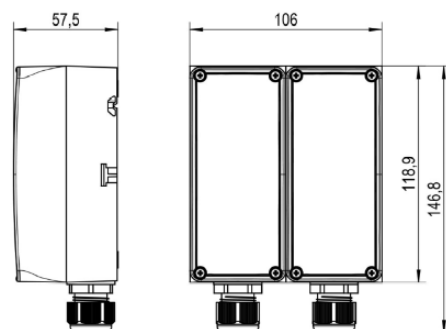


## 9. Technical data

Max. switching current:	16 (2.5) A at 230 VAC + 10 %
NC contact:	0.25 A at 230 VDC + 10 %
NO contact TW:	6.3 (2.5) A at 230 VAC + 10 % 0.25 A at 230 VDC + 10 %
NO contact STB:	2.0 (0.4) A at 230 VAC + 10 % 0.25 A at 230 VDC + 10 %
Min. switching current:	at 24 V (AC/DC) min. 100 mA
Switching voltage:	24 - 230 VAC 50/60 Hz 24 - 230 VDC
Rated impulse voltage:	2.5 kV
Contacts:	Floating changeover switch
Electrical connection:	0.75 - 2.5 mm <sup>2</sup> (Push In) Cable gland M 20 x 1.5 mm
Protection class:	I
Protection type:	IP54 Housing
Tripping temperature STB:	75°C (-5 K)
Tripping temperature TW:	0...120°C (preset to 50°C)
max. head temperature:	80°C
max. sensor temperature:	Full scale + 15%
Permissible bearing temperature:	-30° to +80°C
Manual reset after cooling down:	by 10 - 15 K
Time constant:	approx. 120 sec. in air
Probe and capillary material:	Cu
Protective coil:	Length 200 mm
Protective coil material:	Nickel-plated steel
Complete type designation:	STBW 225 / RTKSA-011.210

At ambient temperatures below 238 K - 233 K, a switch-off may occur.



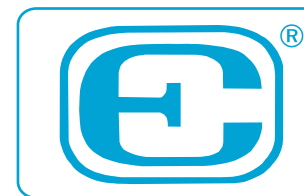
## 10. Maintenance and servicing

Before commissioning and at sufficient intervals, the measuring system must be checked for proper functioning. The intended effect must also be checked.

If external cleaning is required, ensure that the cleaning agent used does not attack the surface of the plastic housing or the copper of the capillary system. No liquid or powdery agent may enter the housing.

## 11. Warranty

The specified technical data were determined in a suitable test environment and only represent the agreed quality on this basis. The customer is responsible for checking the suitability for the purpose intended by the client / customer or the use under the specific conditions of use; we do not assume any warranty for this. Subject to alterations.



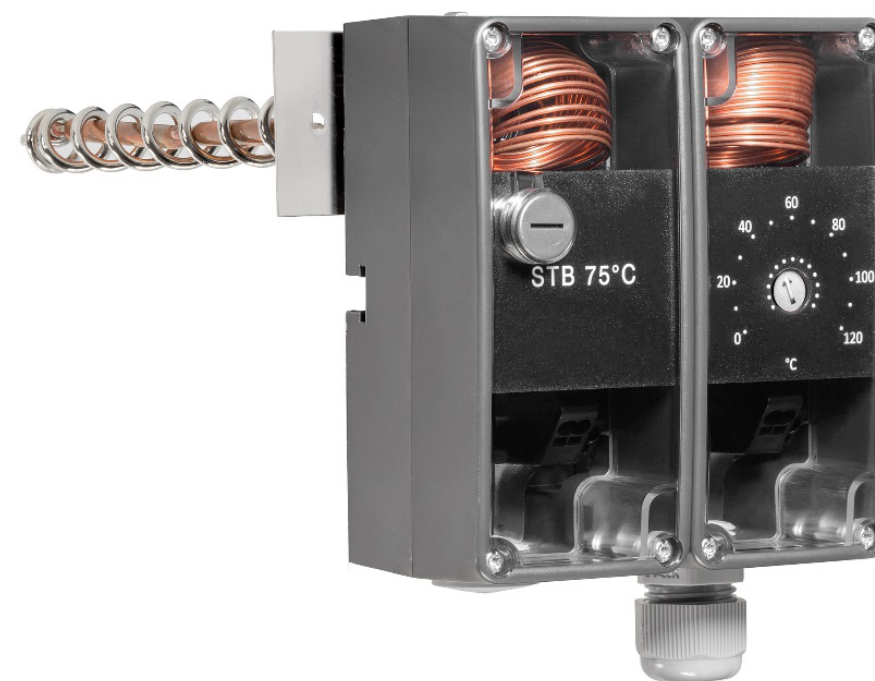
**ENGELCONTROL®**

Operating instructions STBW 225

**ENGELCONTROL®**

**Safety temperature limiter  
with temperature monitor**

**Type STBW 225 / RTKSA-011.210  
for electric air heaters in air conditioning and ventilation systems**



## Notes on the instructions

Please read these operating instructions carefully and observe the relevant country-specific standards, safety regulations and accident prevention regulations.

The installation instructions must be kept available for the entire service life of the appliance.

Passing on and duplication of this document, utilisation and communication of its contents are prohibited unless expressly permitted.

All rights reserved in the event of patent, utility model or design registration.

The following warnings are used in this manual:



### Immediate danger due to electrical voltage

Failure to observe this warning may result in serious injury, death or damage to property.



### Possible danger

Failure to observe may result in serious injury or damage to property.

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GG 6.2024/250

## 1. Safety instructions



Assembly, electrical installation, commissioning and maintenance of the temperature limiter may only be carried out by a qualified electrician. The instructions in this manual must be understood, observed and followed. This person is responsible for ensuring that the device is connected correctly in accordance with the electrical connection diagrams. The appliance is maintenance-free.

Kinking and cutting the sensor lines will lead to permanent failure of the appliance. Filling fluid may escape if the measuring system breaks. This is non-hazardous, non-irritating, non-hazardous to health and non-toxic.

The housing may be opened for electrical connection and parameterisation. There are circuits inside the housing that are dangerous to touch. The device may only be operated by personnel who have been authorised and instructed by the system operator. The applicable standards and directives must be complied with.

## 2. Intended use

The devices are used for the following purposes:

- For supply air monitoring and as limiters for electric air heaters and heating registers
- Please also refer to our information S 20 and A 1999.
- When used in air ducts, a protective coil or thermowell must be used.
- The protective coil has a flange for direct mounting in the air duct. The regulator itself can be retrofitted. The regulator head is fastened to the protective coil using the screws and plates in the fastening set (see Fig. 1).

The following points are also part of the intended use:

- The instructions in this manual must be observed and followed.
- The technical limit values (see chapter 6 'Technical data') must be observed.
- The sensor is to be used exclusively for measuring air
- The devices are not suitable for use in potentially explosive or pressurised areas.

The manufacturer accepts no liability for any damage resulting from improper use, unauthorised modifications, failure to observe these instructions or use by unqualified personnel. The manufacturer's warranty is also void.

## 3. Standards and directives

The appliance complies with the following requirements:

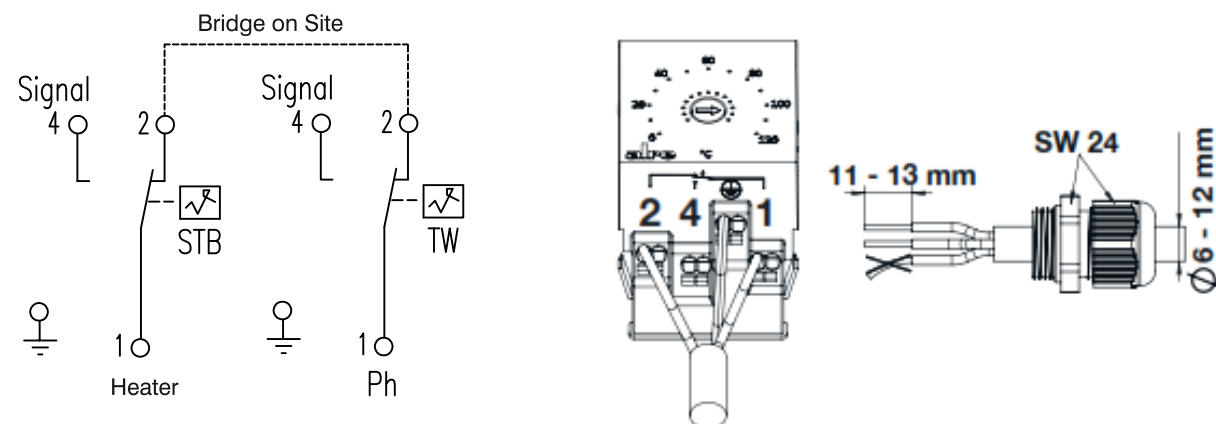
- DIN EN 14597 Temperature control devices and temperature limiters
- DIN EN 60730 Automatic electrical regulating and control devices

## 4. Function

When the set temperature setpoint is reached, the capillary sensor switches the microswitch and heating contact 1 - 2 opens. Contact 1 - 4 closes (utilisation signal fault). The heating circuit is switched off. In the event of a sensor break in the STB / TW application, contact 1 - 2 is permanently opened and contact 1 - 4 is permanently closed. Unlocking is no longer possible with the STB (intrinsic safety).

**TW** (temperature monitor) = internal setting

**STB** (safety temperature limiter) = internal setting fixed, internal reset



## 5. Assembly and installation

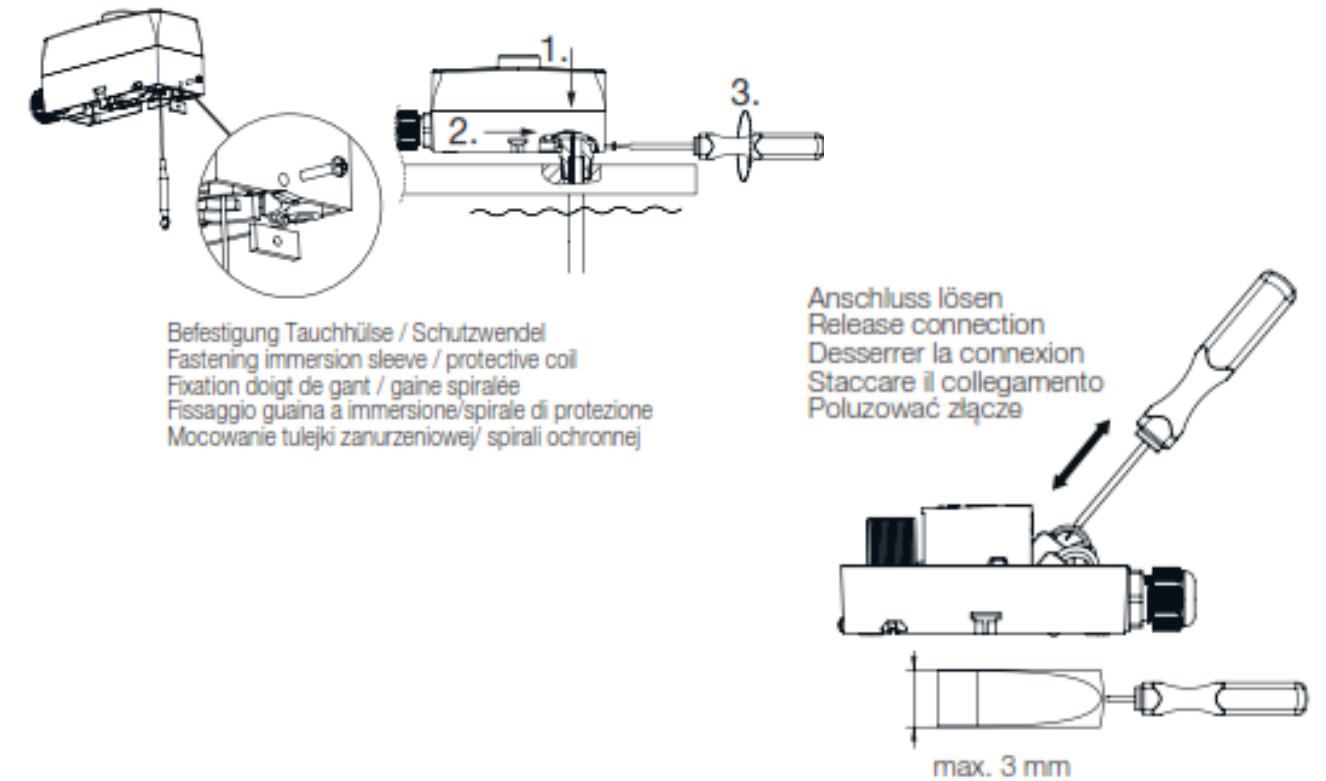


Before installing the device, make sure that it is free of damage or moisture damage that may have been caused by improper transport or storage. The housing protection class is IP54. It must be ensured that the housing remains free of deposits and moisture. The terminals and connection cables must be checked regularly to ensure that they are secure and free from vibrations.

The ambient temperature limits specified in the technical data must be observed.

### 5.1 Installation

The thermostats can be installed in the installation position according to DIN 16257 NL O....NL 90. The capillary tube must not be shortened or kinked.



## 6. Electrical connection



The electrical connection may only be made in a de-energised state. The connection of the electrical conductors according to the wiring diagram. The stripping length of 11-13 mm must be observed. When using flexible conductors, wire end ferrules must be used.

## 7. Cleaning



Cleaning the open device is prohibited. Remove dust and dirt with a dry, solvent-free and soft cloth.

## 8. Disassembly / disposal



Before dismantling, switch off the power supply and secure against being switched on again.