

RE71 TEMPERATURE CONTROLLER

FEATURES:



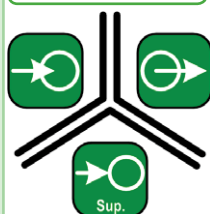
INPUTS:



OUTPUTS:



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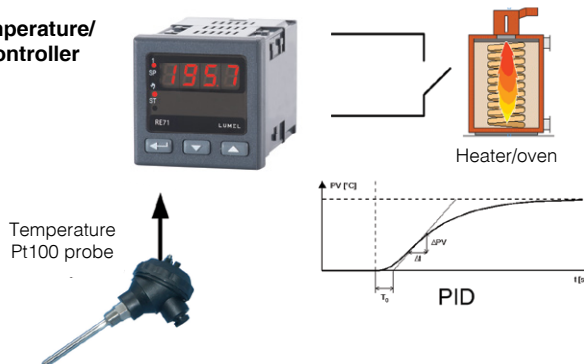
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- Control acc. to the PID or ON/OFF algorithm.
- Direct co-operation with resistance thermometer or thermocouple sensors.
- Automatic selection of PID parameters.
- One control output, relay output or voltage output for SSR relay control.
- Manual control mode.

EXAMPLE OF APPLICATION

RE71 - temperature/
process controller



Automatic control of the heater using
the PID algorithm with autotuning function

INPUTS

Sensor type	Range [°C]	Basic error [°C]	Remarks	Additional error
Resistance thermometer (acc. to EN 60751), measuring current 0.25mA				Additional errors in rated operating conditions caused by: • compensation of reference junction temperature changes ≤2°C • change of the ambient temperature ≤100% of the basic error/10K
Pt100*)	-50..100	±0.8	Resistance of the sensor line < 10 Ω; one must connect with wires of the same section and length	
	0..250	±1.3		
	0..600	±3.0		
Thermocouple of J type (acc. to EN 60584-1)				
Fe-CuNi	0..250	±2.0		
	0..600	±3.0		
	0..900	±4.0		
Thermocouple of K type (acc. to EN 60584-1)				
NiCr-NiAl	0..600	±3.0		
	0..900	±4.0		
	0..1300	±6.0		
Thermocouple of S type (acc. to EN 60584-1)				
PtRh10-Pt	0..1600	±8.0		

OUTPUTS

Output kind	Properties
voltageless relay	switching contact, overload capacity: 5A/230V
binary voltage	voltage 6V, without isolation from the sensor side

PARAMETERS OF WORK

Detection of error in the measurement circuit:	thermocouple, Pt100	overflow of measuring range
Way of output operation	reverse: for heating	direct: for cooling
Signalling:	active output, set point value display, auto-tuning, manual control	

EXTERNAL FEATURES

Weight	< 0.25 kg	
Dimensions	48 x 48 x 93 mm	
Protection grade (acc. to EN 60529)	ensured by the housing: IP65	from the terminal side: IP20

RATED OPERATING CONDITIONS

Supply voltage	230 V a.c. $\pm$ 10%, 50/60Hz	power consumption: < 4 VA
Temperature	ambient: 0...23...50°C	storage: -20...70°C
Relative humidity	$\leq$ 85%	condensation inadmissible
Operating position	any	
Preheating time	30 min	
Averaging time	$\geq$ 0.33 s	

SAFETY AND COMPATIBILITY REQUIREMENTS

Electromagnetic compatibility	Noise immunity	acc. to EN 61000-6-2
	Noise emissions	acc. to EN 61000-6-4
Isolation between circuits	basic	
Pollution grade	2	
Installation category	III	acc. to EN 61010-1
Maximal phase-to-earth operating voltage	for the supply circuit, outputs: 300 V for input circuit: 50 V	
Altitude above sea level	< 2000 m	

CONNECTION DIAGRAMS

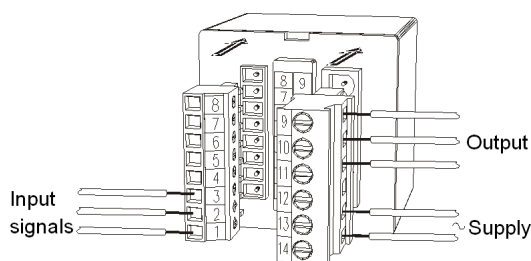


Fig. 1 View of the controller connection strips

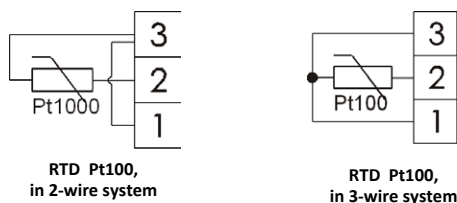


Fig. 2. Connections of input signals

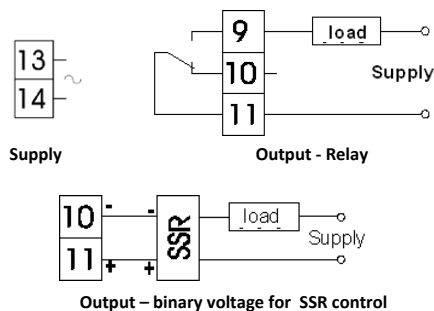


Fig. 3. Connections of the supply and load circuit

ORDERING

ORDERING CODES:

RE71 -	XX	X	X	X	X
Input signal:					
RTD Pt100 (-50...100°C)	01				
RTD Pt100 (0...250°C)	02				
RTD Pt100 (0...600°C)	03				
Thermocouple J (Fe-CuNi)(0...250°C)	04				
Thermocouple J (Fe-CuNi)(0...600°C)	05				
Thermocouple J (Fe-CuNi)(0...900°C)	06				
Thermocouple K (NiCr-NiAl)(0...600°C)	07				
Thermocouple K (NiCr-NiAl)(0...900°C)	08				
Thermocouple K (NiCr-NiAl)(0...1300°C)	09				
Thermocouple S (PtRh10-Pt)(0...1600°C)	10				
Output:					
relay		1			
binary 0/6 V for SSR control		2			
Version:					
standard				00	
custom-made*				XX	
Language:					
Polish					P
English					E
other*					X
Acceptance tests:					
without extra requirements					0
with a extra quality inspection certificate					1
acc. to customer's request*					X

* - after agreeing with the manufacturer

Order example:

The code **RE71 - 06 2 00 E 0** means:

- RE71** - temperature controller of RE71 type
- 06** - input: TC J, (0...900°C)
- 2** - output: binary 0/6 V for SSR control
- 00** - standard version
- E** - English language
- 0** - without extra requirements

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