



Photoelectric sensors W18-3 Ex, Photoelectric retro-reflective sensor, autocollimation

WL18X-3P930



Model Name > [WL18X-3P930](#)
Part No. > [1029902](#)



Illustration may differ

At a glance

- Autocollimation optics
- Polarizing filter
- Highly visible red sender LED
- Operation via potentiometer
- Sensors meet requirements of Category 3G/3D

Your benefits

- Autocollimation optics and polarizing filters ensure reliable detection of shiny objects
- Quick and easy alignment and setup due to highly visible red light
- Reliable use in potentially explosive atmospheres
- Application-specific sensitivity control via potentiometer
- Quick and easy installation due to a wide range of accessories, especially reflectors



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D):	23.6 mm x 117 mm x 49.3 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 7 m ¹⁾
Sensing range:	0 m ... 5 m ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Wave length:	645 nm
Angle of dispersion:	1.8 °
Adjustment:	Potentiometer, 1 turn
Light spot size (distance):	Ø 40 mm (2 m)
Continuous threshold adaption:	-

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

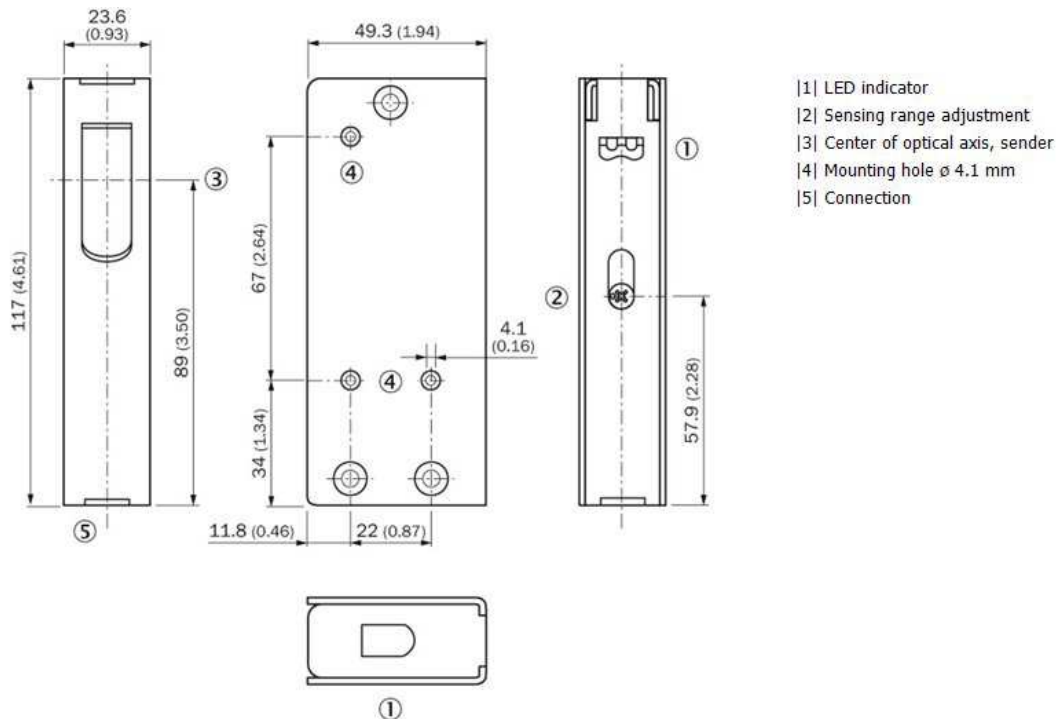
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	40 mA ³⁾
Output type:	PNP

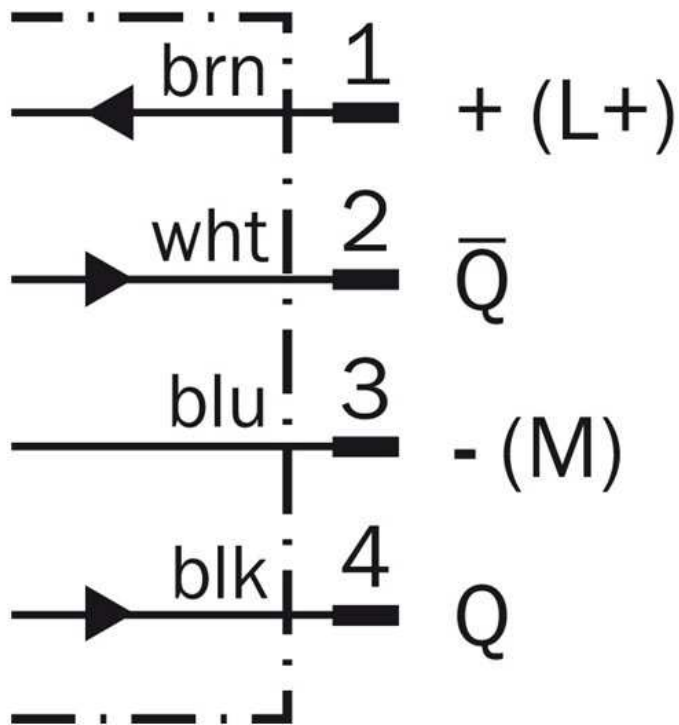
Switching mode:	Light/dark switching
Output current I _{max} :	100 mA
Response time:	< 500 µs ⁴⁾
Switching frequency:	± 1,000 Hz ⁵⁾
Connection type:	Cable with connector M12, 4-pin, 0.29 m ⁶⁾
Cable material:	PVC
Circuit protection:::	A, C, D ⁷⁾ ⁸⁾ ⁹⁾
Weight:	300 g
Polarisation filter:	✓
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 67
ATEX marking:	EX II 3D IP67 T70 °C EX II 3G EEx nA II T4 X ¹⁰⁾
Hazardous area category:	3D, 3G
Ambient operating temperature:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
Housing material:	ABS, Plastic

¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Do not bend below 0 °C ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ C = interference suppression ⁹⁾ D = outputs overcurrent and short-circuit protected ¹⁰⁾ Conformity with directives. Explosion prevention: Directive 94/9/EC

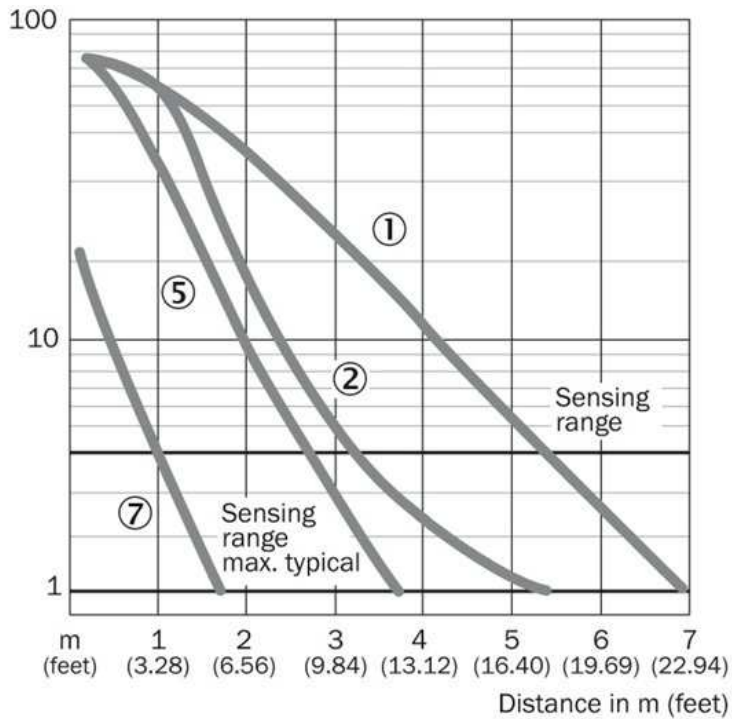
Dimensional drawing



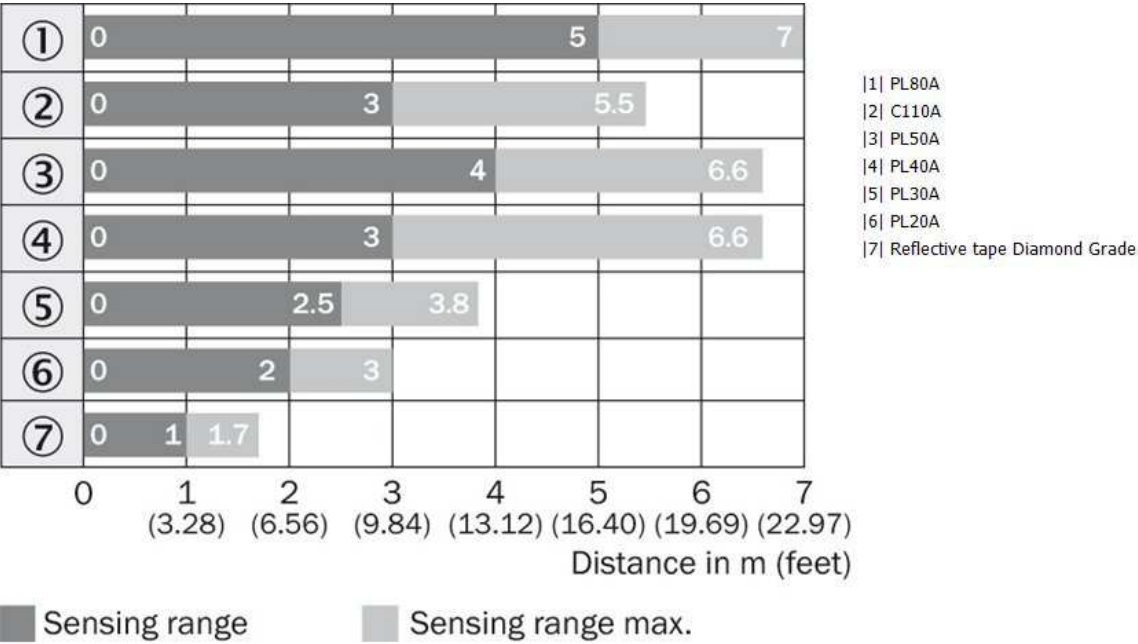
Connection diagram



Characteristic curve



Sensing range diagram



Connection type



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