

ONLINE DATA SHEET
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Fork sensors
WFM

WFM80-60P311



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WFM

Model Name > WFM80-60P311
Part No. > 6037829



Illustration may differ

At a glance

- Highly visible red emitted light
- No setup, out-of-the-box operation
- 360° output indicator
- 5 fork sizes: maximum depth 120 mm, maximum width 180 mm
- Rugged, IP 67 aluminum housing

Your benefits

- Fixed housings guarantee a high level of operational safety with simple commissioning
- A visible red light enables easy alignment and fast adjustment
- The 360-degree yellow output indicator makes continual process control possible
- A wide range of different fork sizes increases installation flexibility
- The aluminum housing meets all requirements for use in harsh industrial conditions

Features

Functional principle:	Optical detection principle
Fork width:	80 mm
Fork depth:	60 mm
Label detection:	-
Light source:	LED
Type of light:	Visible red light
Adjustment:	None
Output function:	Light switching
Housing design (light emission):	Fork shaped
Minimum detectable object (MDO):	0.8 mm

Mechanics/electronics

Residual ripple [1]:	< 10 %
Power consumption [2]:	< 20 mA
Switching frequency [3]:	4 kHz
Response time [4]:	125 µs
Stability of response time:	± 15 µs
Output type:	NPN: HIGH = approx. VS/LOW ≤ 1.5 V PNP: HIGH = VS - ≤ 1.5 V/LOW = 0 V
Switching mode:	PNP
Output current Imax.:	100 mA

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Initialization time:	140 ms
Electrical connection:	Connector M8, 3-pin
Protection class [5]:	III
Circuit protection:	VS connections reverse-polarity protected Output Q short-circuit protected Interference suppression
Enclosure rating:	IP 67
Weight:	Ca. 80 g ... 190 g [6]
Housing material:	Aluminum, Metal
Supply voltage:	10 V DC ... 30 V DC [7]
Ambient light immunity:	Sunlight: ≤ 10,000 klx
Fieldbus interface:	-

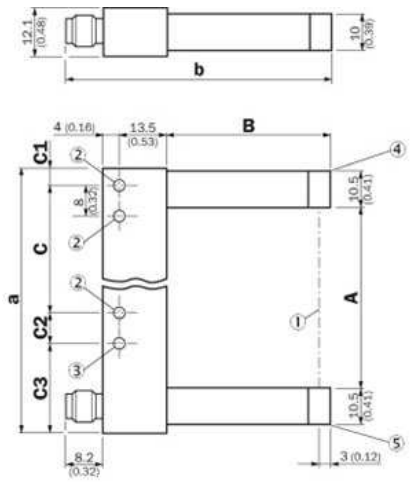
[1] May not exceed or fall short of V_S tolerances [2] Without load [3] With light/dark ratio 1:1 [4] Signal transit time with resistive load [5] Reference voltage DC 50 V [6] Depending on fork width [7] Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A

Ambient data

Shock load:	According to EN 60068-2-27
UL File No.:	NRKH.E191603 & NRKH7.E191603
Ambient temperature operation:	-10 °C ... +60 °C [1]
Ambient storage temperature:	-40 °C ... +80 °C

[1] Do not bend below 0 °C

Dimensional drawing



Dimensions in mm (inch)

	A (Fork width)	B (Fork depth)	C	C1
WFM30	30 (1.18)	42 (1.65)	30 (1.18)	6.5 (0.26)
WFM50	50 (1.97)	60 (2.36)	40 (1.57)	6.5 (0.26)
WFM80	80 (3.15)	60 (2.36)	70 (2.76)	6.5 (0.26)
WFM120	120 (4.72)	124.3 (4.89)	100 (3.94)	17 (0.67)
WFM180	180 (7.09)	124.3 (4.89)	152 (5.98)	22 (0.87)

	C2	C3	a	b
WFM30	- (-)	- (-)	54 (2.13)	67.7 (2.67)
WFM50	8 (0.31)	19.5 (0.77)	74 (2.91)	85.7 (3.37)
WFM80	8 (0.31)	19.5 (0.77)	104 (4.09)	85.7 (3.37)
WFM120	10 (0.39)	17 (0.67)	144 (5.67)	150.2 (5.91)
WFM180	8 (0.31)	22 (0.87)	204 (8.03)	150.2 (5.91)

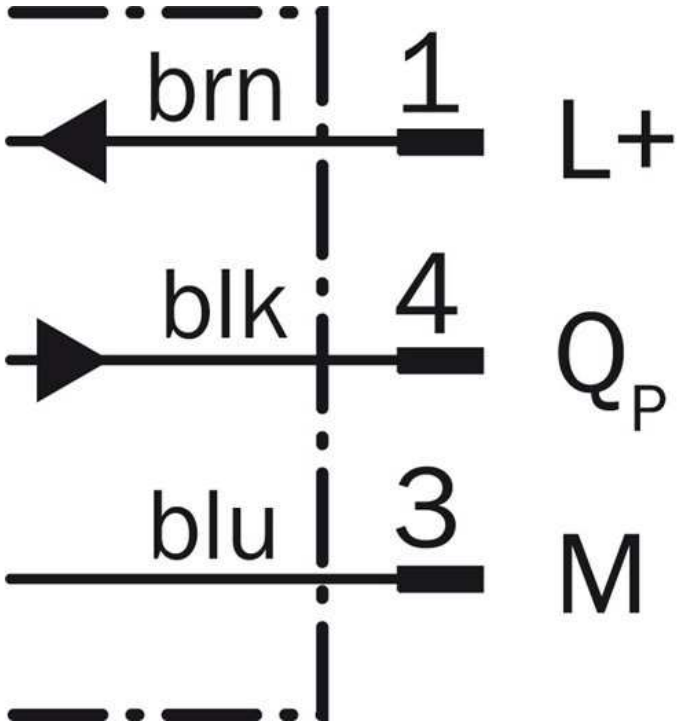
|1| Optical axis
|2| Mounting hole, Ø 4.3 mm
|3| WFM50/80/120/180
|4| Transmitted light (red)
|5| Function signal indicator (yellow), switching output

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Anschlussart und -schema

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Connection diagram



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