

## DT20 Hi Distance Sensor

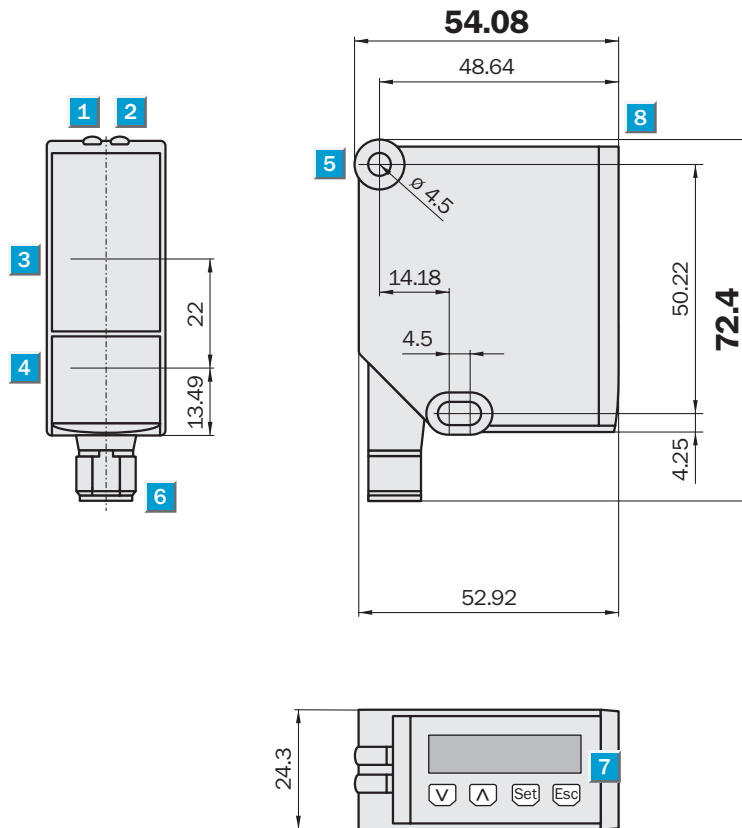


	<b>Measurement range</b> 100 ... 600/100 ... 300/ 50 ... 150 mm
<b>Distance sensor, scanner mode</b>	

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



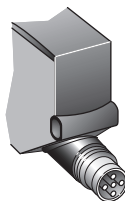
### Dimensional drawing



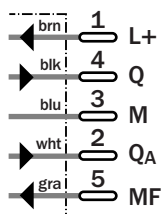
- 1 Power
- 2 Status indicator
- 3 Optical axis - receiver
- 4 Optical axis - sender
- 5 Fixing hole
- 6 Plug M12, 5-pin
- 7 Display and operating panel
- 8 Reference edge

### Connection type

DT20 Hi



5-pin, M12



Technical data		DT20 Hi	P214B	P244B	P254B	N214B	N244B	N254B				
<b>Measurement range</b>												
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> $V_s$ <sup>2)</sup>	10 ... 30 V DC											
<b>Power consumption</b> <sup>3)</sup>	1.8 W											
<b>Residual ripple</b> <sup>4)</sup>	$\leq 5 V_{SS}$											
<b>Analogue output</b> <sup>5)</sup>	4 ... 20 mA											
Accuracy <sup>6)</sup>	$\pm 2$ mm											
	$\pm 1$ mm											
	$\pm 0.5$ mm											
Reproducibility <sup>7)</sup>	$\pm 1$ mm											
	$\pm 0.5$ mm											
	$\pm 0.2$ mm											
Resolution	< 0.5 mm											
	< 0.2 mm											
	< 0.1 mm											
Response time <sup>8)</sup>	< 15 ms											
Output rate	< 2.8 ms											
Temperature drift	0.25 mm/K											
<b>Switching outputs</b>	PNP, $Q/\bar{Q}$											
	NPN, $Q/\bar{Q}$											
Signal voltage PNP	HIGH = $V_s - (< 2 V)$ /LOW = 0 V											
Signal voltage NPN	HIGH = $V_s$ /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 65											
<b>Ambient temperature</b> $T_A$	Operation -20 ... +55 °C <sup>9)</sup>											
	Storage -40 ... +60 °C											
<b>Weight</b>	135 g											
Housing material	Metal											

<sup>1)</sup> Average service life 50,000 h at  $T_A = +25$  °C

<sup>2)</sup> Limit values, reverse-polarity protected Operation in short-circuit protected network max. 8 A

<sup>3)</sup> Without load

<sup>4)</sup> May not exceed or fall short of  $V_s$  tolerances

<sup>5)</sup> Freely scalable

<sup>6)</sup> At 6 ... 90 % remission

<sup>7)</sup> Setting: Avg = medium

<sup>8)</sup> Lateral entry of object into measurement range

<sup>9)</sup> At 24 V

<sup>10)</sup> Continuous change of distance in measurement area

Reproducibility and response time dependent on set mode				
Mode	Response time <sup>10)</sup>	Reproducibility		
		600 mm	300 mm	150 mm
Fast	2.5 ms	$\pm 2$ mm	$\pm 1$ mm	$\pm 0.5$ mm
Medium	10 ms	$\pm 1$ mm	$\pm 0.5$ mm	$\pm 0.25$ mm
Slow	40 ms	$\pm 0.5$ mm	$\pm 0.25$ mm	$\pm 0.13$ mm

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

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