

# RE72 TEMPERATURE CONTROLLER

## FEATURES:

- Timer Password protection SP<sup>X2</sup>
- Smart PID Auto On/Off
- Soft Start AL Latch
- LPConfig Compatible

## INPUTS:

- DC CT

## OUTPUTS:

- MOD BUS RS 485

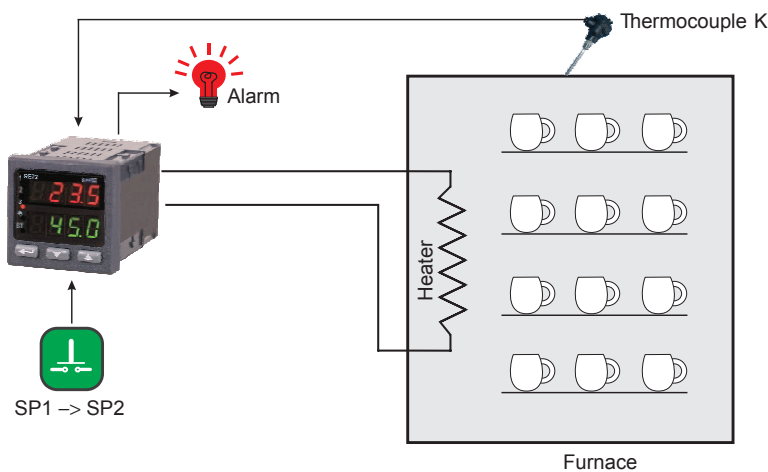
## GALVANIC ISOLATION:

- Supply RS 485



- Universal measuring input.
- Binary input control.
- Set point value: fixed 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.
- 8 types of alarms.
- Function of bistable alarm (LATCH).
- Timer function.
- Measurement of heater current and heater burning control or short-circuit of the control element (e.g. SSR).

## EXAMPLE OF APPLICATION



Control of ceramics burning process.

### 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

### OUTPUTS

Output type	Properties	Load capacity
Voltageless relay output	NO contact	2 A/ 230 V a.c. (out. 1 and 2) 1 A/ 230 V a.c. (out. 3)
Voltage transistor 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 $R_{load} \leq 500 \Omega$

### DIGITAL INTERFACE

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

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### EXTERNAL FEATURES

Readout field	2 x 4 digits	digit height: 10 mm, red and green colours
Dimensions	48 x 48 x 93 mm	
Weight	< 0.2 kg	
Protection grade	from frontal plate: IP65	from terminal side: IP20

### 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
Relative humidity	< 85%	(without condensation of water vapour)
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

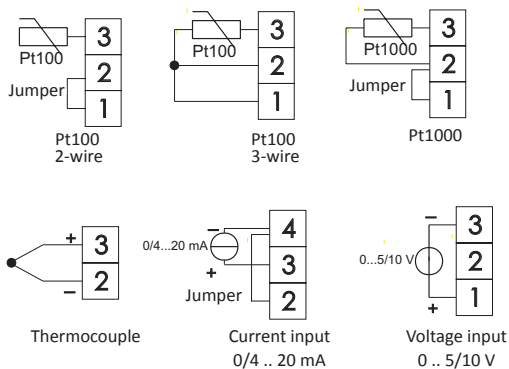


Fig. 1. Input signals.

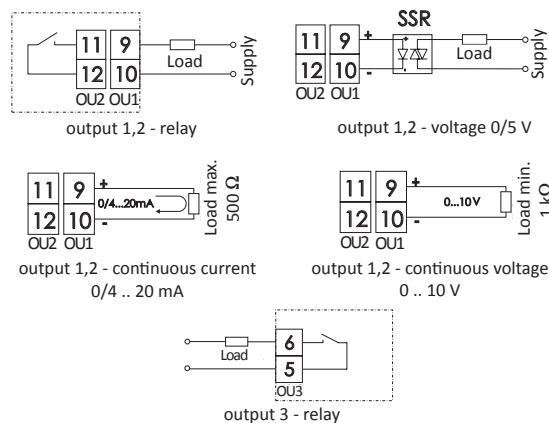


Fig. 2. Control/alarm outputs.

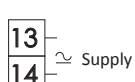


Fig. 3. Supply.

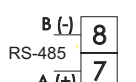


Fig. 4. Interface RS-485



Fig. 5. Transducer supply.



Fig. 6. Binary input.

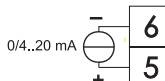


Fig. 7. Additional input.

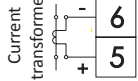


Fig. 8. Current transformer input.

### ORDERING

RE72 -	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>Options:</b>							
none						0	
output 3 - relay						1	
binary input						2	
current transformer input <sup>2)</sup>						3	
additional current input: 0/4 .. 20 mA						4	
transducer supply: 24 V d.c. 1 W						5	
<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>3)</sup>						XX	
<b>Language version:</b>							
Polish							P
English							E
other <sup>3)</sup>							X
<b>Acceptance tests:</b>							
without extra quality requirements							8
with an extra quality inspection certificate							7
according to customer's request <sup>3)</sup>							X

### Ordering example:

The code: **RE72 - 1 2 2 1 00 E 8** means:  
**RE72** - temperature controller of RE72 type  
**1** - output 1: relay  
**2** - output 2: voltage 0/5 V  
**2** - option with binary input  
**1** - supply: 85 .. 253 V a.c./ d.c.  
**00** - standard version  
**E** - documentation and descriptions in English version  
**8** - without extra quality requirements.

### SEE ALSO:



Temperature sensors.



SSR relay of LU series.



Free LPConfig for easy programming of LUMEL's products.

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