



Photoelectric sensors W280, Photoelectric retro-reflective sensor

WL280-N132



Model Name > [WL280-N132](#)
Part No. > [6028285](#)



Illustration may differ

At a glance

- Visible red light
- Potentiometer for sensitivity control
- Light/dark switching (DC devices)
- Rotatable connector, cable connector or terminal chamber
- Versions for 10 - 30 V DC or 24 - 240 V DC/AC voltage supply
- Stainless steel mounting bracket and P250 reflector are 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, allowing electrical flexibility
- Potentiometer adjustment for application-specific operation
- 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) and reflector are included in delivery scope
- Polarizing filter ensures reliable detection, even with shiny targets

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



Features

Sensor/detection principle:	Photoelectric retro-reflective 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.:	0.01 m ... 15 m ¹⁾
Sensing range::	0.01 m ... 10 m, 0.01 m ... 13 m ^{2) 3)}
Type of light:	Visible red light
Light source:	LED ⁴⁾
Angle of dispersion:	1.6 °
Adjustment:	Sensitivity adjustment
Light spot size (distance):	10 m

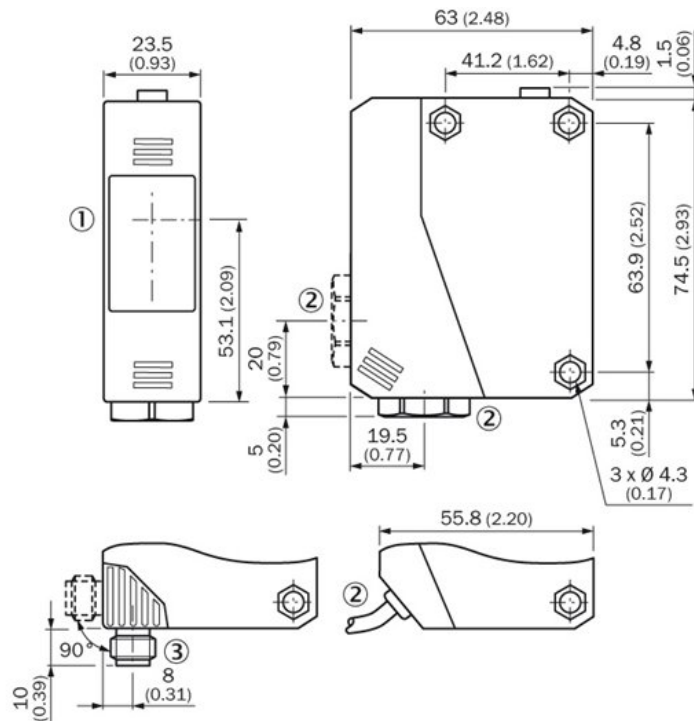
1) 3) PL80A 2) P250 4) Average service life of 100,000 h at $T_A = +25\text{ °C}$

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	$\leq 5\text{ Vpp}$ ²⁾
Power consumption:	$\leq 30\text{ mA}$ ³⁾
Output type:	NPN, open collector
Switching mode:	Light/dark-switching
Switching mode selector:	Selectable via light/dark rotary switch
Output current $I_{max.}$:	100 mA
Response time:	$\leq 0.5\text{ ms}$ ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾
Connection type:	Cable, 3-wire, 2 m ⁶⁾
Conductor cross-section:	0.18 mm ²
Circuit protection:::	A, B, C, D ⁷⁾ 8) 9) 10)
Protection class:	II ¹¹⁾
Weight:	150 g
Polarisation filter:	✓
Special device:	-
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 66
Items supplied:	Mounting bracket BEF-W280, Reflector P250
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C

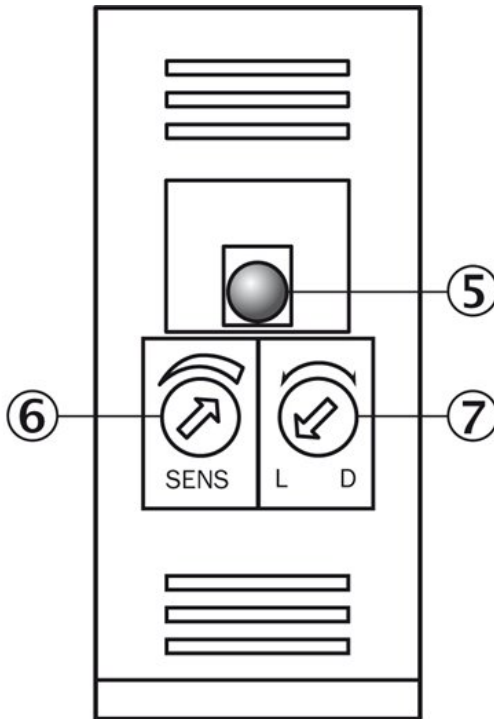
¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Do not bend below 0 °C ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ B = inputs and output reverse-polarity protected ⁹⁾ C = interference suppression ¹⁰⁾ D = outputs overcurrent and short-circuit protected ¹¹⁾ To VDE 0106

Dimensional drawing



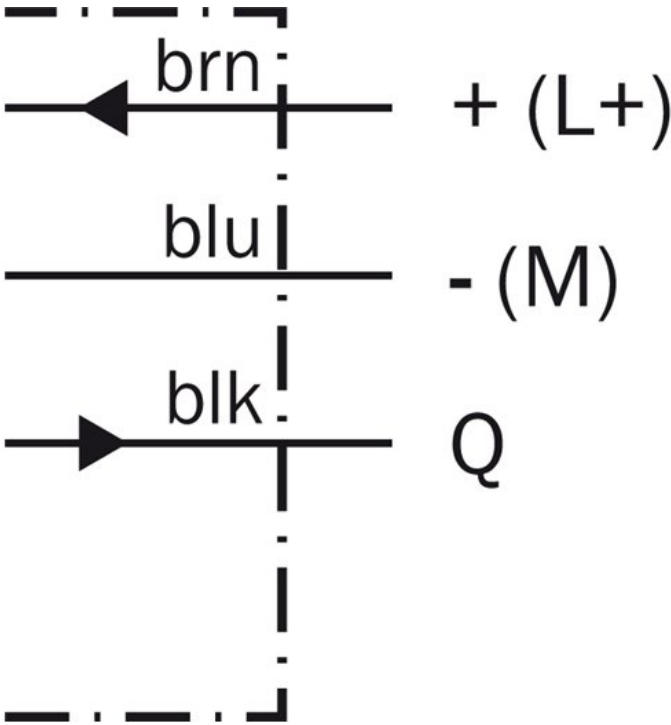
- |1| Optical axis, sender and receiver
- |2| Cable entry gland 1/2" PF for cable diameter 6 to 10 mm or 3-core cable Ø 3.8 mm
- |3| Connector M12, 4-pin , rotatable by 90°

Adjustments possible

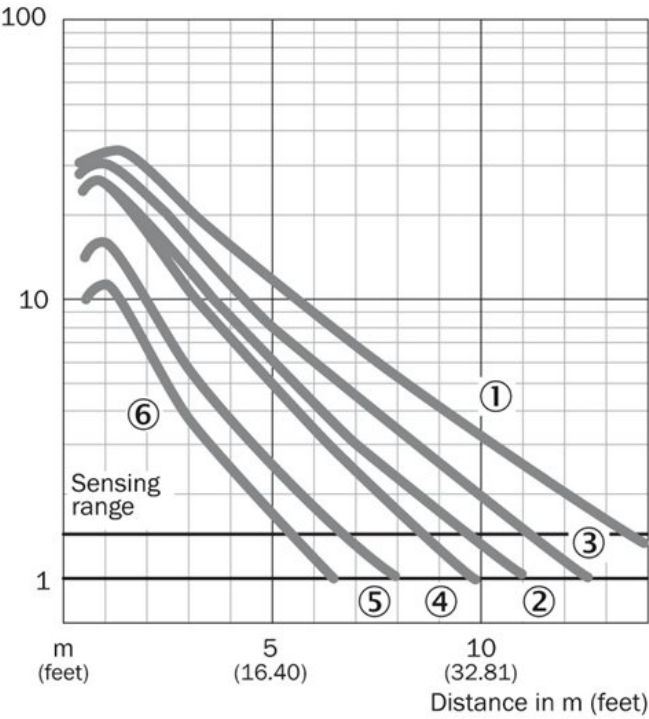


- |5| LED signal strength indicator
- |6| Sensitivity adjustment
- |7| Light/ dark rotary switch L = light switching, D = dark switching

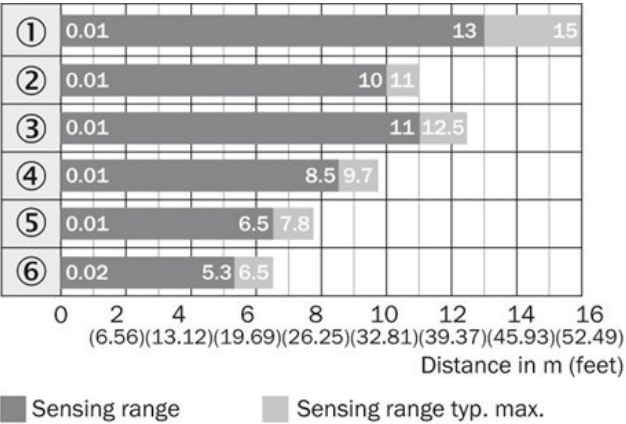
Connection diagram



Characteristic curve



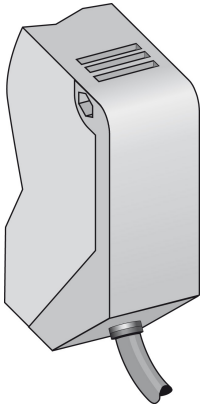
Sensing range diagram



Reflector type

- ① PL80A
- ② P250
- ③ PL50A/PL40A
- ④ PL30A/PL31A
- ⑤ PL20A
- ⑥ Reflective tape
Diamond Grade

Connection type



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