

# Rock.Regler.021 Installation and operating instructions

The device regulates the room temperature or floor temperature for almost all types of heating in dry and closed Clearing. This controller is supplied without a cover and must be fitted with the TAE center piece + frame of the respective Switch range are covered.

## Operation on the thermostat

### connection

N = zero (2 terminals, internally connected)

L = phase (2 terminals, internally connected)

L' = relay output 230V ~, 10 (2) A

LS = special mode for external input

230V ~ 50Hz; same phase as

Supply voltage

**integrated room sensor** (room controller, the white dot on the top left front)



### Key functions:

-  press longer (3 sec.) – switches display and control function on / **off**. press briefly - switches the background lighting on for approx. 10 seconds
-  lowers the target temperature after pressing it for the first time with each further key press by 0.5 °C
-  increases the target temperature after pressing it for the first time with each further key press by 0.5 °C

### LCD display

#### Backlight

switches on at the push of a button and approx. 10 sec automatically off after last actuation is shown.

the actual temperature (room or floor temperature), the target temperature appears for approx. 3 seconds after first pressing

the buttons  or 

 **Red LED + "3 flames"** 

#### **Comfortable temperature**

- . **pulsating** - controller requests heat
- . **rigid** - target temperature reached

**blue LED + "single flame"** 

#### **Economy temperature**

only if phase at LS = for special operation

- pulsating** - controller requests heat
- rigid** - target temperature reached

**Rock.FF remote sensor** NTC remote sensor approx. 4m  
 for underfloor control function  
 10 ° C = 58.7 kΩ  
 25 ° C = 30.0 kΩ  
 15 ° C = 46.7 kΩ  
 30 ° C = 24.3 kΩ  
 20 ° C = 37.3 kΩ  
 35 ° C = 19.7 kΩ



## Function

**The device is used for two types of controller:**

- Room temperature controller with integrated room sensor (220 kΩ at terminal FF)
- Floor temperature controller with external remote sensor on terminals FF

In the event of a sensor interruption / short circuit, the device switches to **emergency mode** . Here it is regulated according to room temperature the display flashes.

The controller is designed for two target temperatures:

red LED  normal operation (comfort temperature) and blue LED  special operation (economy temperature)

Special operation is activated by connecting phase to LS  . The target temperature is in normal and in reduced mode

adjustable to the entire control range. The target temperature is set using the  (plus) and  (minus) buttons.

The integrated or the external remote sensor records the ambient temperature (actual temperature). When falling below the setpoint temperature switches the relay on, if exceeded it switches off. In both cases, **delay** times are up to 3 minutes (e.g. valve running times for hot water heating)

The controller has a button protection to prevent unintentional changes.

Therefore, the key must be used to switch on / off  be pressed for longer than 3 seconds. With the buttons 

And  appears the first time the button is pressed the temperature display; only when the button is pressed again can the values be changed.

**Mini USB socket**

only with variant  
 Rock.USB controller  
 available

## LED and flame signs

red LED and pulsating  = Comfort mode heating phase, relay contact closed

red LED and rigid  = Comfort mode, no heat demand, relay contact open

blue LED and pulsating  = Special operation heating phase, relay contact closed

blue LED and rigid  = Special operation, no heat request, relay contact open

## further function

**Switching the backlight ON / OFF:**  Press the button for approx. 1 second and then briefly press the button 

**red LED / blue LED ACTIVE / OFF:**  Press the button for approx. 1 second and then briefly press the button 

**Adjustment -3.5K to 4.0K (room temperature)**  and  buttons and press simultaneously for at least 8 seconds, then with the Correct keys  or 

### keylock

Activate: Hold the button  down for more than 30 seconds

Deactivate: Hold the button  down for more than 30 seconds

## Installation and commissioning

The controller is installed in a commercially available flush-mounted box. Pay attention to external heat sources. Not above Mount another heat generator (e.g. light dimmer, radiator, television, etc.).

The electrical connection is made with screw terminals as shown in the picture description.

Caution, switch off all poles of the mains voltage before installation!

### FF terminals

- 220 k $\Omega$  resistance = control via room sensor

- external remote sensor = control via floor sensor

A separate conduit is to be provided for the floor sensor, which is closed, for example, with the sensor sleeve.509.

The controller is fastened in the flush-mounted box with the expanding claws, the plastic support bars on the side are used for this for fixation. The cover (TAE center piece + frame of the switch manufacturer) is mounted with the screw.

### Please note

The device may only be operated by a qualified electrician in accordance with the circuit diagram and in compliance with the VDE safety regulations

as well as the local EVU's, otherwise there is a risk of fire or electric shock.

These operating instructions must be kept for later use!

## Technical specifications

Operating voltage: 230V ~ / 50 Hz

Display: LCD display

Contact: Normally open 230V ~ 10 (2) A

Electrical connection: screw terminals

Attachment: Spreading claw in flush-type box  $\varnothing$  60mm

Switching differential: approx. 0.5 K

Power consumption: approx. 0.5 W.

Temperature setting range: 0 ° C to + 40 ° C

Temperature reduction: phase on LS  $\neg$ , entire control range adjustable

Temperature measuring range: -5 ° C to + 60 ° C

Storage temperature: -15 ° C to + 60 ° C

Protection class: IP 30

Protection class: II according to installation

Radio interference suppression: according to EN 50081-1, EN 50082-1

Sensor voltage: DC voltage <5V

Sensor characteristics:

- 5 ° C = 122.4 k $\Omega$  25 ° C = 30.0 k $\Omega$

0 ° C = 95.0 k $\Omega$  30 ° C = 24.3 k $\Omega$

5 ° C = 74.4 k $\Omega$  35 ° C = 19.7 k $\Omega$

10 ° C = 58.7 k $\Omega$  40 ° C = 16.1 k $\Omega$

15 ° C = 46.7 k $\Omega$  45 ° C = 13.3 k $\Omega$

20 ° C = 37.3 k $\Omega$  50 ° C = 11.0 k $\Omega$

Sensor defect: with remote sensor -> emergency operation

Display flashes

