

Temperature controller

RESISTRON® RES-5008

Conversion instructions from RES-403 to
RES-5008 for qualified professionals



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1 Validity of the operating instructions

These operating instructions apply to all models of the temperature controller RESISTRON® RES-5008 manufactured January 2020 and later.

2 Intended use

The current version of the temperature controller RES-5008 is downward compatible with the previous version RES-403.

This means that the temperature controller RES-5008 can be used instead of the temperature controller RES-403.

3 Selecting device

The temperature controller RESISTRON® RES-5008 has the following features:

- The line voltage can be anywhere within the range of 110 VAC to 480 VAC.

	Article number	
Line voltage	RES-403	RES-5008
115 VAC	740301	7500800
230 VAC	740302	
400 VAC	740303	

3.1 Corresponding system components



NOTICE

Malfunctioning due to use of devices from other manufacturers

Devices from other manufacturers can lead to malfunctions in the control loop.

- Use only original ROPEX accessories.
- Use only system components manufactured by ROPEX or that are approved for use with ROPEX equipment.

Device	Type		Certification	Article number
Current transformer	PEX-W5		UL	885107
	PEX-W4 ¹⁾		UL	885106
	PEX-W3 ¹⁾		-	885105
Mains filter	LF-06480	6 A, 480 VAC	UL	885500
	LF-35480	35 A, 480 VAC	-	885506
	LF-10520	10 A, 480 VAC	• UL • CSA	885504
	LF-50520	50 A, 480 VAC	• UL • CSA	885509

¹ No longer available

4 What is new?

	Temperature controller	
	RES-403	RES-5008
Visualization software	<i>ROPEX visualization software</i>	<i>ROPEXvisual®</i>
Operation	-	Terminal <i>T-408-1</i>
Interface	DIAG USB 2.0 in conjunction with the communication interface <i>CI-USB-1</i> , article no. 886550.	Micro USB The temperature controller can be connected to a PC to make maintenance and startup easier with the aid of the visualization software <i>ROPEXvisual®</i> .
Line voltage	• 115 VAC • 230 VAC • 400 VAC	110 VAC...480 VAC The temperature controller automatically recognizes the line voltage.
	When the line voltage is being supplied, the temperature controller is ready for operation.	Once the line voltage is activated, the temperature controller switches from standby to measuring mode or control mode.
24 VDC supply voltage	-	Standby When the 24 VDC supply voltage is switched on but there is no line voltage, the temperature controller remains in standby. The actual value 0 °C is output at ANALOG output terminal 17. As soon as line voltage is supplied, the temperature controller switches to measuring mode or control mode.
Terminal strip for supply voltage (included)	Not compatible with the terminal strip <i>RES-5008</i>	Not compatible with the terminal strip <i>RES-403</i>
Terminals 1 to 4	Terminal assignment identical	Terminal assignment identical
Terminal strip for control signals (included)	Compatible with the terminal strip <i>RES-5008</i>	Compatible with the terminal strip <i>RES-403</i>
Terminals 5 to 18	Not identical to assignment of the terminal strip <i>RES-5008</i> ; refer to Connection diagram showing terminals	Not identical to the previous assignment of the terminal strip <i>RES-403</i> ; refer to Connection diagram showing terminals

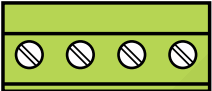
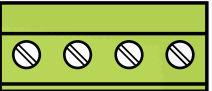
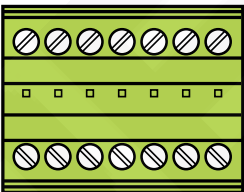
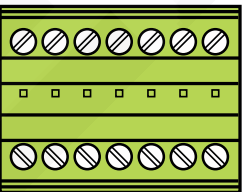
	Temperature controller	
	RES-403	RES-5008
AUTOCAL feature	Start the AUTOCAL feature - Using the button on the temperature controller - AUTOCAL input (terminal 8)	Start the AUTOCAL feature - Using the terminal <i>T-408-1</i> - With the PREHEAT input, configured as AUTOCAL input (terminal 18) - With an external button connected between terminal 18 (PREHEAT configured as AUTOCAL) and terminal 5 (+24 VDC)
Output ALARM	Relay make contact	Relay changeover contact Configurable with the aid of the slide
Error code display	-	In the event of an alarm, the error code - Is shown as voltage at the analog output - Is shown in terminal <i>T-408-1</i> - Is indicated via <i>ROPEXvisual</i>®.
Input PREHEAT	-	Configurable for input: - PREHEAT - AUTOCAL - RESET - Measurement pause
Setpoint (SET POINT) potentiometer	1. Connect potentiometer to terminal 17. 2. Use the potentiometer to set the setpoint.	A potentiometer can no longer be connected. ► Use the terminal <i>T-408-1</i> to set the setpoint.
Modification	MOD 26 (BOOSTER connection)	Booster output, standard
	MOD 40 (Signal Temperature reached)	-
	MOD 46 (Signal Temperature OK)	-

Further information can be found in the operating instructions for the temperature controller *RES-5008* and for the visualization software *ROPEXvisual*®; refer to [Homepage > Products > Downloads](#).

5 Connecting device

5.1 Terminal assignment

5.1.1 Terminal strip supply voltage and pulse transformer

		Terminal assignment	
		RES-403	RES-5008
Terminal strip	Supply voltage Terminals 1 - 4		
		• Not mechanically compatible • Terminal assignment identical	
	Control signals Terminals 5 - 18		
		• Mechanically compatible • Terminal assignment not identical	
Signal	U _R voltage measurement	7	8
	SET POINT potentiometer	17	-
	ANALOG OUTPUT	14	17
	ALARM OUTPUT	6, 5	12, 13, 14
	PREHEAT configured as AU-TOCAL with 24 VDC signal	8	18
	START (HEAT) with 24 VDC signal	12	16
	START with contact	18 (connect to 15)	16 (connect to 5)
	GND (ground) for E/A signals	13	7
	+24 VDC	-	5
	Ground (protective ground conductor)	13	6

5.1.2 Connection diagram showing terminals

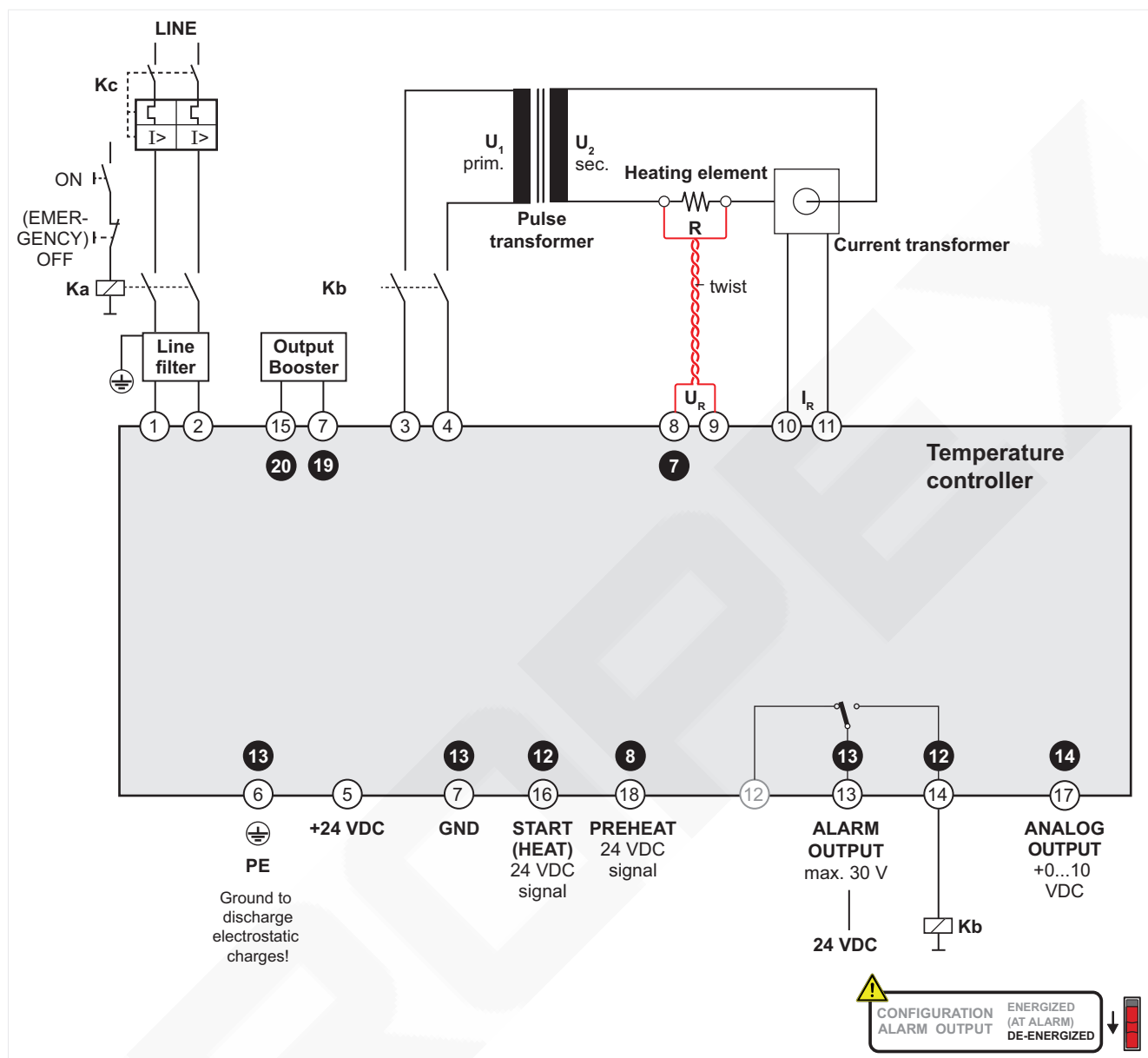


Illustration 1: Comparison of RES-403 and RES-5008 terminal assignment

How terminals are shown, example	Terminal assignment of temperature controller
6	RES-403
14	RES-5008
12	RES-5008 not connected