

HR82 TEMPERATURE CONTROLLER

FEATURES:

- Timer Password protection SP X2
- Smart PID Auto On/Off
- Soft Start AL Latch
- LPCongig Compatible

INPUTS:

- DC CT

OUTPUTS:

- MOD BUS RS 485

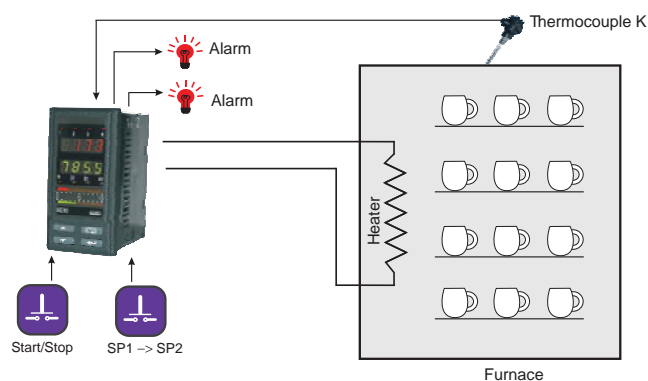
GALVANIC ISOLATION:

- Supply RS 485



- 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.
- 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 (K)	-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 forntal side: IP65	from terminal side: IP20
Bargraph	2 x 21 points	color: red and green



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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

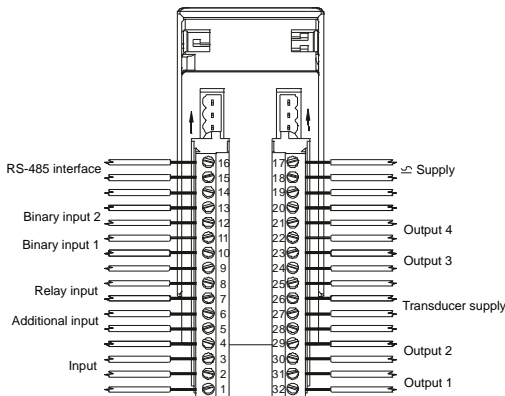


Fig.1. View of controller connection terminal strips.

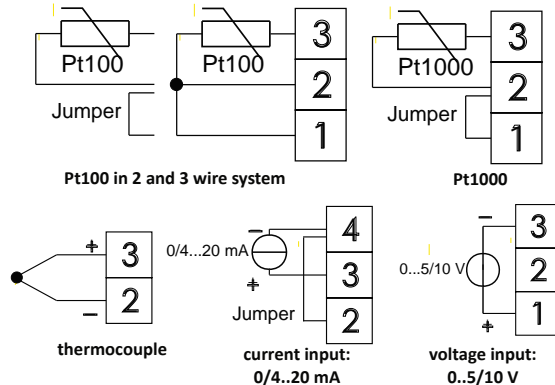


Fig.2. Connection of input signals.

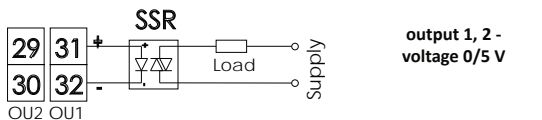
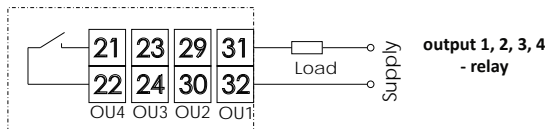


Fig.3. Control/alarm output.

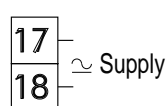


Fig.4. Supply.

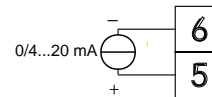


Fig.5. Signal of additional output.

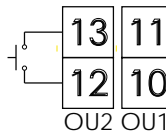


Fig.6. Binary input 1 and 2.

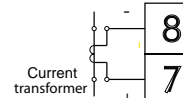


Fig.7. Current transformer input.

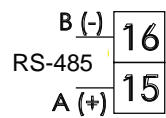


Fig.8. RS-485 interface.

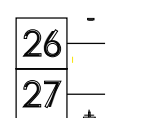


Fig.9. Supply of 24 V transducers.

ORDERING

HR82 -	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 there is a selected relay on the output 1
²⁾ only after agreeing with the manufacturer

Order example:

The code **HR82 - 1 2 0 1 00 E 0** means:
HR82 - controller of HR82 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.

SEE ALSO:

CONvertisSEUR PROGRAMMABLE



HCU12

CONvertisSEUR ALIMENTE DEPUIS BOUCLE DE COURANT



HC15

AFFICHEUR NUMERIQUE



HI20

REGULATEUR



HR20