

# RE82 TEMPERATURE CONTROLLER

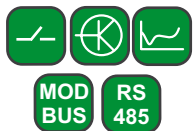
## FEATURES:



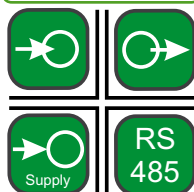
## INPUTS:



## OUTPUTS:



## GALVANIC ISOLATION:



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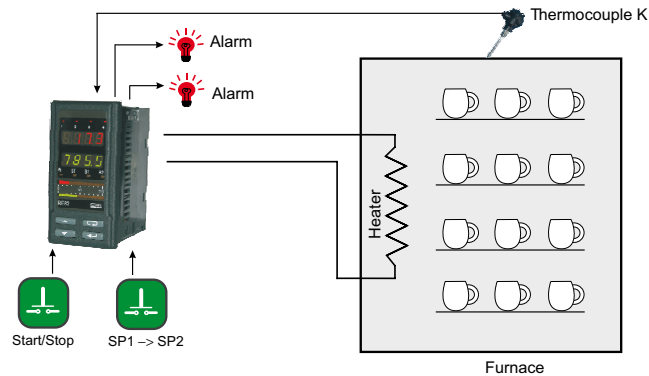


NEW



- 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.
- 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 forntal side: IP65	from terminal side: IP20
Bargraph	2 x 21 points	color: red and green

### 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

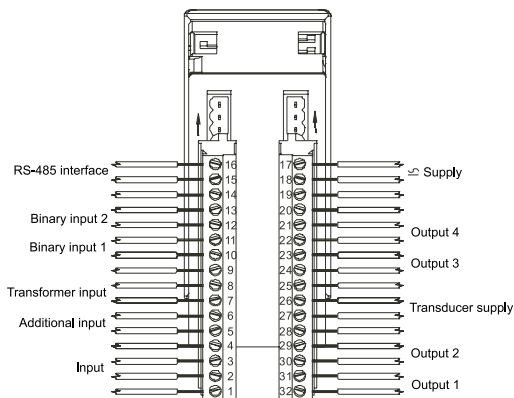


Fig. 1. View of controller connection terminal strips.

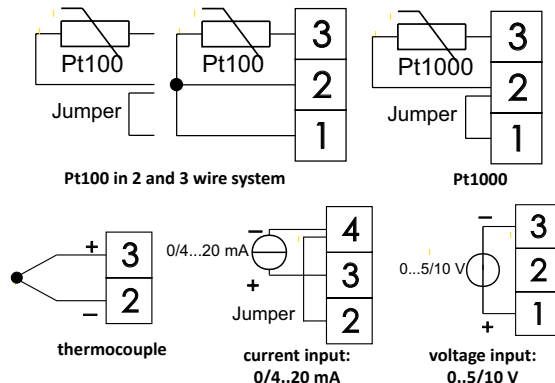


Fig. 2. Connection of input signals.

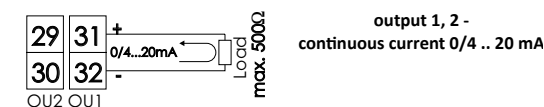
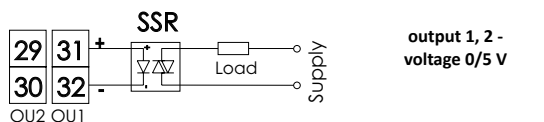
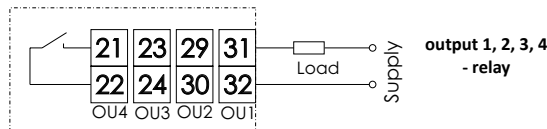


Fig. 3. Control/alarm output.

### ORDERING

RE82 -	X	X	X	X	X	X	X
<b>Output 1:</b>							
relay	1						
voltage 0/5 V	2						
continuous current: 0/4 .. 20 mA	3						
continuous voltage: 0 .. 10 V	4						
<b>Output 2:</b>							
relay <sup>1)</sup>	1						
voltage 0/5 V	2						
continuous current: 0/4 .. 20 mA	3						
continuous voltage: 0 .. 10 V	4						
<b>Supply of transducers:</b>							
none						0	
supply of transducers 24 V d.c. 1 W						1	
<b>Supply:</b>							
85 .. 253 V a.c./ d.c.						1	
20 .. 40 V a.c./ d.c.						2	
<b>Version:</b>							
standard							00
custom-made <sup>2)</sup>							XX
<b>Language:</b>							
Polish							P
English							E
other <sup>2)</sup>							X
<b>Additional quality requirements:</b>							
without additional quality requirements							0
with an extra inspection quality certificate							1
acc. to customer's request <sup>2)</sup>							X

<sup>1)</sup> only when a relay or voltage output 0/5 V is also selected on the output 1  
<sup>2)</sup> only after agreeing with the manufacturer

#### Order example:

The code **RE82 - 1 2 0 1 00 E 0** means:  
**RE82** - controller of RE82 type  
**1** - output 1: relay  
**2** - output 2: voltage 0/5 V  
**0** - without supply of transducers  
**1** - supply: 85 .. 253 V a.c./ d.c.  
**00** - standard version  
**E** - English language version  
**0** - without additional quality requirements.

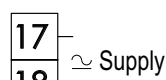


Fig. 4. Supply.

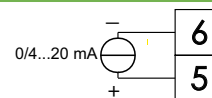


Fig. 5. Signal of additional output.

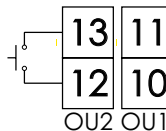


Fig. 6. Binary input 1 and 2.

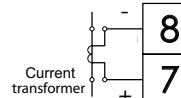


Fig. 7. Current transformer input.

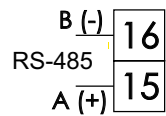


Fig. 8. RS-485 interface.

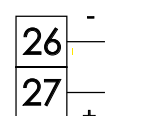


Fig. 9. Supply of 24 V transducers.

### SEE ALSO:



Temperature sensors.



SSR relays LU series.



Free LPConfig software for programming LUMEL's products. Available on our website.

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