



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

WL18-3P430



Model Name > [WL18-3P430](#)
Part No. > [1025911](#)



At a glance

- Sender LED with visible red light
- Autocollimation optics with polarizing filter
- Sensitivity control via potentiometer
- Immune to ambient light
- Optional test input for system diagnostics
- Rugged plastic housing

Your benefits

- Fast installation due to highly visible red light saves time
- Reliable detection of shiny objects without a blind zone due to autocollimation optics and a polarizing filter
- Quick and easy sensing range adjustment due to 270° potentiometer
- Crosstalk and ambient light immunity reduce false readings and downtime
- Reliable availability in the field



Features

Dimensions (W x H x D):	17.6 mm x 75.5 mm x 33.5 mm
Sensing range max.:	0 m ... 7 m ¹⁾
Sensing range:	0 m ... 5 m ²⁾
Housing desig (light emission):	Cuboid, Slim
Light source:	LED ³⁾
Type of light:	visible red light
Wave length:	645 nm
Sensitivity adjustment:	Potentiometer, 1-turn
Sensor/detection principle:	Photoelectric retro-reflective sensor, autocollimation
Light spot (distance):	40 mm (2 m)

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

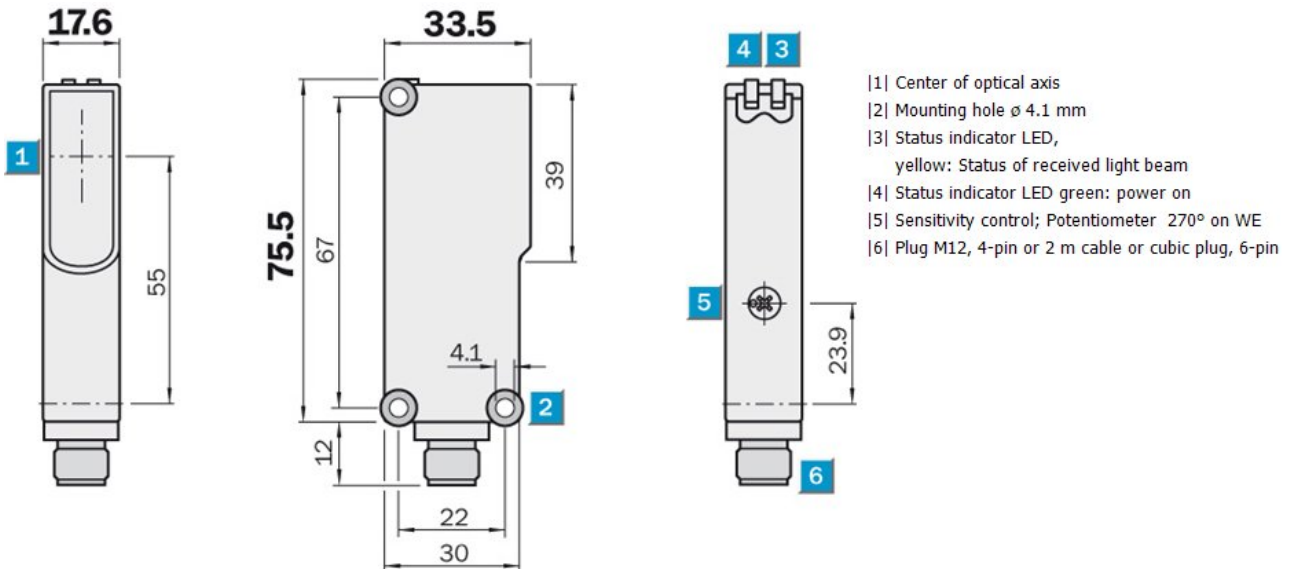
Mechanics/electronics

Enclosure rating:	IP 67
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	< 5 Vpp ²⁾
Power consumption:	40 mA ³⁾
Switching output:	PNP, light/dark-switching
Output current I _{max.} :	100 mA

Response time:	< 500 μ s ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾
Connection type:	Connector M12, 4-pin
Circuit protection:::	A C ^{6) 7) 8)} D
Weight:	40 g
Housing material:	ABS
Optics material:	PMMA
Ambient temperature, operation:	-40 °C ... 60 °C
Ambient temperature, storage:	-40 °C ... 75 °C
Polarisation filter:	✓
Voltage supply-LED:	✓
Output state-LED:	✓
Angle of dispersion:	1.8 °
UL File-No.:	UL No. NRKH.E181493 & cUL No. NRKH7.E181493

1) Limit values, operation in short-circuit protected network max. 8 A²⁾ May not exceed or fall short of V_S ³⁾ Without load⁴⁾ Signal transit time with resistive load⁵⁾
 With light/dark ratio 1:1⁶⁾ A = V_S connections reverse-polarity protected⁷⁾ C = interference suppression⁸⁾ D = outputs overcurrent and short-circuit protected

Dimensional drawing

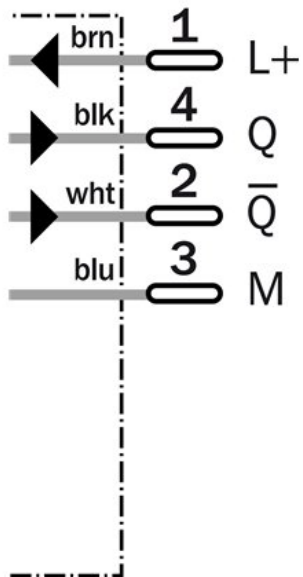


Einstell-Möglichkeiten

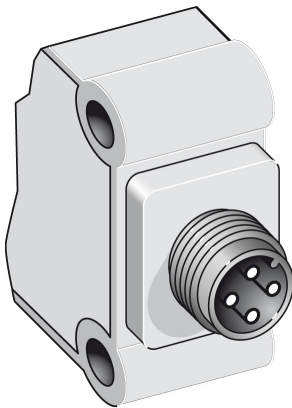


[5] Sensitivity control; Potentiometer 270°

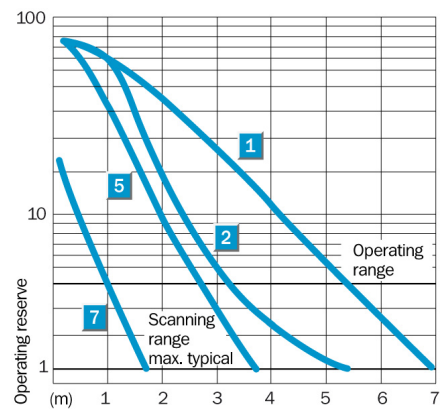
Connection diagram



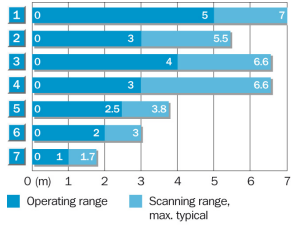
Connection type



Characteristic curve



Sensing range diagram



Reflector type	Operating range
1	PL 80 A 0 ... 5.0 m
2	C 110 0 ... 3.0 m
3	PL 50 A 0 ... 4.0 m
4	PL 40 A 0 ... 3.0 m
5	PL 30 A 0 ... 2.5 m
6	PL 20 A 0 ... 2.0 m
7	Reflective tape Diamond Grade 0 ... 1.0 m

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