

ONLINE DATA SHEET
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Photoelectric sensors
W4-3, Photoelectric proximity sensor, Background suppression

WTV4-3P3441S38



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Model Name > WTV4-3P3441S38
Part No. > 1040696





Illustration may differ

At a glance

- Sensing range from 4 - 50 mm
- Reliable detection of planar, highly transparent and shiny objects at distances of 20 to 25 mm
- 5-turn potentiometer for precise adjustment
- Large, consistent light spot
- Rugged plastic housing with M3 threaded metal inserts
- IR versions available for detection of jet-black objects with a remission < 1%
- Versions available with linear light spot

Your benefits

- Low-cost machine design since shiny and transparent objects are directly detected, making a separate reflector or through-beam system unnecessary
- Less mounting and setup time since no alignment is required
- Rugged mounting system with M3 threaded metal inserts reduces maintenance costs due to a long service life
- Reliable object detection due to best-in-class background suppression and high immunity to ambient light

Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	16 mm x 39.5 mm x 12 mm
Housing design (light emission):	Rectangular
Sensing range max.:	4 mm ... 50 mm [1]
Sensing range:	3 mm ... 30 mm [2]
Type of light:	Visible red light
Light source:	PinPoint LED [3]
Wave length:	650 nm
Adjustment:	Potentiometer, 5 turns
Light spot size (distance):	20 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

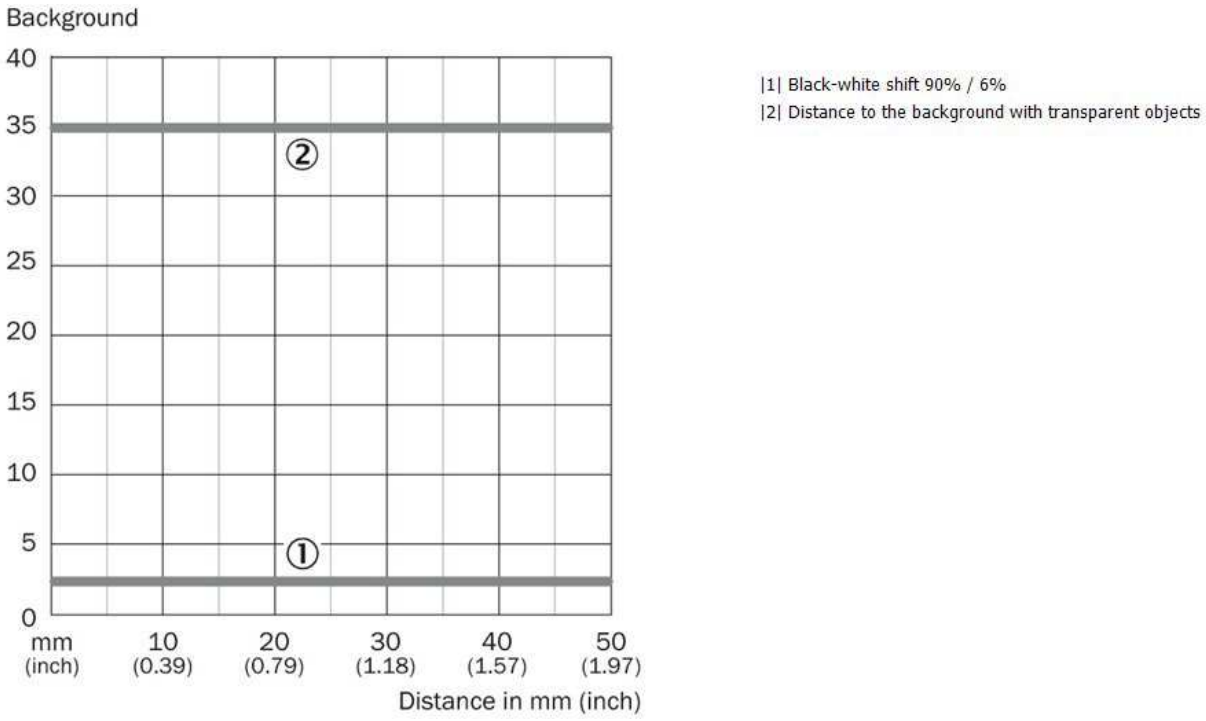
Supply voltage:	10 V DC ... 30 V DC [1]
Ripple::	< 5 Vpp [2] [3]
Power consumption:	≤ 20 mA [4]
Output type:	PNP

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Switching mode:	Light switching
Output current Imax.:	≤ 100 mA
Response time:	< 0.5 ms [5]
Switching frequency:	1,000 Hz [6]
Connection type:	Cable with connector M12, 4-pin, 150 mm [7]
Cable material:	PVC
Conductor cross-section:	0.14 mm²
Cable diameter:	Ø 3.4 mm
Circuit protection:::	A, C, D [8] [9] [10]
Protection class:	III
Weight:	30 g
Special device:	-
Optics material:	PMMA
Enclosure rating:	IP 67 IP 66
Special feature:	V-optics
Ambient operating temperature:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493
Housing material:	ABS, Plastic

[1] Limit values [2] [3] May not exceed or fall short of V_S tolerances [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] C = interference suppression [10] D = outputs overcurrent and short-circuit protected

Characteristic curve



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Connection type



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A4 4c int43

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