

TRE TU, TS TU, TRS TU Series

Control and safety thermostats

Technical Data Sheet



Description

TRE TU, TS TU and TRS TU Series thermostats are automatic temperature switches for control, shut-off and combined applications, for use in all systems requiring ON-OFF control of water temperature.

TRE TU

Immersion control thermostat with 3 switching contacts. Shuts off the heat supply when the water temperature reaches the setpoint, which is adjustable 30÷90°C. Sensing bulb with 1/2" M conical gas sheath 90 mm long. Plastic case with external control knob. IP rating: IP40. Tolerance: ±3°C. Contact rating: 20(5)A 250V. 400V 10(1)A.



ENEC 03 compliant

INAIL approved. Compliant with LVD 2014/35/EU. Compliant with PED/0497/4092/23.

Type	Part No.	IP rating	Weight (g)
TRE TU	0405101TU	IP40	305

TS TU

Positive-safety immersion shut-off thermostat with manual resetting and fixed setpoint. Shuts off the heat supply when the water temperature reaches the setpoint. Setpoint 99°C (tolerance 0÷-6°C). Sensing bulb with 1/2" M conical gas sheath 90 mm long. Contact rating: 20(5)A 250V 10(1)A 400V. 6.3 mm Fast-On terminals with screw fitting.

INAIL approved. Compliant with LVD 2014/35/EU. Compliant with PED/0497/4091/23.

Type	Part No.	IP rating	Weight (g)
TS TU	0405201TU	IP40	290

TRS TU

Immersion control and shut-off dual thermostat with manual resetting. Same characteristics as TRE TU thermostat. Control temperature 30-90°C. Tolerance: ±3°C. Shut-off temperature 99°C. Sensing bulb with 1/2" M conical gas sheath 90 mm long.

Plastic case with external control knob and manual resetting, IP40. Contact rating: 20(5)A 250V. 400V 10(1)A.



ENEC 03 compliant

INAIL approved. Compliant with LVD 2014/35/EU. Compliant with PED/0497/4091/23.

Type	Part No.	IP rating	Weight (g)
TRS TU	0405301TU	IP40	490

THRT

Sheath for TS TU and TRE TU Series thermostats. 1/2" M conical gas connection.

Type	Part No.	Total length
THRT	LP441D	100 mm

THTRS

Sheath for TRS TU Series thermostats. 1/2" M conical gas connection.

Type	Part No.	Total length
THTRS	LP442	100 mm

Technical features	TRE TU	TS TU	TRS TU
Contact type	no. 3 switching	switching	no. 3+1 switching
Contact rating: resistive	20A 250V 10A 400V	20A 250V 10A 400V	20A 250V 10A 400V
inductive	5A 250V 1A 400V	5A 250V 1A 400V	5A 250V 1A 400V
Temperature control range	30÷90°C	-	30÷90°C
Fixed shut-off temperature	-	99°C	99°C
Tolerance	± 3°C	0÷-6°C	R ±3°C B 0÷-6°C
IP rating	IP40	IP40	IP40
Sensing element	copper	copper	copper
Sheath	copper	copper	copper
Sensing element sheath connection	1/2" M conical gas	1/2" M conical gas	1/2" M conical gas

Approvals

The products are supplied with an INAIL (Italian Institute for Insurance against Accidents at Work) approval certificate, certifying that the prototype has passed the necessary tests and the production series has therefore been approved. The document is valid for five years. Every unit of the production series covered by the certificate and manufactured within its five-year period of validity is approved indefinitely.

Application

These devices are used in boiler rooms for automatically shutting off the supply of heat to the boiler when the water temperature reaches a setpoint. They are "INAIL approved" components because they meet the technical requirements set down in the technical specification implementing Italian ministerial decree 1-12-75 (R regulations - 2009 Edition).

Operation

TRE TU, TS TU and TRS TU Series thermostats operate according to the liquid expansion principle: as the temperature detected by the sensing element in the sheath increases, the liquid in the element expands, thus changing the status of the switching contact. This contact can be used for starting or stopping devices such as pumps, burners, etc. **TRE TU Series** models are automatic, whereas on **TS TU and TRS TU Series** models, if the protection and shut-off device is triggered, it can only be reset manually, as required by INAIL regulations.

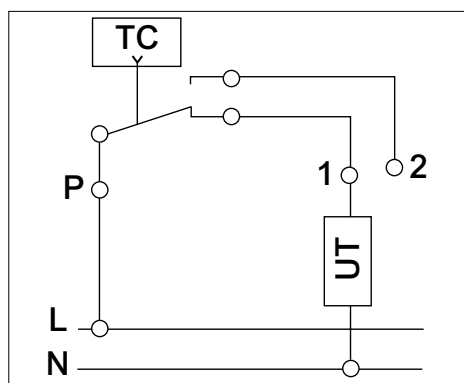
Installation

For efficient operation of the thermostats, install the copper sheath on the flow pipe within a maximum of 0.5 m from the boiler outlet and fully immersed in the heat carrier fluid. On adjustable models, set the desired maximum flow temperature, taking account of any thermal inertia of the boiler, which could trigger the device with manual reset (TS TU or TRS TU) before the device with automatic reset (TRE TU).

Electrical connections

TRE TU

When the setpoint temperature is reached, the thermostat's switching contact (TC) opens, thus shutting off the circuit supplying the controlled device (UT).



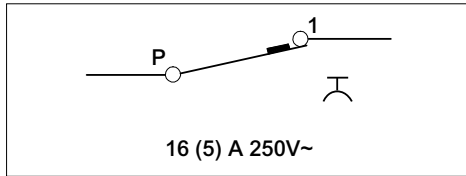
P - Line

1 - Normally Closed

2 - Normally Open

6.3 mm Fast-On terminals with screw fittings.

As the temperature increases, the switching contact opens, thus shutting off the circuit supplying the controlled device.



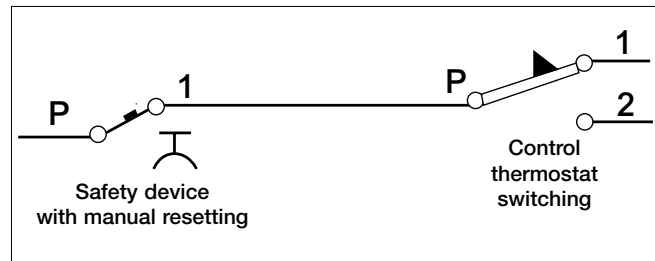
P - Phase

1 - Normally closed with manual resetting

TRS TU

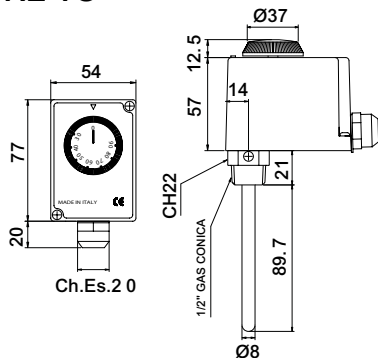
When the setpoint temperature is reached, the switching contact opens, thus shutting off the circuit supplying the controlled device. When the shut-off temperature is reached, the safety contact opens and must be manually reset.

6.3 mm Fast-On terminals with screw fittings.

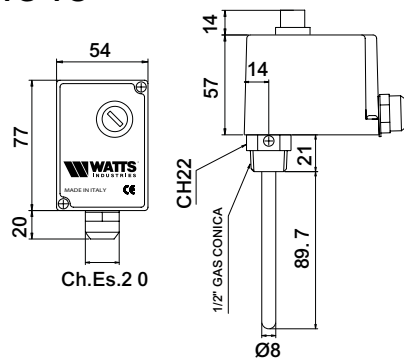


Overall dimensions (mm)

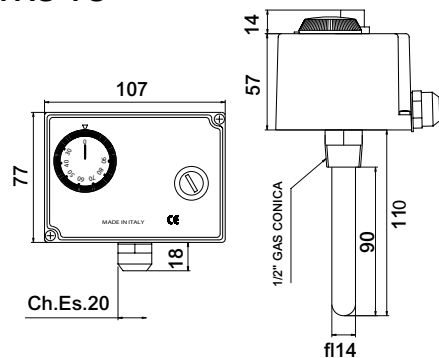
TRE TU



TS TU



TRS TU



Specification text

TRE TU Series

Immersion control thermostat with 3 switching contacts **TRE TU Series** – WATTS brand. Shuts off the heat supply when the water temperature reaches the setpoint, which is adjustable 30÷90°C. Sensing bulb with 1/2" M conical gas sheath 90 mm long. Plastic case with external control knob , IP40. Tolerance ±3°C. Contact rating: 20(5) A 250V. 400V 10(1)A. ENEC 03 compliant. INAIL approved. Compliant with LVD 2014/35/EU. Compliant with PED/0497/4092/23.

TS TU Series

Positive-safety immersion shut-off thermostat with manual resetting and fixed setpoint **TS TU Series** – WATTS brand. Shuts off the heat supply when the water temperature reaches the setpoint. Setpoint 99°C (tolerance 0÷-6°C). Sensing bulb with 1/2" M conical gas sheath 90 mm long. Contact rating: 20(5)A 250V. 6.3 mm Fast-On terminals with screw fitting. INAIL approved. Compliant with LVD 2006/95/EC. Compliant with PED/0497/4092/23.

TRS TU Series

Immersion control and shut-off dual thermostat with manual resetting **TRS TU Series** – WATTS brand. Control temperature 30÷90°C. Tolerance $\pm 3^\circ\text{C}$. Shut-off temperature 99°C. Sensing bulb with 1/2" M conical gas sheath 90 mm long. Plastic case with external control knob and manual resetting, IP40. Contact rating: 20(5)A 250V. 400V 10(1)A. ENEC 03 compliant. INAIL approved. Compliant with LVD 2006/95/EC. Compliant with PED/0497/4092/23.

The descriptions and photographs contained in this product specification sheet are supplied by way of information only and are not binding.

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