



Photoelectric sensors ELF3, Photoelectric retro-reflective sensor

EL3-F2438



Model Name > [EL3-F2438](#)
Part No. > [1044717](#)



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 46.7 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

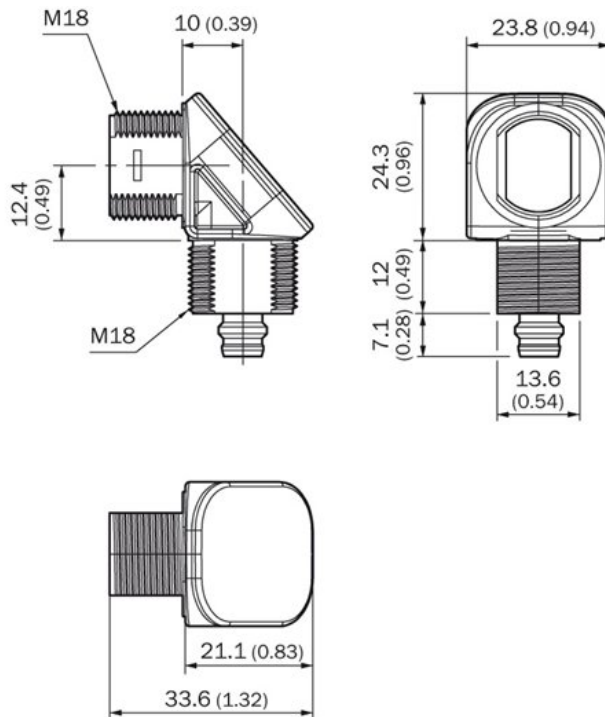
Mechanics/electronics

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

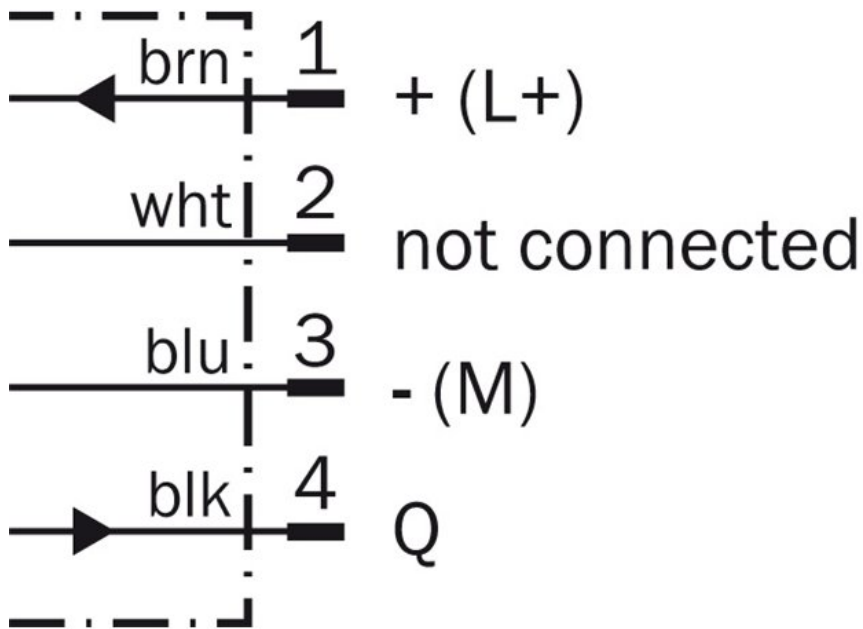
Output current I _{max} ::	50 mA
Switching frequency:	400 Hz ⁴⁾
Connection type:	Connector M8, 4-pin
Circuit protection::	A, D ^{5) 6)}
Protection class:	III ⁷⁾
Weight:	0.014 kg, 0.03 lbs
Polarisation filter:	✓
Housing material:	Glass fiber reinforced ABS plastic
Enclosure rating:	IP 67
Items supplied:	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⁾ A = V_S connections reverse-polarity protected ⁶⁾ D = outputs overcurrent and short-circuit protected ⁷⁾ Reference voltage 50 V DC

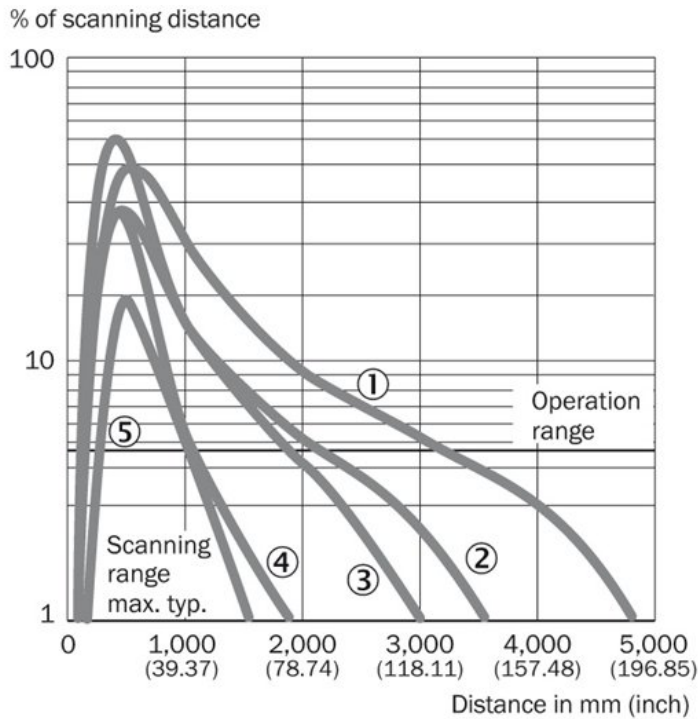
Dimensional drawing



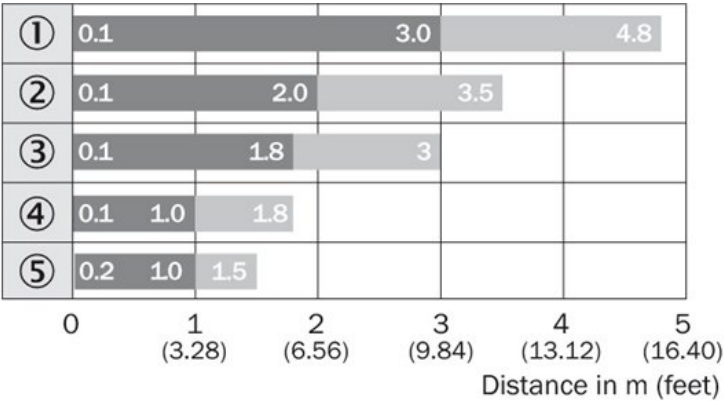
Connection diagram



Characteristic curve



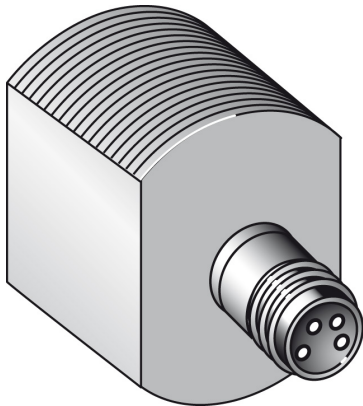
Sensing range diagram



■ 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



Australia

Phone +61 3 9457 0600
1800 334 802 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail sac@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Ceská Republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail kundenservice@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6801000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 3358 1341
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederlands

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail austefjord@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail admin@sicksgp.com.sg

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886-2-2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 8865 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 800-325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com