

Temp-232

Temperature sensor comm. over RS-232 for indoor usage

Temp-232 is a simple digital temperature sensor, communicating over the RS-232 bus by a simple text protocol. It does not need a power supply. The sensor is powered from the serial port of the PC.

The measured temperature is sent in °C by means of a simple text protocol. The sensor is sending the value of the temperature regularly (the interval can be preset), or it sends it only when it has been asked according to a specific question – answer protocol.

To measure the temperature the sensor uses an integrated element which has an accuracy of $\pm 0,5^{\circ}\text{C}$. In the connector's sleeve an indicator is situated, which signalizes by blinking the current measurement in progress.



Applications

- Temperature measurement systems
- Industrial measurements and regulations.
- Temperature measurement of storehouses, manufacturing and dwelling premises.
- Connecting it with Poseidon–measurement in technological premises, Ethernet data transfer

Basic features

- The sensor is connected to the PC by a serial cable RS-232
- Temperature range -55°C to $+125^{\circ}\text{C}$
- The address of the sensor and the interval of the automatic report of the temperature can be set in the terminal SETUP mode
- It can be set to operate in a Question-Answer mode
- Indication of measurement by a LED indicator
- Simple communication protocol
- Does not need a power supply. IT can be powered from the PC's serial port
- The sensor can cooperate with the SNMP thermometer, Poseidon
- Temp-232 by being set to „**Delay: 10s**“ can be compatible from the protocol point of view with the sensor (TM), all SW, designated for this temperature sensor, can be used.

Sensor installation – first steps

- Connect Temp-232 to the serial port of the PC
- Start the terminal program, choose the serial port, in which Temp-232 is connected, set speed to 9600, port parameters to 8N1, outputs RTS and DTR to „ON“
- At the terminal you can see now the temperature value (default value of interval 2 seconds)

Temp-232 – parameters

Temperature range.....	-55°C... +125°C
Resolution.....	0,1 °C
Accuracy of measurement	+/- 0,5 °C in the range -10°C to +85°C +/- 2 °C in the range -55°C to +125°C
Speed of measurement.....	max. response time 50ms, the temperature is measured once a second
Measuring element.....	DS18B20
Communication.....	ASCII, described in the specification
Communication parameters.....	9600 8N1
Communication link.....	RS-232 (RxD, TxD, GND, DTR, RTS)
State indication.....	The red indicator, blinks on each measurement The red indicator lights in Terminal SETUP mode
Operation Modes	<u>Auto-Report</u> / <u>Question-Answer</u>
- mode selection.....	<u>Auto-Report</u> , if the variable D (Outgoing Delay) is different from 0. If the sensor is in <u>Auto-Report</u> mode and receives a temperature request, it goes automatically to <u>Question-Answer</u> mode.
- Auto-Report mode:	The temperature reported regularly in a preset interval
Interval of temp. reports.....	Interval range 1... 255 [seconds]
Format of reports.....	<mark><3 digits – whole part °C><decimal point> <1 digit – decimal part °C><C><CR><LF> ex.: „+028.0C“ (CR = 10 DEC, LF = 13 DEC)
- Question-Answer mode:	The temperature is reported only after request „ Delay: 0s “ has to be set in the SETUP mode.
Temperature value request.....	„t“ (116 DEC)
Report format with temperature value.....	„+028.0C<CR><LF>“

Setting SETUP Terminal mode

Entering to SETUP mode	Send 20x „u“ char (117 DEC) after switching on
Switching on the thermometer.....	Set DTR or RTS to „On“
Parameter choice in setup mode.....	First letter of the command

```
#### Temp232  SETUP ####
####  Hw: 1  Fw:1.2  ####

Temperature:      +030.3C
D: Outg. delay:   0s
X: Exit
### www.HW-group.com ###

Temp232>
```

How to order

Check our website and product page, choose product type from the table in the “Ordering” chapter and fill to your order our product name and number (“600 051 Temp-232 1.5m” for example)