

CCT pressure/ temperature sensor

For air-conditioning systems with heat pumps



Product description



The CCT pressure temperature sensor is often used in heat pumps for climate control systems and in thermal management (battery), particularly in vehicles with alternative drives. The specially developed thermo receptors permit a fast response time in flowing media and guarantee the high accuracy of the temperature measurements.

The design excels due to its compact size and minimal weight, which makes it easy to integrate and ideal for lightweight systems. The specific evaluation electronics make the pressure and temperature signal available via a digital single wire interface (LIN) and auto addressing.

High quantities can be realised at an affordable price thanks to fully automated production.

Fields of application

- Climate control system in vehicles with alternative drives
- Heat pump
- Thermal management (battery)

Features

Specially developed thermoreceptors

- Fast response time in moving fluids
- High temperature measuring accuracy

Tried-and-tested stainless-steel measuring element

- Excellent long-term stability
- Good compatibility with fluids

Small size

- Very easy to integrate
- Support for lightweight-construction concepts

Application-specific evaluation electronics

- Tried-and-tested automotive EMC/ESD resistance
- Extended diagnostic and protective functions
- Verified LIN 2.1 conformity with sleep mode
- Pressure and temperature signal available via digital single-wire interface (LIN) and auto addressing

Fully automated assembly

- Cost effective
- Large quantities can be produced

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Technical Specifications

Measurement range

Nominal pressure	0–10 to 0–100 bar
Over pressure	2 × nominal pressure
Burst pressure	3 × nominal pressure
Pressure type	Relative

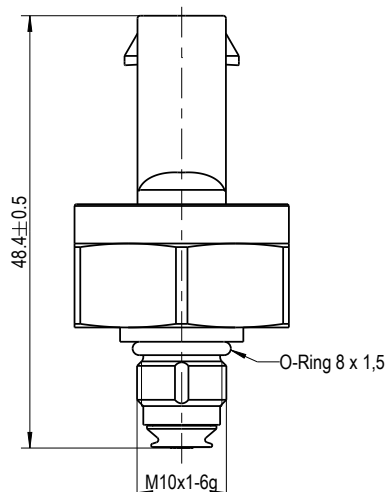
Electrical characteristics

Supply voltage	9–16 V
Current consumption	max. 10 mA
Output signals	LIN 1.3 / LIN 2.1 auto addressing

Mechanical characteristics

Measuring element	Stainless steel cell with resistive measuring bridge
Housing material	Aluminium
Pressure connection	HEX 24, M10
Thread	Male thread ¹⁾

Dimensions



Electrical connection	4-pin RD plug ¹⁾
Installation position	Any
Weight	Approx. 15 g

Accuracy

Total pressure error	± 0.5 % FS (0–90 °C) ± 1 % FS (–40–125 °C)
Total temperature error ³⁾	± 1 K ²⁾
Response time (t ₉₀)	3 sec ²⁾

Environmental conditions

Operating temperature range	–40–125 °C
Media temperature range	–40–150 °C
Media compatibility	R134a, HFO 1234yf, PAG oil, POE oil

¹⁾ Other electrical connections available on request

²⁾ Depending on installation situation

