

CCT pressure sensor

For vehicle climate control systems

DESCRIPTION

The Climate Control Pressure Transmitter (CCT) was specially designed for measuring the pressure of vehicle coolants. The hermetically sealed, robust aluminium case makes this sensor an affordable solution for vehicle climate control systems. Its high-quality stainless steel measurement element makes the CCT not only compatible with a broad range of media, but also ideal for high-pressure applications (R744). Its innovative evaluation electronics provides reliable, precise measurement data over a broad temperature range. Specially adapted to meet the needs of the automobile industry, the CCT also fulfils current EMC and ESD regulations.



FIELDS OF APPLICATION

Climate control in

- HFO 1234yf and R134a systems
- R744 high pressure systems

Compressor protection



KEY FEATURES

Specially developed stainless steel measurement element

Application-specific evaluation electronics

Tested aluminium casing

Large number of available analogue and digital output signals

BENEFITS

- Excellent long-term stability
- High media compatibility

- Automobile-tested EMC/ESD resistance
- Enhanced diagnostic and protective functions
- Tested LIN 2.1 conformity including power-saving mode (sleep mode)

- Corrosion resistant
- Low weight
- Affordable

- Easy integration in existing systems

Technical specification

CCT pressure 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 PWM 0.5 ... 4.5 V, ratiometric
Overvoltage protection	up to 40 V (LIN) 18 V (PWM)
Reverse polarity protection	- 18 V

Mechanical characteristics

Measurement element	Stainless steel cell with resistive measuring bridge
Case material	Aluminium
Pressure connection	HEX 24, M10 x 1.25 female thread ¹⁾
Electrical connection	RD plug ¹⁾
Installation position	Arbitrary
Weight	Approx. 25 g

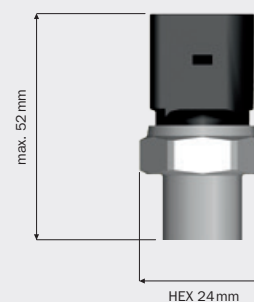
Accuracy

Total error ²⁾	± 0.5 % FS (0 ... 90 °C) ± 1 % FS (-40 ... 125 °C)
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Environmental conditions

Operating temperature range	-40 ... 125 °C (150 °C)
Media temperature range	-40 ... 125 °C (150 °C)
Media compatibility	R134a, PAG oil, HFO-1234yf, R744 ³⁾
ESD (DIN EN 61000-4-2)	6 kV to contacts 15 kV to case
EMC (ISO 11452)	250 V/m (Stripline) 150 mA (BCI)

Dimension



1) Other 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) Available on request