



Photoelectric sensors

W4-3, Photoelectric proximity sensor, Foreground suppression

WTF4-3F2161S49



Model Name > [WTF4-3F2161S49](#)
Part No. > [1042432](#)



Illustration may differ

At a glance

- Foreground suppression with a sensing range of 10 - 100 mm
- Reliable detection of jet-black and shiny objects
- 5-turn potentiometer for precise setting adjustment

Your benefits

- Economical and efficient machine integration since a separate reflector is not required though photoelectric retro-reflective sensor performance is retained - the sensor uses the machine background as a reflector
- Foreground suppression provides highly reliable recognition of almost all object types
- Rugged mounting system with M3 threaded metal inserts reduces maintenance costs due to a long service life



Features

Sensor/detection principle:	Photoelectric proximity sensor, Foreground suppression
Dimensions (W x H x D):	16 mm x 39.5 mm x 12 mm
Housing design (light emission):	Rectangular
Sensing range max.:	10 mm ... 60 mm ¹⁾
Sensing range:	10 mm ... 60 mm ²⁾
Type of light:	Visible red light
Light source:	PinPoint LED ³⁾
Wave length:	650 nm
Adjustment:	Potentiometer, 5-turn
Light spot size (distance):	Ø 3.5 mm (40 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

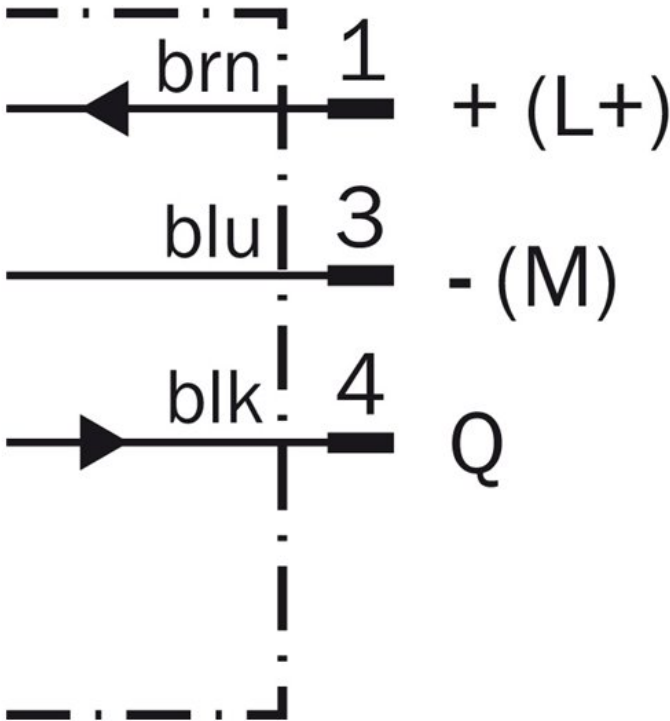
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 V _{pp} ²⁾
Power consumption:	≤ 20 mA ³⁾
Output type:	PNP
Switching mode:	Light switching
Output current I _{max} :	≤ 100 mA
Response time:	< 0.5 ms ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾
Connection type:	Connector M8, 3-pin

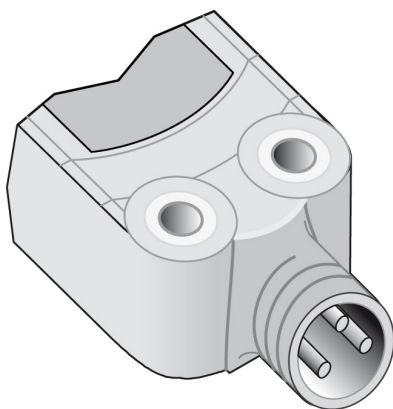
Circuit protection:::	A, C, D ^{6) 7) 8)}
Protection class:	III
Weight:	30 g
Special device:	-
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Special feature:	For transparent objects
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C

¹⁾ Limit values 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

Connection diagram



Connection type



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