RE81 TEMPERATURE CONTROLLER

LUMEL EVERYTHING COUNTS

Features:

IP65 · Auto tuning · PD14 compatible · eCon · SMART PID · ON/OFF control · Password protection

Inputs:

Outputs:

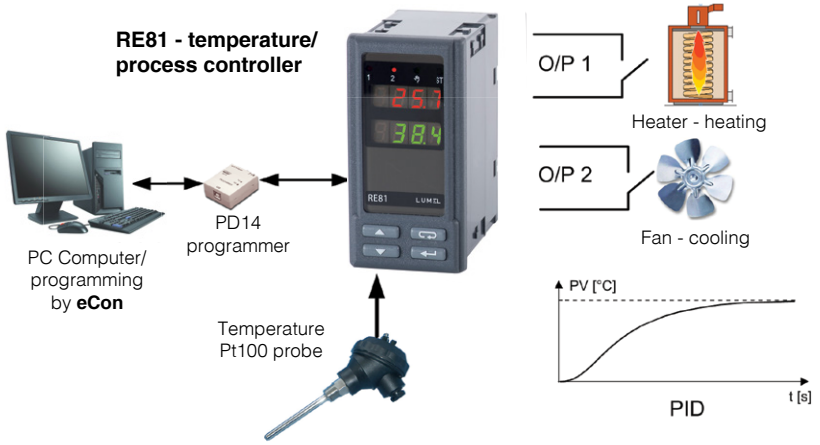
SSR output

Galvanic isolation:

Sup. · PD14 interface

- Control acc. to the PID, ON-OFF, heating/cooling algorithms or step-by-step control.
- Co-operates directly with resistance thermometers (RTD) or thermocouple sensors (TC).
- Automatic selection of PID parameters.
- 2 configurable outputs.
- Controller configuration by means of the free delivered eCon software.
- Error signaling by means of messages.
- Manual control mode.
- Frontal protection grade ensured by the casing: IP65.

Example of Application



Automatic control of heating and cooling with PID algorithm and autotuning.

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** • line resistance change of the RTD sensor **≤ 50% of the basic error value/10K** • 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 PN-EN 60584-1)				
Fe-CuNi	0..250	±2.0		
	0..600	±3.0		
	0..900	±4.0		
Thermocouple of K type (acc. to PN-EN 60584-1)				
NiCr-NiAl	0..600	±3.0		
	0..900	±4.0		
	0..1300	±6.0		
Thermocouple of S type (acc. to PN-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, auto-tuning, manual control	

Export department:
+48 68 45 75 139/ 321/ 368
Fax: +48 68 32 54 091
e-mail: export@lumel.com.pl

LUMEL S.A.
ul. Sulechowska 1
65-022 Zielona Góra
POLAND
WWW.LUMEL.COM.PL

RE81 TEMPERATURE CONTROLLER

EXTERNAL FEATURES		
Weight	< 0.25 kg	
Dimensions	48 x 96 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. ± 10%, 50/60Hz	power consumption: < 4 VA
Temperature	ambient: 0...23...50˚C	storage: -20...70˚C
Relative humidity	≤ 85%	condensation inadmissible
Operating position	any	
Preheating time	30 min	
Averaging time	≥ 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	acc. to EN 61010-1
Pollution grade	2	
Installation category	III	
Maximal phase-to-earth operating voltage	for the supply circuit, outputs: 300 V	
	for input circuits: 50 V	
Altitude above sea level	< 2000 m	

CONNECTION DIAGRAMS

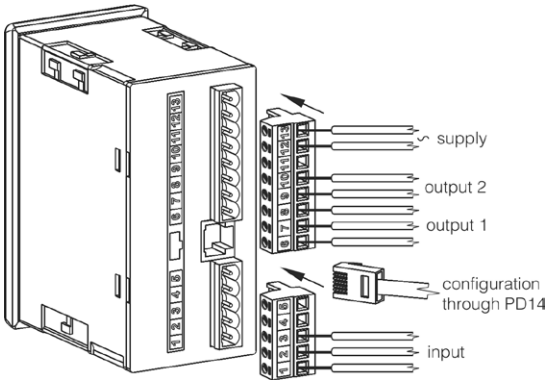
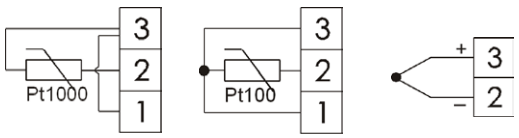
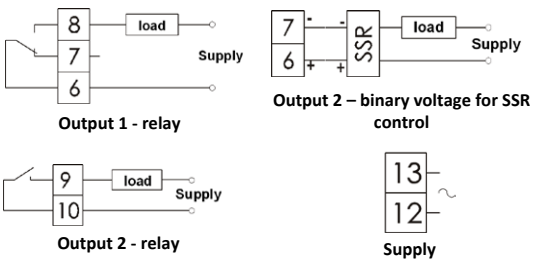


Fig. 1 View of the controller connection strips



RTD Pt100, in 2-wire system | **RTD Pt100, in 3-wire system** | **thermocouple**

Fig. 2. Connections of input signals



Output 1 - relay

Output 2 – binary voltage for SSR control

Output 2 - relay

Supply

Fig. 3. Supply and load circuit connections

ORDERING

ORDERING CODES:

RE81 -	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

* - second output - relay
** - after agreeing with the manufacturer

Order example:

The code **RE81 - 06 2 00 E 0** means:

RE81 - temperature controller of RE81 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

SEE ALSO:

Export department:
+48 68 45 75 139/ 321/ 368
Fax: +48 68 32 54 091
e-mail: export@lumel.com.pl

LUMEL S.A.
ul. Sulechowska 1
65-022 Zielona Góra
POLAND
WWW.LUMEL.COM.PL

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Temperature Sensor Modules ***category:***

Click to view products by LUMEL ***manufacturer:***

Other Similar products are found below :

HPP809A031 MBT 3560-0000-0050-10-110 MBT 3560-0000-0100-10-110 MBT 3560-0001-0050-10-120 MBT 3560-0001-0100-10-120 TCN4L-22R TX4H-14R TX4H-24R TX4H-A4R TX4H-B4R TX4L-14R TX4L-A4R TX4L-B4R TX4M-14R TX4M-24R TX4M-A4R TX4M-B4R QP99 CP-02 CP82 CP99 R38-LAOO R38-LARR 72-11304023-0150.0050 72-11304027-0150.0050 72-23304003-0150.0050.GGP 72-23904001-0300.0040.TM 72-34904001-0300.0040.TM TEM 73 A AT403-414-1000 AT403-614-1000 AT-503-1141-000 AT-503-1161-000 AT-503-6140-000 AT-603-1141-000 AT603-414-1000 AT-903-1161-000 ATR121-AD ATR121-B TPMC-5 TPMC-8W K39-HCRR K39T-HCRR K49-HCRR K49P-HCRR K85-HERR KR1-LCRR-D LHI874 LHI944 LHI968