S S REGELTECHNIK THERMASREG TR22 Temperature Controllers one Step Instruction Manual

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S S REGELTECHNIK THERMASREG TR22 Temperature Controllers one Step

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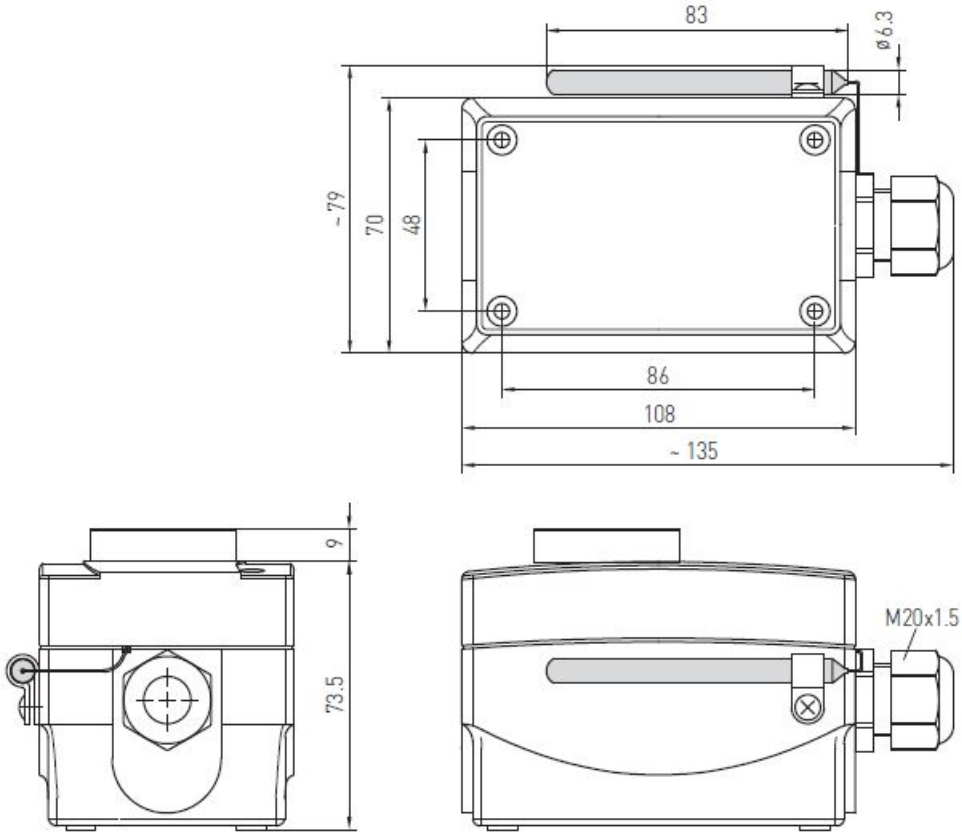
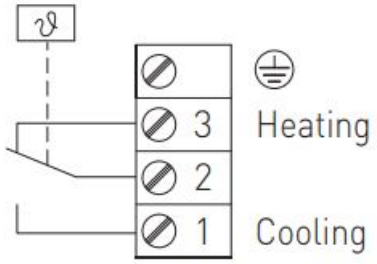


The mechanical temperature controller / wet room temperature controller THERMASREG® TR 22 with switching output (one-step) and copper capillary, working without external voltage. It is used for monitoring and controlling temperatures in heat generation plants, in heating, ventilation, and air conditioning systems, for ventilation, cooling, and climate control in halls, cold storage rooms, greenhouses, nurseries, stables, breeding rooms, as industrial room thermostat or surface-mounted thermostat in industrial applications as well as in wet room and outdoor areas.

TECHNICAL DATA

Switching capacity: (Contact load)	24...250 V AC +10 %, 16 A, cos φ = 1.0 24...250 V AC +10 %, 1.5 A, cos φ = 0.6 at 24 V AC min. 150 mA
Contact:	dust-proof switch block unit as potential-free single-pole changeover contact
Housing:	plastic, UV-resistant, material polyamide, 30 % glass-globe reinforced, colour traffic white (similar to RAL 9016)
Housing dimensions:	108 x 70 x 73.5 mm (Thor 2)
Cable gland:	M 20 x 1.5; including strain relief
Housing temperature:	–35...+65 °C
Design principle:	torsion meter with liquid filling
Capillary:	copper
Tolerance:	T_{min} ± 3 K; T_{max} ± 3 K
Routing:	admissible vibration load ≤ ½g
Electrical connection:	0.14 - 2.5 mm^2 via terminal screws
Protection class:	I (according to EN 60 730)
Protection type:	**IP 65** (according to EN 60 529)
Standards:	CE conformity, EMC directive 2014 / 30 / EU, low-voltage directive 2014 / 35 / EU
FUNCTION	**Heating**: The preset setpoint (scale value) is equivalent to the switch-off value of the heating. The switch-on value is lower by the amount of operating difference. Contact 2 - 3 breaks when temperature rises to the preset value. **Cooling:** The preset setpoint (scale value) is equivalent to the switch-on value of the cooling. The switch-off value is lower by the amount of operating difference. Contact 1 - 2 closes when temperature rises to the preset value.

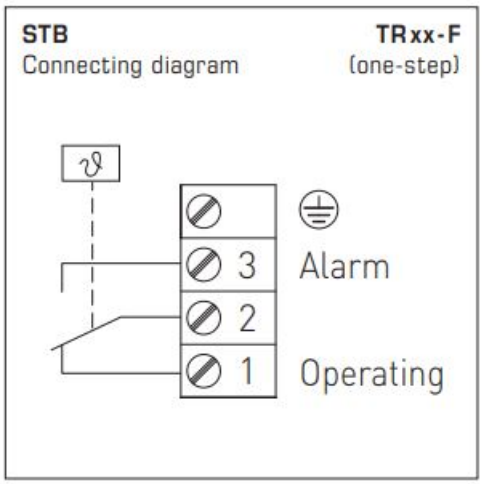
Connecting diagram **TR 22**

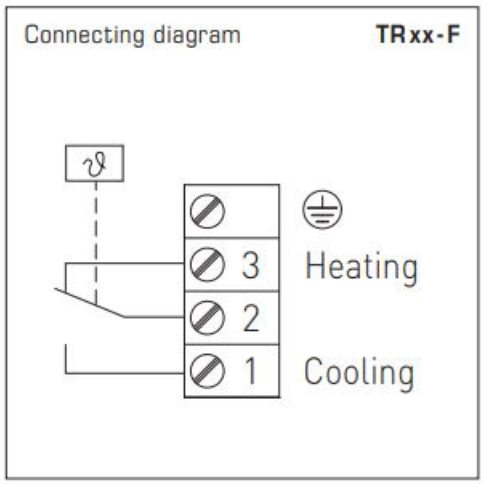


THERMASREG® TR 22	Temperature controllers, one-step			
Type / WG01	**Temperature Range**	**Thermal Operating Difference (fixed) approx.**	**Max. Capillary Temperature**	**Item No.**
TR 22				**TR** (External setting)
TR-22	–35...+35 °C	3 K (±1 K)	+60 °C	1102-1050-1100-100
TR 22 U				**TW** (Internal setting)
TR-22 U	–35...+35 °C	3 K (±1 K)	+60 °C	1102-1050-2100-100

Mechanical temperature controller THERMASREG® TR xx – F with remote sensor and switching output (one-step), working as capillary thermostat / capillary controller without external voltage. This capillary controller is used for monitoring and to control temperatures of non-aggressive liquid or gaseous media in heating, ventilation and air conditioning technology as well as in mechanical and apparatus engineering, for installation in immersion sleeves or air conditioning ducts.

TECHNICAL DATA	
Switching capacity: (Contact load)	24...250 V AC +10 %, 16 A, cos φ = 1.0 24...250 V AC +10 %, 1.5 A, cos φ = 0.6 at 24 V AC min. 150 mA
Contact:	dust-proof switch block unit as potential-free single-pole changeover contact
Housing:	plastic, UV-resistant, material polyamide, 30 % glass-globe reinforced, colour traffic white (similar to RAL 9016)
Housing dimensions:	108 x 70 x 73.5 mm (Thor 2)
Cable gland:	M 20 x 1.5; including strain relief
Housing temperature:	–10...+65 °C
Design principle:	torsion meter with liquid filling
Sensor:	copper tube, length of capillary = 1 m with PVC protective hose, Ø 6.8 mm
Tolerance:	T_{min} ± 3 K; T_{max} ± 3 K
Inserted length:	immersion sleeves EL = 150 mm (accessories see table)
Routing:	bending radius > 35 mm admissible vibration load ≤ ½g admissible tensile load < 100 N
Electrical connection:	0.14 - 2.5 mm² via terminal screws
Protection class:	I (according to EN 60730)
Protection type:	**IP 65** (according to EN 60529)
Standards:	CE conformity, EMC directive 2014 / 30 / EU, low-voltage directive 2014 / 35 / EU
FUNCTION	**Heating:** wire contacts 2-3 **Cooling:** wire contacts 2-1





THERMASREG® TRxx-F Temperature controllers, one-step

Type/WG01	Temperature Range	Thermal Operating Difference (fixed) approx.	Max.Capillary Temperature	Item No.
TRxx-F				**TR** (External setting)
TR-1-F	–35... +35 °C	3K (±1K)	+60 °C	1102-1056-1110-100
TR-060-F	0... +60 °C	3K (±1K)	+75 °C	1102-1050-1110-300
TR-090-F	0... +90 °C	3K (±1K)	+120 °C	1102-1050-1110-400
TR-0120-F	0...+120 °C	5K (±1K)	+135 °C	1102-1050-1110-500
TR-50140-F	+50...+140 °C	5K (±1K)	+150 °C	1102-1050-1110-600
Extra charge:	**U** = Internal setting (**TW**), e.g. TR-090-F-U			
ACCESSORIES				
THR-MS-08/150	Brass immersion sleeve, EL = 150 mm, Ø 8 x 0.5 mm			7100-0011-3404-000
THR-VA-09/150	Stainless steel immersion sleeve **V2A** (1.4301), EL = 150 mm, Ø 9 x 1.0 mm			7100-0012-3032-000

Our “General Terms and Conditions for Business“ together with the “General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry“ (ZVEI conditions) including supplementary clause “Extended Retention of Title“ apply as the exclusive terms and conditions. In addition, the following points are to be observed:

- These instructions must be read before installation and putting in operation and all notes provided therein are to be regarded!
- Ensure not to kink or squash the sensor element.
- Devices must only be connected under dead-voltage conditions. To avoid damages and errors the device (e.g. by voltage induction) shielded cables are to be used, laying parallel with current-carrying lines is to be avoided, and EMC directives are to be observed.
- This device shall only be used for its intended purpose. Respective safety regulations issued by the VDE, the states, their control authorities, the
- TÜV and the local energy supply company must be observed. The purchaser has to adhere to the building and safety regulations and has to prevent perils of any kind.
- No warranties or liabilities will be assumed for defects and damages arising from improper use of this device.
- Consequential damages caused by a fault in this device are excluded from warranty or liability.
- These devices must be installed and commissioned by authorized specialists.
- The technical data and connecting conditions of the mounting and operating instructions delivered together with the device are exclusively valid.
- Deviations from the catalog representation are not explicitly mentioned and are possible in terms of technical progress and continuous improvement of our products.
- In case of any modifications made by the user, all warranty claims are forfeited.
- This device must not be installed close to heat sources (e.g. radiators) or be exposed to their heat flow. Direct sun irradiation or heat irradiation by similar sources (powerful lamps, halogen spotlights) must absolutely be

avoided.

- Operating this device close to other devices that do not comply with EMC directives may influence functionality.
- This device must not be used for monitoring applications, which serve the purpose of protecting persons against hazards or injury, or as an EMERGENCY STOP switch for systems or machinery, or for any other similar safety-relevant purposes.
- Dimensions of housing or housing accessories may show slight tolerances on the specifications provided in these instructions.
- Modifications of these records are not permitted.
- In case of a complaint, only complete devices returned in original packing will be accepted. If the sensor element's admissible load limits are exceeded, ensure to use an adequate support structure.

Notes on commissioning:
This device was calibrated, adjusted, and tested under standardized conditions. When operating under deviating conditions, we recommend performing an initial manual adjustment on-site during commissioning and subsequently at regular intervals. Commissioning is mandatory and may only be performed by qualified personnel! These instructions must be read before installation and commissioning and all notes provided therein are to be regarded!

Subject to errors and technical changes. All statements and data herein represent our best knowledge at date of publication. They are only meant to inform about our products and their application potential, but do not imply any warranty as to certain product characteristics. Since the devices are used under a wide range of different conditions and loads beyond our control, their particular suitability must be verified by each customer and/or end user themselves. Existing property rights must be observed. We warrant the faultless quality of our products as stated in our General Terms and Conditions.

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Documents / Resources

	S S REGELTECHNIK THERMASREG TR22 Temperature Controllers one Step [pdf] Instruction Manual THERMASREG TR22 Temperature Controllers one Step, THERMASREG TR22, Temperature Controllers one Step, Controllers one Step

References

- S+S Regeltechnik | Ihr sensorik Partner