



DT20-P130B4080

DT20

DISPLACEMENT MEASUREMENT SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
DT20-P130B4080	1041497

Other models and accessories → www.sick.com/DT20



Detailed technical data

Performance

Measuring range	400 mm ... 800 mm, 18 % ... 90 % remission ¹⁾
Resolution	1 mm / 2 mm ²⁾
Repeatability	± 1.5 mm / ± 3 mm ³⁾
Accuracy	± 4 mm ^{4) 5)}
Response time	10 ms / 15 ms ²⁾
Light source	LED, infrared
Typ. light spot size (distance)	15 mm x 15 mm (at 1 m)
Additional function	Plug-and-play, Customer specific scaled measuring range, Switching output to monitor the measuring range
Laser service life (MTTF at 25 °C)	100,000 h

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

Interfaces

Analog output	1 x 4 mA ... 20 mA (≤ 300 Ω)
Switching output	1 x PNP (100 mA) ¹⁾

- ¹⁾ PNP: HIGH = $V_S - (< 2 V)$ / LOW = 0 V.

Mechanics/electronics

Supply voltage V_S	DC 10 V ... 30 V ¹⁾
Ripple	≤ 5 V _{pp} ²⁾
Power consumption	≤ 1.5 W ³⁾

- 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.

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

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

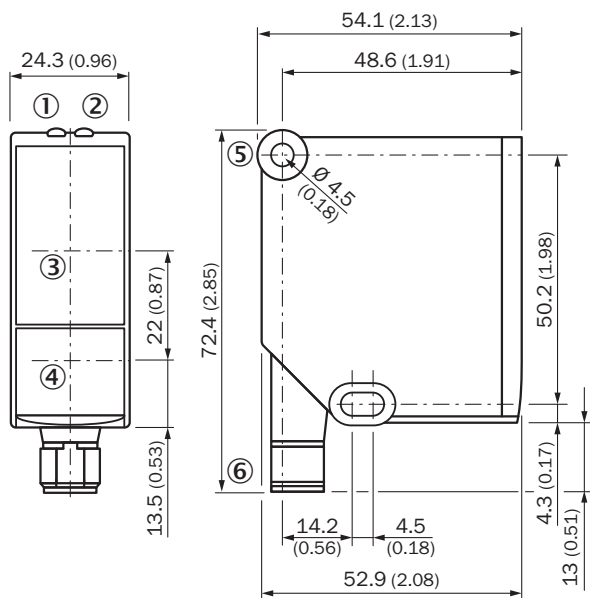
2) May not fall short of or exceed V_S tolerances.

3) Without load.

Ambient data

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

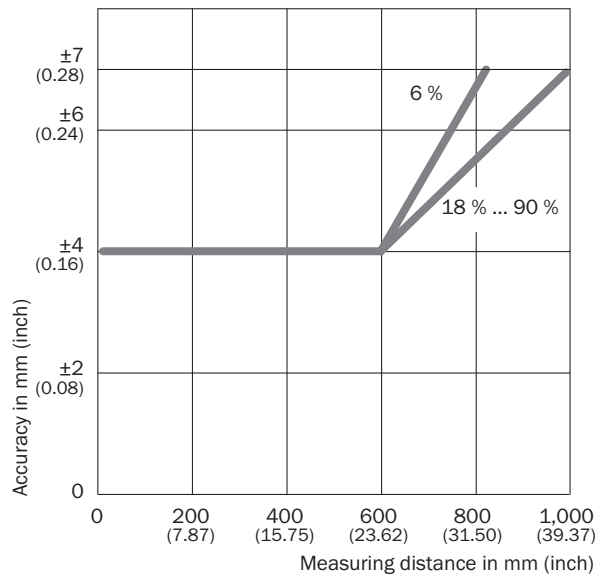
Dimensional drawing (Dimensions in mm (inch))



- 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

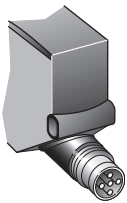
Characteristic curve

Characteristic curve: accuracy

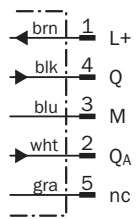


Connection type

Male connector M12, 5-pin






Connection diagram



Recommended accessories

Other models and accessories → www.sick.com/DT20

	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:

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