

## Electronic temperature controller Rdi./48

### With digital indication for actual value and setpoint

For connection of resistance thermometers Pt 100.

### Up to 3 contacts, which are adjustable independently of each other.

- 11 mm high LED display, resolution: 0,1 / 1,0°C
- control accuracy adjustable, quick control function
- direct connection of resistance- thermometer Pt 100, thermocouples and sensors with standard signal
- indication range up to 1999 digits
- built-in housing according to DIN 43700  
dimensions: 96 x 48 mm, installation depth: 137 mm
- switching to setpoint by pressing button
- floating distant switch contacts 230 V / 6 A
- connection by AMP plug connection 6,3 mm



RdiW/48-PID



RdiW/48-PID-3K-GL

Rdi./48 digital controller are electronic with 1, 2 or 3 switch contacts in space-saving version. The main contact K1 is either a signal contact or occupied with PID feedback. The actual temperature is shown permanently, setpoint is shown by pressing the button. The values are adjusted by a ten-course potentiometer.

The individual executions differ in the input circuit, the output values and control values. Depending upon execution of the input circuit temperature sensors can be attached directly such as resistance thermometers, thermocouples, as well as sensors with standard signal. The devices are also deliverable as humidity controller in connection with our humidity sensor FG 80 H and FG 120.

**Inputs:** Resistance-thermometer Pt 100 DIN, thermocouples Fe-CuNi (J), NiCr-Ni (K), PtRh-Pt (S), humidity sensor FG 80 H and FG 120, as well as current and voltage giver.

No line alignment needed, devices for connection of resistance-thermometer Pt 100 are alternatively in 2-, 3- or 4-wire-circuit.

**Outputs:** 2 switch relays with 1-pole floating switch contact, 230 V / 6 A (Add-on "2K", "MAX" or "MIN" = 2 relays, add-on "3K" = 3 relays)

**Options:** Analog output 0-20 mA, 4-20 mA linear or 10 mV/K, extern setpoint default 0-20 mA, 4-20 mA linear or 10 mV/K.

**Feedback:** RC-feedback, PID place-held back,  $X_p = 5\%$  symmetric to setpoint, adjustable on the frontside (not for signal devices or additional contacts)

**Power supply voltage:** 230 V / 50-60 Hz, 24 VAC

**Protection circuit:** The device is shutting down in case of resistance-thermometer or thermocouple breach.

**Actual value-Setpoint indication:** LED, 7 segment display 11 mm high

**Indication accuracy:**  $\pm 0,5\%$ ,  $\pm 1$  digit of scale

For Pt 100 1,0-div.:  $\pm 1$  digit

For Pt 100 0,1-div.:  $\pm 0,2^\circ\text{C}$ ,  $\pm 1$  digit

**Switch point accuracy:**  $\pm 0,25\%$

**Ambiente air temperature effect:**  $\pm 0,5\%$  / 10K

**Allowed ambiente air temperature:**  $0^\circ\text{C}/32^\circ\text{F}$  up to  $50^\circ\text{C}/122^\circ\text{F}$

**Additional contacts:**

MAX= Maxima signal contact, assigned, adjustable 0-10% of scale (no digital adjustment)

MIN = Minima signal contact, assigned, adjustable 0-10% of scale (no digital adjustment)

K2 = Signal contact, adjustable steplessly over the entire range of control

K3 = 2 signal contacts, adjustable steplessly over the entire range of control

The additional contacts are serially adjustable with a screwdriver, small potentiometer buttons are attachable on inquiry. Every contact is shown by a LED. The LED lights, wenn the assigned relay is responded. For cooling functions etc. the relay function can be turned around. In case of order, it must be indicated!

**Options:** Analog output 0-20 mA or 4-20 mA, 250 ohm burden, and/or 10 mV/K by button on the backside. In this case the setpoint "K" is not in function.

All connections are made over a plug receptacle (6,3 mm) on the backside.

**Range of adjustment:**

Resistance-thermometers Pt 100:	-199,9 + 199,9°C, 0 + 99,9°C, 0 + 49,9°C -99,9 + 99,9°C : 0,1°C -200 + 600°C, 0 + 250°C, 0 + 400°C, 0 + 600°C, 0 + 800°C : 1,0°C
Thermocouples FeCu-Ni (J):	+20 + 250°C, +20 + 400°C, +20 + 600°C : 1,0°C
Thermocouples NiCr-Ni (K):	+20 + 999°C, +20 + 1200°C
Thermocouples PtRh-Pt (S):	+20 + 1600°C
Humidity sensors FG 80 H and FG 120:	0-100% r.F. : 0,1% r.F.
Sensors with standard signal:	0-20 mA, 10 mV/K

**Type description:**

RdiW/48-	= For connection of resistance-thermometers
RdiT /48-	= For connection of thermocouples
RdiF /48-	= For connection of humidity sensors
RdiE/48-	= For connection of sensors with standard signal
-S -	= Signal device
-PID-	= Kontakt K1 with PID feedback
-Max-	= Maxima signal contact, matched to setpoint
-Min -	= Minima signal contact, matched to setpoint
-K2 -	= Additional contact, independently adjustable to setpoint
-K3 -	= 2 additional contacts, independently adjustable to setpoint
-A 0-20-	= Analog output 0-20 mA
-A 4-20-	= Analog output 4-20 mA
-A 10 -	= Analog output 10 mV/K
-E 0-20-	= External setpoint setting 0-20 mA
-E 4-20-	= External setpoint setting 4-20 mA
-E 10 -	= External setpoint setting 10 mV/K

**Add-on:**

**GL** = Full transparent door with frame, protection type IP 55