

EAN code
TER-13/2: 8595188192255

Technical parameters

TER-13/2

Supply terminals:	A1-A2
Supply voltage:	AC 100 – 240 V (50-60 Hz), DC 145 – 335 V
Consumption (max.):	Wi-Fi "OFF" 1.2 W/2 VA "ZAP" 1.7 W/3.1 VA
Supply voltage tolerance:	-15 %; +10 %

Measuring circuit

Measuring terminals:	T1-T1, T2-T2
Temperature range:	-40 .. +120 °C (-40 .. +248 °F)
Hysteresis (sensitivity):	0 .. 100 °C (32 .. 212 °F)
Difference (for function 3, 4, 5, 6):	1 .. 100 °C (34 .. 212 °F)
Sensor failure indication:	displayed on LCD*

Output

Contact type:	2x changeover (AgSnO ₂)
Current rating:	AC 10 A/DC 5 A; PD, B300
Breaking capacity:	2500 VA/AC1, 150 W/DC1
Switching voltage:	AC 250 V/DC 30 V
Power dissipation (max.):	1.2 W
Mechanical life:	10.000.000 ops.
Electrical life (AC1):	100.000 ops.

Time circuit

Accuracy:	max. ±0.5 s day (23 °C/73.4 °F)**
Min. switching interval:	1 s
Program data storage period:	min. 10 year
Set time backup:	up to half a year with 60 outages (CR 2032 - 3V)

Program circuit

Number of memory locations:	200 - time programs, 30 - holidays
Program type:	daily, weekly, yearly + temperature
Displayed data:	LCD display with white backlight
Settings via website:	by Wi-Fi (2.4 GHz)

Other information

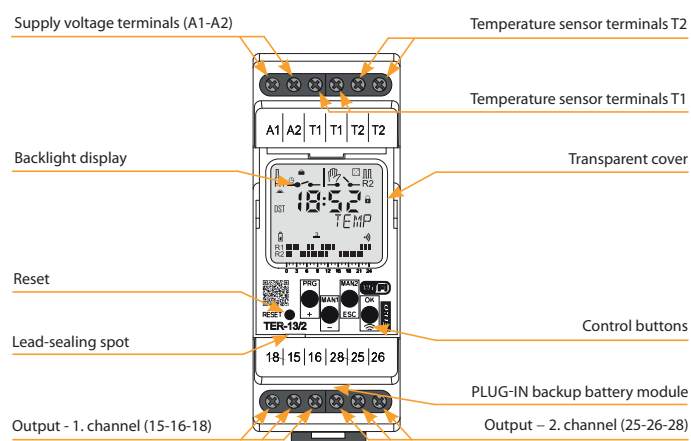
Operating temperature:	-20 .. +55 °C (-4 .. 131 °F)
Storage temperature:	-30 .. +70 °C (-22 .. 158 °F)
Dielectric strength:	
supply – output	AC 4 kV
output 1 – output 2	AC 4 kV
Operating position:	any
Mounting:	DIN rail EN 60715
Protection degree:	IP40 front panel/IP20 terminals
Overvoltage category:	III.
Pollution degree:	2
Wire cross-section; solid/ stranded with ferrule (max.):	1x 2.5 mm ² (14 AWG), 2x 1.5 mm ² (16 AWG)/ 1x 2.5 mm ² (14 AWG), 2x 1.0 mm ² (17 AWG)
Dimensions:	90 x 35 x 64 mm (3.5" x 1.4" x 2.5")
Weight:	126 g (4.4 oz)
Standards:	EN 61812-1, EN 18031-1, EN 300328

* SHORT - short circuit, NO SEN - sensor interruption

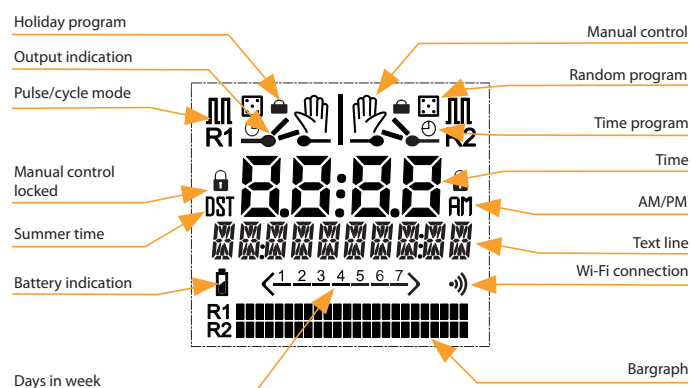
** If not synchronized through NTP server

- Switching control based on measured temperature with built-in time switch allowing daily, weekly, and yearly programs. This way, the thermostat function can be limited in real-time as needed.
- The thermostat is subordinate to the time switch programs.
- Simple setting after the first start-up.
- Complex control of home and water heating, incl. solar heating.
- Two thermostats in one, two temperature inputs, 2-channel design (each with an operating hours counter).
- Functions: two independent single-stage thermostats, depending functions of two thermostats, differential thermostat, two-stage thermostat, thermostat with "WINDOW" function, thermostat with dead zone.
- Wide operating temperature settings -40 .. +120 °C (-40 .. +248 °F), that can be changed in real-time.
- User replaceable battery to back up the set time during power outages.
- Built-in web server for setup and control via Wi-Fi connection.
- Time synchronization through NTP server (require internet connection of thermostat).
- Possibility of permanent connection to the local network.
- WRC: web remote control and setup from anywhere (require internet connection of thermostat).
- New well-arranged display with white backlight.
- Pulse/cycle output mode.
- Transition of summer/winter time – AUTO or OFF.
- PIN code protection against unauthorized changes.
- Wireless firmware update - **current version 1.22**

Description

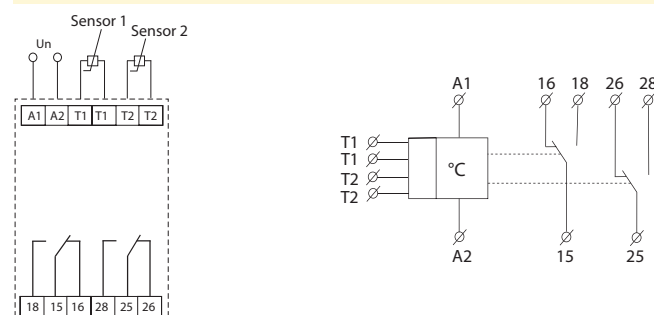


Description of displayed elements



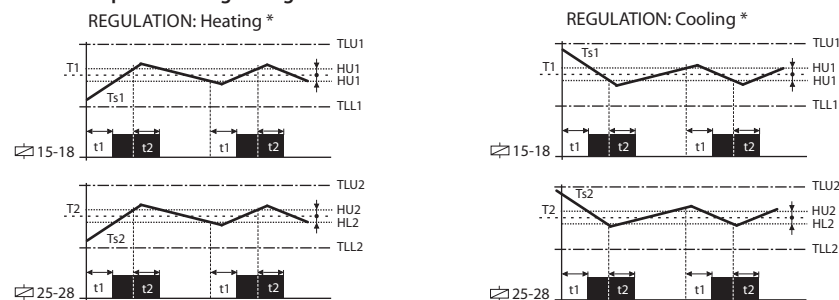
Connection

Symbol



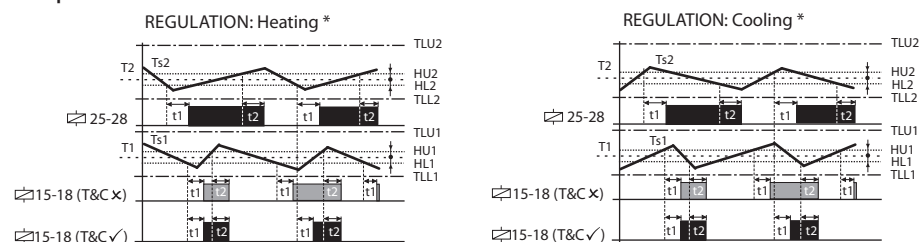
Functions

1. Two independent single-stage thermostats



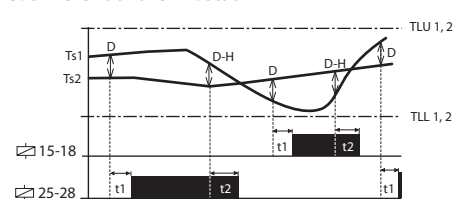
Two independent thermostat channels operate separately according to their own set temperature and hysteresis. Each output closes when the measured temperature crosses the selected switching level.

2. Dependent function of two thermostats



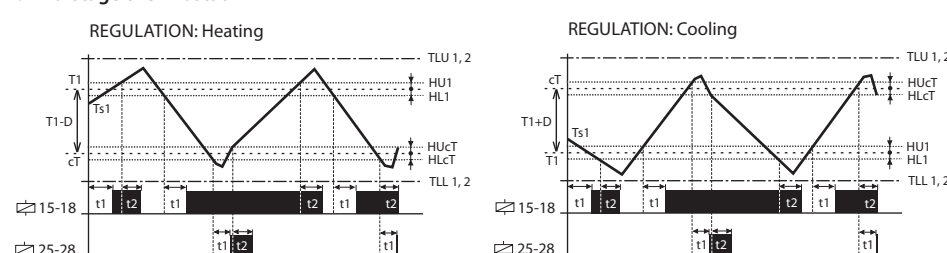
The output 15-18 closes only when the switching conditions of both thermostat inputs are fulfilled at the same time. This function works as an internal logical AND between both temperature channels and is suitable for applications where one output must depend on two measured temperatures. The second output is controlled directly by the second thermostat channel and switches according to its own set temperature and hysteresis.

3. Differential thermostat



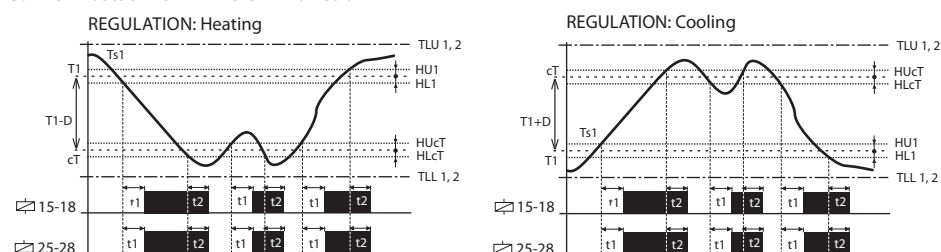
The thermostat compares temperatures measured by two sensors and closes the output when the set temperature difference is reached. The output is closed according to which sensor has the lower temperature (or higher with proper alternative connection). This function is typically used for heat transfer control, for example, between a collector and a storage tank.

4. Two-stage thermostat



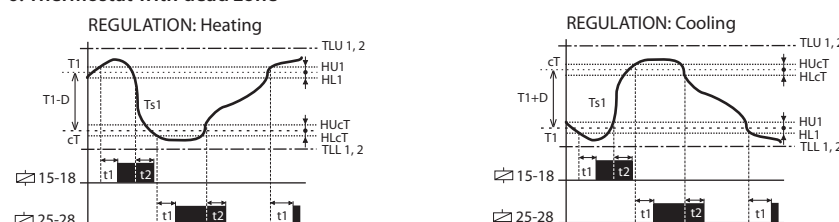
A two-stage thermostat uses two outputs with one main switching level and an additional difference setting. The first output controls the main stage, while the second output is closed when the temperature exceeds the set difference. This function is suitable for systems with main and auxiliary heating or cooling stages, e.g. boiler room or server room.

5. Thermostat with "WINDOW" function



The output is active only while the measured temperature remains within the defined temperature window. When the temperature moves outside the selected range, the output changes state. This function is suitable for applications where operation is allowed only between two temperature limits e.g. freezing of gutters.

6. Thermostat with dead zone



The dead zone function creates a neutral temperature range between two set temperatures. Within this range, outputs are open. This function is suitable for maintaining temperature within a defined comfort or safety band, e.g. greenhouse and switchboards.

Legend to the graphs:

Ts1(Ts2) - measured temperature by the sensor T1 (T2)
 D - set difference (only for differential thermostat)
 H - set hysteresis (only for differential thermostat)
 T1(T2) - set temperature level T1 (T2)
 HU1(HU2) - set upper hysteresis to T1(T2)
 HLL1(HLL2) - set lower hysteresis to T1(T2)
 cT - calculated temperature from T1-D(heating) or T1+D(cooling)
 HUCt - set upper hysteresis to cT
 HLCt - set lower hysteresis to cT
 TLU 1, 2 - upper temperature limit (optional)

TLL 1, 2 - lower temperature limit (optional)
 T&C ✓ - indicates the „internal“ state of the contact (regardless of the dependent function)
 T&C × - indicates the actual state of the contact (AND function, logical conjunction T1∧T2)
 t1 - delay when closing the output contact
 t2 - delay when opening the output contact
 ⚡15-18 output contact (belongs to temperature Ts1**)
 ⚡25-28 output contact (belongs to temperature Ts2**)

* regulation type can be selected separately for each channel

** for function 4, 5, 6 belongs to temperature Ts1 only

In the event of a short circuit or interruption of the temperature sensor, the corresponding output contact opens!