

## CCT pressure temperature sensor

For climate control systems with a heat pump

### DESCRIPTION

The CCT pressure temperature sensor is installed in climate control systems, particularly in vehicles with alternative drives, and heat pumps. The specially developed thermo-receptors permit a fast response time in flowing media and guarantee high temperature accuracy. 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). High quantities can be realised at an affordable price thanks to fully automated production.



### FIELDS OF APPLICATION

- Vehicle climate control system with alternative drives
- Heat pump



### KEY FEATURES

Specially developed thermo-receptors

Tested stainless steel measurement element

Compact design

Application-specific evaluation electronics

Fully automated production

### BENEFITS

- Fast response time in flowing media
- High temperature accuracy

- Excellent long-term stability
- High media compatibility

- Excellent integratability
- Supports lightweight designs

- Automobile-tested EMC/ESD resistance
- Enhanced diagnostic and protective functions
- Tested LIN 2.1 conformity including power-saving mode (sleep mode)
- Pressure and temperature signal available via digital single wire interface (LIN)

- Affordable
- Large quantities can be realised

## Technical specification

CCT pressure temperature sensor



### Pressure ranges

Nominal pressure	10 ... 100 bar
Overpressure	2 x nominal pressure
Bursting pressure	3 x nominal pressure

### Electrical characteristics

Supply voltage	8 ... 18 V
Supply current	max. 10 mA
Output signal	LIN 1.3/LIN 2.1
Overvoltage protection	40 V
Reverse polarity protection	- 18 V

### Mechanical characteristics

Measurement element	Stainless steel cell with resistive measuring bridge
Case material	Aluminium
Pressure connection	HEX 19, M10x1 male thread <sup>1)</sup>
Electrical connection	RD plug <sup>1)</sup>
Installation position	Arbitrary
Weight	Approx. 25 g

### Accuracy

Total error pressure <sup>2)</sup>	± 0.5 % FS (0 ... 90 °C) ± 1 % FS (-40 ... 125 °C)
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Total error temperature <sup>3)</sup>	± 1 K
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Response time (t <sub>90</sub> )	3 sec <sup>3)</sup>
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### Environmental conditions

Operating temperature range	-40 ... 125 °C (150 °C)
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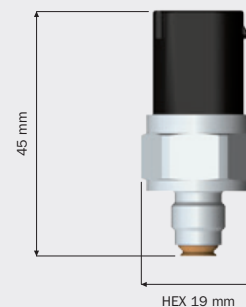
Media temperature range	-40 ... 125 °C (150 °C)
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Media compatibility	R134a, PAG oil, HFO-1234yf <sup>4)</sup> , R744 <sup>4)</sup>
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ESD (DIN EN 61000-4-2)	6 kV to contacts 15 kV to case
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EMC (ISO 11452)	250 V/m (Stripline) 150 mA (BCI)
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### Dimension



1) Alternative pressure and electrical connections available on request  
2) Covers repeatability, hysteresis, non-linearity (TBL), calibration and temperature effects; depending on the pressure and temperature range  
3) Depends on the installation situation  
4) Available on request