

# Controller IntraCon Series IA-RE19



## 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.

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# IA-RE19 IntraCon Controller

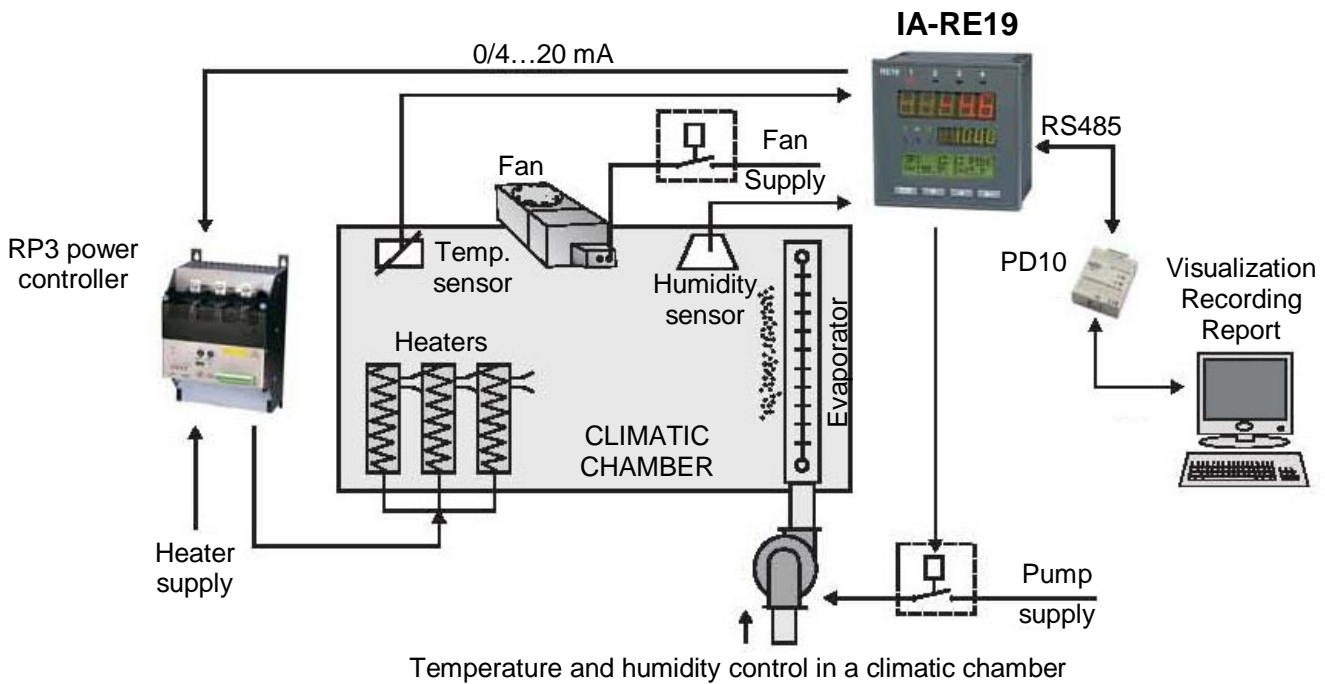
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## 1 Features

- ◆ 2 main inputs: universal (temperature and standard signals)
- ◆ 2 logic inputs
- ◆ Additional input and RS485 (optional)
- ◆ 4 outputs (control and alarm): relay, transistor or continuous (optional)
- ◆ Control: PID with auto-tuning, on/off
- ◆ Programmable control (15 programs of 15 intervals) (optional)
- ◆ Step-by-step control (optional)

## 2 Application example



### 3 Technical details

Inputs			
Kind of input	Max. measuring range	Error	Add. error
<b>Universal main input</b>			
Pt100	-200...850 °C	0.1 %	Compensation of wire resistance changes in 3-wire connection: < 0.1 %
Pt500	-200...850 °C	0.1 %	
Pt1000	-200...850 °C	0.1 %	
Ni100/1.617	-60...180 °C	0.2 %	Compensation of thermocouple reference cold junction: < 2 °C
Cu100/1.426	-50...180 °C	0.2 %	
Fe-CuNi (J)	-200...1200 °C	0.2 %	
Cu-CuNi (T)	-100...400 °C	0.2 %	
NiCr-NiAl (K)	-200...1370 °C	0.1 %	
PtRh10-Pt (S)	-50...1760 °C	0.2 %	
PtRh13-Pt (R)	-50...1760 °C	0.2 %	Ambient temperature change: ≤ 0.1 % / 10 K
PtRh30-PtRh6 (B)	300...1820 °C	0.3 %*	
NiCr-CuNi (E)	-200...1000 °C	0.1 %	(*) error for the thermocouple B concerns the range: 500...1820 °C
NiCrSi-NiSi (N)	-150...1300 °C	0.1 %	
Current (I)	0...20 mA / 4...20 mA	0.05 %	
Voltage (U)	0...5 V / 0...10 V / 1...5 V	0.05 %	
<b>Additional input</b>			
Current (I)	0...20 mA / 4...20 mA		
Voltage (U)	0...5 V / 0...10 V / 1...5 V		
Resistance (R)	0...100 Ω		
<b>Logic Input</b>		<b>voltageless</b>	

Outputs		
Kind of output	Properties	Remarks
Relay	2, 3 or 4 outputs	switching contacts 5 A / 230 V
OC transistor	2, 3 or 4 outputs	$U_{max} = 24 \text{ V}$ , $I_{max} = 20 \text{ mA}$
Voltage transmitter	1 of 2 outputs	0/15 V ( $I_{max} = 20 \text{ mA}$ )
Continuous voltage	1 of 2 outputs	0...5 V, 0...10 V, $R_{load} \geq 500 \Omega$
Continuous current	1 of 2 outputs	0...20 mA, 4...20 mA, $R_{load} \geq 500 \Omega$

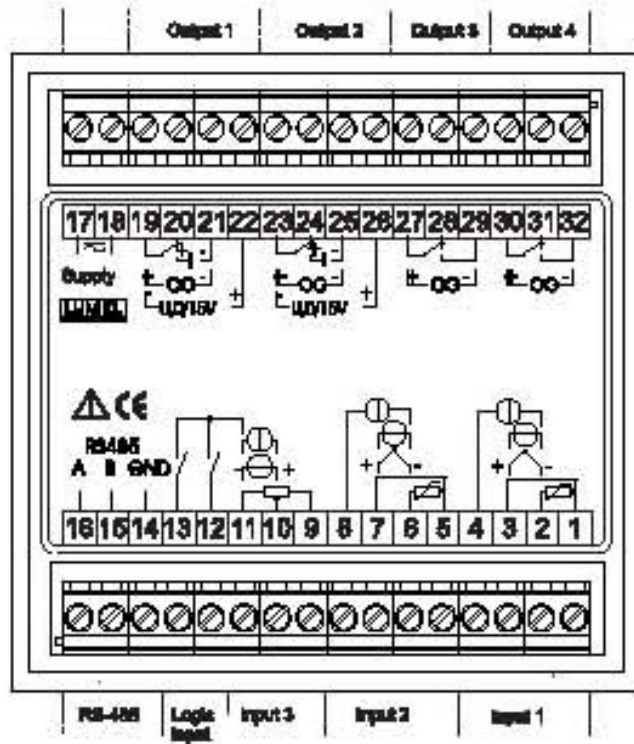
Digital interfaces			
Interface type	Transmission protocol	Modes	Baud rates
RS-485	MODBUS RTU / ASCII	ASCII: 8N1, 7E1, 7O1 RTU 8N2, 8E1, 8O1, 8N1	2400, 4800, 9600, 19200 bit/s

External features		
Readout field	LED 10 mm, 5 digits LED 10 mm, 5 digits LCD 2x 16 characters	
Weight	< 0.4 kg	
Overall dimensions	96 x 96 x 81 mm	Panel cut-out: $90^{+0.6} \times 45^{+0.6} \text{ mm}$
Protection:	IP40 (front side)	IP20 (terminal side)

Rated operating conditions		
Supply	85...253 V AC/DC; 18...360 V DC	Frequency: 40...50...440 Hz
Temperature	Ambient: 0...23...40 °C	Storage: -20...70 °C
Relative Humidity	< 85 %	without condensation
Operating position	any	
External magnetic field	0...400 A/m	

Safety and compatibility conditions		
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 working voltage	for the supply circuit, relay outputs: 300 V	
	for remaining circuits: 50 V	
Altitude above sea level	< 2000 m	

**4 Connecting diagrams**



View of controller terminal strips

**5 Order codes**

Code	Description
IA-RE19	Controller
	<b>Version</b>
<b>S</b>	constant-valued control
<b>V</b>	step-by-step control
<b>P</b>	programmable control
<b>X</b>	as per order*
	<b>Additional input</b>
<b>0</b>	without
<b>1</b>	current: 0/4...20 mA
<b>2</b>	Voltage: 0...10 V, 0...5 V, 1...5 V potentiometric transmitter: 100 Ω potentiometric transmitter: 1000 Ω
<b>X</b>	as per order*
	<b>Output</b>
<b>1</b>	4 relays
<b>2</b>	4 OC transmitters
<b>3</b>	1 transistor 0/15 V + 3 relays
<b>4</b>	2 transistors 0/15 V + 2 relays
<b>5</b>	1 continuous + 3 relays
<b>6</b>	1 continuous + 3 transistors OC
<b>7</b>	2 continuous + 2 relays
<b>8</b>	2 continuous + 2 transistors OC
<b>9</b>	1 continuous + 2 transistor 0/15 V
<b>X</b>	as per order*
	<b>Interface RS485</b>
<b>0</b>	without interface
<b>1</b>	with MODBUS protocol
	<b>Supply</b>
<b>1</b>	85...253 V AC/DC
<b>2</b>	18..30 V DC
	<b>Certification</b>
<b>8</b>	without additional quality inspection certificate
<b>7</b>	with additional quality inspection certificate
<b>X</b>	on request*

IA-RE19						
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\*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

# IA



TÜVRheinland®  
**CERT**  
ISO 9001

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