ZILA Elektronik

CAN-Bus

CAN-Bus Pressure-Temperature-Sensor DTS-CAN-01

Criteria

Pressure measuring

- Sensor cell based on a high-grade steel membrane (without interlayer-medium) piezoresistive bridge-connection consisting Polysilizium
- Sensor signal processing integrated (CMOS-Technology)
- Medium compatible with hydraulic-oil, brake-fluid, gasoline, diesel, compressed air, etc.
- Pressure ranges 2 to 4000 bar (Si on high-grade steel)
- Measurement types: Relative pressure against ambient pressure or against internal atmosphere
- Measuring precision: Class 0,5 at RT
- Total error band: < 1,5 % full scale between -10 °C to +80 °C

Temperature measuring

- Thermistor 50 kOhm @ 37°C, with linearization
- Temperature range -10...80 °C
- Measuring precision +/- 0,8 K

General parameter

- Measuring step >= 5 ms
- Measuring resolution 10 Bit

Electrical connection

- CAN-protocol: CANopen 2.0 A
- Physical layer: acc. DIN 11898
- Option: EDS file available

Operating conditions

- Operating temperature: -10 °C to + 80 °C
- Store temperature: -20 °C to +120 °C
- Shockproof: 30 g Duration:14 ms at RT
- Vibration stability: 10 g at 20-1000 Hz
- CE-conformity in accordance with:
- EN 50082-1 and EN 50082-2

DTS-CAN-01

Applications

- Hydraulic
- Pneumatic
- Environmental technology
- Process control
- Climate systems
- Semiconductor industry
- Automotiv
- Agricultural devices
- Heating systems
- Robot systems

Remarks:

1. Standard ranges in kPa (other ranges on inquiry)

0 - 500	0 - 5.000	0 - 50.000	0 - 400.000
0 - 1.000	0 - 10.000	0 - 70.000	
0 - 2.000	0 - 35.000	0 - 200.000	

2. All parts that get in contact with the media are made of following materials:
   to 500 bar X 5 CrNi1810 SUS 304 - 50 Mpa
   to 2000 bar X 5 CrNiCuNb 174 SUS 630 - 100 Mpa
   No O-rings and silicon oil pattern

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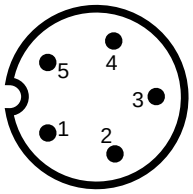
Technical Data

Terminal and wiring diagramm



Seen at the pins

1 *Program pin, not connect please!*
2 Operating voltage 12...27 V
3 GND/CAN_GND
4 CAN_H
5 CAN_L

Specification

The CAN-bus-pressure-temperature-sensor DTS-CAN-01 contains to measure the pressure a high-grad steel membrane, the sensor element and a CMOS-ASIC for calibration and linearization.

For measuring the temperature exists a thermistor, placed in a high-grad steel shell outside of the case in the medium. That guarantees very short delay times.

A microcontroller converts the analogue values, makes the linearization and scaling of the process values and realizes the CANopen-protocol and the data transfer on CAN bus.

The sensor is coordinated electronically and the data are saved digitally. Through this a good long time stability and precision is safeguarded.

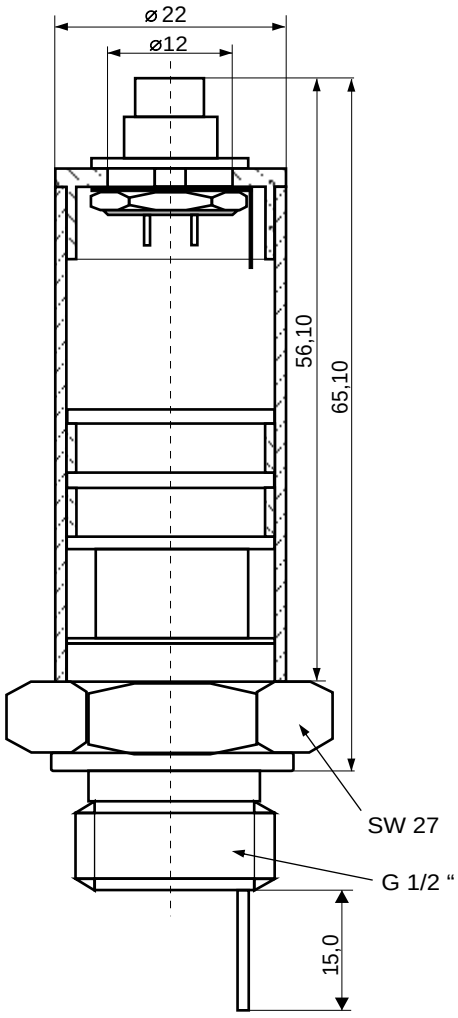
User notes

The pneumatic or hydraulic sealing is done by a standard flatseal or O-ring.

The admissible torque during fastening is 25 Nm.

Order name: DTS-CAN-01 - xxxbar

Mechanics



We reserve the right to make technical modifications