Operating manual - Archive document -

TR 122 D

General

Pt 100 thermostats of the TR 100 series are electronic two-setpoint controllers for monitoring temperatures. The according output relay switches when the preset temperature is exceeded and gives the user the oppotunity to signal the state of the relays and/or release further action.

- 1 sensor, 2 switching-points, 2 relay outputs
- connection of a Pt 100 sensor in 2- or 3-wire connection
- digital display, 3 digits, for temperature and settings
- wide range -99...+800 °C
- sensor and conductor monitoring on short circuit (< 50 Ω) and disconnection (> 430 Ω)
- monitoring of 3rd. conductor
- 3 buttons for doing the settings
- self-testing function
- storage of min- and max-values

programmable options (separately for each setpoint):

- hysteresis -99...+99 K
- MIN- or MAX-function
- relay releases or picks up when exceeding the setpoint
- electronic reclosing lock
- switching delay 0,1...20 s
- 2- wire connection, compensation of line-resistance adjustable

setting the limits

standard setting (ex works):

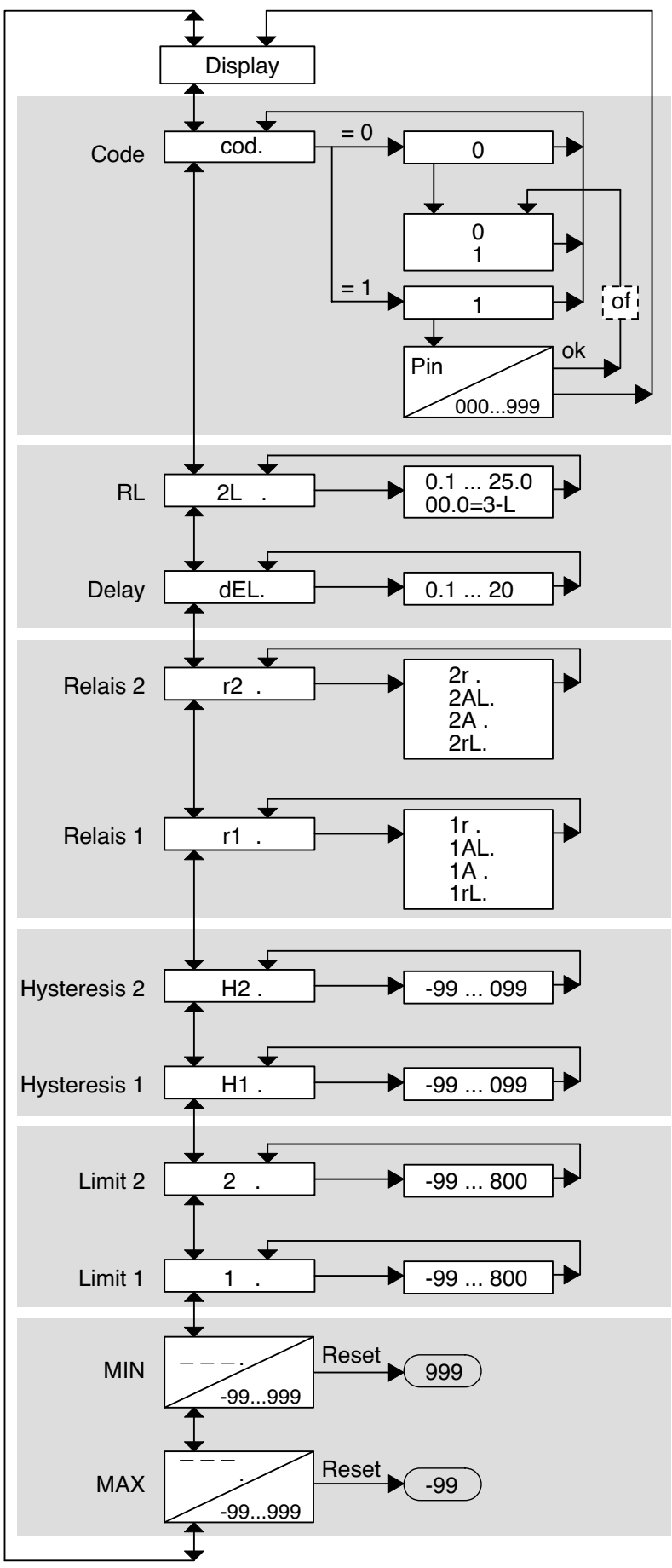
- limit 1 : 100 °C , hysteresis : -2 K
- limit 2 : 150 °C , hysteresis : -2 K
- switching delay: 0,5 s
- function of relays : picked up when o.k., no electronic reclosing lock
- K1 picked up when temperature < limit 1
- K2 picked up when temperature < limit 2
- 3- wire-connection
- code-lock: off

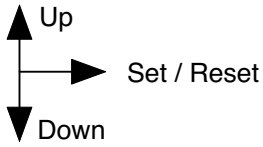
The settings can be changed as prescribed below:

After 30s in setting mode without pressing a button, the thermostat switches automatically back in the measuring mode, the set value is stored.
When the electronic reclosing lok is active, the relay will not switch back when the temperature is o.k. again. A reset is made by pressing of „Reset“ or switching off the supply voltage.

ZIEHL industrie-elektronik GmbH + Co KG, Daimlerstr.13, D-74523 Schwäbisch Hall, Tel.: +49 791 504-0, Fax: -56, e-mail: info@ziehl.de

Operation:





displays:

- " 1 _ _ "- limit 1
- " 2 _ _ "- limit 2
- " _ H _ "- limit exceeded (high)
- " _ L _ "- limit exceeded (low)
- " _ _ c " - electronic reclosing lock active. A reset is made by pressing of „Set“ or

switching off the supply voltage..
i.e. " 2 L c " -limit 2 exceeded (low) and switched off with reclosing lock

- " E r 0 " flashes - sensor or line short-circuit
- " E r 1 " flashes - sensor or line break
- " E r 2 " flashes- sensor or line break (x3)
- " – E E "- temperature below –100 °C
- " E E E "- temperature above +850 °C

Legend:

RL = line-resistance
r = closed current
A = operating current
L = reclosing lock

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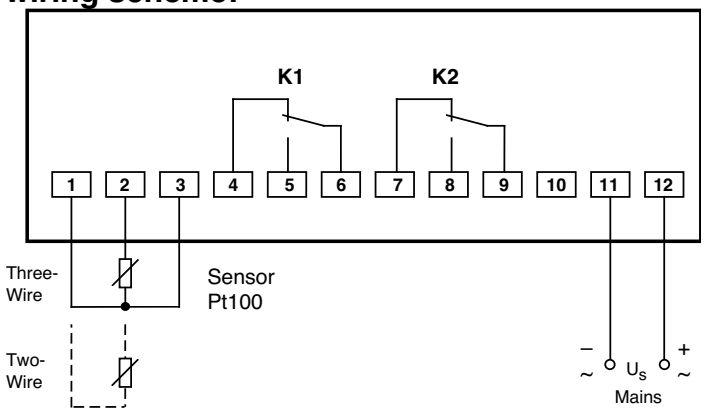
Installation - Putting into operation

The plug base can be mounted either with

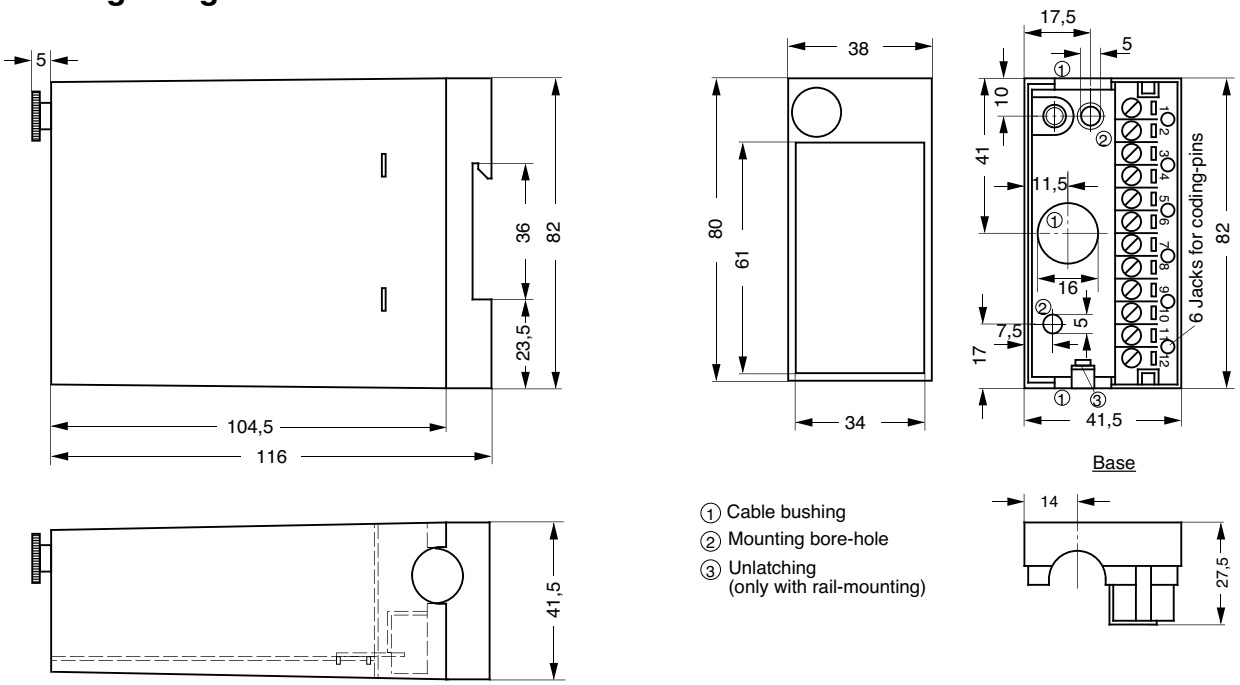
- 35 mm mounting rail according to DIN 50 002 or
- M4 screws
- Wiring directly to plug base
- Connect wires as per wiring scheme
- Plug in electronics and fix with knurled screw

wiring scheme:



ATTENTION
Before switching on thermostat make sure that the operational voltage Us of the lateral type plate and the mains voltage connected to the thermostat are the same.

housing design S12: Dimensions in mm



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Technical data

Power Supply	
Supply Voltage Us	AC 24 V, AC 115 V, AC 230 V DC 24 V … 60 V, DC 110 V … 220 V
admissible tolerance of Us	AC - 15 ... + 10 % , DC - 20 … +25 %
Frequency (AC)	50 Hz
admissible tolerance of frequency	AC 48 ... 62 Hz
Power Consumption	AC <5 VA , DC < 5 W
sensor-connection	Pt100 according to EN 60751
tolerance of measured value	<1 % ±2 Digit
sensor-current	≤ 3 mA
connection	standard = 3-wire RL max. 3 x 25 Ω option: 2-wire max. 25 Ω (adjustable)
measuring rate	<0,6 s
switching points	2 , programmable -99 ... +800 °C
operating principle	standard: closed-current (relay picked up when o.k.) operating-current programmable
hysteresis	programmable -99 ... +99 K
switching delay	programmable 0,1 ... 20 s
relay outputs	2 x 1 co-contact
switching voltage	max. AC 400 V
switching current	max. AC 6 A
switching power	max. 2000 VA (ohmic load) max. 48 W at DC 24V
rated operational current	I_e 2A AC15 400 V / 2A DC13 24 V 4A AC15 230 V
testing-conditions	EN 60947 , EN 50178
isolation	VDE 0110 AC 400V/I.Gr.C
transformer	EN 61558
on-period	100 %
admissible ambient temperature	-20 ... +55 °C
housing	design S-12
line connection	12 - pole, 2 x 1,5 mm^2 or 1 x 2,5 mm^2 each
protection housing/ terminals	IP 30/ IP 20
inclination	any
mounting	snapable mounting onto DIN-rail 35 mm according to DIN 50022 or screwable assembly M4
weight app.	0,3 kg

Subject to technical modifications

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