TEMPERATURE CONTROLLER MOUNTED ON A 35 mm RAIL

RE60 TYPE

APPLICATION

The RE60 controller controls the temperature in objects through turning on and off the electrical controlling device according to the defined setting by the controller. It cooperates directly with RTD and TC.
It is destined for the temperature control in telecommunication cabinets in food and drying industries and everywhere, where there is the necessity to stabilize the temperature changes.
The controller has one output destined for the control and two alarm outputs.

TECHNICAL DATA

Input signals acc. table 1

Input signals and measuring ranges for inputs — Table 1

Sensor type/inputs	Marking	Range [°C]	Basic error [°C]
Pt100 acc.to EN 60751	Pt100	-50...100	0.8
Pt100	Pt100	0...250	1.3
Pt100	Pt100	0...600	3.0
Fe-CuNi acc.to EN 60584-1	J	0...250	3.0
Fe-CuNi	J	0...600	4.0
Fe-CuNi	J	0...900	5.0
NiCr-NiAl acc. to EN 60584-1	K	0...600	4.0
NiCr-NiAl	K	0...900	5.0
NiCr-NiAl	K	0...1300	6.0
PtRh10-Pt acc. to EN 60584-1	S	0...1600	7.0

Current flowing through Pt100 < 220 µA

Measurement time 0.5 s

Detection of error in the measuring circuit:
- thermocouple, Pt100 — overflow of the measuring range

Kinds of outputs:
- relay — voltageless make contacts
  maximal load:
  voltage: 250 V a.c., 150 V d.c.
  current: 5 A 250 V a.c.,
  5 A 30 V d.c.
  resistance load: 1250 VA,
  150 W
- logic voltage (without isolation from the sensor side) — voltage 5 V esistance limiting the current: 66 Ω

Way of output operation:
- reverse for heating
- direct for cooling

Signalling:
- active output — symbol on the LCD display
- active alarm — symbol on the LCD display and LED diode

Rated operating conditions:
- supply voltage — 230 V a.c. ± 10%
  110 V a.c. ± 10%
  24 V a.c. ± 10%
  18...72 V d.c.
- frequency of supply voltage — 50/60 Hz
- ambient temperature — 0...23...50°C
- storage temperature — - 20...+70°C
- related air humidity — < 85% (without condensation)
- external magnetic field — < 400 A/m
- preheating time — 30 min
- work position — any

Power consumption < 3 VA

Dimensions 45 x 120 x 100 mm

Weigh < 0,3 kg

Fixing on a 35 mm rail

Protection degree ensuring by the house IP 40 acc. to EN 60529

Additional errors in rated operating conditions:
- changes of the ambient temperature — ≤ 100% of the basic error /10 K.

Security requirements acc. to EN 61010-1
- installation category — III
- pollution level — 2
- maximal phase-to-earth working voltage:
- for the supplying circuit, outputs — 300 V
- for input circuits — 50 V

Electromagnetic compatibility:
- immunity acc. to EN 61000-6-2
- emissions acc. to EN 61000-6-4

LUMEL

CONTROLLER INSTALLATION

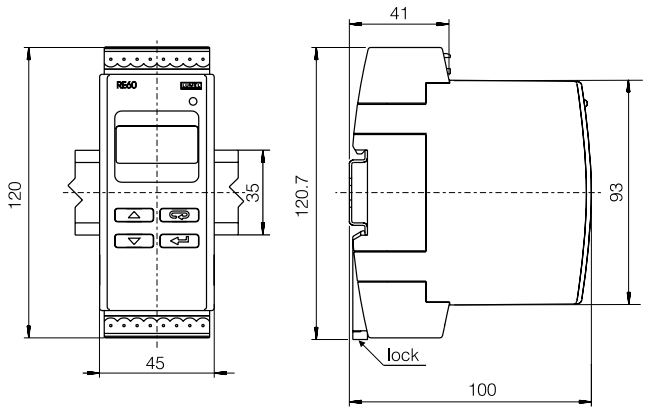

Fig.1. Dimensions and fixing way of the controller

ELECTRICAL CONNECTIONS

Carry out electrical connections to the terminal strips and next insert strips into controller sockets.

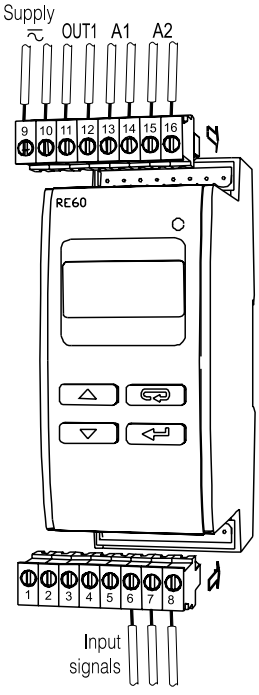

Fig.2. View of controller connection strips

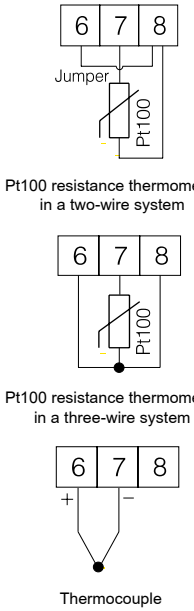

Fig.3. Connection of input signals

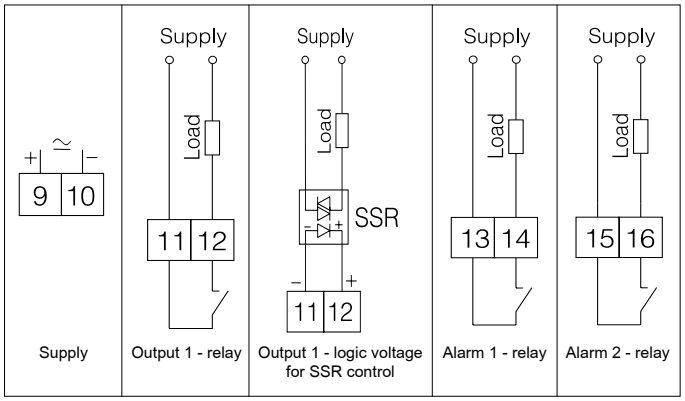

Fig.4. Connection of the supply and load circuit

ORDERING CODES

Kinds of versions and ordering codes

Table 2

Temperature controller RE60 -	XX	X	X	X	X
Input:					
resistance thermometer Pt100 (-50...100 °C)	01				
tresistance thermometer Pt100 (0...250 °C)	02				
resistance thermometer Pt100 (0...600 °C)	03				
thermocouple J (0...250 °C)	04				
thermocouple J (0...600 °C)	05				
thermocouple J (0...900 °C)	06				
thermocouple K (0...600 °C)	07				
thermocouple K (0...900 °C)	08				
thermocouple K (0...1300 °C)	09				
thermocouple S (0...1600 °C)	10				
as per order	XX				
Main output:					
relay		1			
logic 0/5 V for SSR control		2			
as per order		X			
Alarm outputs:					
without outputs			0		
1 relay output			1		
2 relay outputs			2		
as per order			X		
Supply:					
230 V a.c. 50/60 Hz				1	
110 V a.c. 50/60 Hz				2	
24 V a.c. 50/60 Hz				3	
18...72 V d.c.				4	
as per order				X	
Additional requirements:					
without additional requirements					8
with an extra quality inspection certificate					7
acc. to agreement with the user*					X

*The code number is established by the manufacturer.

ORDERING EXAMPLE

The **RE60 - 05 -1 - 2 - 3 - 8** code means:
RE60 - temperature controller of RE60 type to be mounted on a 35 mm rail
05 - input: thermocouple J
1 - main output: relay
2 - alarm outputs: two relays
3 - supply: 24 V a.c. 50/60 Hz
8 - without additional quality inspection requirements