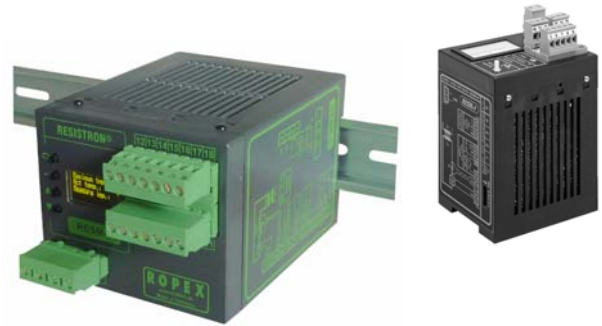


RESM-4/RESM-5^{GB} Replacement

Replacement instruction



The RESM-5 monitoring unit can be used as an alternative to the RESM-4.

The steps necessary to convert from RESM-4 to RESM-5 are described below.

These instructions provide only a brief overview of the two monitoring units. If in doubt, please refer to the latest version of the monitoring unit documentation, which is always binding.

The electrical connections of the RESM-4 and RESM-5 monitoring units are NOT compatible (see wiring diagrams).

The two models are also operated differently. Whereas potentiometers are used to calibrate the RESM-4 and set the alarm threshold, you do this on the RESM-5 with a display and four keys.

⚠ Older RESM-1 monitoring units (for temperature controllers in the "2xx" series) cannot be converted using the RESM-5.

Preparation

1. Select the unit

Select an RESM-5 with the same line voltage as the old RESM-4 monitoring unit (115VAC, 230VAC, or 400VAC). The RESM-5 monitoring unit has the following order numbers:

Line voltage:	115VAC ↴	RESM-5/115VAC
		Art. No. 885241
	230VAC ↴	RESM-5/230VAC
		Art. No. 885242
	400VAC ↴	RESM-5/400VAC
		Art. No. 885243

The line frequency is automatically detected by the RESM-5 monitoring unit in the range from 47 to 63Hz.

2. Select the required components

Trouble-free operation of the RESM-5 monitoring unit is only guaranteed in combination with the following components:

- PEX-W2 or PEX-W3: Current transformer
- Alternatively: MSW-1 or MSW-2:
Monitoring current transformer
- LF-06480: Line filter 6A, 480VAC

⚠ In order to avoid malfunctions, the RESM-5 is only allowed to be operated with the specified components.

Installation and startup

⚠ Installation and startup may only be performed by technically trained, skilled persons who are familiar with the associated risks and warranty provisions.

Please also refer to the relevant product documentation as well as to the ROPEX Application Report.

The information provided here offers no more than a brief overview. If in doubt, please refer to the latest version of the product documentation, which is always binding (↪ see also section 1 of the RESM-5 documentation, "Safety and warning notes").

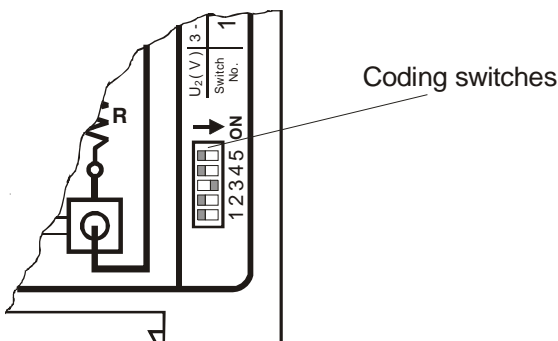
Proceed as follows to replace the RESM-4 monitoring unit and install / start up the RESM-5:

1. Switch off the line voltage and verify that the circuit is de-energized.
2. Remove the old RESM-4 monitoring unit.
3. The supply voltage specified on the nameplate of the RESM-5 monitoring unit must be identical to the line voltage that is present in the plant or machine. The line frequency is automatically detected by the controller in the range from 47 to 63Hz.

⚠ The RESM-4 has coding switches on the housing for setting the secondary voltage and current ranges.

The RESM-5 has been provided with an AUTORANGE function instead of these switches. The voltage and current ranges are automatically set when you run AUTOCAL.

Old setting ranges on the RESM-4:



U_2 (V)	3 - 10	8 - 30	20 - 60	50 - 80	$I_2 > 80A$
Switch No.	1	2	3	4	5

AUTORANGE function on the RESM-5:

The RESM-5 monitoring unit has no coding switches on the housing. The voltage (0.4...120V) and current (30...500A) ranges are automatically set when you run the AUTOCAL function. Heed the information provided in the ROPEX Application Report in order to avoid malfunctions.


4. The number of times the wire is laid through the PEX-W2/-3 or MSW-1/-2 current transformer for the RESM-5 must be the same as for the RESISTRON temperature controller. Heed the information provided in the ROPEX Application Report in order to avoid malfunctions.
5. Install the RESM-5 monitoring unit in place of the RESM-4. The terminals of the two devices are ***NOT*** compatible (see wiring diagrams).
6. Make sure no START signal is applied to the RESISTRON temperature controller.
7. Switch on the line voltage.
8. A power-up message appears on the display when you switch on the monitoring unit to indicate that it is being powered up correctly.
9. One of the following states then appears:

DISPLAY	ACTION
Display in home position	Go to step 10
Error message with error code 104...106, 111...113, 211	Go to step 10
Error message with error code 118	Reconnect/ Interchange U_R measuring wire to terminals 8+9. Then return to step 7
Error message with error code 101...103, 107, 108, 201...203, 801, 9xx	Error diagnosis (↪ document. RESM-5)

10. Configure the RESM-5:


Configure the RESM-5 as described in the "Configuration" section of the product documentation. The following settings must always be configured:

Setting	Step in Configuration menu
Language	201
Restore factory settings	202
Temperature range and heatsealing band alloy	204, 205
Maximum temperature (alarm threshold)	206
Alarm output function	215
ALARM-IN/RESET input function	229

 **Step nos. 204 (temperature range), 205 (heatsealing band alloy), and 206 (maximum temperature) should be set according to the heatsealing application and the heatsealing bands used. To prevent dangerous situations, refer to the risk analysis for the machine or plant.**



11. Deactivate alarms to simplify startup (if necessary):

To start up the RESISTRON temperature controller independently of the RESM-5 (e.g. in order to run AUTOCAL), you can deactivate the alarm output of the RESM-5 for a defined time. To do this, set any time up to 5 minutes with step 215 (alarm output). This time only applies once and is canceled if the RESM-5 is switched on or off.


 **The alarm relay is no longer switched by the RESM-5 if the alarm output is deactivated. In this case, error messages/signals are no longer transferred to the higher-level controller. You should therefore only use this function if the risk analysis for the machine or plant allows.**

To calibrate the zero point (AUTOCAL) on the RESM-5:

Run the AUTOCAL function while the heatsealing band is cold.

Press the  key repeatedly until menu step 107 is displayed. Then select the AUTOCAL function by pressing the  key. If this function is executed correctly, the main menu is automatically displayed again.

If AUTOCAL was not performed successfully, an error message appears on the display. In this case the controller configuration is incorrect (see "Configuration" section of the RESM-5 documentation and ROPEX Application Report). Configure the controller correctly and run the AUTOCAL function again.

 **The AUTOCAL function must be executed correctly on the RESISTRON temperature controller before it can be run here (i.e. the RESISTRON temperature controller must generate measuring impulses).**

The monitoring unit is now ready

RESM-5 factory settings / as-shipped condition

By restoring the factory settings (step 21 in the software menu, see step 10 above), you reset the unit to the following defaults:

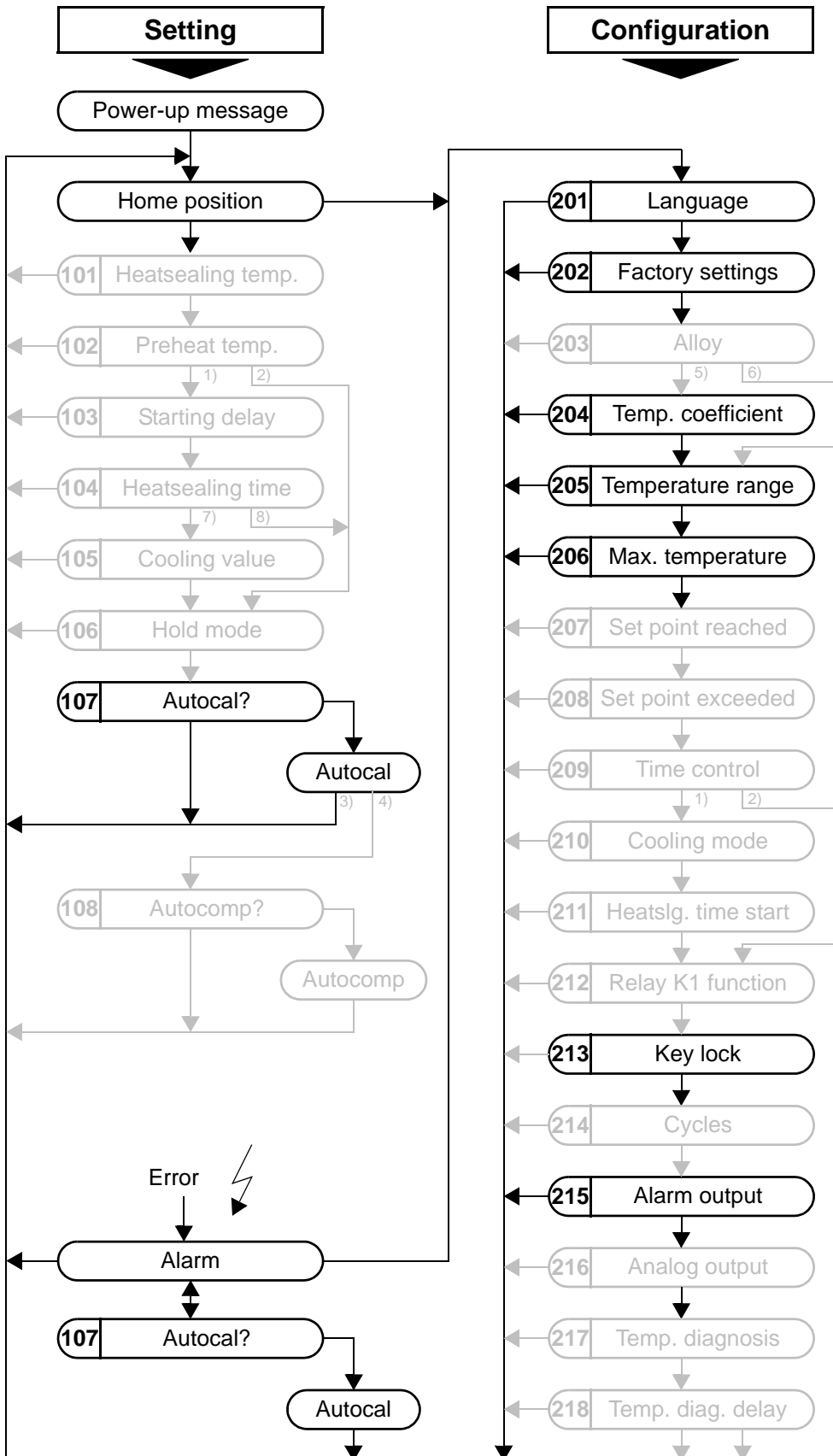
Menu	Function	Value
107	AUTOCAL temperature	20°C
204	Alloy	400ppm/K
205	Range	300°C
206	Maximum temperature (alarm threshold)	40°C
213	Key lock	No key
215	Alarm output	Normal (energized at alarm)
225	Temperature unit	Celsius
228	Screensaver	5 min
229	ALARM-IN/RESET input	Normal

The selected language (step 201 in the software menu) is not changed when you restore the factory settings.

As-shipped condition:

The RESM-5 monitoring unit is shipped with the above factory settings and with the language set to "German".

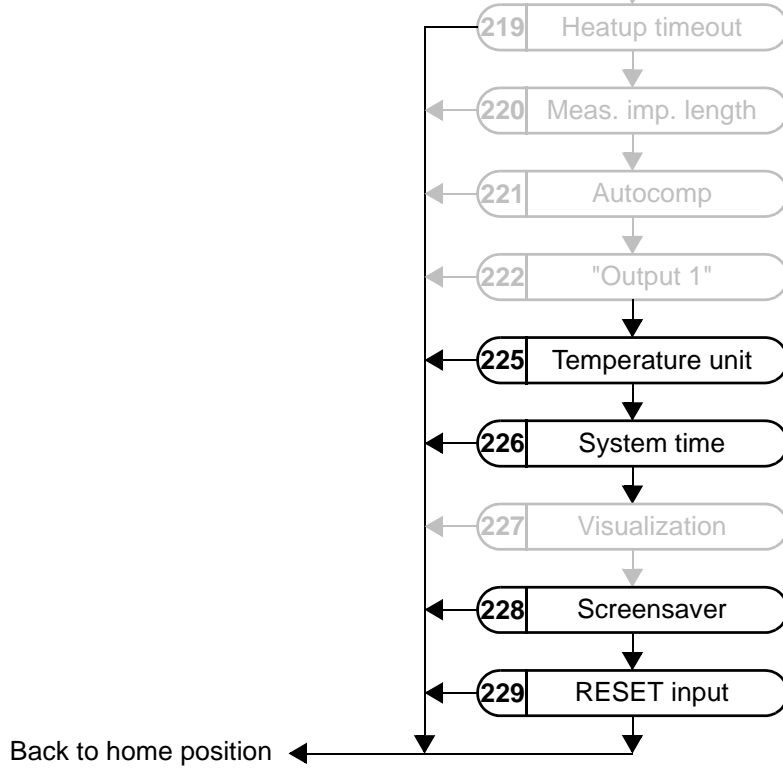
Menu structure of the RESM-5



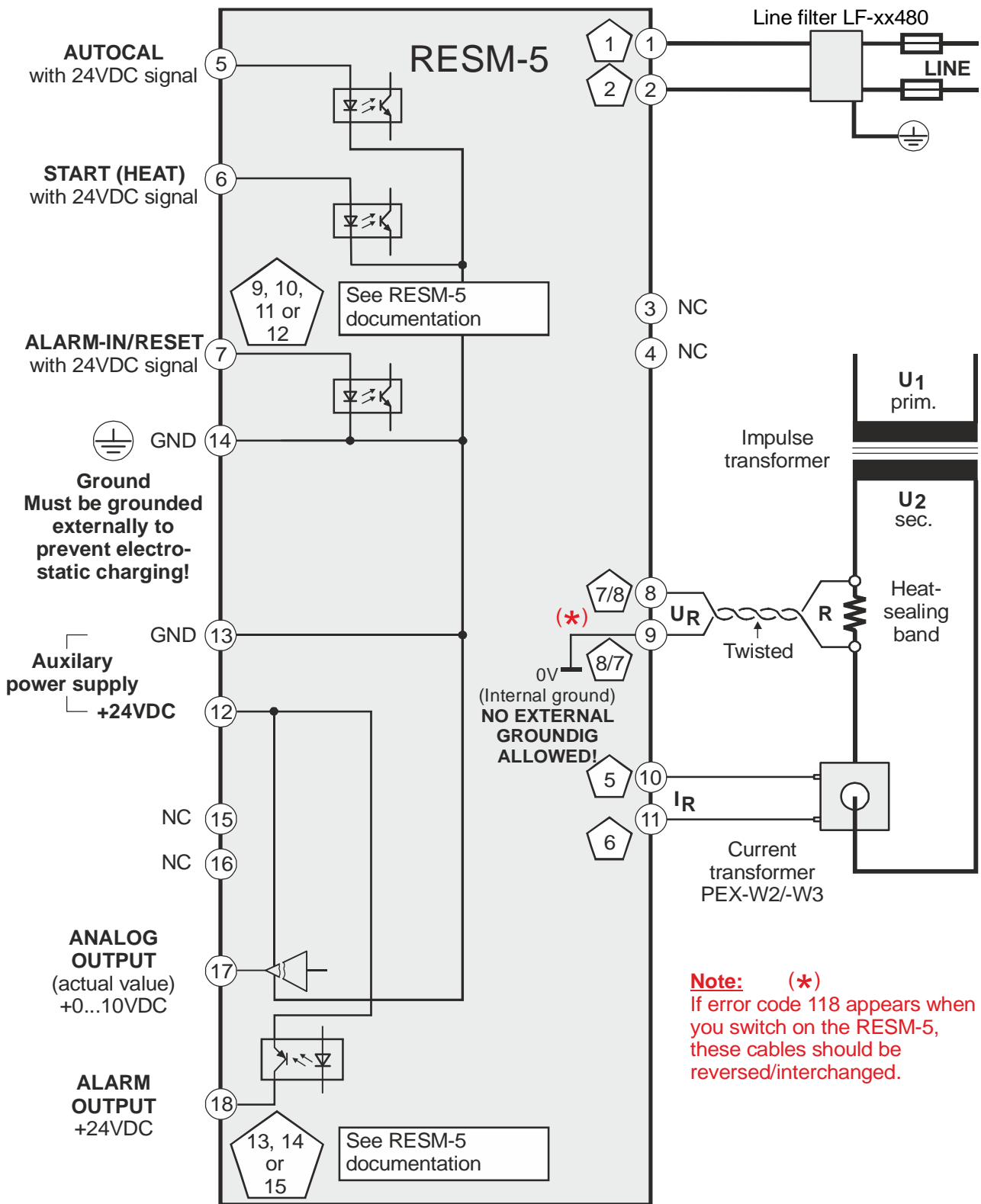
Continued on next page

Configuration

Continued from previous page



Wiring diagram of the RESM-5 (new)



Note: (*)
 If error code 118 appears when you switch on the RESM-5, these cables should be reversed/interchanged.

Terminals on RESM-4

Wiring diagram of the RESM-4 (old)

