



Photoelectric sensors
W27-2 Laser, Photoelectric proximity sensor,
Background suppression

WT27K-2F430



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Model Name > WT27K-2F430
Part No. > 1059239



Illustration may differ

At a glance

- 2 mm diameter light spot at a distance of 400 mm
- Precise adjustable background suppression
- Visible red laser LED
- Sensing range adjustment via potentiometer
- UL approval

Your benefits

- Precise detection of very small parts up to a distance of 400 mm due to 2 mm light spot
- Durable design provides high resistance to vibration



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	24.6 mm x 80 mm x 53.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	100 mm ... 800 mm ¹⁾
Sensing range:	100 mm ... 800 mm
Type of light:	Visible red light
Light source:	Laser ²⁾
Laser class:	1 (EN 60825-1), low power. Eyes normally protected by averting reaction and eyelid closing reflex
Adjustment:	Potentiometer
Light spot size (distance):	Ø 2 mm (400 mm)

¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life 50,000 h at T_A = +25 °C

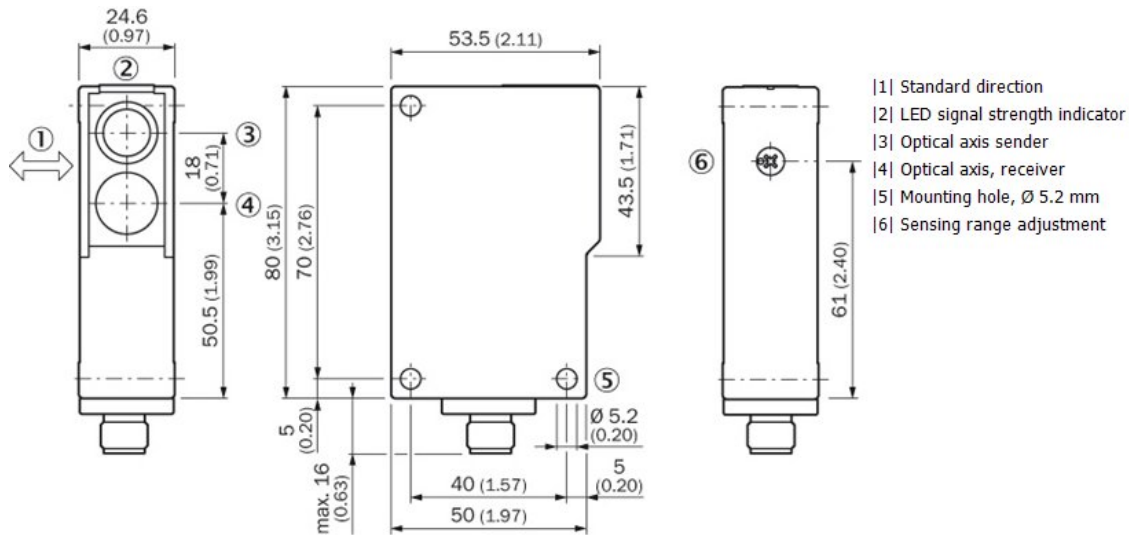
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 5 % ²⁾
Power consumption:	≤ 35 mA ³⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark-switching
Output current I _{max} :	≤ 100 mA
Response time:	< 25 ms ⁴⁾

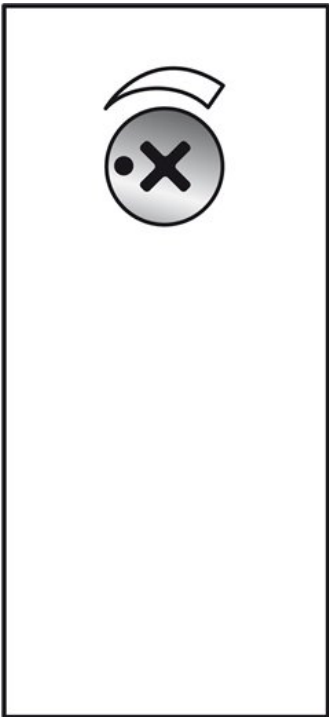
Switching frequency:	50 Hz ⁵⁾
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, C, D ⁶⁾ ⁷⁾ ⁸⁾
Protection class:	II ⁹⁾
Weight:	100 g
Special device:	-
Housing material:	ABS, Plastic
Enclosure rating:	IP 67
Ambient operating temperature:	-10 °C ... 45 °C
Ambient storage temperature:	-10 °C ... 75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

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⁾ A = V_S connections reverse-polarity protected ⁷⁾ C = interference suppression ⁸⁾ D = outputs overcurrent and short-circuit protected
⁹⁾ Reference voltage 50 V DC

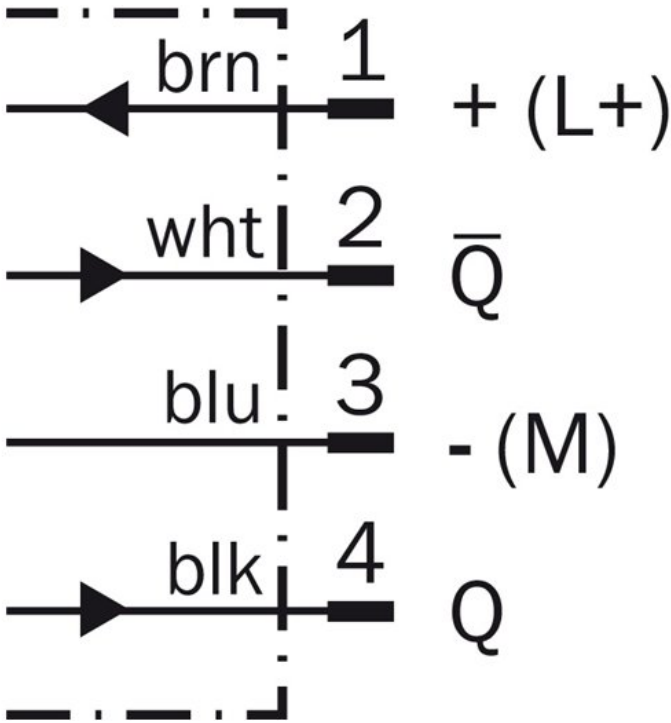
Dimensional drawing



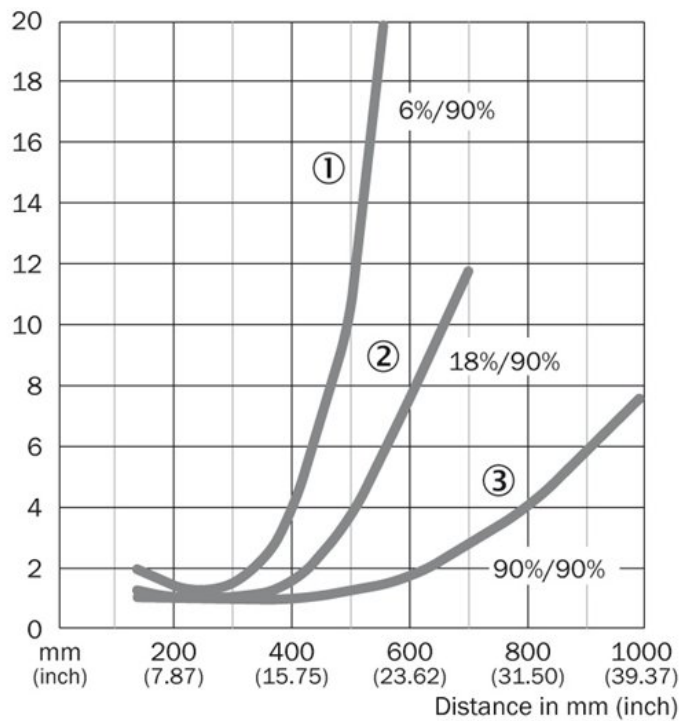
Adjustments possible



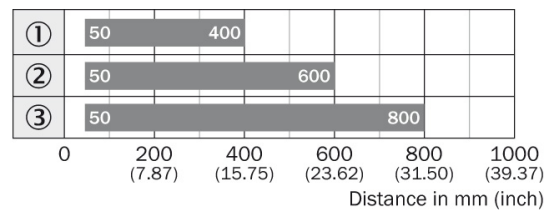
Connection diagram



Characteristic curve



Sensing range diagram



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

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