



Photoelectric sensors
W18-3 Ex, Photoelectric proximity sensor,
Background suppression

WT18X-3P920



Photoelectric sensors W18-3 Ex, Photoelectric proximity sensor, Background suppression

Model Name > [WT18X-3P920](#)
Part No. > [1029901](#)



Illustration may differ

At a glance

- Best-in-class optical performance due to superior OES3 technology
- Background suppression with second sender LED
- Slim, durable plastic housing
- Sensors meet requirements of category 3G/3D

Your benefits

- Reliable object detection due to best-in-class background suppression and ambient light immunity
- Reliable use in potentially explosive atmospheres
- High availability in the field
- Quick and easy installation using SICK accessories saves time



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	23.6 mm x 117 mm x 49.3 mm
Housing design (light emission):	Rectangular
Sensing range max.:	10 mm ... 1,000 mm ¹⁾
Sensing range:	50 mm ... 1,000 mm ²⁾
Type of light:	Infrared light
Light source:	LED ³⁾
Wave length:	870 nm
Adjustment:	Potentiometer, 4 turns
Light spot size (distance):	Ø 30 mm (600 mm)

^{1) 2)} Object with 90 % reflectance (referred to standard white, DIN 5033) ³⁾ Average service life of 100,000 h at T_A = +25 °C

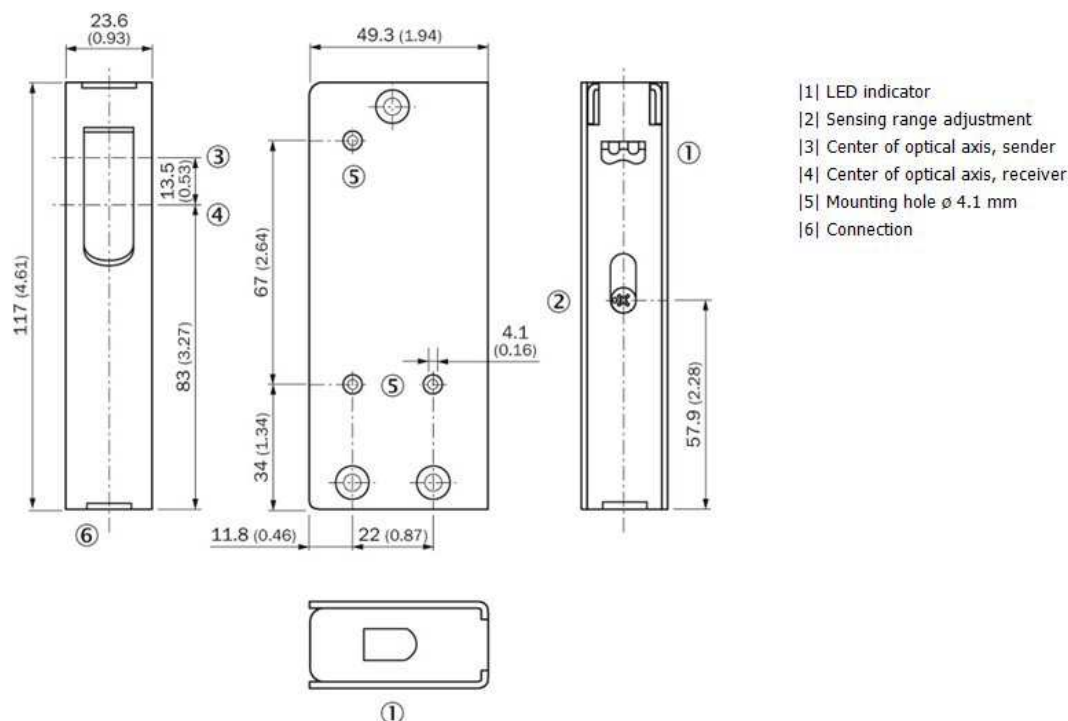
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	55 mA ³⁾
Output type:	PNP
Switching mode:	Light/dark switching
Output current I _{max} :	100 mA
Response time:	< 700 µs ⁴⁾
Switching frequency:	± 700 Hz ⁵⁾

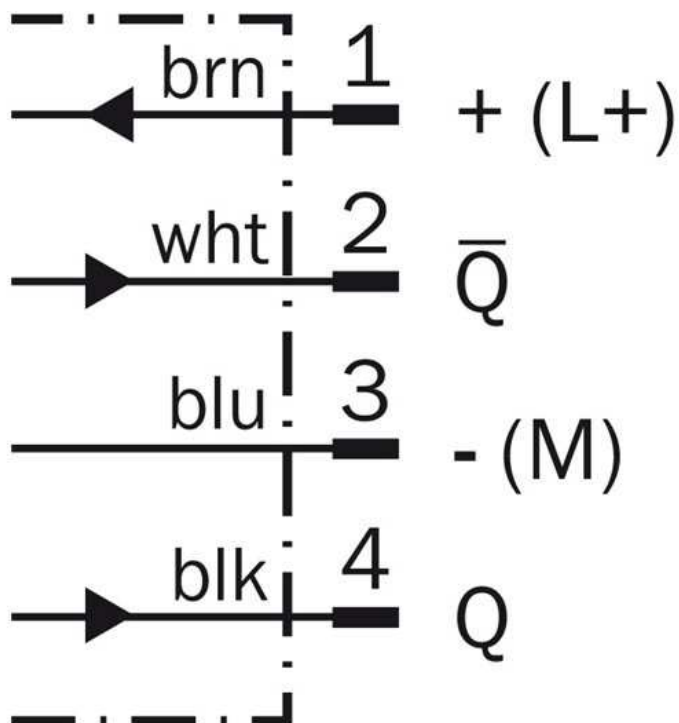
Connection type:	Cable with connector M12, 4-pin, 0.29 m ⁶⁾
Cable material:	PVC
Circuit protection:::	A, C, D ^{7) 8) 9)}
Weight:	300 g
Optics material:	PMMA
Enclosure rating:	IP 67
ATEX marking:	EX II 3D IP67 T70 °C EX II 3G EEx nA II T4 X ¹⁰⁾
Hazardous area category:	3D, 3G
Ambient operating temperature:	-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

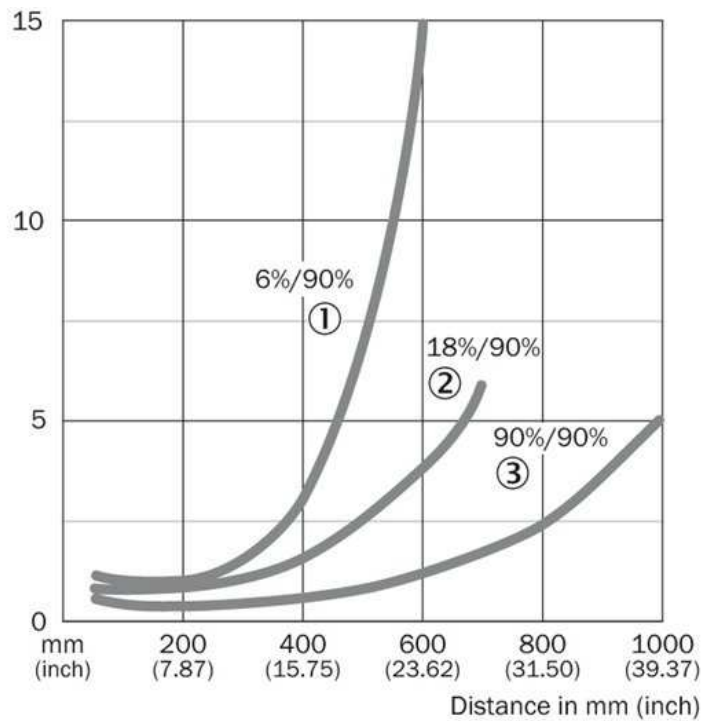
Dimensional drawing



Connection diagram

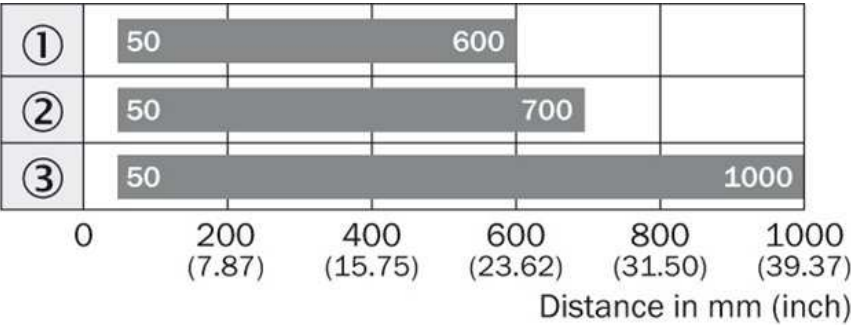


Characteristic curve



- [1] Sensing range on black, 6 % remission
- [2] Sensing range on gray, 18 % remission
- [3] Sensing range on white, 90 % remission

Sensing range diagram



- |1| Sensing range on black, 6 % remission
- |2| Sensing range on gray, 18 % remission
- |3| Sensing range on white, 90 % remission

■ Sensing range

Connection type



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