

## Distance sensor DT20

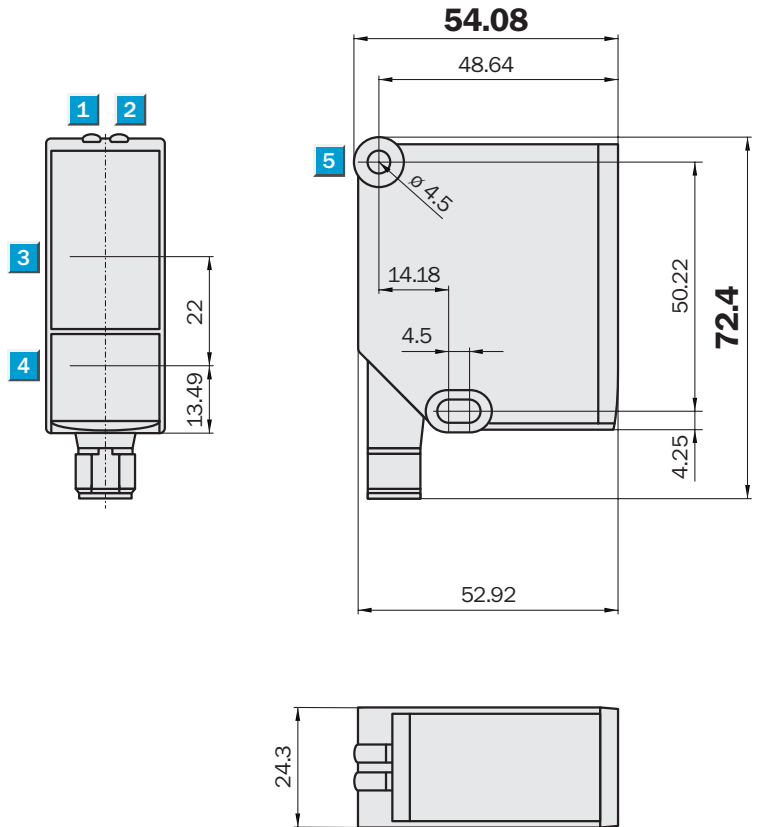


	<b>Measurement range</b> 90 ... 600 mm 100 ... 1000 mm
Distance Sensor, Proximity mode	

- Analogue output 4 ... 20 mA
- High measurement accuracy
- Power-On LED
- Plug & Play Sensor
- Insensitive to external light sources



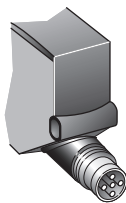
### Dimensional drawing



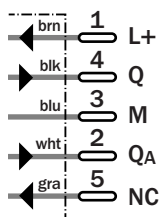
- 1 Power
- 2 Funktionsanzeige
- 3 Optical axis, receiver
- 4 Optical axis, sender
- 5 Mounting hole
- 6 Plug, M12, 5-pin

### Connection type

DT20



5-pin, M12



Technical data		DT20
<b>Measurement range <sup>1)</sup></b>		
Object with 6% remission	90 ... 600 mm	
	100 ... 820 mm	
Object with 18% remission	90 ... 600 mm	
	100 ... 1,000 mm	
Object with 90% remission	90 ... 600 mm	
	100 ... 1,000 mm	
<b>Light source <sup>2)</sup></b>		
	LED, infrared light	
Light spot diameter	35 mm at 1 m	
<b>Supply voltage <math>V_s</math> <sup>3)</sup></b>		
	10 ... 30 V DC	
<b>Current consumption <sup>4)</sup></b>		
	1.5 W	
<b>Residual ripple <sup>5)</sup></b>		
	$\leq 5 V_{pp}$	
<b>Analogue output</b>		
	4 ... 20 mA	
<b>Reproducibility</b>		
	$\pm 1.5$ mm	
	$\pm 3$ mm	
<b>Resolution</b>		
	1 mm	
	2 mm	
<b>Response time</b>		
	10 ms	
	15 ms	
<b>Output rate</b>		
	1 ms	
<b>Temperature drift</b>		
	0.25 mm/K	
<b>Switching outputs</b>		
	PNP o. NPN, Q	
<b>Signal voltage PNP</b>		
	HIGH = $U_V - (< 2 V)$ /LOW = 0 V	
<b>Signal voltage NPN</b>		
	HIGH = $U_V$ /LOW $\leq 2 V$	
<b>Connection type</b>		
	M12 plug, 5-pin	
<b>VDE protection class</b>		
	<input type="checkbox"/>	
<b>Enclosure rating</b>		
	IP 66/IP 67	
<b>Ambient temperature <math>T_A</math></b>		
	Operation -25 ... +55 °C	
	Storage -40 ... +75 °C	
<b>Weight</b>		
	135 g	
<b>Housing material</b>		
	Metal	

<sup>1)</sup> For types with max. measurement range: > 600 mm for min. measurement range = 100 mm < 600 mm for min. measurement range = 90 mm

Various measurement ranges are possible (see type-based order information below)

<sup>2)</sup> Average service life 100,000 h at  $T_A = +25$  °C

<sup>3)</sup> Limit values, reverse-polarity protected

<sup>4)</sup> Without load

<sup>5)</sup> May not exceed or fall short of  $V_s$  tolerances

**Plug & Play: measurement range freely selectable, measurement range bb to ee  $\geq 4$  mA ... 20 mA**

DT20-P/N130Bbbe	
bb: min. measurement range <sup>6)</sup>	ee: max. measurement range <sup>6)</sup>
09 <sup>7)</sup>	00 <sup>7)</sup>

<sup>6)</sup> Minimum range between bb and ee must be 10 units (05  $\geq 5$  cm; 10  $\geq 10$  cm)

<sup>7)</sup> 09  $\geq 9$  cm; 00  $\geq 100$  cm

**1<sup>st</sup> example: measurement range 100 mm ... 1000 mm**

DT20-P130B1000	
4 mA $\geq 10$ cm	20 mA $\geq 100$ cm

**2<sup>nd</sup> example: measurement range 600 mm ... 90 mm (Inverse diagram)**

DT20-P130B6009	
4 mA $\geq 60$ cm	20 mA $\geq 9$ cm

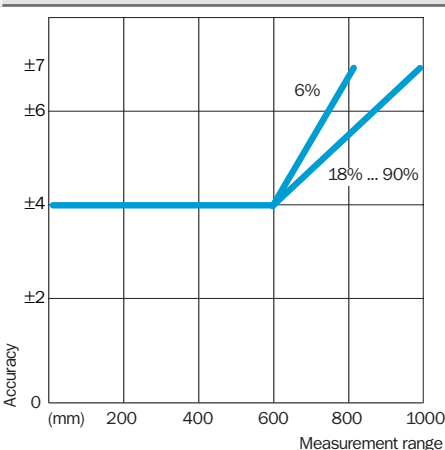
**Basic types:**

Order information	
Type	Order no.
DT20-P130B0960	1029273
DT20-P130B1000	1028800
DT20-P130B1050	1027831
DT20-P130B1080	1028720
DT20-P130B2535	1028721
DT20-P130B2545	1028724
DT20-P130B2560	1028723
DT20-P130B4000	1028722
DT20-N130B0960	1029274
DT20-N130B1000	1029275

**Measurement range**

90 ... 600 mm
100 ... 1000 mm
100 ... 500 mm
100 ... 800 mm
250 ... 350 mm
250 ... 450 mm
250 ... 600 mm
400 ... 1000 mm
90 ... 600 mm
100 ... 1000 mm

**Accuracy**



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