

## DT 10

### Distance Sensor

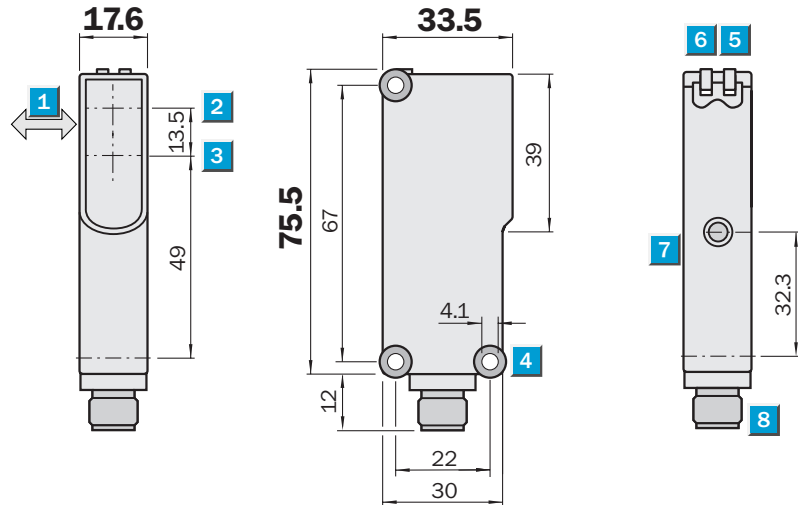


**Measurement range**  
**50 ... 500 mm**  
 Distance Sensor

- Analogue output 4 ... 20 mA
- High measuring accuracy
- Visible red light
- Power-On LED
- Insensitive to external light sources (HF lamps)

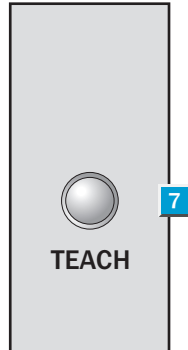


#### Dimensional drawing



#### Adjustments possible

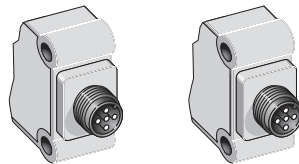
All types



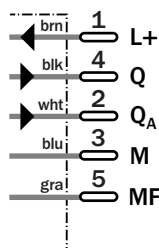
- 1 Standard direction of the material being detected
- 2 Optical axis, sender
- 3 Optical axis, receiver
- 4 Mounting hole  $\varnothing$  4.1 mm
- 5 LED indicator, yellow; switching output status active
- 6 LED indicator, green; power on
- 7 Teach button
- 8 M12 plug, 5-pin

#### Connection type

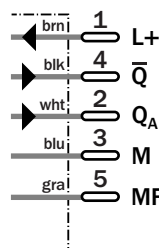
DT10-P10B5	DT10-P10D5
DT10-N10B5	DT10-N10D5



5-pin, M12



5-pin, M12



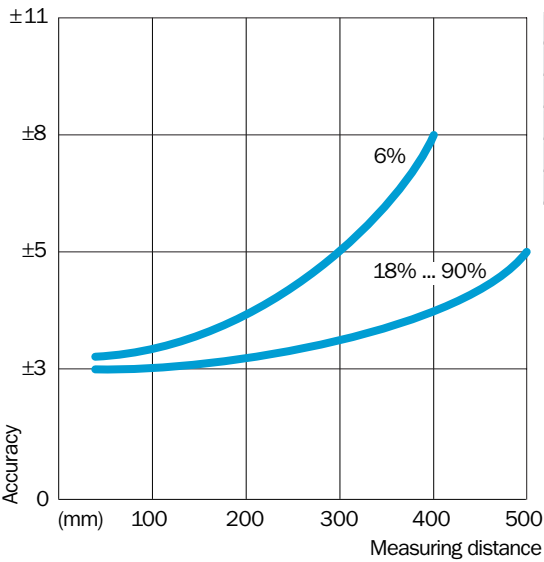
Technical data		DT10-	P10B5	P10D5	N10B5	N10D5						
<b>Measuring range</b>												
Object with 6% remission	50 mm ... 400 mm											
Object with 18% ... 90 % remission	50 mm ... 500 mm											
<b>Light source</b> <sup>1)</sup>	LED, red light											
Light spot diameter	20 mm at 400 mm											
<b>Supply voltage</b> $V_S$ <sup>2)</sup>	10 ... 30 V DC											
<b>Current consumption</b> <sup>3)</sup>	< 1.2 W											
<b>Residual ripple</b> <sup>4)</sup>	$\leq 5 V_{pp}$											
<b>Analogue output</b> <sup>5)</sup>	4 ... 20 mA											
Accuracy <sup>6)</sup>	$\pm 3 \dots 8 \text{ mm}$											
Reproducibility <sup>7)</sup>	3 mm											
Resolution	< 1.5 mm											
Response time <sup>8)</sup>	20 ms											
Output rate <sup>9)</sup>	1 ms											
Temperature drift	1.0 mm/K											
<b>Switching outputs</b>	Q											
	$\bar{Q}$											
DT 10-P: PNP	HIGH = $V_S - (< 1 \text{ V})$ /LOW $\leq 1 \text{ V}$											
DT 10-N: NPN	HIGH = $V_S - (< 1 \text{ V})$ /LOW $\leq 1 \text{ V}$											
<b>Multifunction MF</b>	External Teach											
<b>Output current</b> $I_A$ <sup>10)</sup>	100 mA											
<b>Connection type</b>	M12 plug, 5-pin											
<b>VDE protection class</b> <sup>11)</sup>	<input type="checkbox"/>											
<b>Enclosure rating</b>	IP 67											
<b>Ambient temperature</b> $T_A$	Operation $-25 \dots +50 \text{ }^\circ\text{C}$ Storage $-40 \dots +75 \text{ }^\circ\text{C}$											
<b>Warm-up time</b>	30 min.											
<b>Initialisation period</b>	650 ms											
<b>Weight</b>	Approx. 40 g											

1) Average service life 100,000 h at  $T_A = +25 \text{ }^\circ\text{C}$   
 2) Limit values, reverse-polarity protected  
 Operation in short-circuit protected network max. 8 A

3) Without load  
 4) May not exceed or fall short of  $V_S$  tolerances  
 5)  $R_L < 200 \text{ } \Omega$ ,  $V_p \geq 10 \text{ V}$   
 $R_L < 500 \text{ } \Omega$ ,  $V_p \geq 16 \text{ V}$

6) At room temperature  
 7) Same ambient conditions  
 8) Lateral introduction of object into the measurement range  
 9) Object in measurement range

10) Output Q short-circuit protected  
 11) Reference voltage 50 V DC



Order information	
Type	Order no.
DT10-P10B5	1 027 325
DT10-P10D5	1 027 326
DT10-N10B5	1 027 327
DT10-N10D5	1 027 328

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