



Photoelectric sensors
W280-2, Through-beam photoelectric sensor

WSE280-2P2431



Model Name > [WSE280-2P2431](#)
Part No. > [6044745](#)



Illustration may differ

At a glance

- Highly visible red light spot thanks to the BrightLight LED
- Large sensing range and high operating reserve
- 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 (1.4301) is included in delivery
- AC/DC devices (-2Hxxxx) are compliant with EN 61000-6-3 (electromagnetic interference for "residential, commercial and light-industrial environments")

Your benefits

- Less contamination due to high operating reserves, reducing downtime
- DC and AC/DC devices available in the same housing allow electrical flexibility
- Light/dark switching provides application flexibility and reduces the number of devices needed
- 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



Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	23.5 mm x 74.5 mm x 63 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 60 m
Sensing range:	0 m ... 50 m
Type of light:	Visible red light
Light source:	BrightLight LED ¹⁾
Adjustment:	Potentiometer
Light spot size (distance):	Ø 0.6 m (20 m)

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

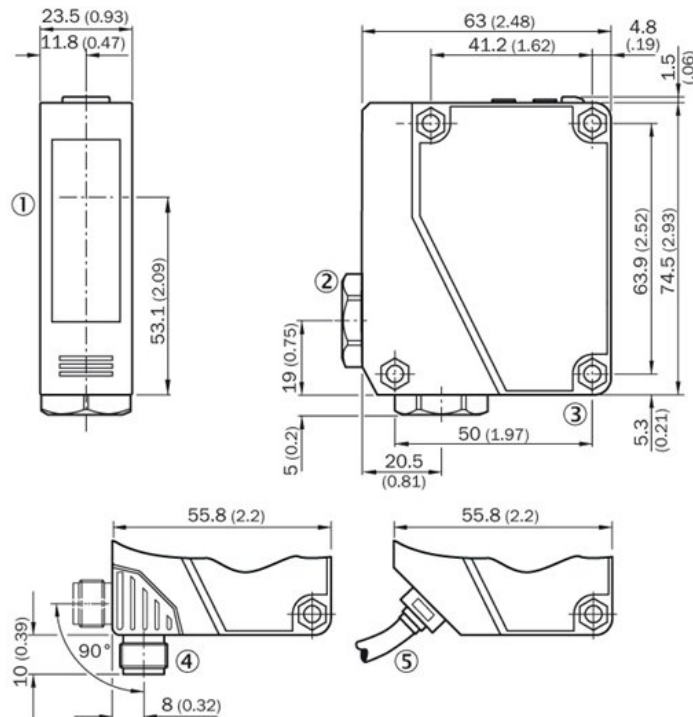
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 5 V _{pp} ²⁾
Power consumption, sender:	≤ 20 mA
Power consumption, receiver:	≤ 20 mA ³⁾
Output type:	PNP

Switching mode:	Light/dark-switching
Output characteristic:	Open collector
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:	Connector M12, 4-pin
Circuit protection:::	A, B, C, D ^{6) 7) 8) 9)}
Protection class:	III
Weight:	300 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67
Items supplied:	Mounting bracket BEF-W280
EMC:	EN 60947-5-2 ¹⁰⁾
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C

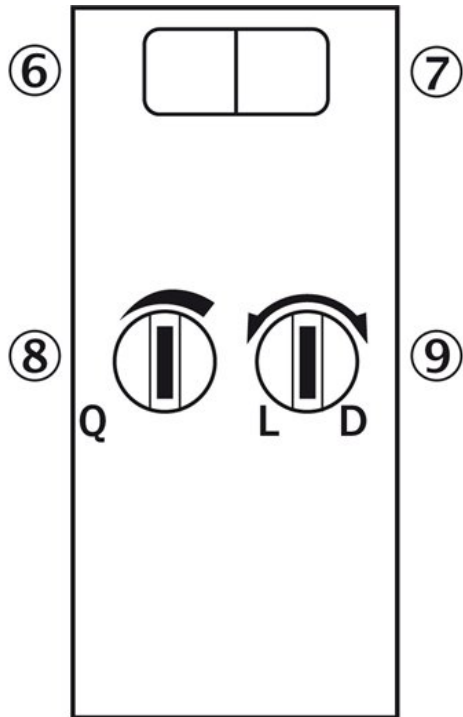
1) Limit values, operation in short-circuit protected network max. 8 A 2) May not exceed or fall short of V_S tolerances 3) Without load 4) Signal transit time with resistive load
5) With light/dark ratio 1:1 6) A = V_S connections reverse-polarity protected 7) B = inputs and output reverse-polarity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

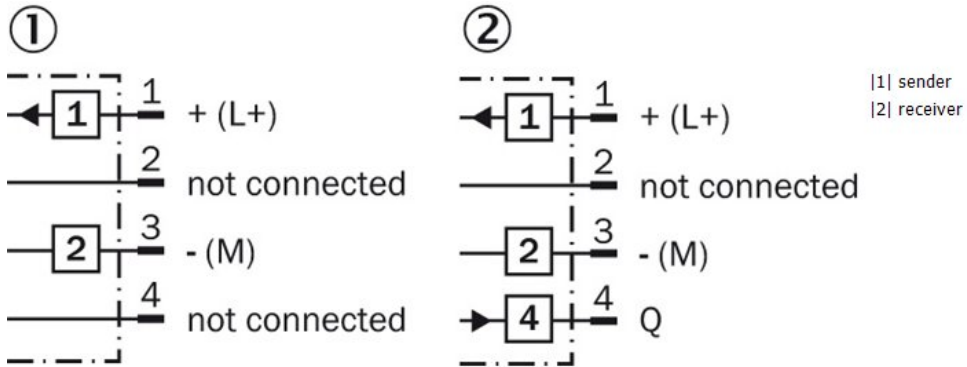


- [1] centre of optical axis, sender and receiver
- [2] Cable entry gland 3/8" for cable diameter 6 to 8 mm
- [3] Mounting hole, Ø 4.3 mm
- [4] Connector M12, 4-pin, 90° rotatable, can be locked with slider
- [5] Cable, 2 m, 3-pin, Ø 3,8 mm

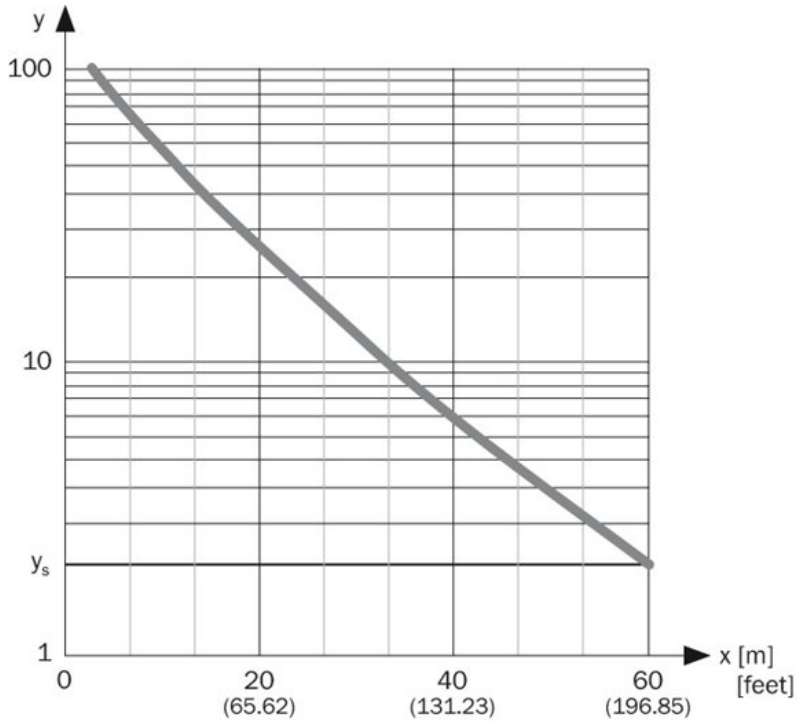
Adjustments possible



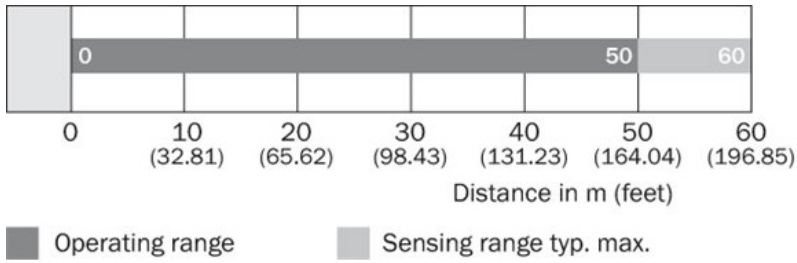
Connection diagram



Characteristic curve



Sensing range diagram



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