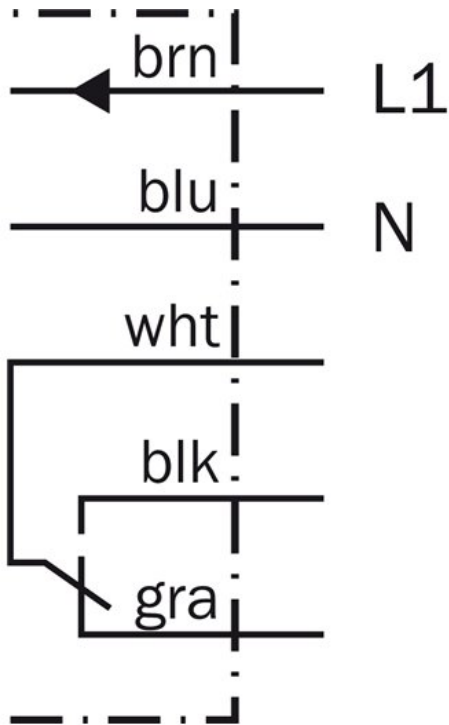
- |1| Center of optical axis, receiver
- |2| Center of optical axis, sender
- |3| Cable entry gland 3/8" for cable diameter 6 to 8 mm
- |4| Mounting hole, Ø 4.3 mm
- |5| Cable, 2 m, 5-wire, Ø 6,3 mm

Adjustments possible

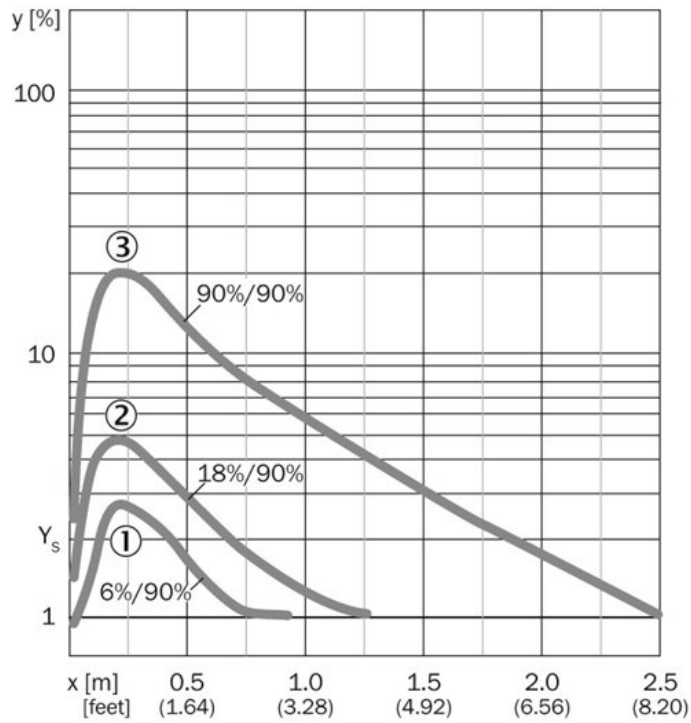


- |6| LED indicator green: Stability indicator
- |7| Status indicator LED,
yellow: Status of received light beam
- |8| Sensing range adjustment: potentiometer

Connection diagram

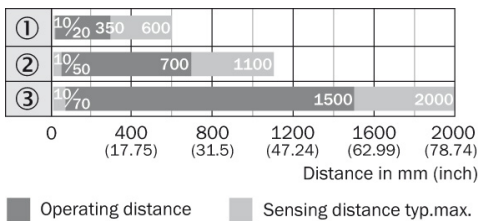


Characteristic curve



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

Sensing range diagram



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