

# BARIX TS



## BARIX TS

**Encapsulated I-wire temperature sensor for home automation, commercial control and monitoring applications**

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Dallas DS18B20 digital temperature sensor with 12 bit resolution

Wide range:  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$   
 $-67^{\circ}\text{F}$  to  $+257^{\circ}\text{F}$

Accuracy:  $\pm 0.5^{\circ}\text{C}$  ( $-10^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ )  
 $\pm 0.9^{\circ}\text{F}$  ( $+14^{\circ}\text{F}$  to  $+185^{\circ}\text{F}$ )

Dallas I-wire interface

Rubber encapsulated cable (33 cm / 1 ft.) and housing with mounting hole

# BARIX TS

Barix TS is an encapsulated I-wire temperature sensor for home automation, commercial control and monitoring applications.

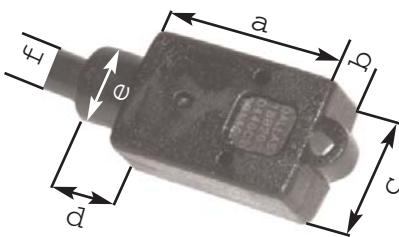
Using the industry standard Dallas I-wire over 2-wire with “parasit power” the sensor can be attached to I-wire capable controllers.

## Technical Specifications

- Unique I-Wire® interface requires only one port pin for communication
- Derives power from data line (“parasite power”)—does not need a local power supply
- Multi-drop capability simplifies distributed temperature sensing applications
- Requires no external components
- User-definable non-volatile temperature alarm settings
- Alarm search command identifies and addresses devices whose temperature is outside of programmed limits (temperature alarm condition)
- Software compatible with the DS1822-PAR
- Ideal for use in remote sensing applications (e.g., temperature probes) that do not have a local power source
- Thermometer resolution is user-selectable from 9 to 12 bits
- Converts temperature in 750 ms (max.)
- Wide range:  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$   
 $-67^{\circ}\text{F}$  to  $+257^{\circ}\text{F}$
- Accuracy:  $\pm 0.5\text{C}$  ( $-10^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ )  
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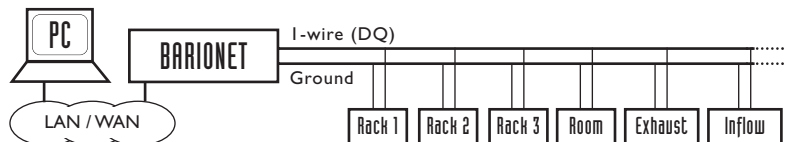
### Rubber encapsulated case:

a=13.1mm (0.5”), b=5mm (0.07”), c=8mm (0.3”)  
d=3.5mm (0.14”),  $\varnothing$  e=5.9mm (0.23”),  
mounting hole:  $\varnothing$  1.8 (0.07”)  
cable length: 260mm (10”),  $\varnothing$  f=2.5mm (0.1”)



The Barix TS temperature sensor can be used in a wide range of measuring, control and monitoring application fields:

- temp.control (heating, air conditioning, food and stock cooling)
- monitoring and alarming (server cabinets and rooms)
- temperature data logging (long time analysis)
- production quality control (industrial, medical, food processing)



Using the Dallas I-wire bus architecture installers can reduce costs when multiple measuring points in a single room have to be connected as a cable with two wires is sufficient.

For central temperature control of several rooms or buildings Barix offers the Barionet X8 extension unit which converts the I-wire bus to an RS-485 bus using the industry standard Modbus/RTU protocol. The RS-485 bus needs a 4-wire cable, carries power to the Barionet X8 extension units eliminating the need of a local power supply, and can be connected to a standard Modbus controller.

Using a Barix Barionet as the Modbus controller, the Barionet X8 can be controlled by a local Basic application (BCL) as well as remotely using TCP, UDP, Modbus/TCP and SNMP and allows reading of all sensors using a standard web browser.

Each Barionet X8 can read up to 16 Barix TS temperature sensors and up to 31 Barix Barionet extension units can be directly connected to a Modbus Master and can be increased to up to 250 devices using standard RS-485 repeaters. This gives a total amount of 496 sensors or a total of 4000 sensors when using repeaters.

For further information, distribution partners, detailed technical specifications and information about other versions and products please visit [www.barix.com](http://www.barix.com)