INTRA-AUTOMATION **IA**

MESS- UND REGELINSTRUMENTE / MEASUREMENT AND CONTROL

www.tuv.com
TÜVRheinland
ID:9105022228

TÜVRheinland®
CERT
ISO 9001

Temperature Controller
IntraCon

Series IA-RE82

Technical Information
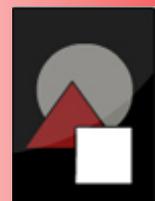
03/2011

Accessories

THE EXPERT IN LEVEL AND FLOW

Intra-Automation
Technical Information
03/2011

Technical details subject to be changed without notice.

For comments regarding this brochure, please contact:
info@intra-automation.de

IA-RE82
IntraCon

Temperature Controller

List of Contents:

1 Features

- Universal measuring input
- Binary input control
- Set point value: fixed 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

  8 types of alarms

  Function of bistable alarm (LATCH)

  Timer function

  Measurement of heater current and heater burning or short-circuit of the control element

2 Application example

Control of ceramics burning process
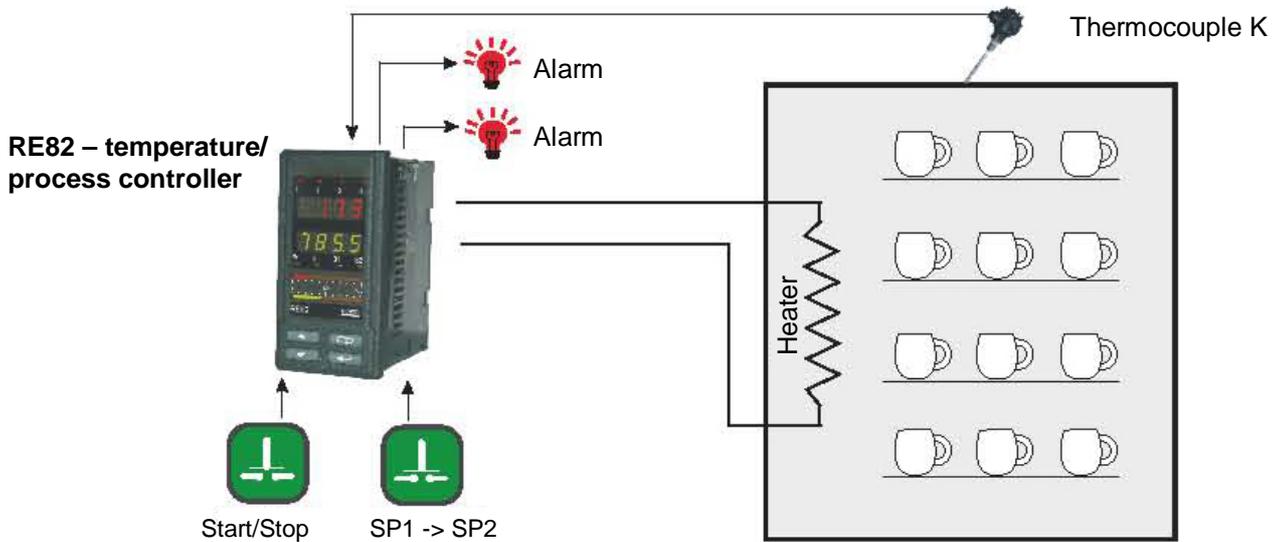
3 Technical data

Inputs

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-Pt6 (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 % $\pm$ 1 digit
Voltage channels (U)	0…5/10 V	0.2 % $\pm$ 1 digit
Binary	voltageless	

Outputs

Kind of output	Properties	
Voltageless relay output	NO contact	2A/230 V AC (out 1 and 2) 1A/230 V AC (out 3)
Voltage transmitter output	0/5 V	max. 40 A
Continuous voltage output	0…10 V	at $R_{load} \geq 1$ kΩ
Continuous current output	0…20 mA, 4…20 mA	at $R_{load} \leq 500$ Ω
Supply of measuring relays	24 V DC	max. 30 mA

Digital interfaces

Interface type	Transmission protocol	Modes	Baud rates
RS-485	MODBUS RTU	8N2, 8E1, 8O1, 8N1	4.8, 9.6, 19.2, 38.4, 57.6, 115.2 kbit/s

External features

Read-out field	2x4 digits	Digit height: 10 mm, red and green
Weight	< 0,2 kg	
Dimensions	48 x 96 x 93 mm	
Protection grade (acc. to EN 60529)	IP65 (housing/front side)	IP20 (terminal side)
Bargraph	2x 21 points	colour: red and green

Rated operation conditions

Supply voltage	85…253 V AC/DC	24…40 V AC/DC
Temperature	Ambient: 0...23…50 °C	Storage: -20…70 °C
Relative humidity	$\leq$ 85 %	(without condensation of water vapour)
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 grade	2	
Installation category	III	
Maximal phase-to-earth operating voltage	supply circuit, output: 300 V	acc. to EN 61010-1
	input circuit: 50 V	
Altitude above sea level	< 2000 m	

4 Electrical connection

Controller connection terminal:

Input connections:

Pt100 in 2 and 3 wire system   Pt1000

thermocouple   current input: 0/4..20 mA   voltage input: 0..5/10 V

Control/alarm output

output 1, 2, 3, 4 - relay

output 1, 2 - voltage 0/5 V

output 1, 2 - continuous current 0/4 .. 20 mA

output 1, 2 - continuous voltage 0..10 V

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.
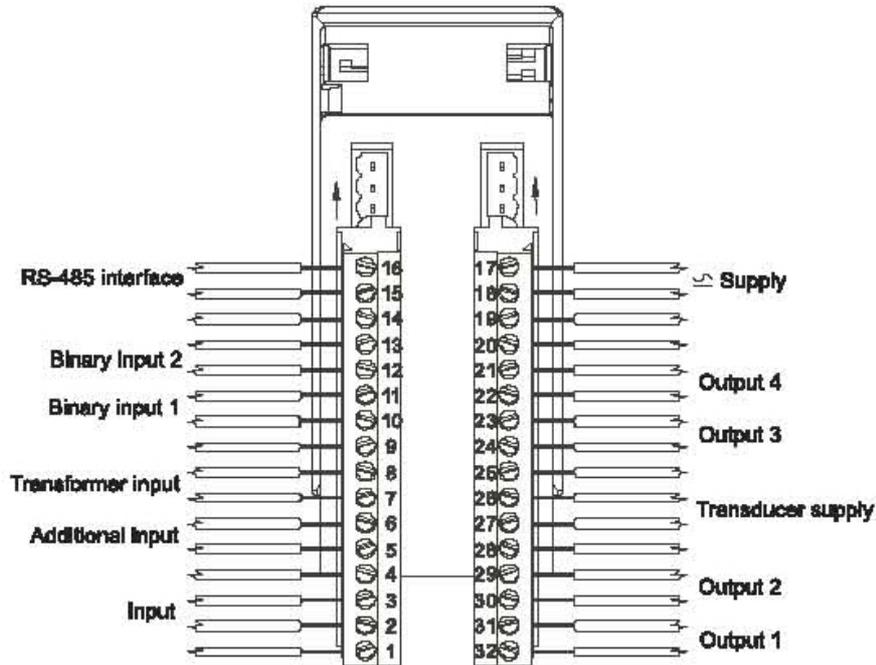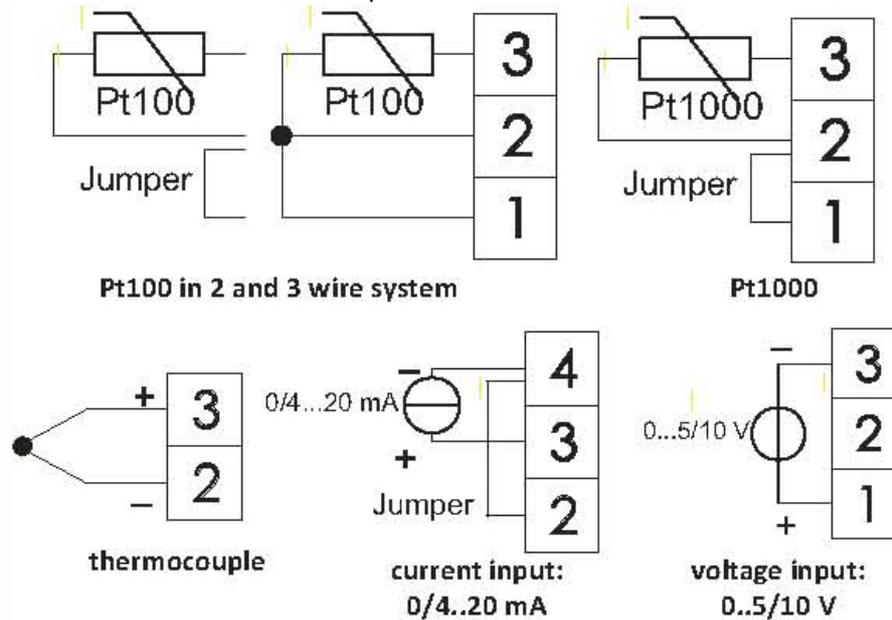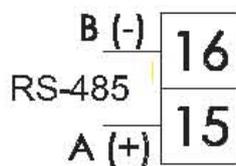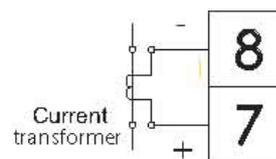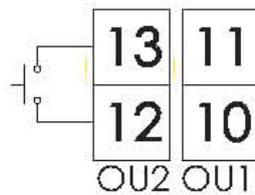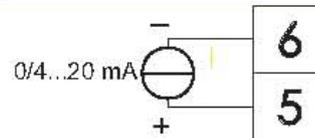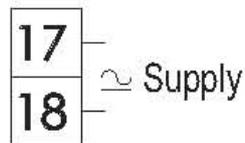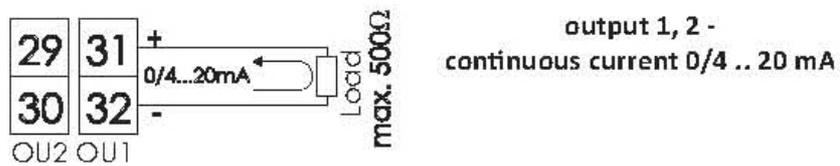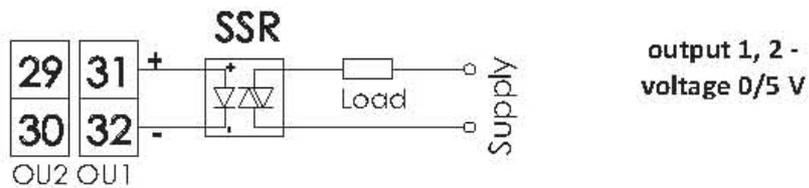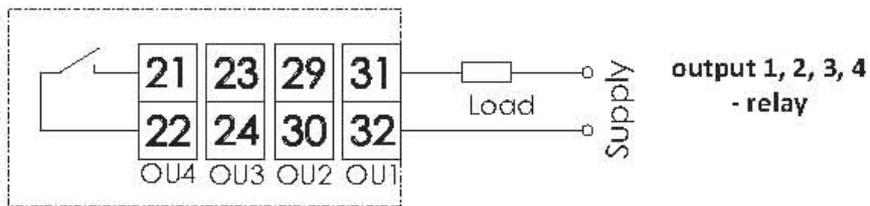
5 Order codes

Code	Description							
IA-RE82	Temperature Controller							
	Output 1							
	1	relay						
	2	voltage: 0/5V						
	3	continuous current: 0/4…20 mA						
	4	continuous voltage: 0…10 V						
		Output 2						
		1	relay					
		2	voltage: 0/5V					
		3	continuous current: 0/4…20 mA					
		4	continuous voltage: 0…10 V					
			Supply of transducers					
			0	without				
			1	Transducer supply: 24 V DC, 1 W				
				Supply				
				1	85…253 V AC/DC			
				2	20…40 V AC/DC			
					Version			
					00	standard		
					XX	custom-made		
						Language version		
						E	English	
						X	other	
							Certification	
							0	without additional quality inspection certificate
							1	with additional quality inspection certificate
							X	on request*
IA-RE72								

*Please contact manufacturer

Besides the products covered by this brochure, Intra-Automation GmbH also manufactures other high-quality and high precision instruments for industrial measurement tasks. For more information, please contact us (contact details on the backside of this brochure).

Flow measurement

Itabar®-Flow Sensor

IntraSonic IS210 Ultrasonic Flow Meter

Level measurement

ITA-mag. Level Gauge

MAGLINK Level Indicator

Other Measurement Tasks:

DigiFlow Flow and Level Computers

IntraCon Digital Controllers

IntraDigit Digital Indicators / Meters

INTRA-AUTOMATION
MESS- UND REGELINSTRUMENTE / MEASUREMENT AND CONTROL

International Headquarters:	**Sales Office for the BENELUX:**
Intra-Automation GmbH	B.V. Intra-Automation HTP
Otto-Hahn-Str. 20	PO Box 10
41515 Grevenbroich	4730 AA Oudenbosch
GERMANY	THE NETHERLANDS
☎ +49 – (0) 21 81 / 7 56 65-0	☎ +31 – (0)165 – 32 22 01
☷ +49 – (0) 21 81 / 6 44 92	☷ +31 – (0)165 – 32 29 70

🖱 info@intra-automation.de   🖱

🖥 www.intra-automation.com