

Temperature Controller IntraCon Series IA-RE71



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:
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IA-RE71 IntraCon Temperature Controller

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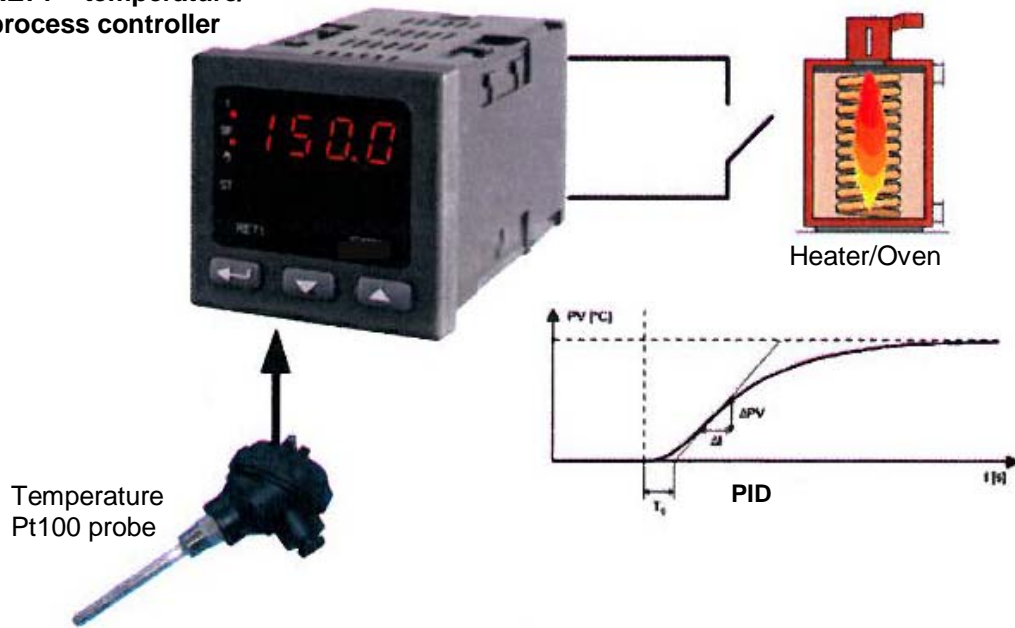
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1 Features

- ◆ Control acc. to the PID or ON/OFF algorithm
- ◆ Direct cooperation with resistance thermometers or thermocouple sensors
- ◆ Automatic selection of PID parameters
- ◆ One control output, relay output or voltage output for SSR relay control
- ◆ Manual control mode

2 Application example

RE71 – temperature/
process controller



Automatic control of the heater using the PID algorithm with auto-tuning function

3 Technical data

Inputs					
Sensor type	Range [°C]	Basic error [°C]	Remarks	Additional error	
Resistance thermometer (acc. to EN 60751), measuring current 0.25 mA					
Pt100	-50...100	± 0.8	Resistance of the sensor line < 10 Ω: one must connect with wires of the same section and length	Additional error in rated operating conditions caused by: Compensation of reference junction temperature changes: ≤ 2°C Change of ambient temp.: ≤ 100% of the basic error / 10 K	
	0...250	± 1.3			
	0...600	± 3.0			
Thermocouple of J type (acc. to EN 60584-1)					
Fe-CuNi	0...250	± 2.0			
	0...600	± 3.0			
	0...900	± 4.0			
Thermocouple of K type (acc. to EN 60584-1)					
NiCr-NiAl	0...600	± 3.0			
	0...900	± 4.0			
	0...1300	± 6.0			
Thermocouple of S type (acc. to EN 60584-1)					
PtRh10-Pt	0...1600	± 8.0			

Outputs	
Kind of output	Properties
voltageless relay	switching contact, overload capacity: 5 A/230 V
Binary voltage	voltage 6 V, without isolation from the sensor side

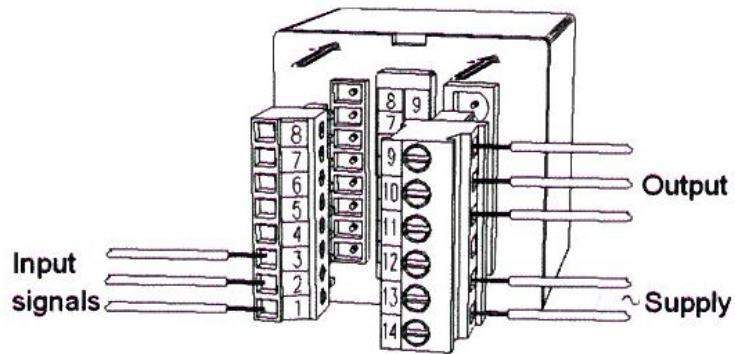
Parameters of work		
Detection of error in the measurement circuit:	Thermocouple, Pt100	Overflow of measuring range
Way of output operation:	reverse: for heating	Direct: for cooling
Signalling:	Active output, set point value display, auto-tuning, manual control.	

External features		
Weight	< 0,25 kg	
Dimensions	48 x 48 x 93 mm	
Protection grade (acc. to EN 60529)	IP65 (housing/front side)	IP20 (terminal side)

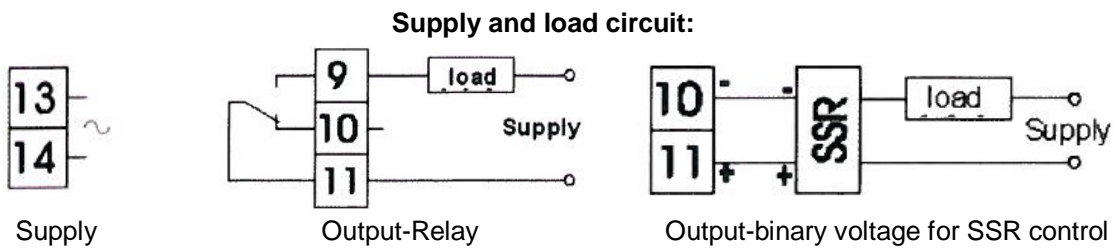
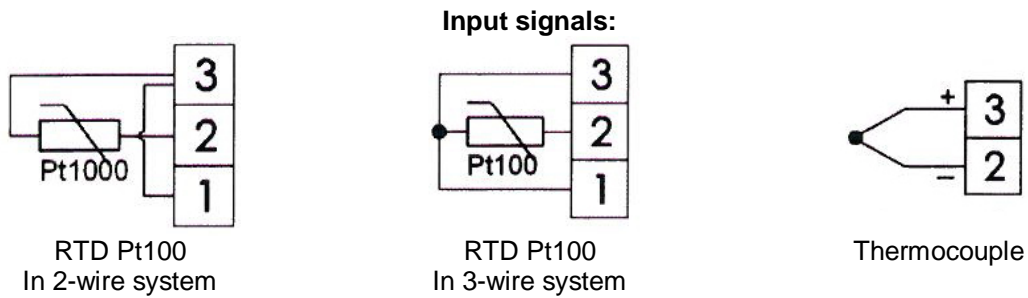
Rated operation conditions		
Supply voltage	230 V AC ± 10 %, 50/60 Hz	power consumption: < 4 VA
Temperature	Ambient: 0...23...50 °C	Storage: -20...70 °C
Relative humidity	≤ 85 %	condensation inadmissible
Operating position	any	
Preheating time	30 min	
Averaging time	≥ 0,33 s	

Safety and compatibility requirements		
Electromagnetic compatibility	noise immunity	acc. to EN 61000-6-2
	noise emissions	acc. to EN 61000-6-4
Pollution grade	2	acc. to EN 61010-1
Installation category	III	
Maximal phase-to-earth operating voltage	supply circuit, output: 300 V	
	input circuit: 50 V	
Altitude above sea level	< 2000 m	

4 Electrical connection



View of the controller connection terminals

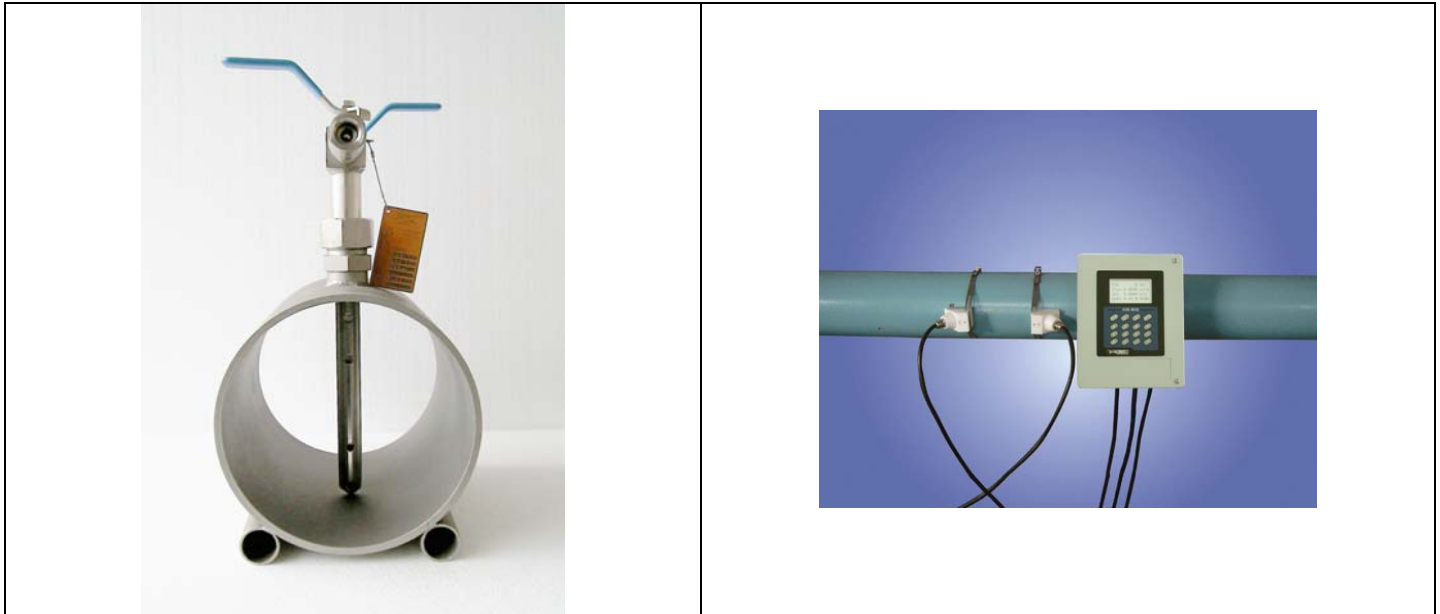


5 Order codes	
Code	Description
IA-RE71	Temperature Controller
	Input
01	resistance thermometer Pt100 -50...100 °C
02	resistance thermometer Pt100 0...250 °C
03	resistance thermometer Pt100 0...600 °C
04	thermocouple J 0...250 °C
05	thermocouple J 0...600 °C
06	thermocouple J 0...900 °C
07	thermocouple K 0...600 °C
08	thermocouple K 0...900 °C
09	thermocouple K 0...1300 °C
10	thermocouple S 0...1600 °C
	Main output
1	relay
2	logic 0/5 V for SSR control
	Version
00	Standard
XX	custom-made
	Language
E	English
X	Other*
	Certification
8	without additional quality inspection certificate
7	with additional quality inspection certificate
X	on request*
IA-RE71	

*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).

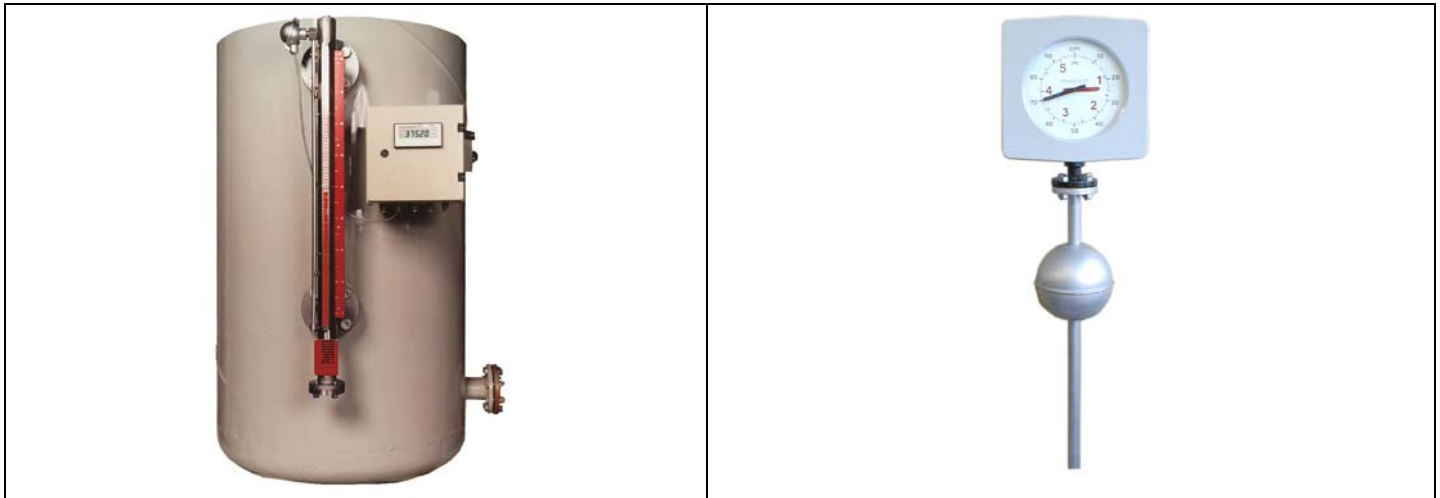
Flow measurement



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



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