ONLINE DATA SHEET
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Fork sensors
WF, WFnext

WF15-60B410

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Model Name > WF15-60B410
Part No. > 6028438

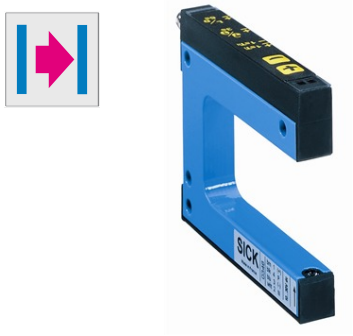

Illustration may differ

At a glance

- Infrared light source
- Simple and accurate adjustment via teach-in or manually via "+"/"-" buttons
- Fast response time (max. 100 µs)
- PNP and NPN switching output
- Light/dark switching function
- 21 different models with different fork widths and depths
- Rugged, IP 65 aluminum housing

Your benefits

- Fast response time and fine resolution ensure reliable detection even at high speeds
- Infrared light source provides excellent ambient light immunity
- User friendly setting via teach-in or "+"/"-" button
- A wide range of different fork sizes enables flexible installation
- The aluminum housing meets all requirements for use in harsh industrial conditions

Features

Functional principle:	Optical detection principle
Fork width:	15 mm
Fork depth:	59 mm
MDO [1]:	0.2 mm
Label detection:	✓
Light source:	LED, infrared
Adjustment:	Manual ("+"/"-" button)
Output function:	Light/darkswitching, selectable via button

[1] Minimum detectable object

Mechanics/electronics

Supply voltage Vs [1]:	DC 10 V ... 30 V
Ripple [2]:	< 10 %
Power consumption [3]:	40 mA
Switching frequency [4]:	10 kHz
Response time [5]:	100 µs
Stability of response time:	± 20 µs

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Output type:	NPN: HIGH = approx. VS / LOW ≤ 2 V PNP: HIGH = VS- ≤ 2 V / LOW approx. 0 V
Switching mode:	PNP/NPN
Output current Imax.:	100 mA
Initialization time:	100 ms
Connection type:	Connector M8, 4-pin
Ambient light safety:	Sunlight: ≤ 10,000 klx
Protection class [6]:	III
Circuit protection:	VS connections reverse-polarity protected Output Q short-circuit protected Interference suppression
Enclosure rating:	IP 65
Weight:	Ca. 36 g ... 160 g [7]
Housing material:	Aluminum

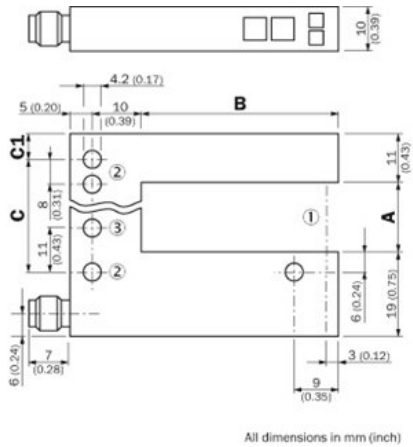
[1] Limit values, reverse-polarity protected, operation in short-circuit protected network, max. 8 A [2] May not exceed or fall short of V_S tolerances [3] Without load [4] With light/dark ratio 1:1 [5] Signal transit time with resistive load [6] Reference voltage DC 50 V [7] Depending on fork width

Ambient data

Ambient temperature [1]:	Operation: -20 ... 60 °C Storage: -30 ... 80 °C
Shock load:	According to EN 60068-2-27
UL File-No.:	UL No. NRKH.E191603

[1] Do not bend below 0 °C

Dimensional drawing



All dimensions in mm (inch)

Dimensions in mm (inch)

	A Fork width	B Fork depth	C	C1
WF2	2 (0.08)	42/59/95 (1.65/2.32/3.74)	14 (0.55)	5 (0.20)
WF5	5 (0.20)	42/59/95 (1.65/2.32/3.74)	14 (0.55)	6.5 (0.20)
WF15	15 (0.59)	42/59/95 (1.65/2.32/3.74)	27 (1.06)	5 (0.20)
WF30	30 (1.18)	42/59/95 (1.65/2.32/3.74)	42 (1.65)	5 (0.20)
WF50	50 (1.97)	42/59/95 (1.65/2.32/3.74)	51 (2.01)	16 (0.63)
WF80	80 (3.15)	42/59/95 (1.65/2.32/3.74)	81 (3.19)	16 (0.63)
WF120	120 (4.72)	42/59/95 (1.65/2.32/3.74)	121 (4.76)	16 (0.63)

|1| Optical axis
|2| Mounting hole, Ø 4.2 mm
|3| WF50/80/120 only

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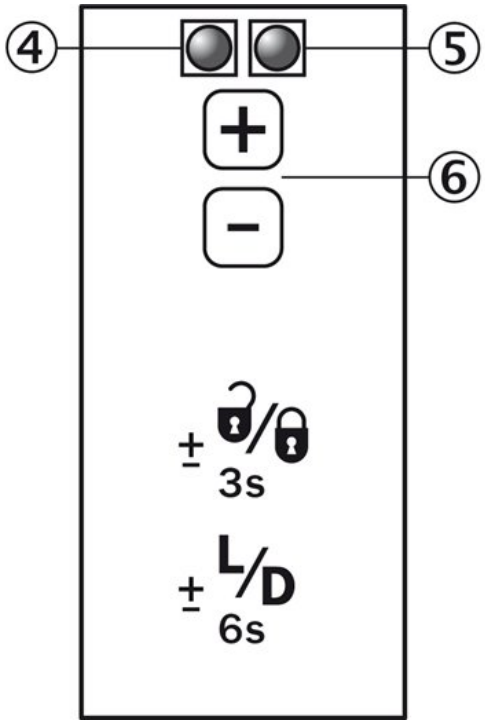
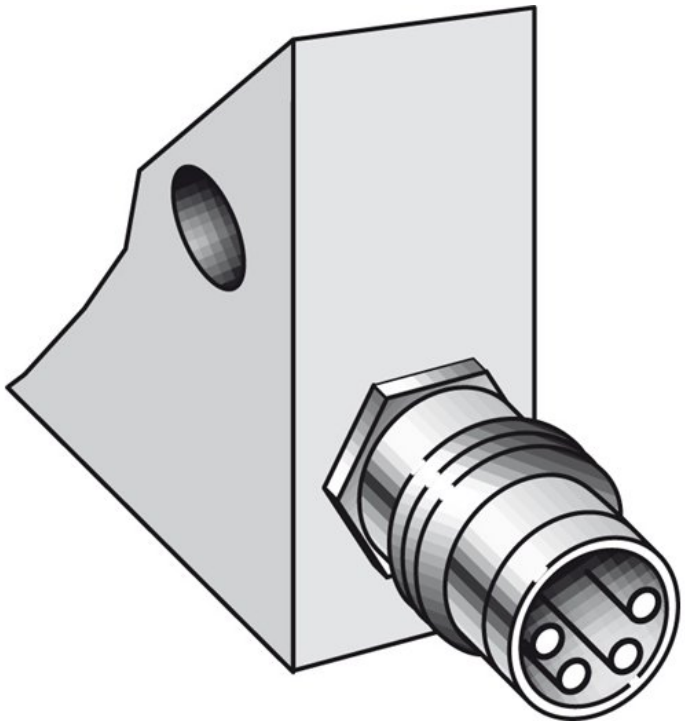
Adjustments



|4| Function signal indicator (yellow), switching output
|5| Function indicator (red)
|6| "+"/"-" buttons and function button

Connection type



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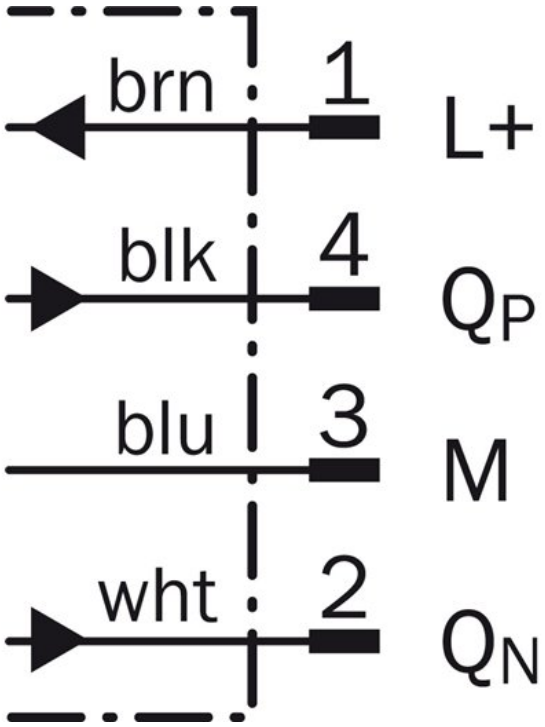
Connection diagram



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