

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 sheath 100 mm long. Plastic case with external control knob. IP rating: IP40. Tolerance: ±3°C. Contact rating: 16(5)A 250V. 400V 10(1)A.

ENEC 03 compliant

INAIL approved. Compliant with LVD 2014/35/EU.

| 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 97°C (tolerance +3 ÷ -5°C). Sensing bulb with 1/2" M sheath 89.7 mm long. Contact rating: 16(5) A 250V. 6.3 mm Fast-On terminals with screw fitting.

INAIL approved. Compliant with LVD 2014/35/EU.

| 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 95°C. Sensing bulb with 1/2" M sheath 100 mm long. Plastic case with external control knob and manual resetting, IP40. Contact rating: 16(5)A 250V. 400V 10(1)A.

ENEC 03 compliant

INAIL approved. Compliant with LVD 2014/35/EU.

| 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 connection.

| Type | Part No. | Total length |
|------|----------|--------------|
| THRT | LP441D | 100 mm |

THTRS



Sheath for TRS TU Series thermostats. 1/2" M 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 | 16A 250V 10A 400V | 16A 250V 10A 400V | 16A 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 | - | 97°C | 95°C |
| Tolerance | ± 3K | +3÷-5K | ± 3K |
| IP rating | IP40 | IP40 | IP40 |
| Sensing element | copper | copper | copper |
| Sheath | copper | copper | copper |
| Sensing element sheath connection | 1/2" M | 1/2" M | 1/2" M |

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.

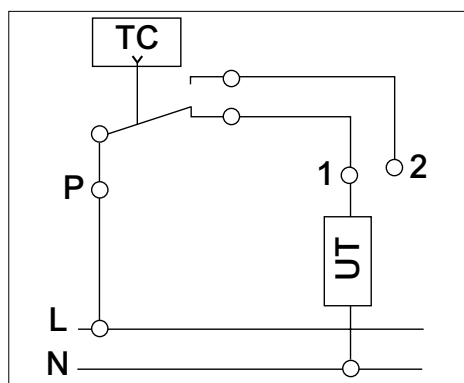
Installation

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

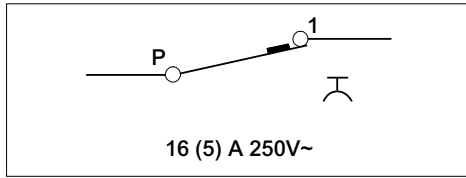
1 - Normally Closed

2 - Normally Open

6.3 mm Fast-On terminals with screw fittings.

TS TU

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



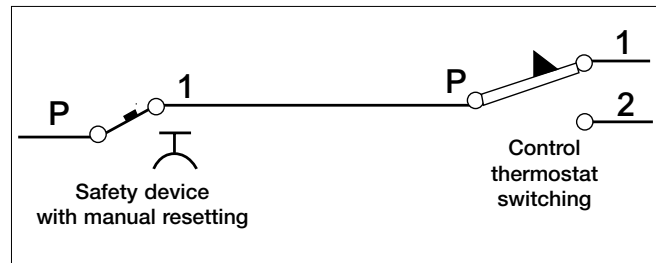
P - Phase

1 - Normally closed with manual resetting

TRS TU

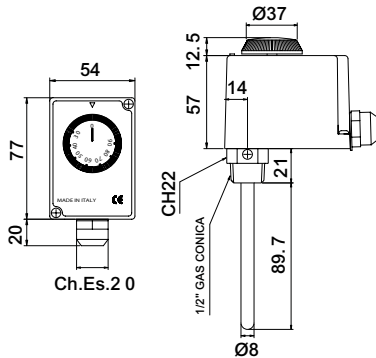
When the setpoint temperature is reached, the switching contact opens, thus shutting off the circuit supplying the controlled device. When the shut-off temperature is reached, the safety contact opens and must be manually reset.

6.3 mm Fast-On terminals with screw fittings.

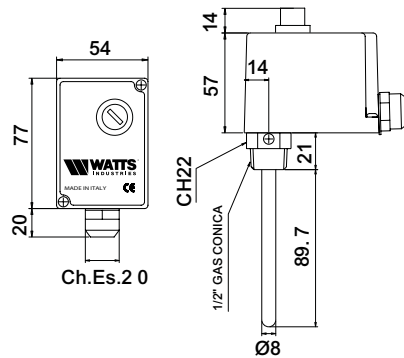


Overall dimensions (mm)

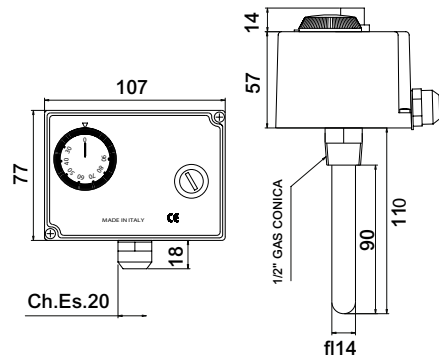
TRE TU



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 sheath 100 mm long. Plastic case with external control knob, IP40. Tolerance ±3°C. Contact rating: 16(5) A 250V. 400V 10(1)A. ENEC 03 compliant. INAIL approved. Compliant with LVD 2014/35/EU.

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 97°C (tolerance 3÷5°C). Sensing bulb with 1/2" M sheath 89.7 mm long. Contact rating: 16(5)A 250V. 6.3 mm Fast-On terminals with screw fitting. INAIL approved. Compliant with LVD 2006/95/EC.

TRS TU Series

Immersion control and shut-off dual thermostat with manual resetting **TRS TU Series** – WATTS brand. Control temperature 30÷90°C. Tolerance ±3°C. Shut-off temperature 95°C. Sensing bulb with 1/2" M sheath 100 mm long. Plastic case with external control knob and manual resetting, IP40. Contact rating: 16(5)A 250V. 400V 10(1)A. ENEC 03 compliant. INAIL approved. Compliant with LVD 2006/95/EC.

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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