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Photoelectric sensors
ELF3, Photoelectric retro-reflective sensor

EL3-F2428

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Model Name > EL3-F2428
Part No. > 1044705

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 43.4 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

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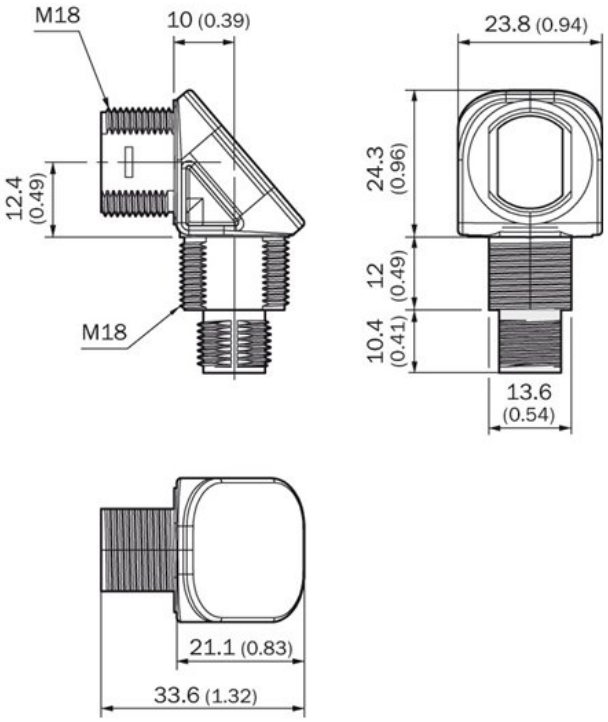
Output current Imax.:	50 mA
Switching frequency:	400 Hz [4]
Connection type:	Connector M12, 4-pin
Circuit protection::	A, D [5] [6]
Protection class:	III [7]
Weight:	0.014 kg, 0.03 lbs
Polarisation filter:	✓
Housing material:	Glass fiber reinforced ABS plastic
Enclosure rating:	IP 67
Items supplied:	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



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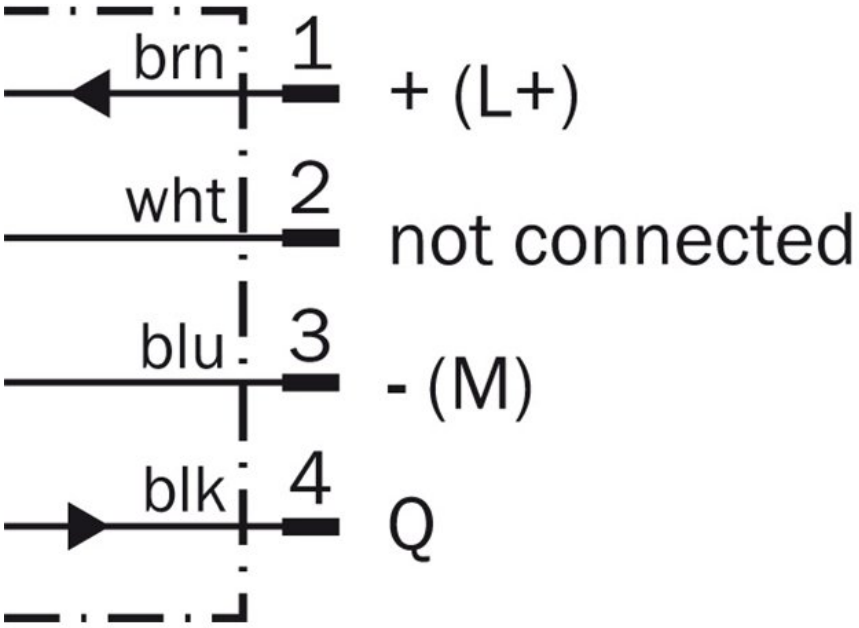
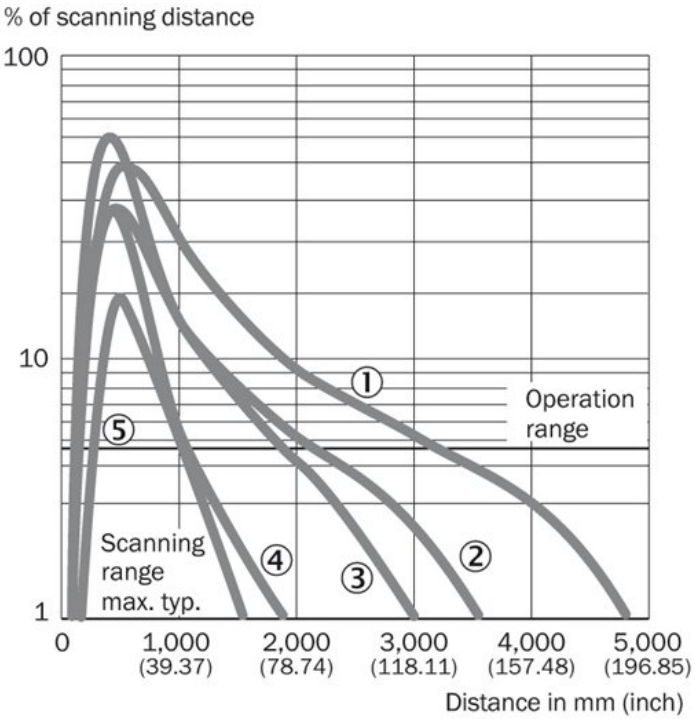
Connection diagram



Characteristic curve



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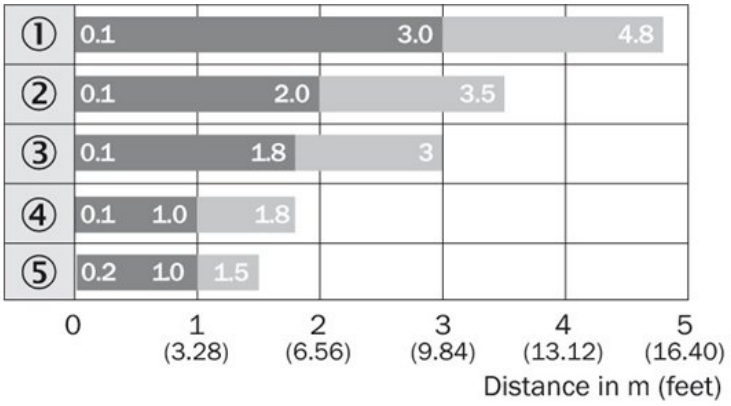
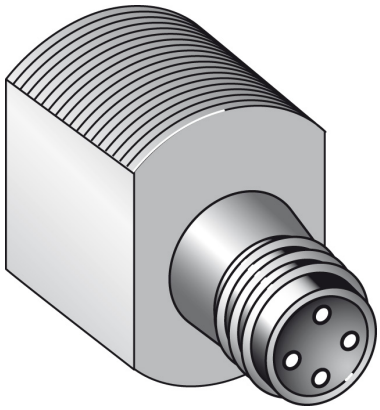
Sensing range diagram



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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