


DT 60

Distance Sensor "Long range"

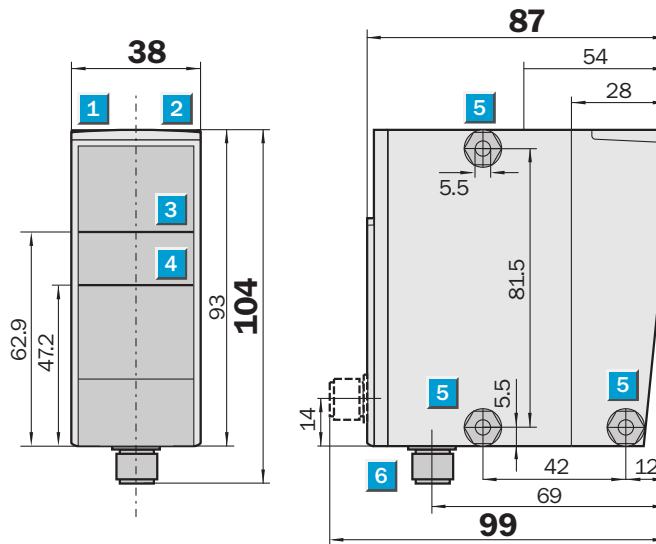


 **Measurement range**
200 ... 5300 mm

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

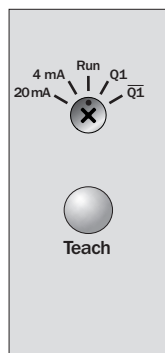
Dimensional drawing



Adjustments possible

DT 60-P111B

DT 60-N111B

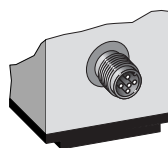


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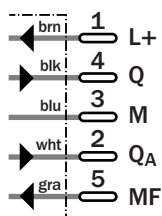
- 1 Power
- 2 Function indicator
- 3 Optical axis, sender
- 4 Optical axis, receiver
- 5 Mounting hole
- 6 M12 plug, 5-pin
- 7 Operating panel Teach-in version

Connection type

All types



5-pin, M12



| Technical data | DT 60- | P111B | N111B | P111B bbee | N111B bbee | | | | | | |
|--|---|-------|-------|---------------|---------------|--|--|--|--|--|--|
| Teach-in version | | | | | | | | | | | |
| Plug & Play version | Measuring range freely selectable | | | | | | | | | | |
| Measuring range | | | | | | | | | | | |
| (min. ... measuring distance) | 200 mm ... 5300 mm | | | | | | | | | | |
| Object with 3% remission | 200 mm ... 2000 mm | | | | | | | | | | |
| Object with 6% remission | 200 mm ... 2800 mm | | | | | | | | | | |
| Object with 18% remission | 200 mm ... 5000 mm | | | | | | | | | | |
| Object with 90% remission | 200 mm ... 5300 mm | | | | | | | | | | |
| Light source ¹⁾ | Laser diode, red light | | | | | | | | | | |
| Light spot at 2 m distance | Ø 10 mm | | | | | | | | | | |
| Supply voltage V _S ²⁾ | 11 ... 30 V DC | | | | | | | | | | |
| Power consumption ³⁾ | < 3 W | | | | | | | | | | |
| Ripple ⁴⁾ | ≤ 5 V _{SS} | | | | | | | | | | |
| Analogue output (invertable) | 4 ... 20 mA | | | | | | | | | | |
| Accuracy ⁵⁾ | ± 10 mm | | | | | | | | | | |
| Reproducibility | ± 8 mm typ. | | | | | | | | | | |
| Resolution | 1.5 mm | | | | | | | | | | |
| Response time | 50 ms ... 250 ms ⁶⁾ | | | | | | | | | | |
| Cycle time | < 55 ms | | | | | | | | | | |
| Output rate | < 15 ms | | | | | | | | | | |
| Temperature drift | 0.4 mm/K typ. | | | | | | | | | | |
| Switching outputs (invertable) | Q | | | | | | | | | | |
| | \bar{Q} | | | | | | | | | | |
| DL 60-P: PNP | HIGH = U _V - (< 2 V)/LOW = 0 V | | | | | | | | | | |
| DL 60-N: NPN | HIGH = U _V /LOW ≤ 2 V | | | | | | | | | | |
| Output current I _A ⁷⁾ | 100 mA | | | | | | | | | | |
| Multifunction MF | Laser off | | | | | | | | | | |
| Connection type | M12 plug, 5-pin | | | | | | | | | | |
| VDE protection class ⁸⁾ | II | | | | | | | | | | |
| Laser protection class | 2 (EN 60 825-1) | | | | | | | | | | |
| Enclosure rating | IP 67 | | | | | | | | | | |
| Ambient temperature | Operation -25 ... +55 °C | | | | | | | | | | |
| | Storage -25 ... +75 °C | | | | | | | | | | |
| Weight | 202 g | | | | | | | | | | |

¹⁾ Average service life 50,000 h at T_A = +25 °C

²⁾ Limit values, reverse-polarity protected

³⁾ Without load

⁴⁾ May not exceed or fall short of V_S tolerances

⁵⁾ After 30 minutes on-time

⁶⁾ Adaptive, depending on degree of reflectance

⁷⁾ Output Q short-circuit protected

⁸⁾ 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 ⁹⁾ | ee: max. measuring distance ⁹⁾ |
| Q2 ¹⁰⁾ | 53 ¹¹⁾ |

⁹⁾ Minimum distance between bb and ee must be 0.3 units (0.3 ± 300 mm)

¹⁰⁾ 02 ± 200 mm; 53 ± 5300 mm

¹¹⁾ 90% remission

1st example: measuring range 1200 mm ... 3400 mm

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

2nd 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-P111B | 1 025 843 | DT 60-P111B0253 | 1 026 063 |
| DT 60-N111B | 1 025 844 | DT 60-N111B0253 | 1 026 160 |
| DT 60-P111B0520 | 1 025 847 | DT 60-P111Bbbee ⁹⁾ | X XXX XXX |

⁹⁾ Measuring range freely selectable

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