

RE82 TEMPERATURE CONTROLLER

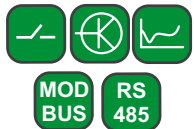
FEATURES:



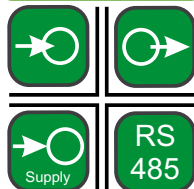
INPUTS:



OUTPUTS:

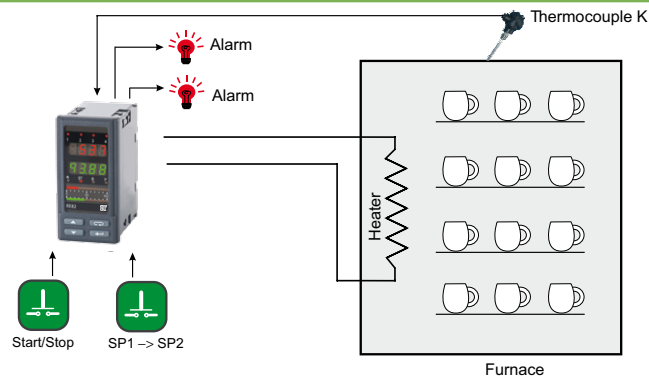


GALVANIC ISOLATION:



- 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.
- 2 relay outputs in standard and optional 2 outputs: relay, OC or analog output.
- 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 frontal side: IP65 | from terminal side: IP20 |
| Bargraph | 2 x 21 points | color: red and green |

Sifam Tinsley Instrumentation Ltd
Unit 1 Warner Drive,
Springwood Industrial Estate
Braintree, Essex, UK, CM72YW
E-mail: sales@sifamtinsley.com
Web: www.sifamtinsley.com/uk
Contact: +44(0)1803615139



Sifam Tinsley Instrumentation Inc.
3105, Creekside Village Drive,
Suite No. 801, Kennesaw,
Georgia 30144 (USA)
E-mail Id : psk@sifamtinsley.com
Web: www.sifamtinsley.com
Contact No.: +1 404 736 4903

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

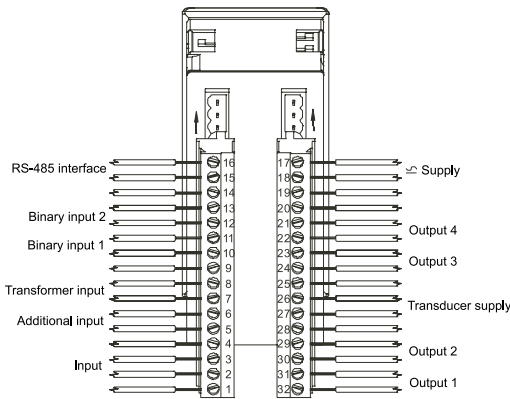


Fig. 1. View of controller connection terminal strips.

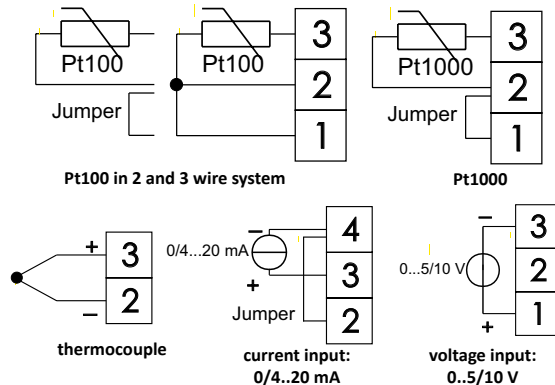


Fig. 2. Connection of input signals.

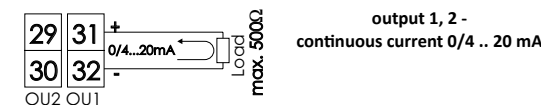
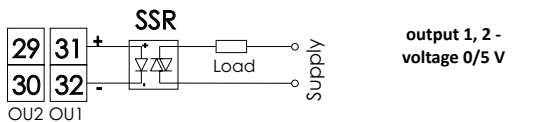
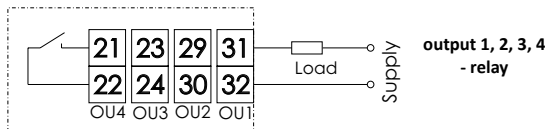


Fig. 3. Control/alarm output.

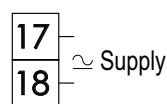


Fig. 4. Supply.

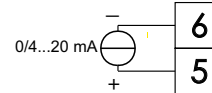


Fig. 5. Signal of additional input.

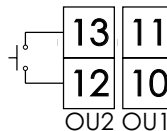


Fig. 6. Binary input 1 and 2.

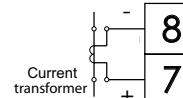


Fig. 7. Current transformer input.

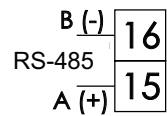


Fig. 8. RS-485 interface.

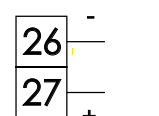


Fig. 9. Supply of 24 V transducers.

ORDERING

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

¹⁾ only when a relay or voltage output 0/5 V is also selected on the output 1
²⁾ 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.

Sifam Tinsley Instrumentation Ltd
 Unit 1 Warner Drive,
 Springwood Industrial Estate
 Braintree, Essex, UK, CM72YW
 E-mail: sales@sifamtinsley.com
 Web: www.sifamtinsley.com/uk
 Contact: +44(0)1803615139



Sifam Tinsley Instrumentation Inc.
 3105, Creekside Village Drive,
 Suite No. 801, Kennesaw,
 Georgia 30144 (USA)
 E-mail Id : psk@sifamtinsley.com
 Web: www.sifamtinsley.com
 Contact No.: +1 404 736 4903