



Photoelectric sensors
W280, Through-beam photoelectric sensor

WS/WE280-P230



Model Name > [WS/WE280-P230](#)
Part No. > [6028288](#)



Illustration may differ

At a glance

- Visible red light
- 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 are compliant with EN61000-6-3 (electromagnetic interference for "residential, commercial and light-industrial environments")
- UL recognized

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

Note: This part is discontinued. Please see the replacement product under "Replacement Products" link. "



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 ... 45 m
Sensing range:	0 m ... 40 m
Type of light:	Visible red light
Light source:	LED ¹⁾
Sensitivity adjustment:	Sensitivity adjustment
Angle of dispersion:	1.4 °
Light spot size (distance):	40 m

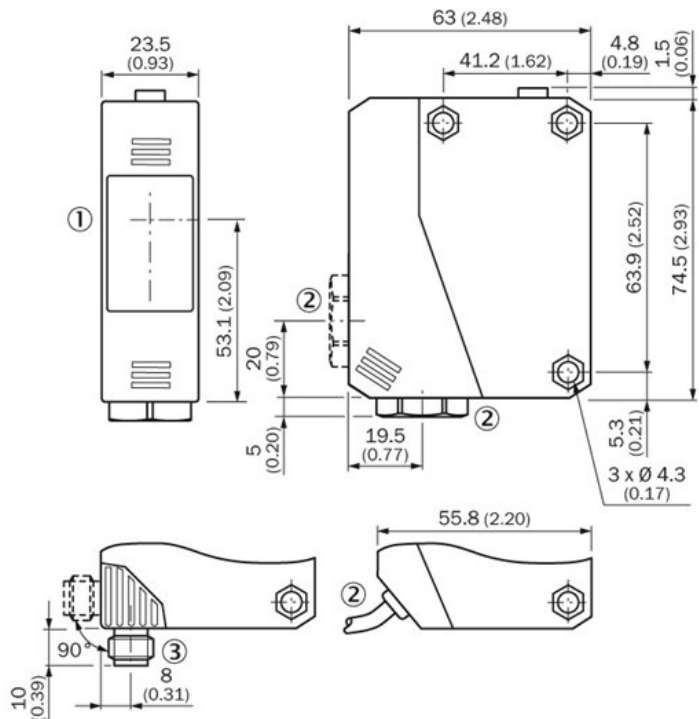
¹⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	$\leq 5 \text{ Vpp}$ ²⁾
Power consumption, sender:	3.5 mA ³⁾
Power consumption, receiver:	3.5 mA ⁴⁾
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:	$\leq 0.5 \text{ ms}$ ⁵⁾
Switching frequency:	1,000 Hz ⁶⁾
Angle of reception:	6 °
Connection type:	Cable gland
Circuit protection:::::	A, B, C, D ^{7) 8) 9) 10)}
Protection class:	II ¹¹⁾
Weight:	300 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 66
Items supplied:	Mounting bracket BEF-W280
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C

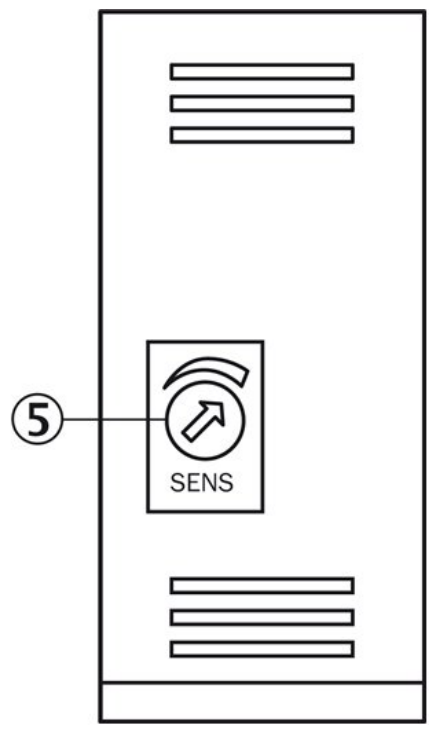
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ^{3) 4)} Without load ⁵⁾ Signal transit time with resistive load ⁶⁾ With light/dark ratio 1:1 ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ B = inputs and output reverse-polarity protected ⁹⁾ C = interference suppression ¹⁰⁾ D = outputs overcurrent and short-circuit protected ¹¹⁾ To VDE 0106

Dimensional drawing



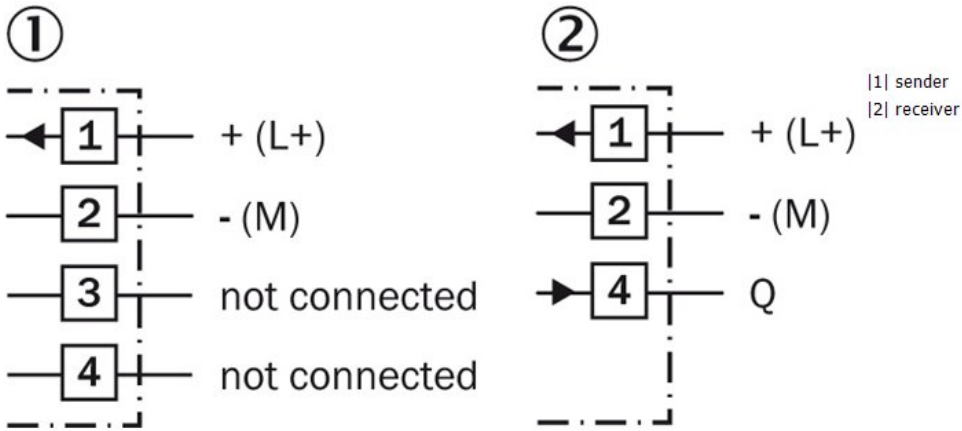
- [1] Optical axis, sender and receiver
- [2] Cable entry gland 1/2" PF for cable diameter 6 to 10 mm or 3-core cable Ø 3.8 mm
- [3] Connector M12, 4-pin , rotatable by 90°

Adjustments possible

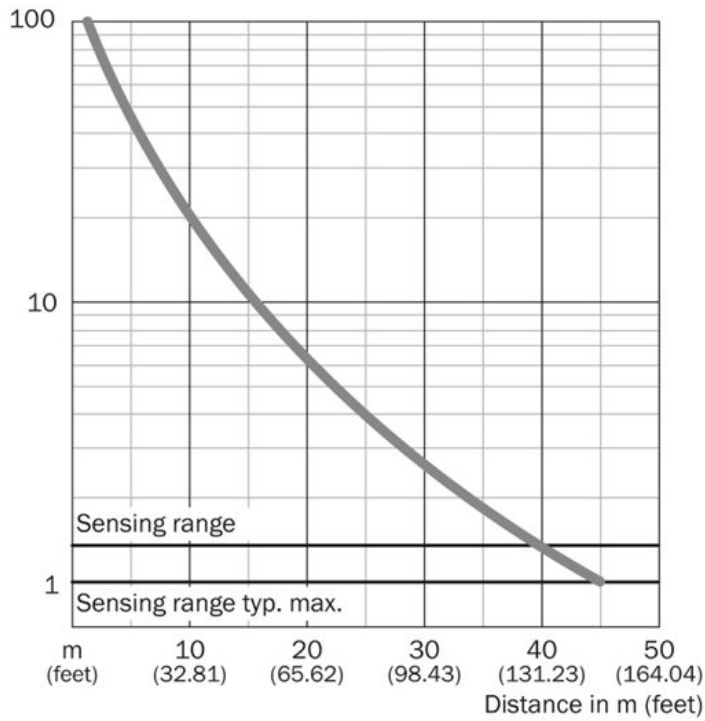


- [5] Sensitivity adjustment

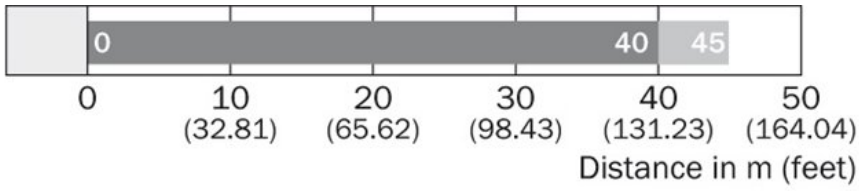
Connection diagram



Characteristic curve

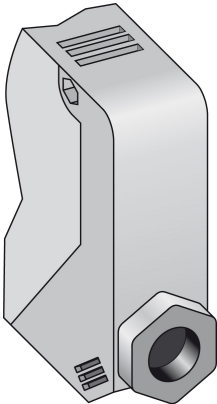


Sensing range diagram



■ Sensing range ■ Sensing range typ. max.

Connection type



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