



# DT20-P130B2535

## DT20

DISPLACEMENT MEASUREMENT SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
DT20-P130B2535	1028721

Other models and accessories → [www.sick.com/DT20](http://www.sick.com/DT20)



### Detailed technical data

#### Performance

<b>Measuring range</b>	250 mm ... 350 mm, 18 % ... 90 % remission <sup>1)</sup>
<b>Resolution</b>	1 mm / 2 mm <sup>2)</sup>
<b>Repeatability</b>	± 1.5 mm / ± 3 mm <sup>3)</sup>
<b>Accuracy</b>	± 4 mm <sup>4) 5)</sup>
<b>Response time</b>	10 ms / 15 ms <sup>2)</sup>
<b>Light source</b>	LED, infrared
<b>Typ. light spot size (distance)</b>	15 mm x 15 mm (at 1 m)
<b>Additional function</b>	Plug-and-play, Customer specific scaled measuring range, Switching output to monitor the measuring range
<b>Laser service life (MTTF at 25 °C)</b>	100,000 h

- <sup>1)</sup> On 6 % remission the maximal measurable distance is 820 mm.  
<sup>2)</sup> Depending on measurement range: 90 ... 600 mm / > 600 mm.  
<sup>3)</sup> 18 % ... 90 % remission.  
<sup>4)</sup> 6 % ... 90 % remission.  
<sup>5)</sup> ± 4 mm up to 600 mm; ≤ ± 7 mm at distance < 600 mm; see accuracy diagram.

#### Interfaces

<b>Analog output</b>	1 x 4 mA ... 20 mA (≤ 300 Ω)
<b>Switching output</b>	1 x PNP (100 mA) <sup>1)</sup>

- <sup>1)</sup> PNP: HIGH =  $V_S - (< 2 \text{ V})$  / LOW = 0 V.

#### Mechanics/electronics

<b>Supply voltage <math>V_S</math></b>	DC 10 V ... 30 V <sup>1)</sup>
<b>Ripple</b>	≤ 5 V <sub>pp</sub> <sup>2)</sup>
<b>Power consumption</b>	≤ 1.5 W <sup>3)</sup>

- <sup>1)</sup> Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.  
<sup>2)</sup> May not fall short of or exceed  $V_S$  tolerances.  
<sup>3)</sup> Without load.

<b>Initialization time</b>	≤ 250 ms
<b>Warm-up time</b>	≤ 30 min
<b>Housing material</b>	Metal housing with PMMA lens
<b>Connection type</b>	Male connector, M12, 5-pin
<b>Indication</b>	2 x LED
<b>Weight</b>	135 g

1) Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

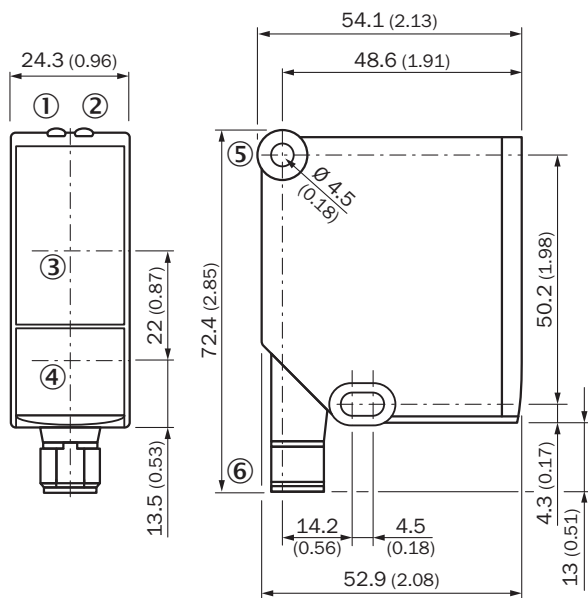
2) May not fall short of or exceed  $V_S$  tolerances.

3) Without load.

## Ambient data

<b>Enclosure rating</b>	IP 65
<b>Protection class</b>	II
<b>Ambient temperature</b>	Operation: -25 °C ... +55 °C Storage: -40 °C ... +75 °C
<b>Temperature drift</b>	0.25 mm/K
<b>Vibration resistance</b>	EN 60068-2-6 / EN 60068-2-64
<b>Shock resistance</b>	EN 60068-2-27

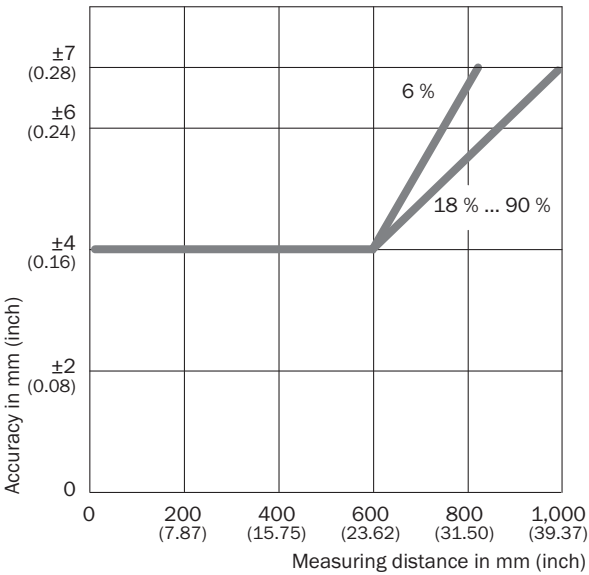
## Dimensional drawing (Dimensions in mm (inch))



- ① Status indicator operating voltage active (green)
- ② Status indicator switching output (orange)
- ③ Optical axis, receiver
- ④ Optical axis, sender
- ⑤ Fixing hole
- ⑥ Male connector M12, 5-pin

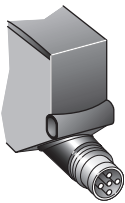
Characteristic curve

Characteristic curve: accuracy

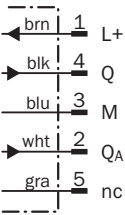


Connection type

Male connector M12, 5-pin


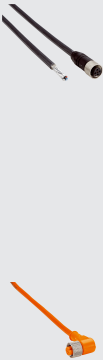


Connection diagram



## Recommended accessories

Other models and accessories → [www.sick.com/DT20](http://www.sick.com/DT20)

	Brief description	Type	Part no.
Mounting brackets and mounting plates			
	Mounting bracket, stainless steel (1.4404), without mounting material, for DT20 Hi, without mounting hardware	BEF-WN-DT20	4043524
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PVC, unshielded, 2 m	DOL-1205-G02M	6008899
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PVC, unshielded, 5 m	DOL-1205-G05M	6009868
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PVC, unshielded, 10 m	DOL-1205-G10M	6010544
	Head A: female connector, M12, 5-pin, angled Head B: cable Cable: PVC, unshielded, 2 m	DOL-1205-W02M	6008900
	Head A: female connector, M12, 5-pin, angled Head B: cable Cable: PVC, unshielded, 5 m	DOL-1205-W05M	6009869
	Head A: female connector, M12, 5-pin, angled Head B: cable Cable: PVC, unshielded, 10 m	DOL-1205-W10M	6010542

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is “Sensor Intelligence.”**

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)