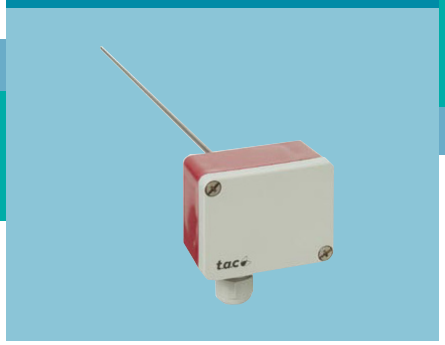


STP620

Fast Response Water Sensor

The STP620 fast response immersion sensor is designed for use in the most demanding control schemes. Many modern applications call for above average performance and this device is key to stability and efficiency. A typical application would be district heating where it is used with a controller such as the MN range. The DWT design is such that the sensing element is encased in the optimum amount of high quality Stainless Steel, permitting ultra fast detection of temperature change.

This sensor are available with the standard 'Satchwell' temperature sensor output characteristic.

FEATURES

- Very fast response to temperature change, typically 2s.
- Probe diameter specifically designed for direct insertion into small pipes.
- Stainless Steel probe.
- Head can be rotated to suit a 20mm diameter conduit entry point.
- Head design has easily removable lid.
- Simple wiring connections.
- Simple commissioning.
- IP 65 as standard.

SPECIFICATION

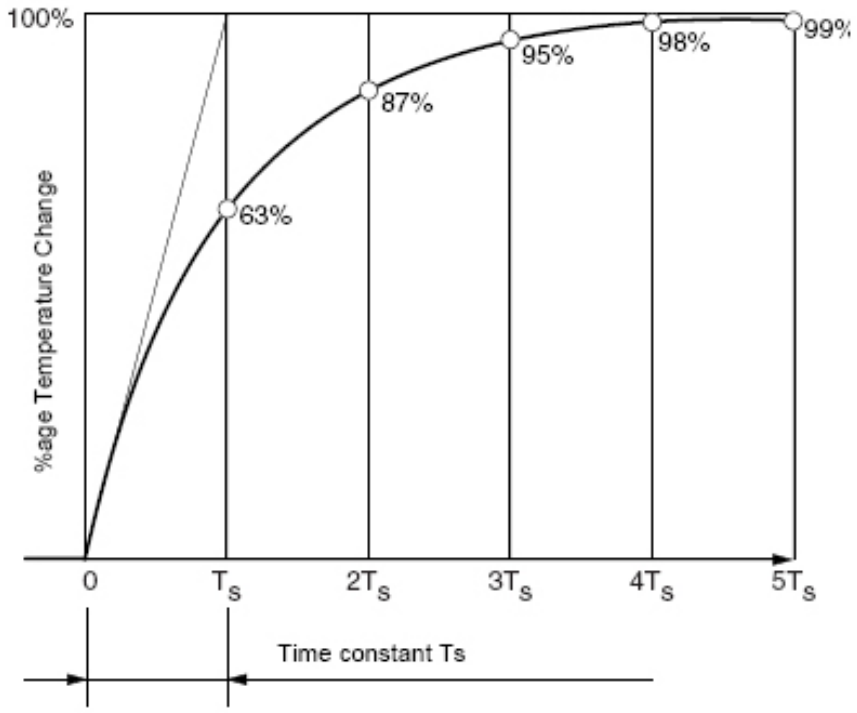
Mounting	Immersion
Max Stem Length	120mm
Resistance at 25°C	5502Ω
Temperature Sensing Range	-10 to 120°C
Compatible Controllers	BAS, CSC, CSMC, CXR, CXT, CZT, IAC, KMC, MMC, Satchwell MicroNet, Satchwell Σ (Sigma)
Protection Class	IP 65
Sensing Element	Negative Temperature Coefficient thermistor
Max Sensing Temperature	120°C
Min Sensing Temperature	-10°C
Time Constant	2s (see Sensor Principles)
Wiring	2-wire non-polarised low voltage dc (Safety Extra Low Voltage (SELV))
Max Ambient Temperature in Operation	120°C
Min Ambient Temperature in Operation	-40°C
Max Temperature in Storage/Transit	55°C
Min Temperature in Storage/Transit	-40°C
Max Humidity in Operation	95% RH
Min Humidity in Operation	0% RH
Max Humidity in Storage/Transit	95% RH
Min Humidity in Storage/Transit	0% RH
Head	Moulded base with lid (2 screw fixing).
Head Material	Nylon 6/Nylon 66 Copolymer
Stem Material	Stainless Steel.
Accessories	None
Characteristics	Non linear

Part Number	Order Code
STP620	5126090000

SENSOR PRINCIPLES

A sensor does not transmit the change of a measured variable instantaneously. The delay in transmission (*time constant or lag coefficient* Ts) can be shown in graphical form.

Change in Temperature



The time taken to transmit 63% of the total change in the measured variable is referred to as the time constant or lag coefficient Ts.

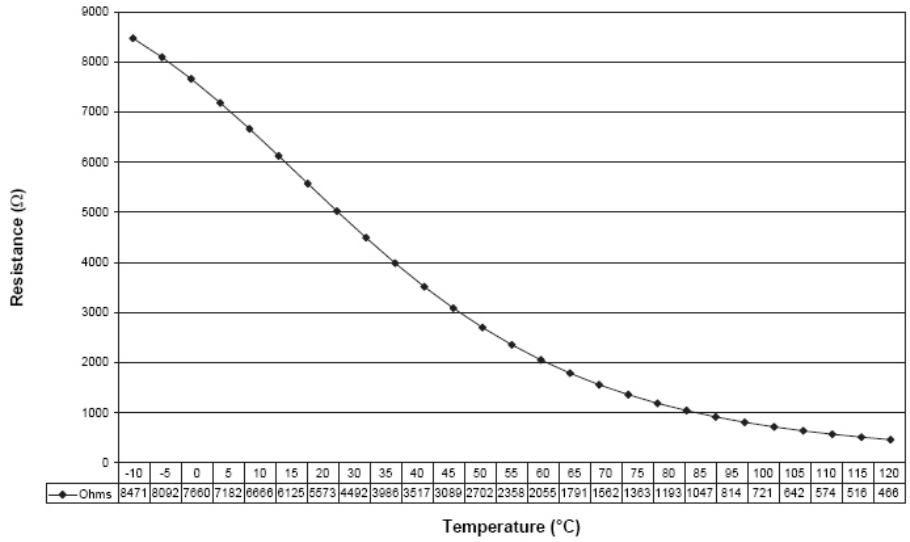
It takes a period equivalent to five times the lag coefficient to transmit approximately 99% of the change in measured variable.

The test is conducted for step temperature change from 20ºC to 80ºC.

CHARACTERISTICS

Sensor Temperature v Resistance

STP620: -10 to 120°C



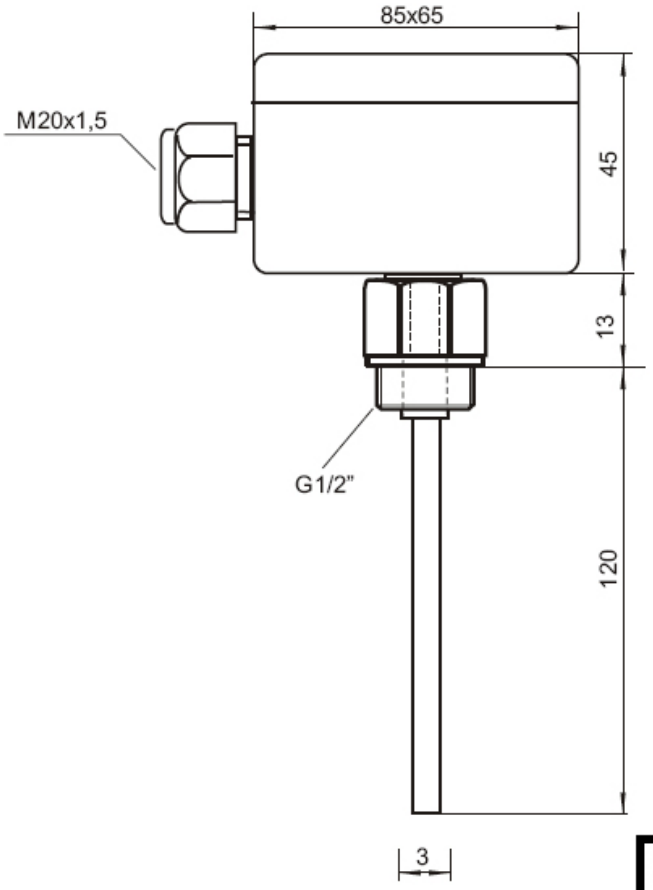
WIRING DIAGRAMS

Wiring Precautions

Refer to the datasheet relevant to the con troller to which sensor is to be connected (see table on page 2).

Maximum resistance, 15Ω per core.

Dimension Drawings



Cautions

- Do not apply power to the system until it has been checked by a qualified technician and the commissioning procedures have been completed.
- If any equipment covers have to be removed during the installation of this equipment, ensure that they are refitted after installation to comply with UL and CE safety requirements.
- These sensors must only be used in conjunction with the appropriate TAC Satchwell controllers shown on Page 2.
- Observe wiring precautions given on the data sheet for the controller that the sensor will be connected to.
- Do not exceed the maximum ambient temperature.
- Interference with parts under sealed covers invalidates guarantee.
- Design and performance of TAC Satchwell equipment is subject to improvement and therefore liable to alteration without notice.
- Information is given for guidance only and TAC Satchwell does not accept responsibility for the selection and installation of its products unless information has been given to the Company in writing relating to a specific application.
- A periodic system and tuning check of the control system is recommended. Please contact your local sales office for details.

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