



Photoelectric sensors
W27-3 Ex, Through-beam photoelectric sensor

WSE27X-3P1830



Model Name > [WSE27X-3P1830](#)
Part No. > [1027991](#)



Illustration may differ

At a glance

- Classification: EX II 3G EX nA op is IIB T4 Gc X, EX II 3D EX tc IIIB T135°C Dc IP67 X according to Directive 94/9/EC (ATEX)
- Corresponds to category 3D/3G
- Conform to standards and ready-to-install: Sensor and additional protective housing (stainless steel 1.4301)
- High sensing range, high operating reserves
- Red light
- Reliable operation in industrial environments, even in ambient light

Your benefits

- Ready-to-install sensors conform to the 3G/3D category for explosive zones (ATEX)
- Less contamination due to high operating reserves, reducing downtime
- Resistant to vibrations, reducing downtime
- Withstands harsh environments, making it suitable for a wide range of applications with operating temperatures from -20 °C - +50 °C



Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	31.4 mm x 112.3 mm x 70.4 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 35 m
Sensing range:	0 m ... 25 m
Type of light:	Visible red light
Light source:	LED ¹⁾
Wave length:	645 nm
Angle of dispersion:	Ca. 1.5 °
Light spot size (distance):	Ø 600 mm (25 m)

¹⁾ Average service life of 100,000 h at T_A = +25 °C

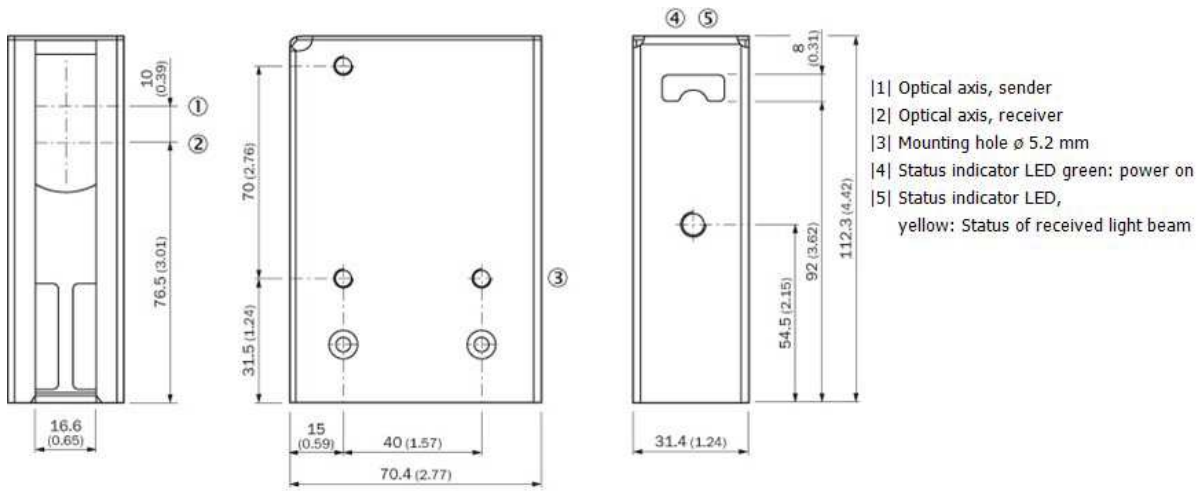
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 5 V _{pp} ²⁾
Power consumption, sender:	35 mA ³⁾
Power consumption, receiver:	20 mA ⁴⁾
Output type:	PNP

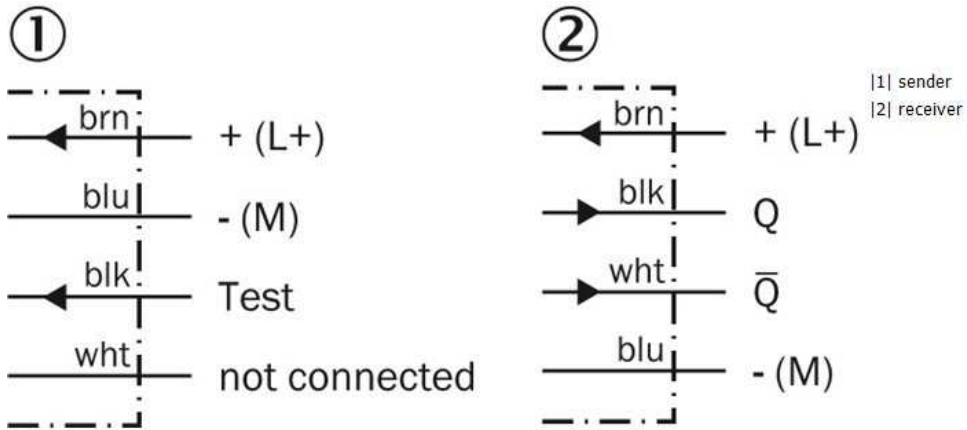
Output function:	Complementary
Switching mode:	Light/dark switching
Output current I _{max} :	≤ 100 mA
Response time:	≤ 500 μs ⁵⁾
Switching frequency:	1,000 Hz ⁶⁾
Angle of reception:	Ca. 3 °
Connection type:	Cable, 4-wire, 10 m ⁷⁾
Cable material:	PVC
Circuit protection:::	A, B, C ^{8) 9) 10)}
Protection class:	II ¹¹⁾
Weight:	1,500 g
Housing material:	ABS, Stainless steel, Stainless steel V2A (1.4301), Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
ATEX marking:	EX II 3G EX nA op is IIB T4 Gc X EX II 3D EX tc IIIB T135°C Dc
Hazardous area category:	3D, 3G
Ambient operating temperature:	-20 °C ... 50 °C
Ambient storage temperature:	-40 °C ... 75 °C
Part number of individual components:	Receiver, WE27X-3P1830, 2033627, Sender, WS27X-3D1830, 2033628
Signal voltage PNP HIGH/LOW:	Approx. VS - 2.5 V/0 V

¹⁾ Limit values, operation in short-circuit protected network max. 8 A
²⁾ May not exceed or fall short of V_S tolerances
^{3) 4)} Without load
⁵⁾ Signal transit time with resistive load
⁶⁾ With light/dark ratio 1:1
⁷⁾ Do not bend below 0 °C
⁸⁾ A = V_S connections reverse-polarity protected
⁹⁾ B = inputs and output reverse-polarity protected
¹⁰⁾ C = interference suppression
¹¹⁾ Reference voltage: 50 V DC

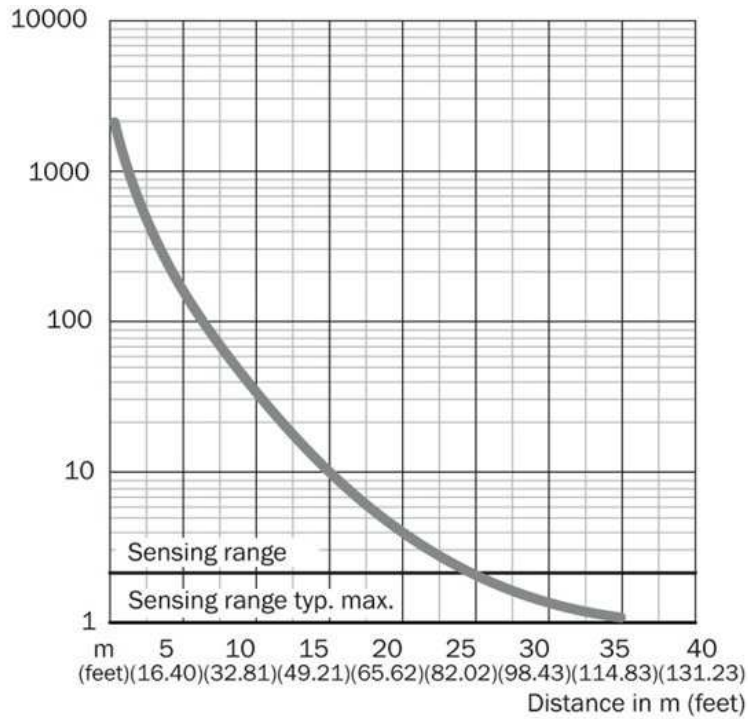
Dimensional drawing



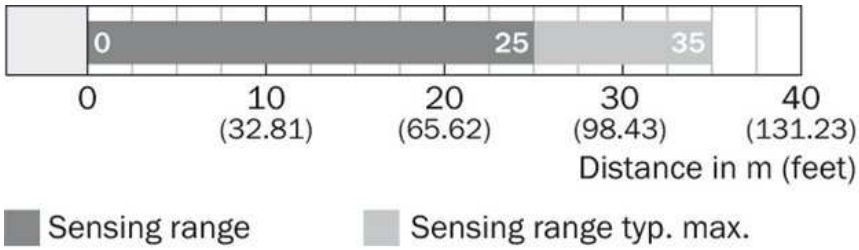
Connection diagram



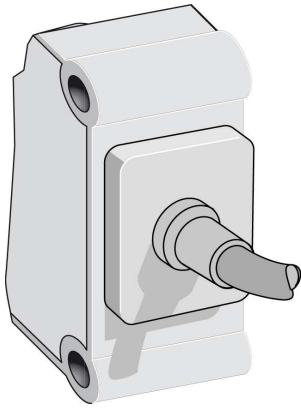
Characteristic curve



Sensing range diagram



Connection type



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