



## Mid range distance sensors Dx60, DS60

DS60-N21211



**Model Name** > **DS60-N21211**  
**Part No.** > **1016491**



**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 <sup>1), 2), 3)</sup> :	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, red
Laser protection class:	2 (EN 60825-1)
Typ. light spot size (distance):	9 mm x 9 mm (at 4.5 m)
Additional function:	Inverted switching output
Service life:	50,000 h

<sup>1) 2) 3)</sup> Teach-in from 200 ... 6,000 mm

**Interfaces**

Switching output (max. output current):	2x NPN (100 mA)
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Output Q short-circuit protected; NPN: HIGH = < 2.5 V / LOW =  $V_S$ ;

### Mechanics/electronics

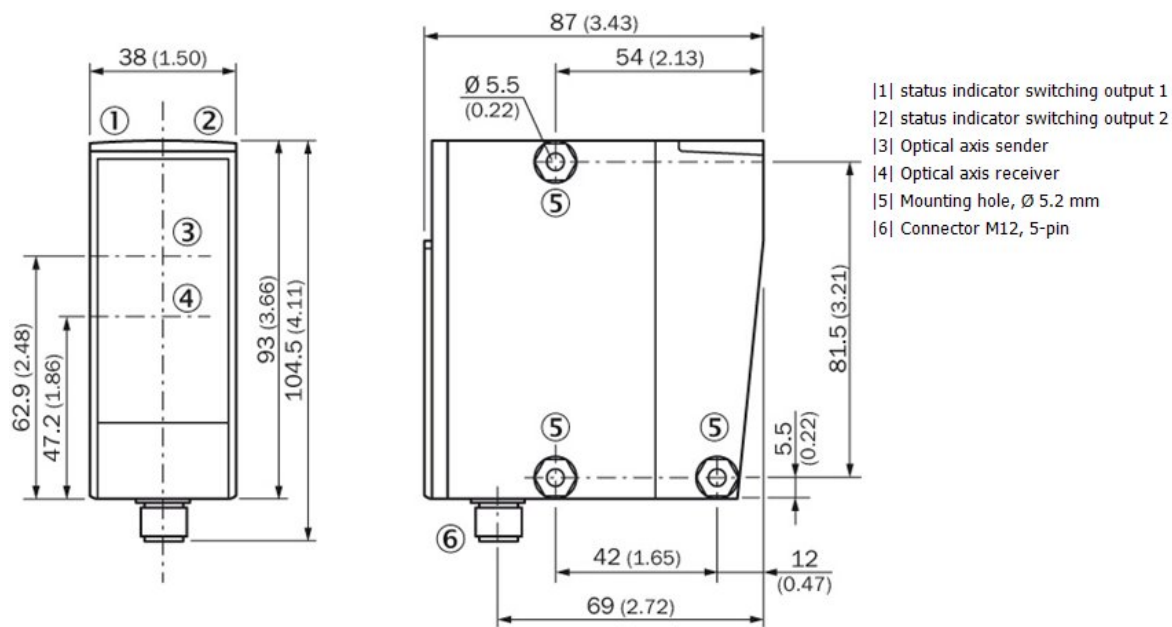
Supply voltage $V_S$ <sup>1)</sup> :	DC 18 V ... 30 V
Ripple <sup>2)</sup> :	≤ 5 Vpp
Power consumption <sup>3)</sup> :	≤ 3 W
Connection type:	Connector M12, 5-pin
Weight:	202 g

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

### Ambient data

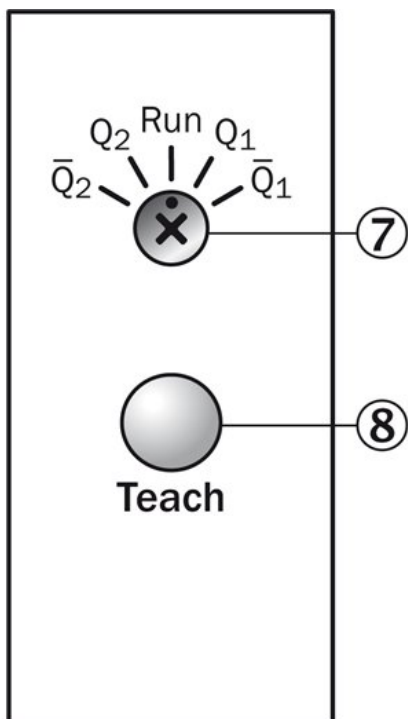
Enclosure rating:	IP 67
Protection class:	II
EMC:	EN 61000-6-2 EN 60947-5-2
Ambient temperature:	Operation: -25 ... 55 °C Storage: -25 ... 75 °C

### Dimensional drawing



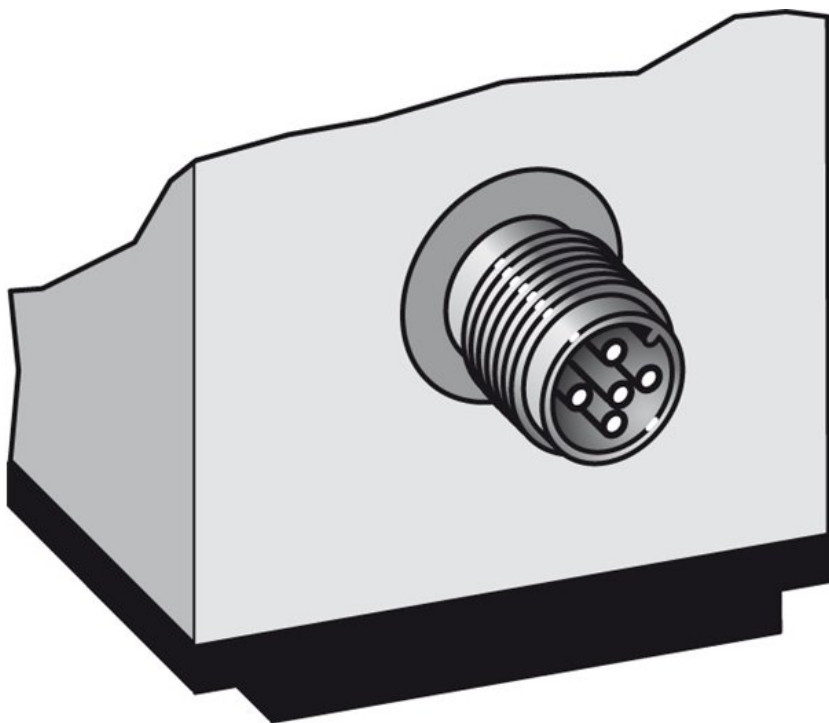
All dimensions in mm (inch)

Adjustment possible

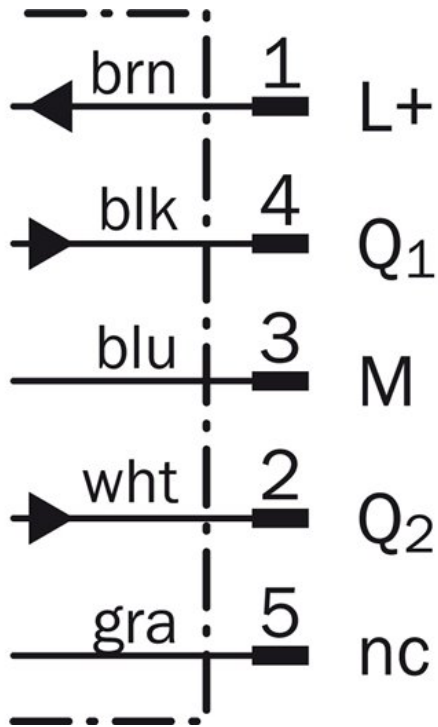


|7| rotary switch  
|8| Control element

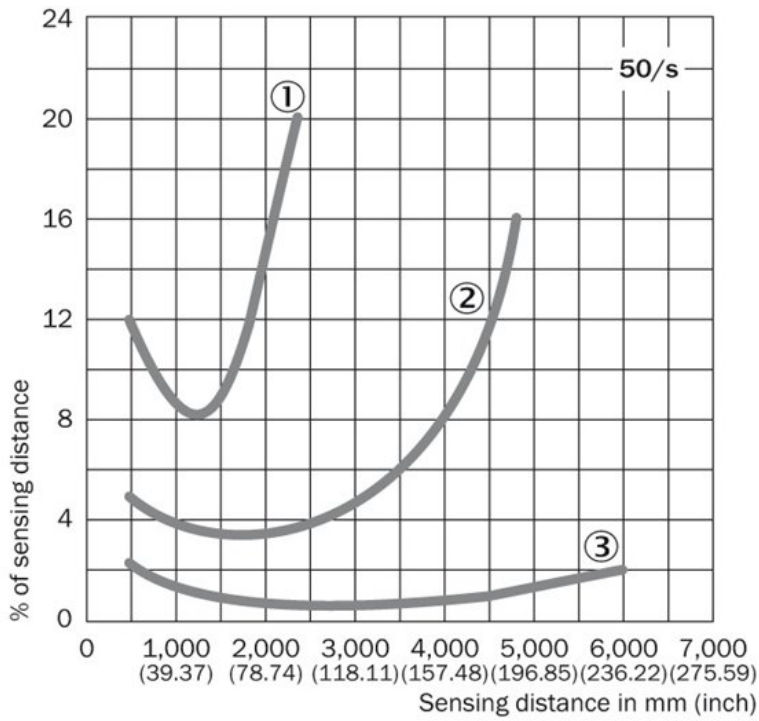
Connection type



Connection diagram



Sensing distance



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

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