



Photoelectric sensors ELF3, Photoelectric retro-reflective sensor

EL3-F2415



Model Name > [EL3-F2415](#)
Part No. > [1043961](#)



Illustration may differ

At a glance

- Flush red lens
- Polarization filter
- Clear back cover for highly visible status indication
- 18 mm front and base mount
- Status and output indicator

Your benefits

- A wide range of customizable options reduces material and labor costs
- Flush red lens provides an increased sensing range for a broader range of application possibilities
- IP 67-rated housing offers a long service life that stands up to harsh environments, reducing maintenance time and costs
- Highly visible status/power indicator provides quick and easy troubleshooting from a distance
- Small sensor footprint easily fits into applications with limited space
- Polarization filter provides reliable detection of shiny objects



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor
Dimensions (W x H x D):	23.8 mm x 45.4 mm x 33.6 mm
Housing design (light emission):	Hybrid
Thread diameter (housing):	M18
Sensing range max.:	0.1 m ... 4.8 m ¹⁾
Sensing range:	0.1 m ... 3 m ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Light spot (distance):	1 m
Wave length:	660 nm

^{1) 2)} PL80A ³⁾ Average service life of 100,000 h at T_A = +25 °C

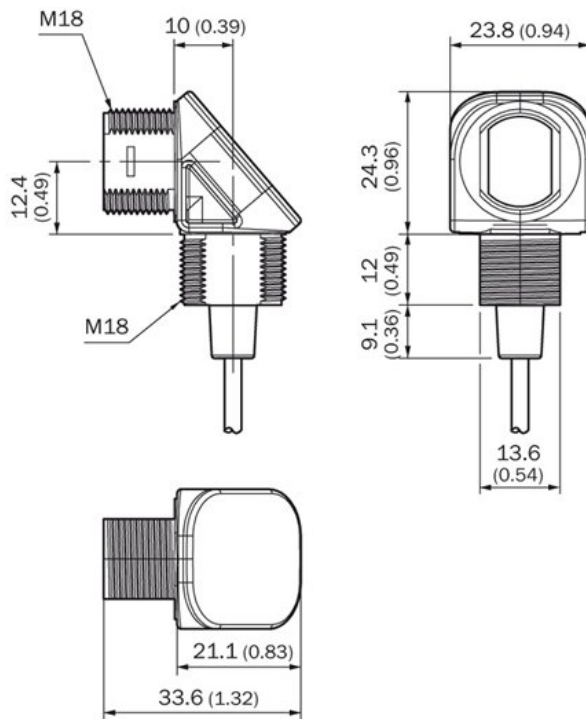
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	< 20 mA ³⁾
Output type:	PNP, Dark-switching

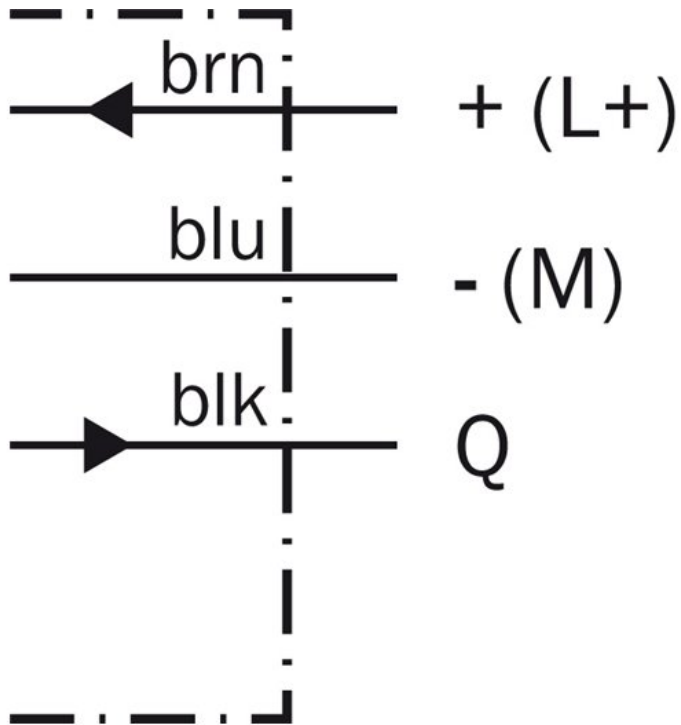
Output current I _{max} ::	50 mA
Switching frequency:	400 Hz ⁴⁾
Connection type:	Cable, 3-wire, 2 m ⁵⁾
Cable material:	PVC
Conductor cross-section:	0.23 mm ²
Circuit protection::	A, D ⁶⁾ ⁷⁾
Protection class:	III ⁸⁾
Weight:	0.036 kg, 0.08 lbs
Polarisation filter:	✓
Housing material:	Glass fiber reinforced ABS 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) May not exceed or fall short of V_S tolerances 3) Without load 4) With light/dark ratio 1:1 5) Do not bend below 0 °C 6) A = V_S connections reverse-polarity protected 7) D = outputs overcurrent and short-circuit protected 8) Reference voltage 50 V DC

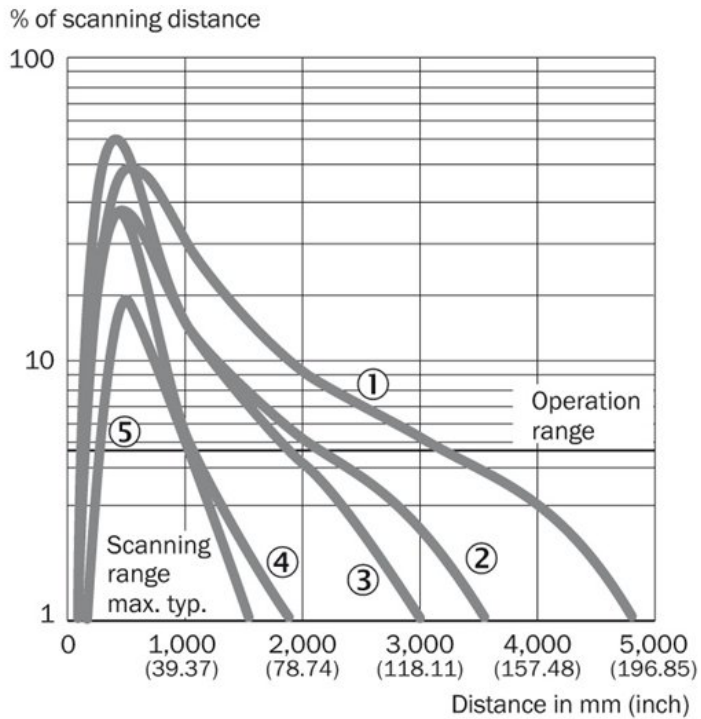
Dimensional drawing



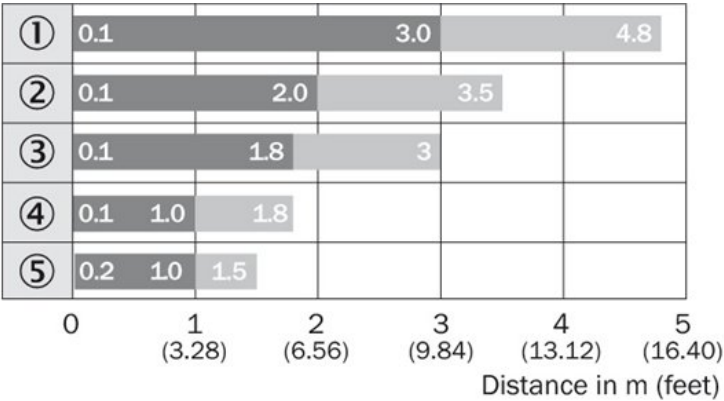
Connection diagram



Characteristic curve



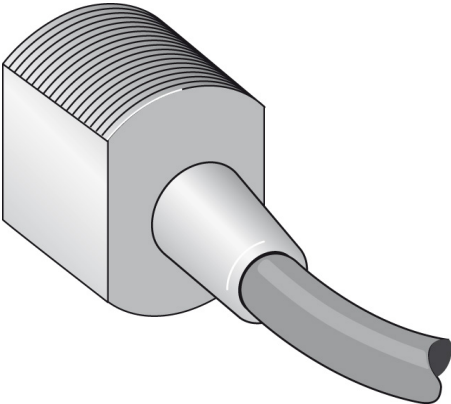
Sensing range diagram



■ Operating distance ■ Scanning distance typ.max.

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

Connection type



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