

# RE82 TEMPERATURE CONTROLLER

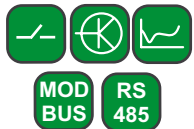
## FEATURES:



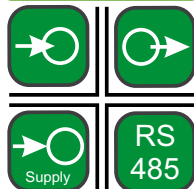
## INPUTS:



## OUTPUTS:

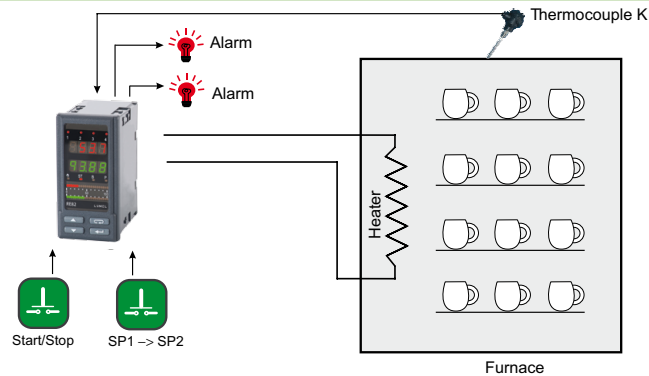


## GALVANIC ISOLATION:



- Universal measuring input.
- Binary input control.
- Set point value: constant value, programmed or from an additional input.
- On/off, PID, PID step-by-step control (valve control) or PID of heating-cooling type.
- 2 relay outputs in standard and optional 2 outputs: relay, OC or analog output.
- Soft-start function.
- 8 types of alarms.
- Alarm latch function.
- Timer function.
- Measurement of heater current and check of heater overheating or shortening of the control element (e.g. SSR).

## EXAMPLE OF APPLICATION



Process control of ceramic firing.

## INPUT

Input type	Range	Error
Pt100	-200 .. 850°C	0.2%
Pt1000	-200 .. 850°C	0.2%
Fe-CuNi (J)	-100 .. 1200°C	0.3%
Cu-CuNi (T)	-100 .. 400°C	0.3%
NiCr-NiAl (K)	-100 .. 1372°C	0.3%
PtRh10-Pt (S)	0 .. 1767°C	0.5%
PtRh13-Pt (R)	0 .. 1767°C	0.5%
PtRh30-PtRh6 (B)	200 .. 1767°C	0.5%
NiCr-CuNi (E)	-100 .. 1000°C	0.3%
NiCrSi-NiSi (N)	-100 .. 1300°C	0.3%
Chromel-kopel (L)	-100 .. 800°C	0.3%
Current channels (I)	0/4 .. 20 mA	0.2% +/- 1 digit
Voltage channels (U)	0 .. 5/10 V	0.2% +/- 1 digit
Binary	voltageless	

## OUTPUT

Output type	Properties	Load capacity
Relay voltageless output	NO contacts	2 A/ 230 V a.c. (outp. 1, 2, 3 and 4)
Transistor voltage output	0/5 V	max 40 mA
Continuous voltage output	0 .. 10 V	at $R_{load} \geq 1 \text{ k}\Omega$
Continuous current output	0 .. 20 mA, 4 .. 20 mA	at $R_{load} \leq 500 \Omega$
Supply of measuring relays	24 V d.c.	max 30 mA

## DIGITAL INTERFACE

Interface type	RS-485	Mode
Protocol	Modbus RTU	8N2, 8E1, 8O1, 8N1
Baud rate	4.8, 9.6, 19.2, 38.4, 57.6 kbit/s	

## EXTERNAL FEATURES

Readout field	2 x 4 digits	digit height: 10 mm, red and green
Overall dimensions	48 x 96 x 93 mm	
Weight	< 0.2 kg	
Protection grade	from frontal side: IP65	from terminal side: IP20
Bargraph	2 x 21 points	color: red and green

# RE82 TEMPERATURE CONTROLLER

## RATED OPERATING CONDITIONS

Supply voltage	85 .. 253 V a.c./ d.c.	20 .. 40 V a.c./d.c.
Temperature	ambient: 0...23...50°C	storage: -20...70°C
Humidity	< 85%	without condensation
Operating position	any	

## SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Pollution level		2
Installation category		III
Maximal phase-to-earth operating voltage	supply, output: 300 V	input circuits: 50 V
Altitude above sea level		2000 m

## CONNECTION DIAGRAMS

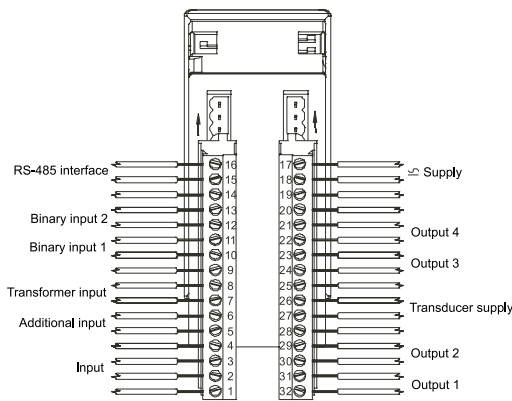


Fig. 1. View of controller connection terminal strips.

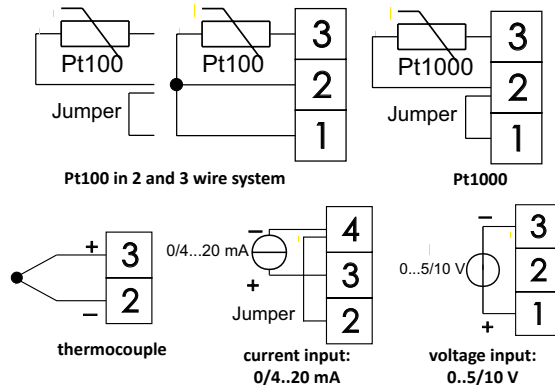


Fig. 2. Connection of input signals.

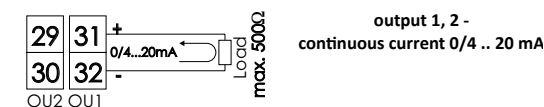
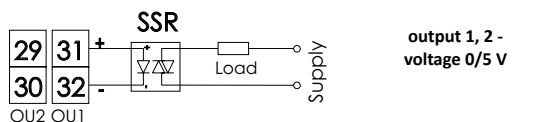
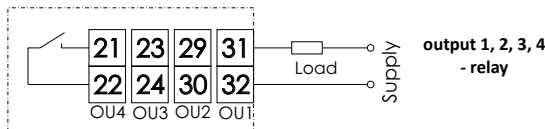


Fig. 3. Control/alarm output.

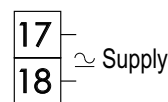


Fig. 4. Supply.

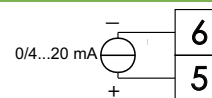


Fig. 5. Signal of additional input.

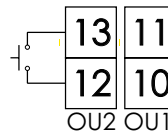


Fig. 6. Binary input 1 and 2.

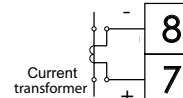


Fig. 7. Current transformer input.

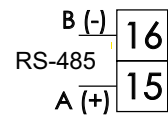


Fig. 8. RS-485 interface.

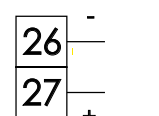


Fig. 9. Supply of 24 V transducers.

## ORDERING

Ordering Code	Description
RE82 431100M0*	Temperature controller RE82, universal input for thermoresistors, thermocouples or for standard analog signals, 1x analog output 10V, 1x analog output 0/4...20mA, 2x relay output, 1x supplying output 24 V d.c., 2x binary input, RS-485 interface, supply 85..253 V a.c./d.c., documentation and descriptions in Polish and English version, test certificate
RE82 131100M0*	Temperature controller RE82, universal input for thermoresistors, thermocouples or for standard analog signals, 1x analog output 0/4...20mA, 3x relay output, 1x supplying output 24 V d.c. 2x binary input, RS-485 interface, supply 85..253 V a.c./d.c., documentation and descriptions in Polish and English version, test certificate
RE82 111100M0*	Temperature controller RE82, universal input for thermoresistors, thermocouples or for standard analog signals, 4x relay output, 2x binary input, 1x supplying output 24 V d.c. RS-485 interface, supply 85..253 V a.c./d.c., documentation and descriptions in Polish and English version, test certificate

\* Upon agreement, an option to order a calibration certificate for the product is available against payment. Then, in the execution code, in the place of the last character, enter the digit 2, eg **RE82 111100M02**. The customer will then receive a standard test certificate and a calibration certificate (against payment).