

## DT20 Hi Distance Sensor

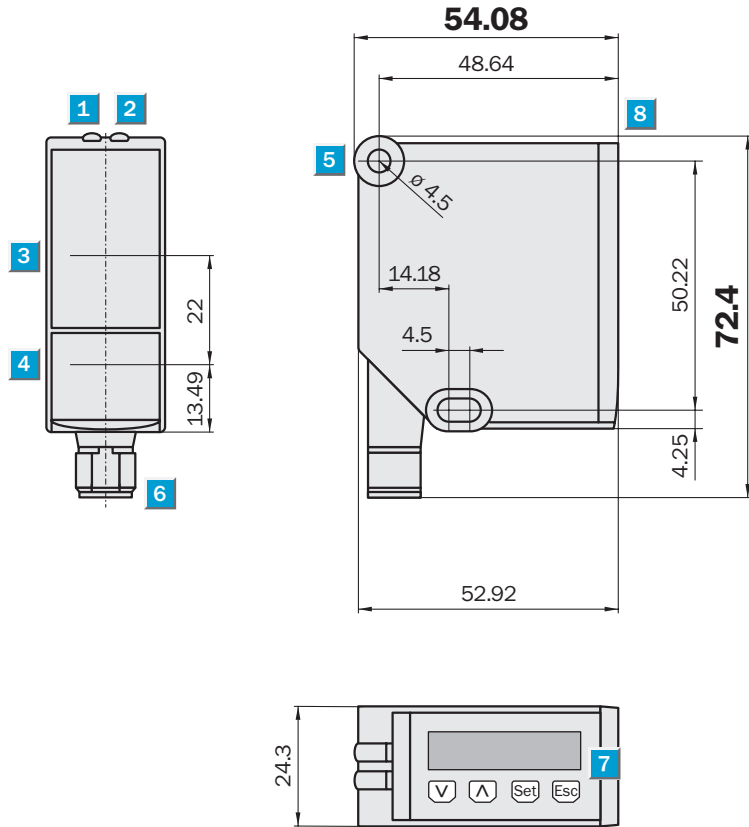


	<b>Measurement range</b> 100 ... 1,000/100 ... 600/ 100 ... 300/50 ... 150 mm
<b>Distance sensor, scanner mode</b>	

- Analogue output 4 ... 20 mA
- High measuring accuracy
- Power-on LED
- Display
- Not sensitive to reflective objects



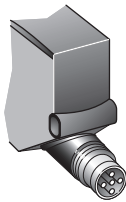
### Dimensional drawing



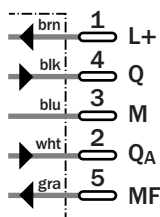
- 1 Power
- 2 Status indicator
- 3 Optical axis – receiver
- 4 Optical axis – sender
- 5 Fixing hole
- 6 Plug M12, 5-pin
- 7 Display and operating panel
- 8 Reference edge

### Connection type

DT20 Hi



5-pin, M12



Stocked, Distributed, and Supported by

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Technical data		DT20 Hi	P224B	P214B	P244B	P254B	N224B	N214B	N244B	N254B		
<b>Measurement range</b>												
Object with 6 % ... 90 % remission	100 ... 1,000 mm											
Object with 6 % ... 90 % remission	100 ... 600 mm											
Object with 6 % ... 90 % remission	100 ... 300 mm											
Object with 6 % ... 90 % remission	50 ... 150 mm											
<b>Light source</b> <sup>1)</sup>	Laser class 2											
<b>Light type</b>	Red light											
Light spot diameter	3 mm at 100 ... 600 mm											
<b>Supply voltage</b> V <sub>s</sub> <sup>2)</sup>	10 ... 30 V DC											
<b>Power consumption</b> <sup>3)</sup>	1.8 W											
<b>Residual ripple</b> <sup>4)</sup>	≤ 5 V <sub>SS</sub>											
<b>Analogue output</b> <sup>5)</sup>	4 ... 20 mA											
Accuracy <sup>6)</sup>	± 10 mm <sup>8)</sup>											
	± 2 mm <sup>7)</sup>											
	± 1 mm											
	± 0.5 mm											
Reproducibility <sup>9)</sup>	± 5 mm <sup>8)</sup>											
	± 1 mm <sup>7)</sup>											
	± 0.5 mm											
	± 0.2 mm											
Resolution	< 1 mm <sup>8)</sup>											
	< 0.5 mm <sup>7)</sup>											
	< 0.2 mm											
	< 0.1 mm											
Response time <sup>10)</sup>	< 15 ms											
Output rate	< 2.8 ms											
Temperature drift	0.5 mm/K <sup>8)</sup>											
	0.25 mm/K <sup>7)</sup>											
<b>Switching outputs</b>	PNP, Q/ $\bar{Q}$											
	NPN, Q/ $\bar{Q}$											
Signal voltage PNP	HIGH = V <sub>s</sub> - (< 2 V)/LOW = 0 V											
Signal voltage NPN	HIGH = V <sub>s</sub> /LOW ≤ 2 V											
<b>Connection type</b>	M12 plug, 5-pin											
<b>VDE protection class</b>	<input type="checkbox"/>											
<b>Enclosure rating</b>	IP 65											
<b>Ambient temperature</b> T <sub>A</sub>	Operation -20 ... +55 °C <sup>11)</sup>											
	Storage -40 ... +60 °C											
<b>Weight</b>	135 g											
Housing material	Metal											

1) Average service life 50,000 h at T<sub>A</sub> = +25 °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<sub>s</sub> tolerances  
 5) Freely scalable  
 6) At 6 ... 90 % remission  
 7) From 100 ... 600 mm  
 8) From 600 ... 1,000 mm

9) Setting: Avg = medium  
 10) Lateral entry of object into measurement range  
 11) At 24 V  
 12) Continuous change of distance in measurement area

Reproducibility and response time dependent on set mode					
Mode	Response time <sup>12)</sup>	Reproducibility			
		1,000 mm	600 mm	300 mm	150 mm
Fast	2.5 ms	± 5 mm	± 2 mm	± 1 mm	± 0.5 mm
Medium	10 ms	± 2.5 mm	± 1 mm	± 0.5 mm	± 0.25 mm
Slow	40 ms	± 1.25 mm	± 0.5 mm	± 0.25 mm	± 0.13 mm

Ordering information					
Type	Order no.	Type	Order no.	Type	Order no.
DT20-P224B	1040405	DT20-N214B	1040140	DT20-P254B	1041278
DT20-N224B	1044216	DT20-P244B	1040406	DT20-N254B	1041279
DT20-P214B	1040012	DT20-N244B	1040713		

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