



Mid range distance sensors Dx60, DS60

DS60-P31311



Model Name > [DS60-P31311](#)
Part No. > [1016693](#)



At a glance

- Measuring range up to 6 m on target and 20 m on reflector
- Safe background suppression of any object in the back (up to 100 m)
- Two invertible switching outputs
- Time-of-flight technology for reliable results
- Precise alignment with red laser light
- Teach-in

Your benefits

- Durable, lightweight housing withstands harsh environments
- Easy one-button teach-in offers fast commissioning
- High switching accuracy increases process reliability, ensuring higher productivity and better quality
- Different measurement options (on object, on reflector or foreground suppression) ensure flexible use and highest reliability within the application
- Both red and infrared laser models enable users to choose the best light source for their application - visible or invisible
- The two switching outputs of the DS60 reduce investment and commissioning costs



Performance

Measuring range	1), 2), 3): 80 mm ... 6,000 mm, 90 % remission 80 mm ... 4,600 mm, 18 % remission 80 mm ... 2,400 mm, 6 % remission
Response time:	10 ms
Switching frequency:	50 Hz
Light source:	Laser, infrared
Laser protection class:	1 (EN 60825-1)
Typ. light spot size (distance):	12 mm x 12 mm (at 6 m)
Additional function:	Inverted switching output ObSB mode
Service life:	50,000 h

1) 2) 3) Teach-in from 200 ... 6,000 mm

Interfaces

Switching output (max. output current): 2x PNP (100 mA)

Output Q short-circuit protected; PNP: HIGH = $V_S - (< 2.5 \text{ V})$ / LOW = $< 2.5 \text{ V}$; NPN: HIGH = $< 2.5 \text{ V}$ / LOW = V_S ;

Mechanics/electronics

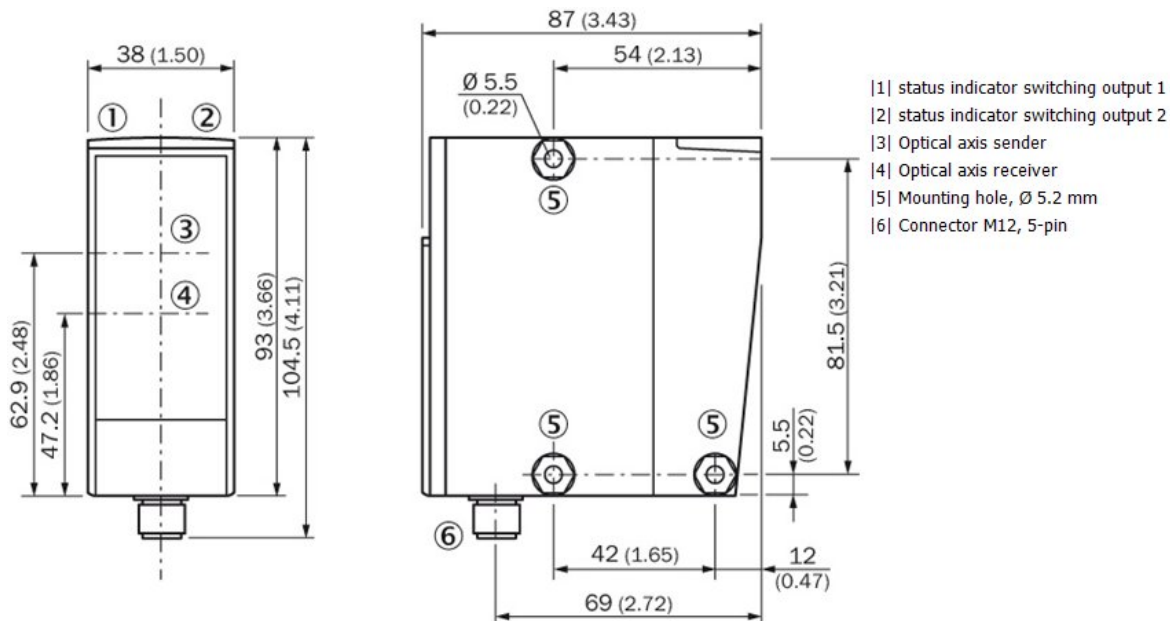
Supply voltage V_S ¹⁾: DC 18 V ... 30 V
Ripple ²⁾: $\leq 5 \text{ Vpp}$
Power consumption ³⁾: $\leq 3 \text{ W}$
Connection type: Connector M12, 5-pin
Weight: 202 g

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network, max. 8 A ²⁾ May not fall short of or exceed V_S tolerances ³⁾ Without load

Ambient data

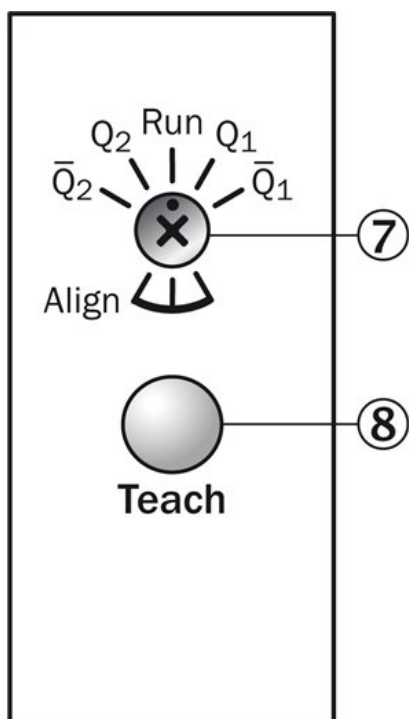
Enclosure rating: IP 67
Protection class: II
EMC: EN 61000-6-2
EN 60947-5-2
Ambient temperature: Operation: -25 ... 55 °C
Storage: -25 ... 75 °C

Dimensional drawing



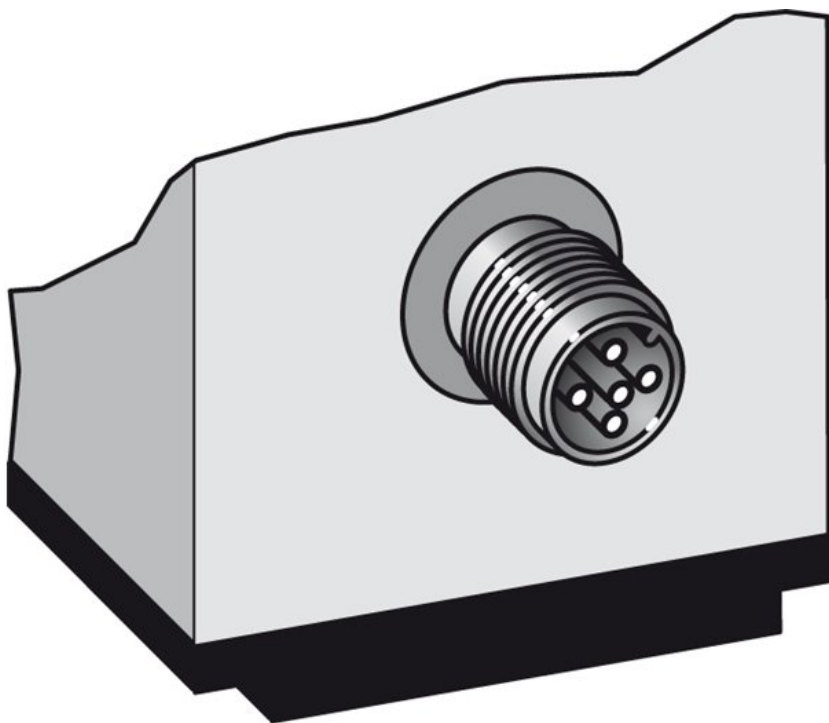
All dimensions in mm (inch)

Adjustment possible

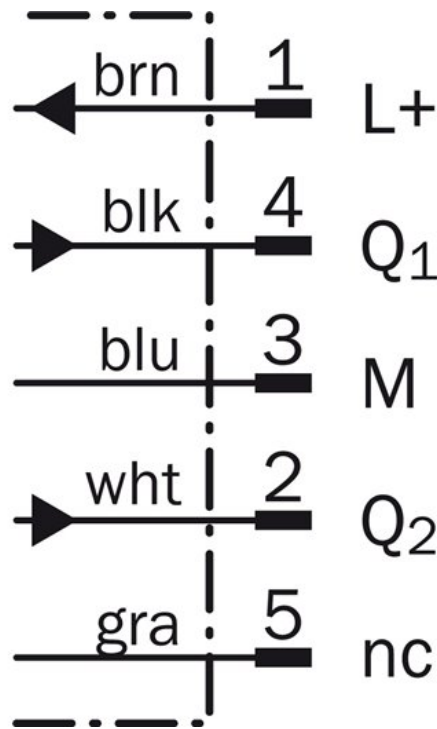


- |7| rotary switch
- |8| Control element

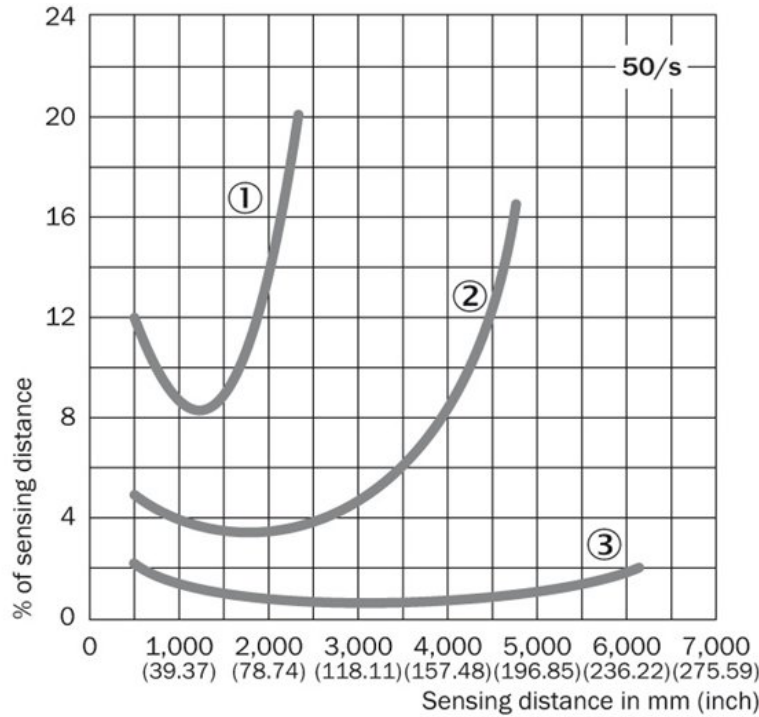
Connection type



Connection diagram



Sensing distance



- |1| 6 % / 90 %
- |2| 18 % / 90 %
- |3| 90 % / 90 %

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