



Temperatursensor

Dieser Temperatursensor ist zum Anschluss an das Sensormodul des ELM Systems geeignet. Er kann zur Messung in gasförmigen und flüssigen Medien benutzt werden, soweit sie mit Edelstahl kompatibel sind.

3000-U39-00 Kabelende mit offenen Kontakten

3000-U39-01 mit Stecker für ELM 19"-Einschübe oder ELM Box-Module

Technische Änderungen vorbehalten.



Temperature Sensor

This temperature sensor can be connected to a sensor module of the ELM system. It can be used for the measuring of temperature of liquid and gaseous media as long as they are compatible with stainless steel.

3000-U39-00 cable ends with open contacts

3000-U39-01 with connector plug for ELM 19"-racks or ELM box modules

Subject to technical changes.



Fig. 1: 3000-U39-01

Plug front side view	Pin number of plug	Signal	Wire color
	1	+12 V DC	red
	2	Sensor	green or black
	3	Ground	blue or brown
	4	(not used)	-

Characteristics

- Temperature measurement range: ... -50...+150 °C (-58...+302 °F)
- Supply voltage: +12V ±10%
- Output voltage: -50°C: 250 mV, +150°C: 4750 mV, error < 2%
- Output resistor: 1 kΩ
- Socket: high-grade steel, diameter 6 mm, length 50 mm
- Cable length: 2 m

Using with ELM sensor module 3000-U13

When connecting the sensor to the 3000-U13 it is possible to assign set-points for switching relays and/or initiating alarms. Because of the sensor output resistance of 1 kΩ and the U13-input resistance of 3 kΩ the voltage measured by U13 will be 232.5 ... 4418 mV. The temperature dependent on the voltage is calculated according to the below formula:

$$\text{Temperature [°C]} = (\text{voltage [mV]} * 0.04778) - 61.11$$

$$\text{Temperature [°F]} = (\text{voltage [mV]} * 0.08601) - 78.00$$

Parameters for ELMcontrol:

lower value	lower limit	upper value	upper limit	fitting scale	fitting offset
-50 °C	233 mV	+150 °C	4418 mV	0.04778	-61.11
-58 °F	233 mV	+302 °F	4418 mV	0.08601	-78.00