


## DT 60

### Distance Sensor "Fast"

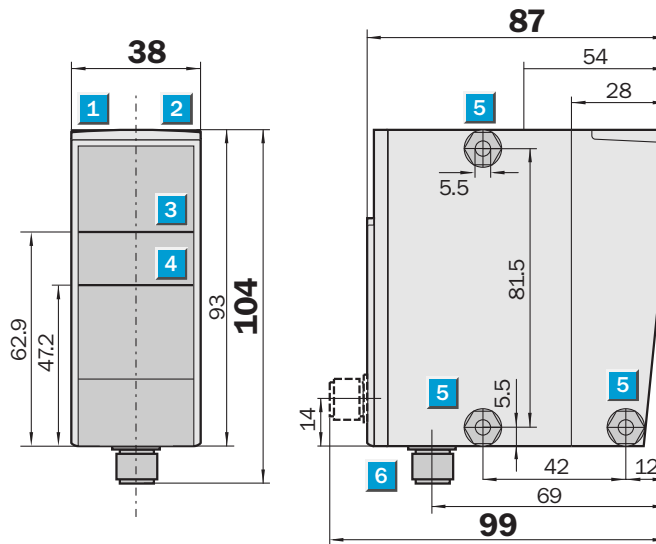


 **Measurement range**  
200 ... 5300 mm

**Distance Sensor**

- Analogue output 4 ... 20 mA
- Teach-in and Plug & Play version
- High measuring accuracy
- Visible red light laser
- Power-On LED
- Acknowledgement after Teach-in

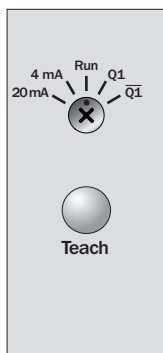
#### Dimensional drawing



#### Adjustments possible

DT 60-P211B

DT 60-N211B

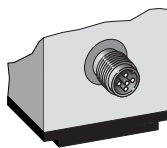


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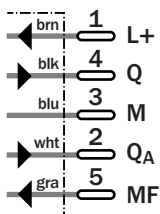
- 1 Power
- 2 Function indicator
- 3 Optical axis, sender
- 4 Optical axis, receiver
- 5 Mounting hole
- 6 M12 plug, 5-pin
- 7 Operating panel Teach-in version

#### Connection type

All types



5-pin, M12



Technical data		DT 60-	P211B	N211B	P211B bbee	N211B bbee						
<b>Teach-in version</b>												
<b>Plug &amp; Play version</b>		Measuring range freely selectable										
<b>Measuring range</b>												
(min. ... measuring distance)	200 mm ... 5300 mm											
Object with 3% remission	200 mm ... 1000 mm (A)/1400 mm (B)											
Object with 6% remission	200 mm ... 1400 mm (A)/2000 mm (B)											
Object with 18% remission	200 mm ... 2400 mm (A)/3600 mm (B)											
Object with 90% remission	200 mm ... 5000 mm (A)/5300 mm (B)											
<b>Light source</b> <sup>1)</sup>		Laser diode, red light										
Light spot at 2 m distance	Ø 10 mm											
<b>Supply voltage</b> V <sub>S</sub> <sup>2)</sup>		11 ... 30 V DC										
<b>Power consumption</b> <sup>3)</sup>		< 3 W										
<b>Ripple</b> <sup>4)</sup>		≤ 5 V <sub>SS</sub>										
<b>Analogue output (invertable)</b>		4 ... 20 mA										
Accuracy <sup>5)</sup>	± 13 mm											
Reproducibility	± 10 mm											
Resolution	1.5 mm											
Response time	A = 30 ms/B = 50 ms											
Cycle time	5 ms (A)/15 ms (B)											
Output rate	1.2 ms (A)/3.6 ms (B)											
Temperature drift	0.5 mm/K (0.4 mm/K typ.)											
<b>Switching outputs (invertable)</b>		Q										
		$\bar{Q}$										
DL 60-P: PNP	HIGH = U <sub>V</sub> - (< 2 V)/LOW = 0 V											
DL 60-N: NPN	HIGH = U <sub>V</sub> /LOW ≤ 2 V											
<b>Output current</b> I <sub>A</sub> <sup>6)</sup>		100 mA										
<b>Multifunction MF</b>		Laser off										
<b>Connection type</b>		M12 plug, 5-pin										
<b>VDE protection class</b> <sup>7)</sup>		II										
<b>Laser protection class</b>		2 (EN 60 825-1)										
<b>Enclosure rating</b>		IP 67										
<b>Ambient temperature</b>		Operation -25 ... +55 °C										
		Storage -25 ... +75 °C										
<b>Weight</b>		202 g										

<sup>1)</sup> Average service life 50,000 h at T<sub>A</sub> = +25 °C

<sup>2)</sup> Limit values, reverse-polarity protected

<sup>3)</sup> Without load

<sup>4)</sup> May not exceed or fall short of V<sub>S</sub> tolerances

<sup>5)</sup> After 30 minutes on-time

<sup>6)</sup> Output Q short-circuit protected  
<sup>7)</sup> Reference voltage DC 50 V

#### Plug & Play version: measuring range freely selectable, measuring range bb to ee ± 4 mA ... 20 mA

DT 60-P/N111Bbbee	
bb: min. measuring distance <sup>8)</sup>	ee: max. measuring distance <sup>8)</sup>
Q2 <sup>9)</sup>	53 <sup>10)</sup>

<sup>8)</sup> Minimum distance between bb and ee must be 0.3 units (0.3 ± 300 mm)

<sup>9)</sup> 02 ± 200 mm; 53 ± 5300 mm

<sup>10)</sup> 90% remission

#### 1<sup>st</sup> example: measuring range 1200 mm ... 3400 mm

DT 60-P/N111B1234	
4 mA ± 1200 mm	20 mA ± 3400 mm

#### 2<sup>nd</sup> example: measuring range 4200 mm ... 3800 mm (Inverted characteristic curve)

DT 60-P/N111B4238	
4 mA ± 4200 mm	20 mA ± 3800 mm

#### Order information

Type	Part no.	Type	Part no.
DT 60-P211B	1 025 845	DT 60-N211B0253	1 026 446
DT 60-N211B	1 025 846	DT 60-P211Bbbee <sup>*)</sup>	X XXX XXX
DT 60-P211B0520	1 026 444	DT 60-N211Bbbee <sup>*)</sup>	X XXX XXX
DT 60-P211B0253	1 026 445		

<sup>\*)</sup> Measuring range freely selectable

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