



Photoelectric sensors  
Z3, Photoelectric retro-reflective sensor

ZL3-F2415



**Model Name** > ZL3-F2415  
**Part No.** > 1045531



Product may differ  
from illustration

**At a glance**

- 4.8 m sensing distance; no setting options
- Transparent housing with 360° status indication
- 24 mm ball mount allows for infinite adjustability
- Spherical eyeball-style housing
- Connection system: straight cable outlet

**Your benefits**

- Low-cost, retro-reflective sensor for standard applications
- Clear housing provides 360° status indication, which simplifies troubleshooting
- Special accessories that allow for infinite adjustability



**Features**

Sensor/detection principle:	Photoelectric retro-reflective sensor
Housing design (light emission):	Hybrid
Housing length:	25 mm
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>
Light spot (distance):	125 mm (1 m)
Wave length:	660 nm

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

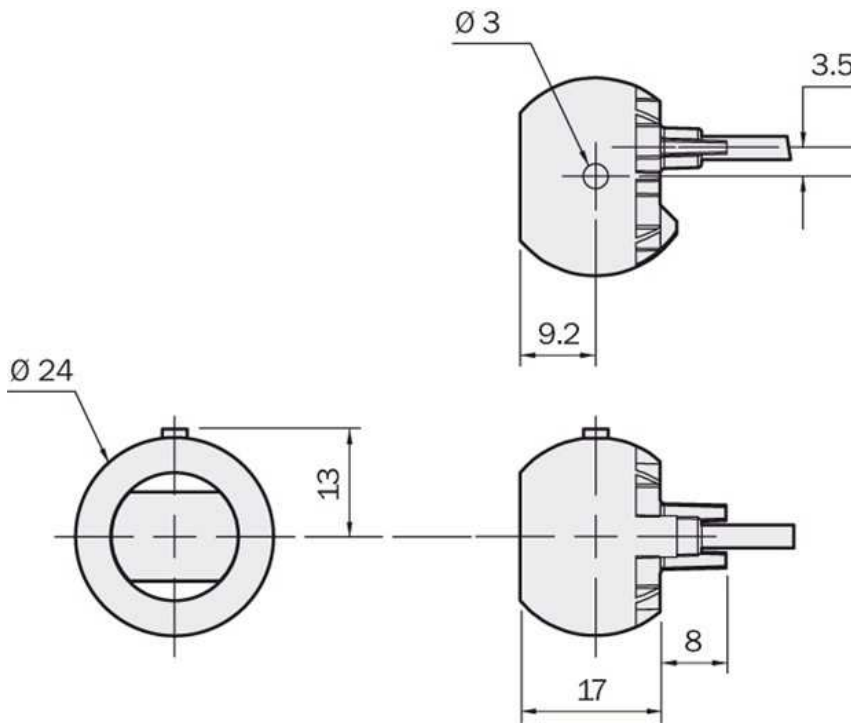
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	< 5 Vpp <sup>2)</sup>
Power consumption:	< 20 mA <sup>3)</sup>
Output type:	PNP, Dark-switching
Output current I <sub>max</sub> .:	50 mA
Switching frequency:	400 Hz <sup>4)</sup>
Connection type:	Cable, 3-wire, 2 m <sup>5)</sup>
Cable material:	PVC
Conductor cross-section:	0.23 mm <sup>2</sup>
Circuit protection::	A <sup>6) 7)</sup> D

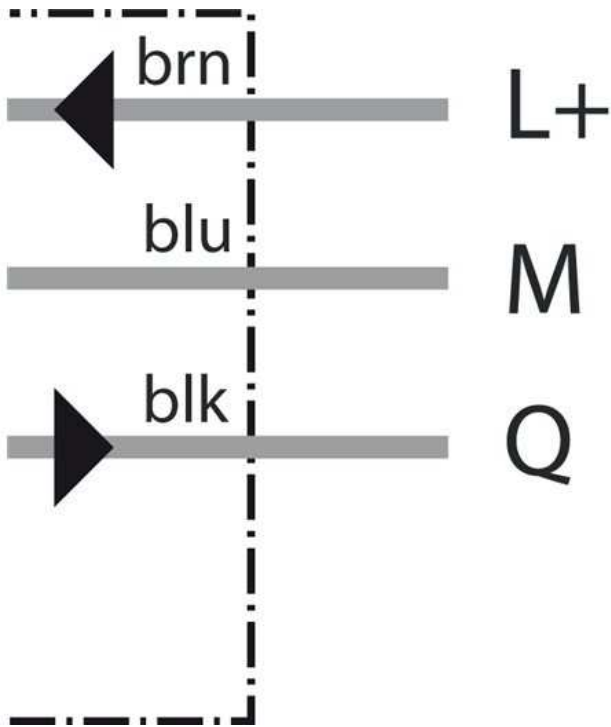
Protection class: III <sup>8)</sup>  
 Polarisation filter: ✓  
 Housing material: Glass fiber reinforced ABS plastic  
 Enclosure rating: IP 67  
 Ambient operating temperature: -25 °C ... 50 °C  
 Ambient storage temperature: -40 °C ... 70 °C

<sup>1)</sup> Limit values <sup>2)</sup> May not exceed or fall short of  $V_S$  <sup>3)</sup> Without load <sup>4)</sup> With light/dark ratio 1:1 <sup>5)</sup> Do not bend below 0 °C <sup>6)</sup> A = VS connections reverse-polarity protected <sup>7)</sup> D = outputs overcurrent and short-circuit protected <sup>8)</sup> Reference voltage 50 V DC

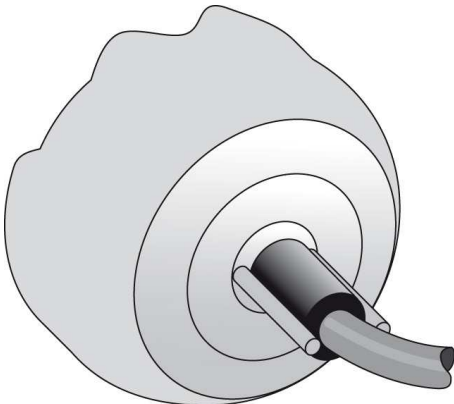
### Dimensional drawing



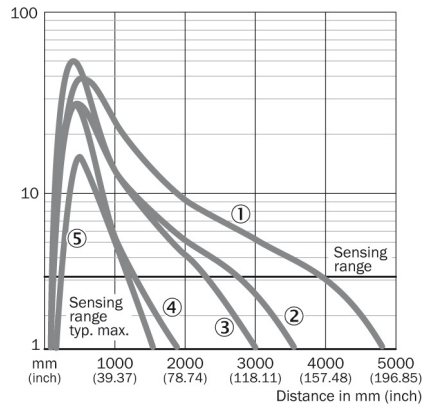
**Connection diagram**



**Connection type**



**Characteristic curve**



**Sensing range diagram**

①	0.1	3	4.8
②	0.1	2	3.5
③	0.1	1.8	3
④	0.1	1	1.8
⑤	0.2	1	1.5

0      1      2      3      4      5  
 (3.28)   (6.56)   (9.84)   (13.12)   (16.40)  
 Distance in m (feet)

■ Sensing range      ■ Sensing range typ. max.

**Reflector type**

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

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