

# Temperature sensor T01

Sensors

## KEY FEATURES

- CAN-Bus temperature sensor for measurement directly in medium
- Compact and robust design for use in harsh environments
- High media compatibility
- Designed for OEM needs
- With ECE type approval
- UL-Listed

## TECHNICAL DATA

- Measuring range  $-40...150\text{ }^{\circ}\text{C}$  /  $-40...302\text{ }^{\circ}\text{F}$
- Support of CANopen or J1939 protocol
- Configurable mean value calculation (J1939)
- Fast response times
- E1 type approval

**Sensor-Technik Wiedemann GmbH**

Am Bärenwald 6  
87600 Kaufbeuren

+49 8341 9505-0  
info@sensor-technik.de  
www.stw-mm.com

## TECHNICAL DATA

Measuring range	-40 ... +150 °C / -40 ... +302 °F
Overall accuracy	0.6 %FS (-40 °C ... +150 °C / -40 °F ... +302 °F) 0.4 %FS (-40 °C ... +85 °C / -40 °F ... +185 °F)
Diameter sensor casing	6 mm
Media temperature	-40 ... +150 °C / -40 ... +302 °F
Operating temperature / Storage temperature	-40 ... +125 °C / -40 ... +257 °F (limitations due to the electric connection possible)
Reaction Time (guidance values)	t <sub>0,5</sub> = 4 s, in water 0.2 m/s t <sub>0,9</sub> = 9.6 s, in water 0.2 m/s t <sub>0,5</sub> = 45 s, in air 2 m/s t <sub>0,9</sub> = 160 s, in air 2 m/s
Protocol	CANopen / SAE J1939
Digital filter	Average filter, configurable at CANopen
Bitrate	CANopen: 125 kbit/s, configurable SAE J1939: 250 kbit/s
Voltage supply	9 ... 36 VDC (allowable ripple @ 50 Hz: 10 %)
Electrical protection	Short circuit and inverse polarity
Electrical connection	M12 connector, DIN-Bajonett (acc. to DIN 72585), DT04 4-pole, other connectors on request
Process connection	G 1/4, other connectors on request
Protection class	IP67 (optionally IP6K9K)
Installation torque	max. 35 Nm
Material with medium contact	1.4548, 1.4571 / FKM
Material housing	1.4301
Material connector	PBT GF30 or PBT GF30 / 1.4301

## QUALIFICATIONS

### Environmental and Testing

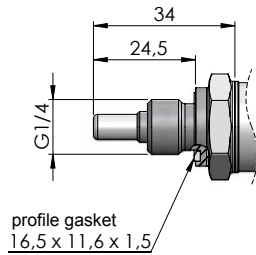
---

EMC	EN 61326-1
Shock	50 g / 11 ms, 30 g / 6 ms acc. to EN60068-27 300 g acc. to IEC60068-2-27
Vibration	20 g acc. to IEC 60068-2-6, Random vibration acc. to ISO16750-3

# TECHNICAL DRAWING

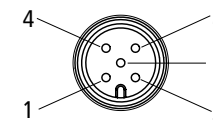
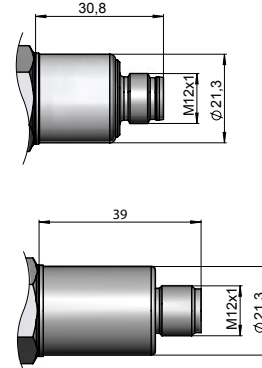
## Process connections

G 1/4, DIN 3852 T 11  
(Form E)



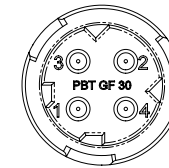
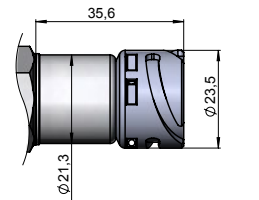
## Electrical connections, protection class IP per IEC 60 529

Circular plug-in connector  
M12x1, 5-pole, IP 67



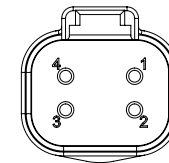
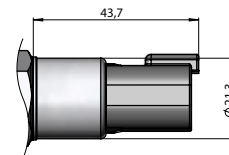
Pin	Connection
1	PE, housing
2	VCC
3	GND
4	CAN_H
5	CAN_L

Bayonet connector  
DIN 72 585, 4-pole, IP 67



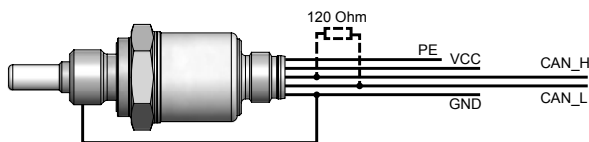
Pin	Connection
1	VCC
2	GND
3	CAN_H
4	CAN_L

Connector  
DT04-4P, 4-pole, IP 67



Pin	Connection
1	CAN_L
2	VCC
3	GND
4	CAN_H

## Recommended terminal layout



# ORDER CODES

Model

**T01**

Units

<input type="checkbox"/>	C°
<input type="checkbox"/>	F°

Output Protocol

<input type="checkbox"/>	CANopen
<input type="checkbox"/>	SAE J1939

Process Connection

<input type="checkbox"/>	G 1/4"
<input type="checkbox"/>	SAE 06

Electrical Connection

<input type="checkbox"/>	M12 (Plastic)
<input type="checkbox"/>	DT04 (4-Pole)

*Select other parameters (one per category)*