



Photoelectric sensors  
Z2, Photoelectric retro-reflective sensor

ZL2-F2428



**Model Name** > [ZL2-F2428](#)  
**Part No.** > [1045371](#)



*Illustration may differ*

**At a glance**

- Photoelectric retro-reflective sensor with 4.8 m sensing distance; no setting options
- Compact, transparent housing with 360° status indication
- M18 front mount and 24-25.2 mm slotted side through holes compatible with competitor devices
- Connection system: angled cable outlet (60°) or M12 or M8 plug connector

**Your benefits**

- Low-cost retro-reflective sensor for standard applications
- Clear housing provides 360° status indication, which simplifies troubleshooting
- Unique mounting options lower installation costs
- Small size fits applications with limited space
- Compatibility with competitor products for easy integration into existing systems



**Features**

Sensor/detection principle:	Photoelectric retro-reflective sensor
Dimensions (W x H x D):	13.6 mm x 45.2 mm x 31.7 mm
Housing design (light emission):	Hybrid
Thread diameter (housing):	M18 x 1
Sensing range max.:	0.1 m ... 4.8 m <sup>1)</sup>
Sensing range:	0.1 m ... 3 m <sup>2)</sup>
Type of light:	Visible red light
Light source:	LED <sup>3)</sup>
Wave length:	660 nm
Light spot size (distance):	125 mm (1 m)

<sup>1) 2)</sup> PL80A <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

**Mechanics/electronics**

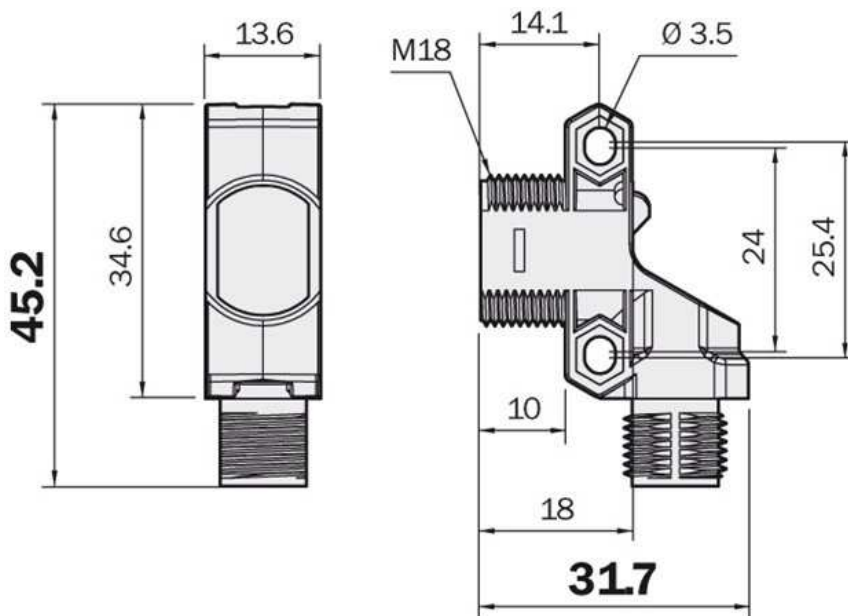
Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Power consumption:	< 20 mA <sup>2)</sup>
Output type:	PNP
Switching mode:	Dark switching
Output current I <sub>max.</sub> :	50 mA
Switching frequency:	400 Hz <sup>3)</sup>
Connection type:	Connector M12, 4-pin

Circuit protection::	A, D <sup>4) 5)</sup>
Protection class:	III <sup>6)</sup>
Polarisation filter:	✓
Housing material:	Glass fiber reinforced ABS plastic, Plastic
Enclosure rating:	IP 67
Items supplied:	Mounting nut M18
Ambient operating temperature:	-25 °C ... 50 °C
Ambient storage temperature:	-40 °C ... 70 °C

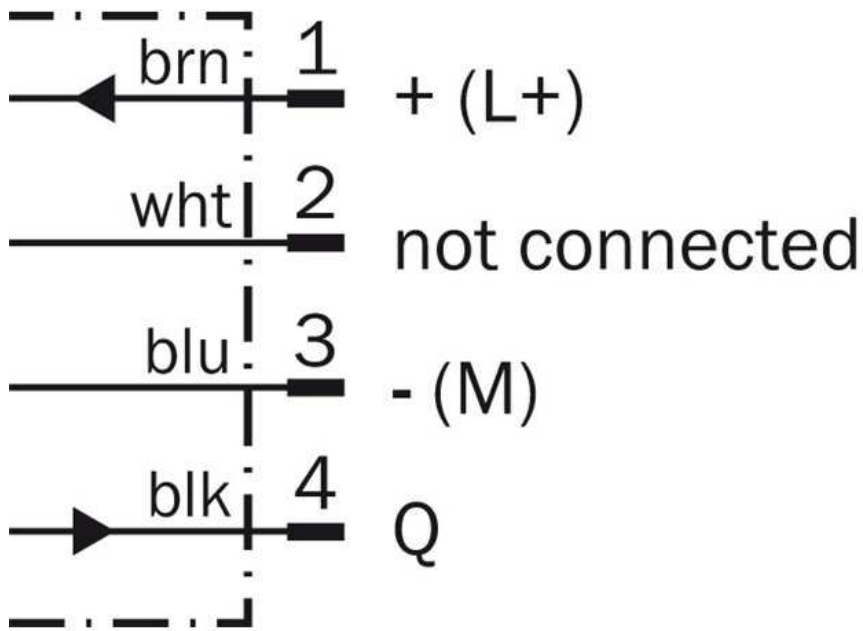
1) Limit values 2) Without load 3) With light/dark ratio 1:1 4)  $A = V_S$  connections reverse-polarity protected 5) D = outputs overcurrent and short-circuit protected 6)

Reference voltage 50 V DC

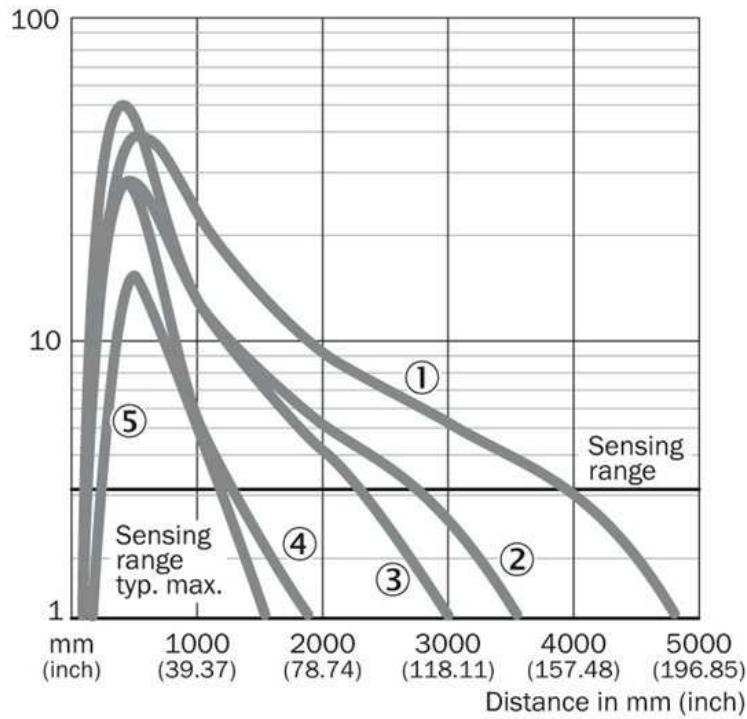
### Dimensional drawing



### Connection diagram

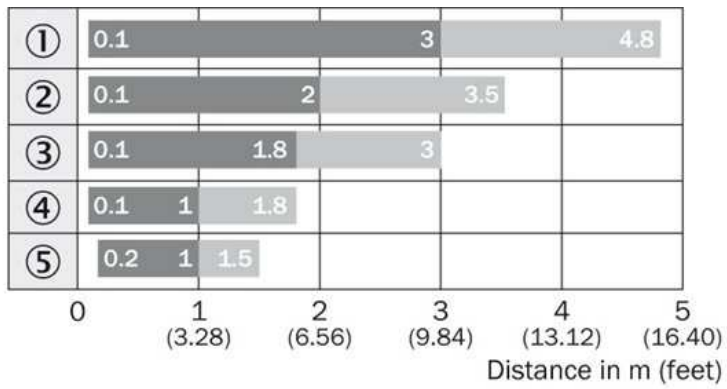


### Characteristic curve



- [1] PL80A
- [2] P250
- [3] PL40A
- [4] PL20A
- [5] Reflective tape REF-Plus

## Sensing range diagram



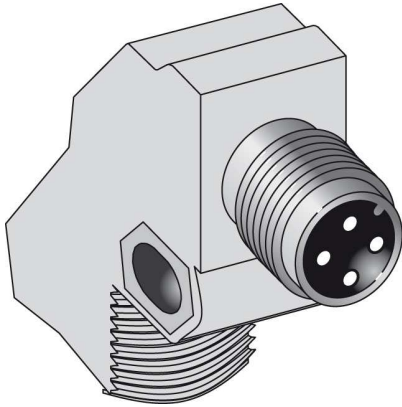
- |1| PL80A
- |2| P250
- |3| PL40A
- |4| PL20A
- |5| Reflective tape REF-Plus

■ Sensing range      ■ Sensing range typ. max.

## Reflector type

- ① PL80A
- ② P250
- ③ PL40A
- ④ PL20A
- ⑤ REF-PLUS

## Connection type



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