FÜR HANDWERK, DAS ÜBERZEUGT.

# BLANKE ELOTOP+ THERMOSTAT TP520

**Technical Data Sheet**

Author: AWT 09/04/2014

## Contents


| | |
|---|---|
| Important information for safe use | 1 |
| Controls and Settings | 2 |
| Display Structure | 2 |
| Menu Structure | 2 |
| Time and Date Settings | 3 |
| Function Description | 4 |
| Factory Settings | 4 |
| Temperature Settings | 4 |
| Program Time Settings | 5 |
| Screensaver | 6 |
| Select Operating Mode | 7 |
| Alarm Indicators | 7 |
| Assembly | 8 |
| Technical Data | 8 |
| Circuit Diagram | 8 |
| Guarantee | 8 |


## Thermostat

The manufacturer's warranty does not extend to product malfunction which arises as a result of mechanical damage, faulty installation, improper handling and for the use of any purpose or conditions that are not listed in these Assembly and Operating Instructions. The circuit diagram and assembly instructions for this appliance, see page 8. Please remember that instructions do not replace the skills of a professional installer.

We recommend that you leave the installation of the thermostat and the heating system to a relevant trades professional. Electrical connections and the mains power connection of the device should only be carried out by a qualified electrician, and recorded. Disconnect the units power connection from the mains power before installing, checking or replacing the thermostat.

## Introduction

Thank you for choosing the new programmable TP 520© Thermostat. The TP 520© allows you to operate your comfort heating in an energy efficient and economical way. In the development of the TP 520© our inspirations and experiences with electric underfloor heating systems have been incorporated. The newly developed thermostat is characterised by high reliability, ease of setting and operation.

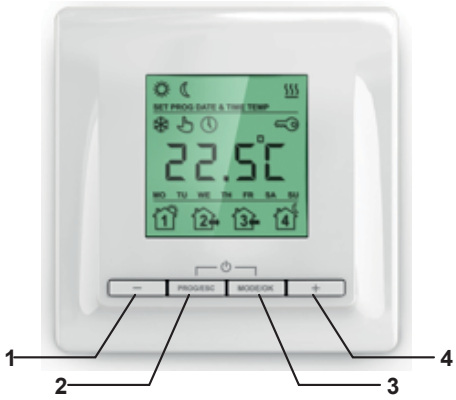
## Application

The TP 520© thermostat can be used to control the Blanke•ELOTOP+. The TP 520© The ensures that the desired temperature is available at the desired time (self-learning effect, i.e. Heating time adapts to the ambient environmental conditions). For example, you can individually adjust the temperatures for individual time periods - from WAKE UP to LEAVING (the house) as well as from COMING (home) till GOING TO SLEEP.

BLANKE

FÜR HANDWERK, DAS ÜBERZEUGT.

## CONTROLS AND SETTINGS



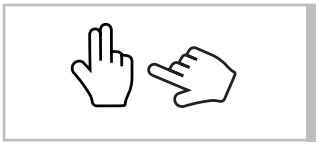

### Switch on controller

Press buttons 2 and 3 simultaneously (for approx. 30 sec.).

### Switch off controller

Unlock by pressing buttons 1 and 4, then turn off by pressing buttons 2 and 3.

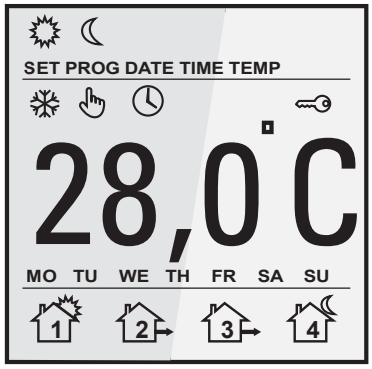
| | | |
|---|---|---|
| 1 | – | decreases the corresponding value |
| 2 | PROG / ESC | opens and closes the program mode |
| 3 | MODE /OK | selects the display and confirms the settings |
| 4 | + | increases the corresponding value |



The hand symbols are used to indicate which buttons must be pressed, either separately or together or how long buttons should be pressed (look at the screen display for the specified time).

For each operation the required button needed is displayed in black.

## DISPLAY STRUCTURE




### Functions / Operating mode

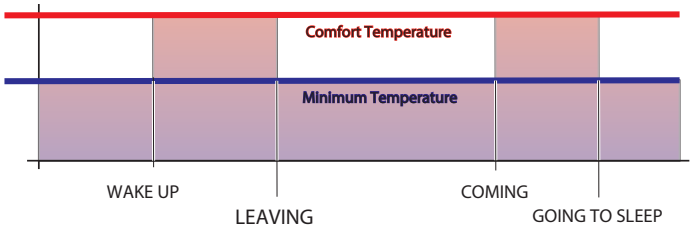
| | |
|---|---|
| ❄ | Frost protection |
| ☝ | Temperature hold |
| 🕒 | Program mode |
| ≋ | Heating on |

### Temperature profiles

| | |
|---|---|
| ☀ | Comfort, temperature adjustable |
| ☾ | Economy, temperature adjustable |

### Program

| | |
|---|---|
| 1 | "WAKE UP" |
| 2 | "LEAVING" |
| 3 | "COMING" |
| 4 | "GOING TO SLEEP" |



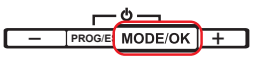

In Comfort mode, your desired comfort temperature is maintained. In economy mode, the temperature is lowered and maintained to the level you set in order to save energy (with the exception of the self-learning effect).

### Miscellaneous

| | |
|---|---|
| 🔑 | The thermostat is locked |
| MO | Monday |
| TU | Tuesday |
| WE | Wednesday |
| TH | Thursday |
| FR | Friday |
| SA | Saturday |
| SU | Sunday |

## MENU STRUCTURE

| | |
|---|---|
| 1x | Close without saving |
| 4 sec | Set program times |
| 8 sec | Set time and day |




| | |
|---|---|
| 1x | Confirm input - save |
| 2 sec | Select screensaver |
| 4 sec | Select program mode |
| 8 sec | Temperature settings |

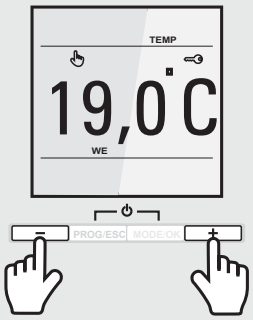
BLANKE

FÜR HANDWERK, DAS ÜBERZEUGT.

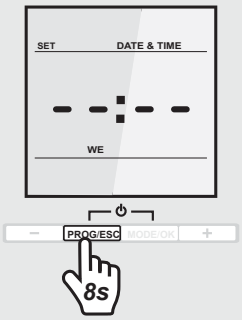
# TIME AND DATE SETTINGS

## PROGRAM START

1 Unlock thermostat



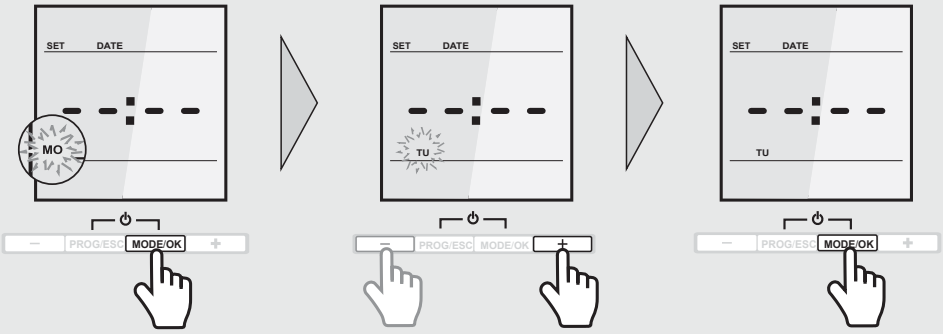

2 Press and hold the PROG/ESC button for 8 sec.




## WEEKDAY SETTING

3 Press the MODE/OK button. The days symbol begins to flash.

4 Select the current day by pressing the “+” or “–” button. Confirm your selection by pressing the MODE/OK button.




## TIME SETTINGS

5 Set the current hour by pressing the “+” or “–” buttons. Confirm your selection by pressing the MODE/OK button.

6 Set the current minute by pressing the “+” or “–” buttons. Confirm your selection by pressing the MODE/OK button.

FÜR HANDWERK, DAS ÜBERZEUGT.

## FUNCTION DESCRIPTION

### FROST PROTECTION
If in winter you do not use the room for a long period of time it is advisable to activate frost protection to avoid structural damage. Frost protection temperature is adjustable from +5°C to +12°C (unlock with +-, press Mode / OK for 4s, press - and select the snowflake symbol, press Mode / OK to confirm, press +- to select temperature and press Mode / OK to confirm.

### TEMPERATURE HOLD
The thermostat maintains the set temperature for each room. The temperature is adjustable from +12°C to +35°C (unlock with +- , press Mode / OK for 4s, press - and select the hand symbol, press Mode / OK to confirm, press +- to select temperature and press Mode / OK to confirm.

### PROGRAM OPERATION
Depending on the time of day and day of the week, the thermostat automatically regulates heating to the set temperatures selected for "Comfort" or "Economy". The temperature is adjustable from +12°C to +35°C (see temperature settings on page 5).

## FACTORY SETTINGS

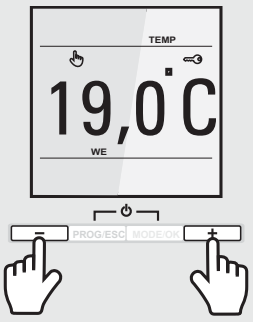
Factory settings are saved as state of delivery and are overridden when individual time entries have been made.

| Day \ Mode | | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| Monday to Friday | Time | 7:00 | 8:00 | 19:00 | 22:00 |
| | Temperature profile | ☀ | ☾ | ☀ | ☾ |
| Saturday and Sunday | Time | 7:00 | 8:00 | 19:00 | 22:00 |
| | Temperature profile | ☀ | ☀ | ☀ | ☾ |

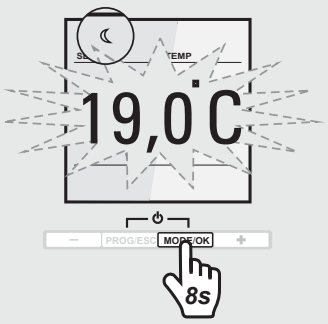
## TEMPERATURE SETTINGS ☾ ☀

### PROGRAM START

1 Unlock thermostat

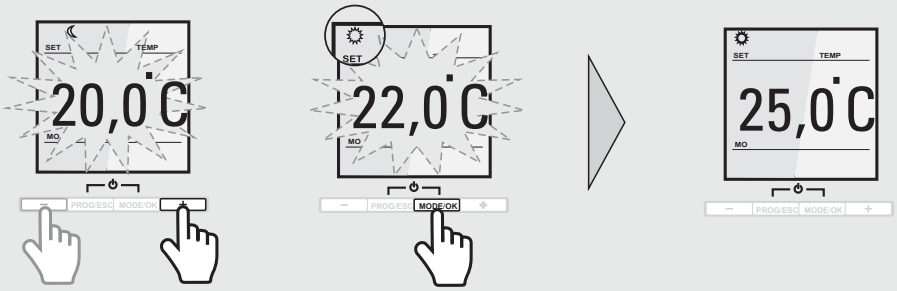



2 Press and hold the MODE/OK button for 8 sec. The ECONOMY symbol appears and the temperature display flashes.




### TEMPERATURE SETTING

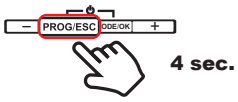
3 Set the desired temperature for “ECONOMY MODE” by pressing the “+” or “–” buttons. Confirm by pressing the MODE/OK button. You can now make the temperature entry for the "COMFORT MODE" as previously described. Also confirm this input by pressing the MODE/OK button. After completing the settings the display shows the current temperature.



BLANKE

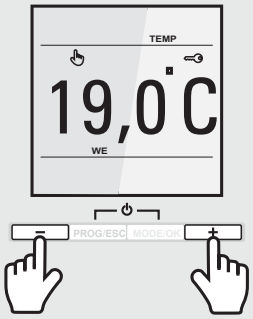
FÜR HANDWERK, DAS ÜBERZEUGT.

# TIME SETTING FOR THE PROGRAM STAGES

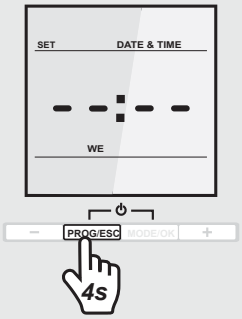



## PROGRAM START

1 Unlock thermostat




2 Press and hold the PROG/ESC button for 4 sec.

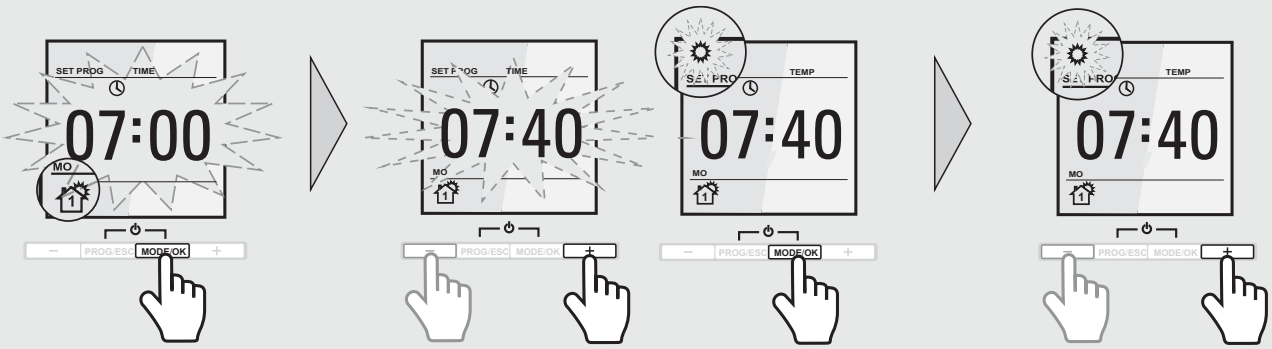



## PROGRAM WAKE UP

3 Press the MODE/OK button. The "time" begins to flash.

4 Set your "WAKE UP" time by pressing the "+" or "–" buttons. Confirm your selection by pressing the MODE/OK button.

5 Activate the "COMFORT" mode by pressing the "+" or "–" buttons.

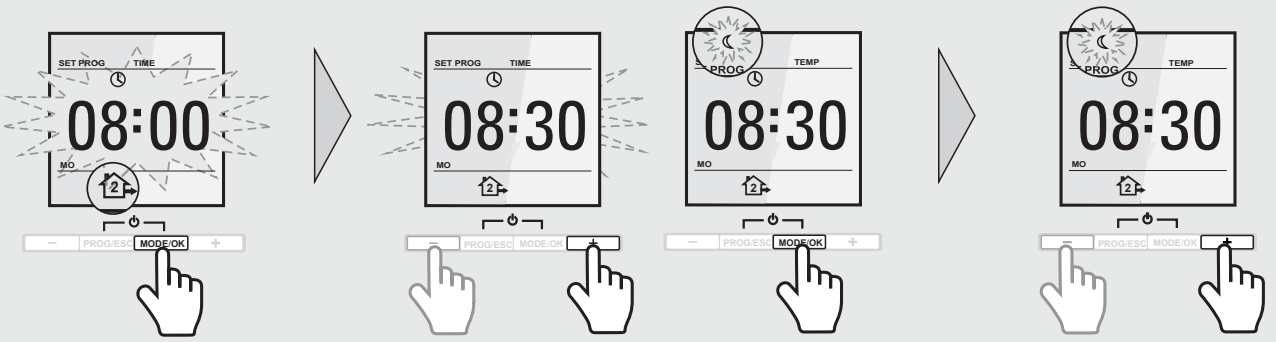



## PROGRAM LEAVING

6 Press the MODE/OK button. The "time" begins to flash.

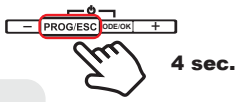
7 Set your "leaving" time by pressing the "+" or "–" buttons. Confirm your selection by pressing the MODE/OK button.

8 Activate the ECONOMY mode by pressing the "+" or "–" buttons.



FÜR HANDWERK, DAS ÜBERZEUGT.

## TIME SETTING FOR THE PROGRAM STAGES

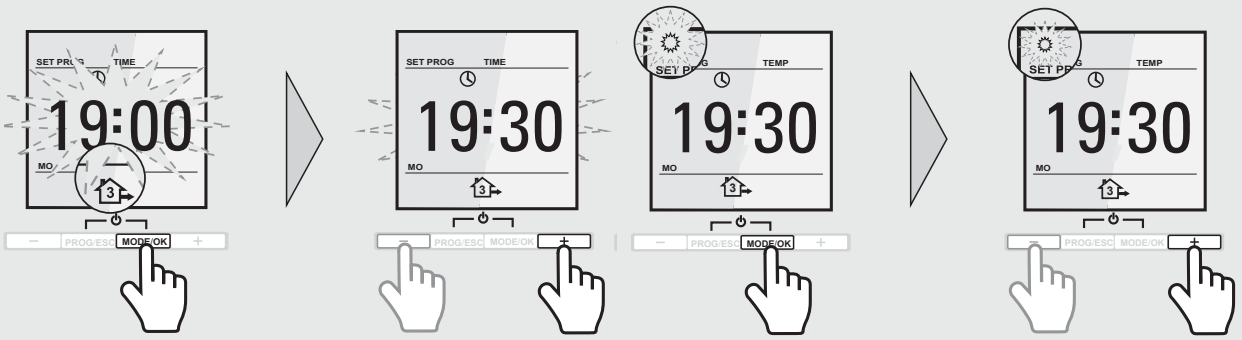



### COMING

9 Press the MODE/OK button. The “time” begins to flash.

10 Set your “coming” time by pressing the “+” or “–” buttons. Confirm your selection by pressing the MODE/OK button.

11 Activate the “COMFORT” mode by pressing the “+” or “–” buttons.

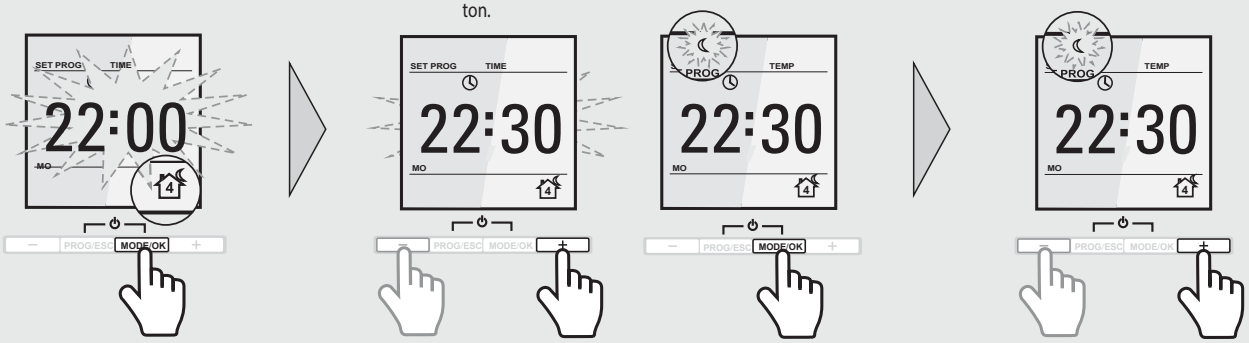



### GOING TO SLEEP

12 Press the MODE/OK button. The “time” begins to flash.

13 Set your “GOING TO SLEEP” time by pressing the “+” or “–” buttons. Confirm your selection by pressing the MODE/OK button.

14 Activate the ECONOMY mode by pressing the “+” or “–” buttons.




To finish and confirm changes press the MODE/OK button at the end of this procedure. The thermostat switches to the program mode for WAKE UP for the following day (TU Tuesday) - Please repeat steps 3 - 14 for all other days of the week according to your needs (every day requires the 4 program points wake up, leaving, coming and going to sleep).

## SCREENSAVER

### SELECT SCREENSAVER

1 Unlock thermostat.

2 The default screensaver is "temperature". Press and hold the MODE/OK button for 2 sec. The display changes to “current time”

3 If you press the MODE/OK button again for 2 seconds, the display returns to the "temperature" (which is measured directly by the temperature sensor in the ground).

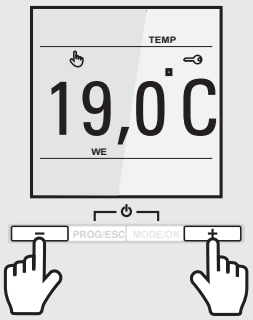
BLANKE

FÜR HANDWERK, DAS ÜBERZEUGT.

## SELECT OPERATING MODE

### PROGRAM START

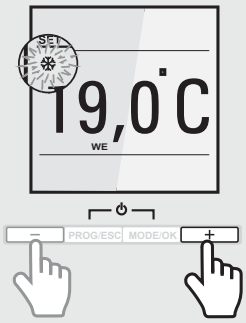
1 Unlock thermostat



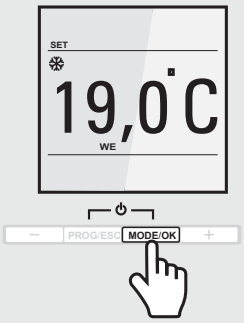

2 Press and hold the MODE/OK button for 4 sec. The “program mode” symbol begins to flash.

### SET OPERATING MODE

3 Select the mode by pressing the “+” or “–” buttons.



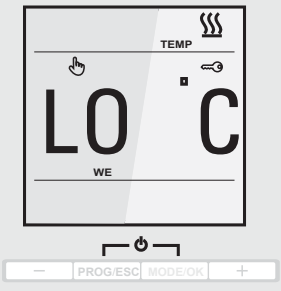

4 Confirm your selection by pressing the MODE/OK button.



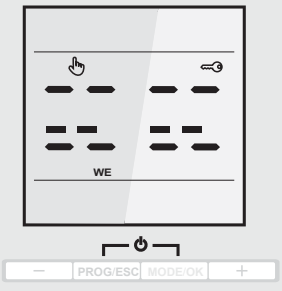

## ALARM DISPLAY

### ALARM INDICATORS

1 Display indicator in the case that the temperature lowers by more than 5°C from the set temperature or in the event that the temperature is higher than +45°C .




2 Display indicator in the case of a SENSOR FAULT



FÜR HANDWERK, DAS ÜBERZEUGT.

## ASSEMBLY

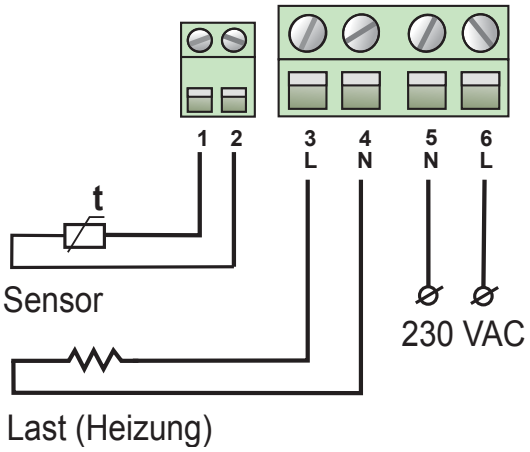
### Disclaimer

All statements correspond to the current state and to the best of our knowledge as accurate and reliable. However this does not constitute liability. Changes, typographical and other print errors do not justify any claim for damages. Liability applies to the general terms and conditions. Technical details are subject to change without notice in advance.

## TECHNICAL DATA

| | |
|---|---|
| Voltage | 230VAC, 60Hz |
| Max. Current | 16A |
| Thermostat usage | 450 mW |
| Weight | 150 g |
| Measurements | 86x86x35 mm |
| IP Protection | IP21 |
| Protection class | II |
| Sensor (TST02) | NTC 6.8 kOhm |
| Length of sensor cable | 2 m |
| Environmental temperature range | from +5°C to +40°C |
| Max. Humidity | 80% |
| Temperature setting range | from +5°C to +35°C |
| Colour | White |

## CIRCUIT DIAGRAM




## SAFETY PRECAUTIONS

Disconnect the units power connection to mains before installing, checking or replacing the thermostat. Work on electrical connections and the mains power connection of the device must be carried out by a qualified electrician. Otherwise the warranty is void. By installation, only plastic flush boxes for the thermostat may be used.

## COMPLAINTS

In the event of damage please contact us at Blanke GmbH & Co. KG.

## GUARANTEE

With the assumption of compliance of the installation and operating instructions, the manufacturer guarantees the conformity of the thermostat with the design specifications. Warranty period – 2 years from purchase date. The customer has the right for either repair or replace of the product if during the warranty period a defect occurs - due to faulty workmanship or fails to operate after a performed (according to the instructions) installation. Damages resulting from improper handling, damage by third party negligence, improper installation (not following the instructions) or consequential damage are excluded from the guarantee. Please retain your proof of purchase. Warranty services will only be performed upon presentation of a proof of purchase.

## WARRANTY CERTIFICATE

The TP520 thermostat has successfully passed all tests

Name.....

Street.....

Post Code, City .....

Region .....

Tel.....

Email.....

Purchase date .....

Installer.....

Installation date .....

Signature .....

**Blanke GmbH & Co. KG**
Stenglinger Weg 68 - 70 • D-58642 Iserlohn
Telephone +49 (0) 23 74 - 50 7-0
Fax +49 (0) 23 74 - 50 7-4230
Email info@blanke-systems.de
Internet www.blanke-systems.de