akribis

USER GUIDE

# TEHR LL

Produal

Distributed by AKRIBIS



This user guide is for devices with the software version 1.1.1 or newer.

## MOUNTING

The device can be installed in dry surroundings (IP20) by screws on the wall surface or on the standard flush mounting box. The recommended installation height is 150…180 cm.

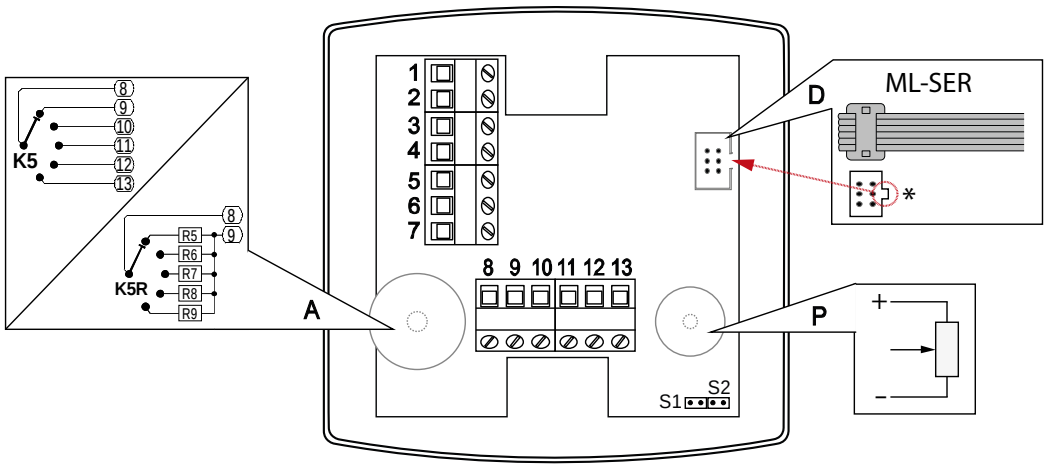
The device position should be selected carefully. All the error factors that can affect to the measurements should be eliminated as well as possible. The following list defines the typical measurement error factors.

- direct sun light
- occupant proximity
- air flow coming from windows or doors
- air flow coming from ventilation nozzles
- air flow coming from the flush mounting box
- differential temperature caused by external wall

## WIRING

Caution

Device wiring and commissioning can only be carried out by qualified professionals. Always make the wirings while the power is switched off.




| | |
|---|---|
| 1 | + (-) temperature signal or controller 4…20 mA |
| 2 | - (+) temperature signal or controller 4…20 mA |
| 5 | potentiometer + |
| 6 | potentiometer slide |
| 7 | potentiometer - |
| 8 | K5 / K5R selector switch |
| 9 | K5 switch position A / K5R out |
| 10 | K5 switch position 0 |
| 11 | K5 switch position 1 |
| 12 | K5 switch position 2 |
| 13 | K5 switch position 3 |

| | |
|---|---|
| A | K5 / K5R 5-stage switch (optional) |
| P | passive potentiometer (optional) |
| D | connector for cover display / ML-SER tool |
| S1<br>S2 | temperature measurement range selection |
| * | from below of the connector |

## SELECTING MEASURING RANGE

Measuring range can be selected with the jumpers S1 and S2:

| * 0…+50 °C | 0…+100°C | -50…+50 °C | -50…+150°C |
|---|---|---|---|
| S1 S2 | S1 S2 | S1 S2 | S1 S2 |

* Factory setting.

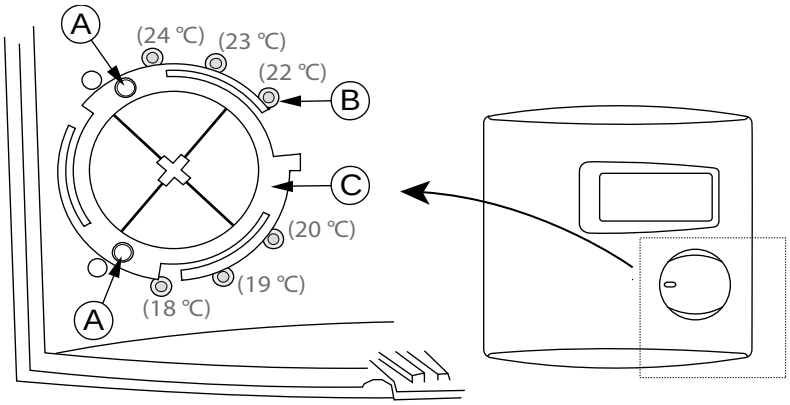
Corresponding signal values at different measurement value range are:

| 0…+50 °C | 0…+100 °C | -50…+50 °C | -50…+150 °C | Signal |
|---|---|---|---|---|
| 0 °C | 0 °C | -50 °C | -50 °C | 4 mA |
| 25 °C | 50 °C | 0 °C | 50 °C | 12 mA |
| 50 °C | 100 °C | 50 °C | 150 °C | 20 mA |

## LIMITING POTENTIOMETER MOVEMENT

The potentiometer movement can be limited with two removable limiting pins.

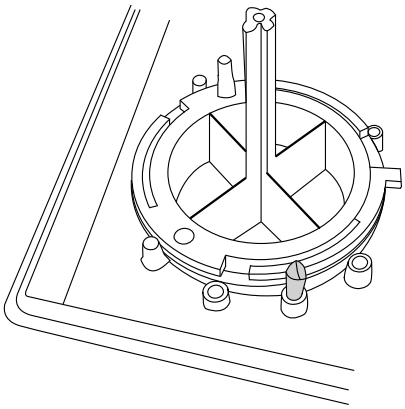
1. Remove the cover.
2. Remove the limiting pin by cutting.




A. Limiting pin
B. Limiting slot
C. Potentiometer knob

3. Fit the pin to the wanted limiting slot.

   There are six slots for the pin (18 °C…24 °C). The knob movement is limited to 19 °C in the following picture.

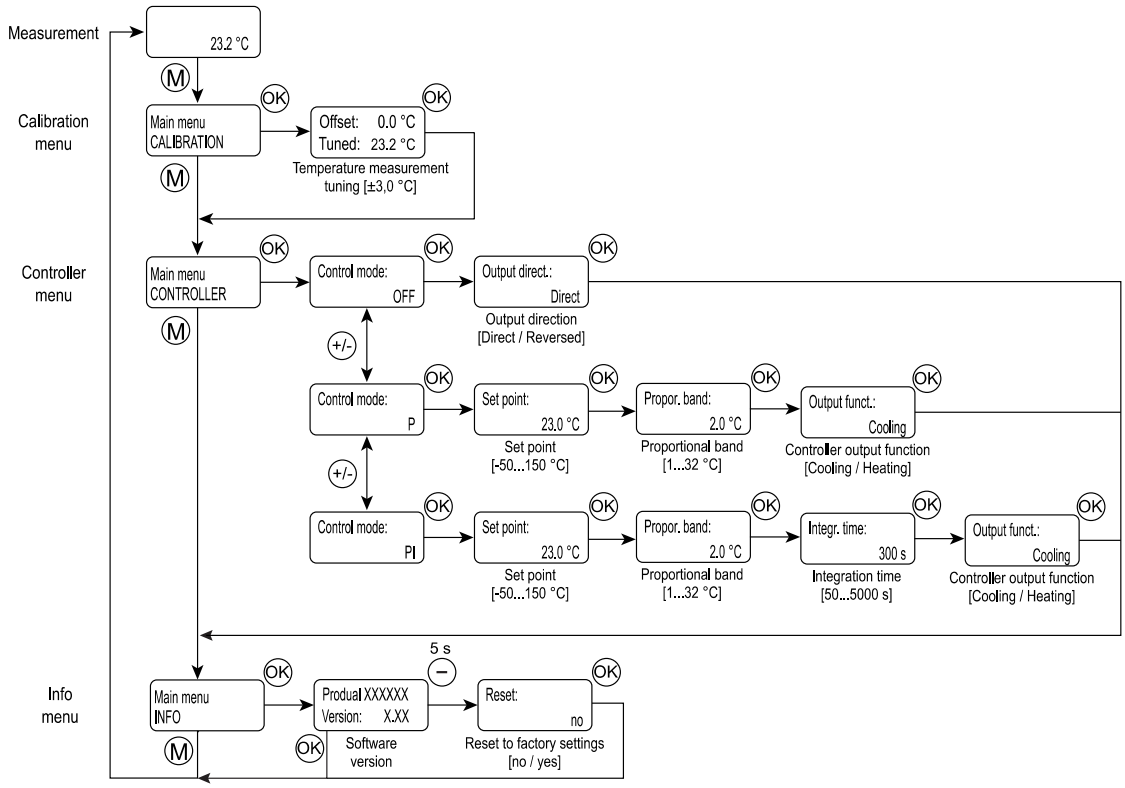


4. Place the potentiometer knob (to correct position).
5. Fit the cover.

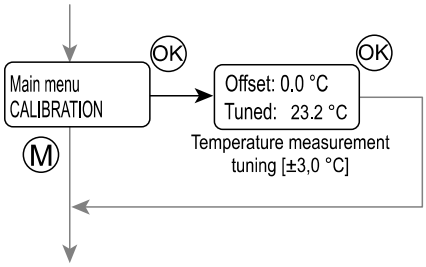
## ML-SER MENU

All transmitter settings can be changed by using the ML-SER tool. You can proceed in the menu by pressing the M and OK buttons. The values can be changed with the ”+” and “–“ buttons. The value is accepted with the OK button. The following menu structure contains the factory settings.

**NOTE:** When ML-SER is connected to the device, the loop current output is not valid.

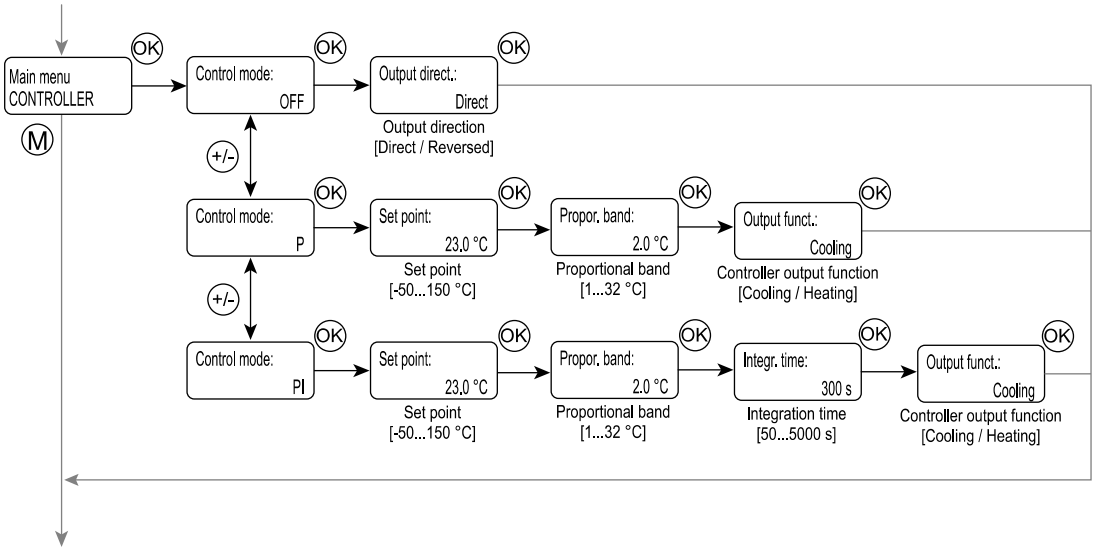



### Calibration menu




The temperature measurement can be tuned through the calibration menu. The temperature value can be adjusted by 0,1 °C steps. ML-SER tool display shows the tuned value.

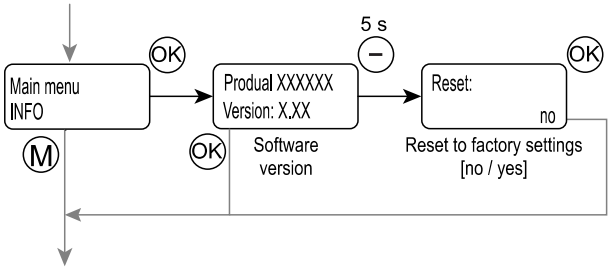
**Controller menu**




In controller menu the temperature output can be changed to controller output. You can also change the controller settings in the menu.

When the controller is not used the output direction can be selected via the controller menu.

**Info menu**




The info menu can be used for checking the software version, and resetting to the factory settings.

**Resetting to the factory settings**

1. Press the "-" button for five seconds in the *Software version* display.
2. Change the resetting dialog answer to "yes".
3. Press OK button.

   The factory settings are now reset.