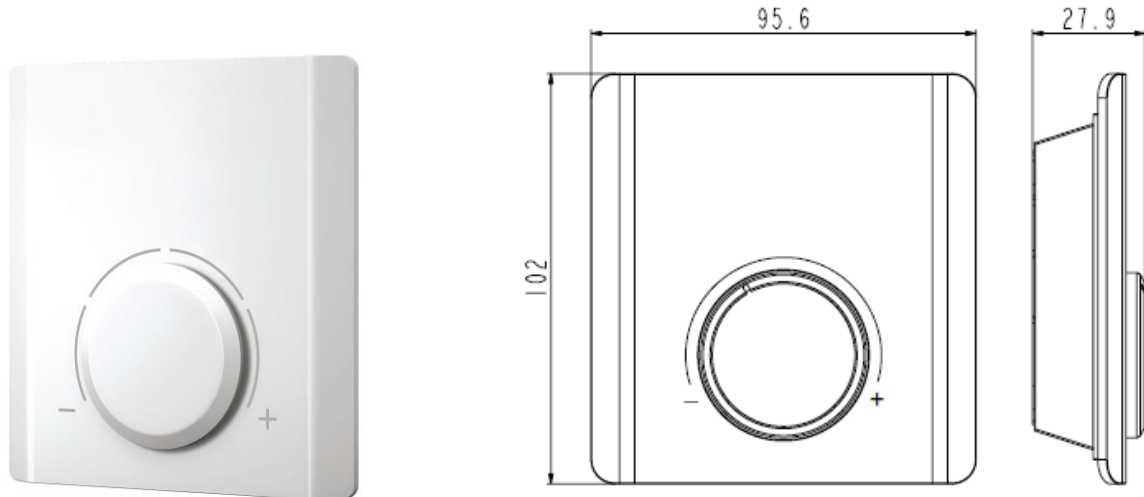


HERZ Electronic room thermostat analog and digital

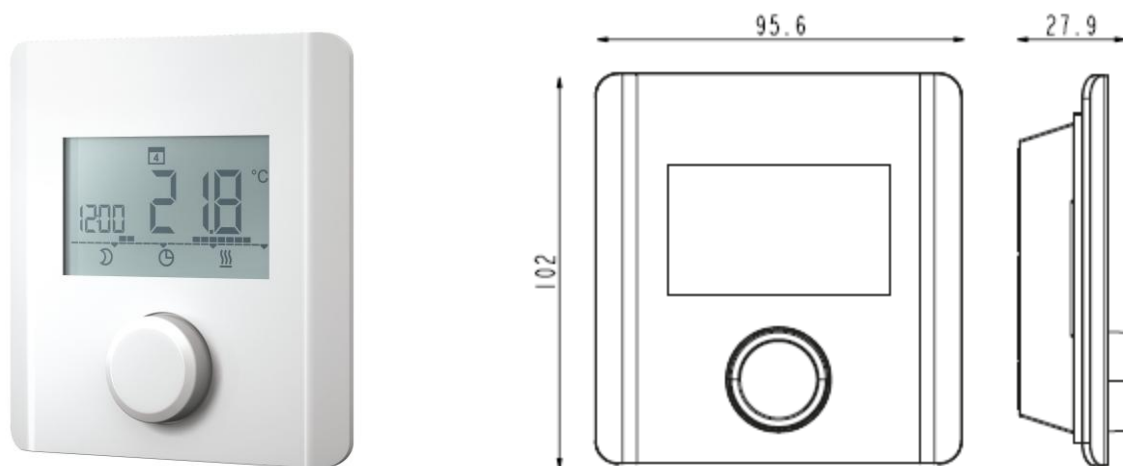
Data sheet for F799 xx, Issue 0816

Dimension in mm

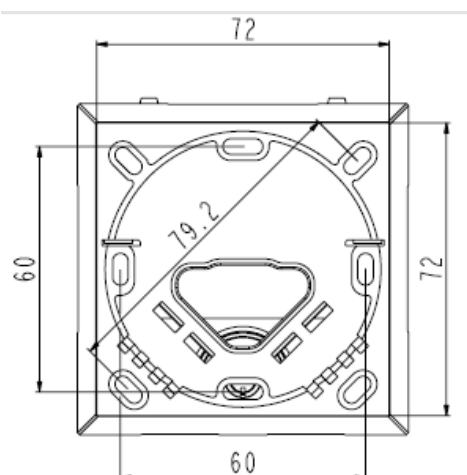
3 F799 11 - 3 F799 14



3 F799 15 – 3 F799 18



Mounting plate



Technical data

	3 F799 11-14	3 F799 15-18
Power supply:		
Power supply	24V~/ 230V~	
Power consumption	< 0,3 in idle state	
Fuse	T2AH (230V)/ T1A (24V)	
Parameters:		
Number of actuators	AXT211/ 201: 230 V, max. 6 pcs. parallel 24 V, max. 4 pcs. parallel	AXT 211/ 201: 230 V, max. 5 pcs parallel 24 V, max. 4 pcs parallel
Setting range	10...28 °C	5...30 °C
Switching difference	+/- 0,5 K	+/- 0,2 K
Decrease	2 K	2 K or adjustable
Measuring elements	NTC	NTC 22k
Ambient conditions:		
temperature	0...50 °C	
humidity	5...80 % rh no condensation	
Inputs-/ Outputs:		
Switching element	230 V, relay/ 24 V, Triac	
Switching rating	230 V, 2 A (0.8 A induktiv) 24 V, 1 A	230 V, 1 A 24 V, 1 A
ECO input	230 V, voltage detection 230 V 24 V, voltage detection 24 V	
Heating/ cooling	230 V, voltage detection 230 V 24 V, voltage detection 24 V	
Pilot timer	-	Output: 230 V, 100 mA 24 V, 100 mA
Connection terminals/ cable:		
Connection terminals	Screw terminals 0,22 mm ² bis 1,5 mm ²	
Power cable	-	Solid: NYM-J/NYM-O (max. 5 x 1,5 mm ²) Flexible: H03V2V2H2-F / H05V2V2H2-F
Switching difference	+/- 0,5K	-
Cord grip	External	-
Standards, directives:		
Type of protection	IP 20 (EN 60529)	
Protection class 24V	III (EN 60730)	
Protection class 230V	II (EN 60730)	
CE- conformity according to EMC- Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-3	
CE- conformity according to Low-voltage directive 2006/95/EG	EN 60730-1, EN 60730-2-9	

 Safety information of electrical connection work

Assembly and installation must be performed exclusively by licensed and specially trained fitters.

Damaged components must be replaced with original or alternative suitable and technically equivalent spare parts.

Prior to starting the system up, check all connection points for leak-tightness.

Following installation, check that all screws are mechanically secure.

It is prohibited to technically modify the system. The user must not implement technical changes to the device because no liability will be accepted for any resultant damage to the system.

Herz- Electronic room thermostat for heating and heating/ cooling

Electronic room thermostat analog

3 F7998 11

features	Heating, temperature set-back, frost protection function
nominal voltage	230V~, ± 10 %, 50 Hz
weight	90g

3 F799 12

features	Heating, temperature set-back, frost protection function
nominal voltage	24V~, ± 20 %, 50 Hz
weight	90g

3 F799 13

features	Heating/cooling, temperature set-back, frost protection and valve protection function, cooling lock
nominal voltage	230V~ ± 10 %, 50 Hz
weight	135g

3 F799 14

features	Heating/cooling, temperature set-back, frost protection and valve protection function, cooling lock
nominal voltage	24V~ ± 10 %, 50 Hz
weight	135g

Electronic room thermostat digital

3 F799 15

features	Heating, temperature set-back, frost protection function
nominal voltage	230V~, ± 10 %, 50 Hz
weight	130g

3 F799 16

features	Heating, temperature set-back, frost protection function
nominal voltage	24V~, ± 20 %, 50 Hz
weight	130g

3 F799 17

features	Heating/cooling, temperature set-back, frost protection and valve protection function, cooling lock
nominal voltage	230V~ ± 10 %, 50 Hz
weight	140g

3 F799 18

features	Heating/cooling, temperature set-back, frost protection and valve protection function, cooling lock
nominal voltage	24V~ ± 10 %, 50 Hz
weight	140g

Description of operation

For intelligent unitary control (2-point) in residential and business spaces.

3 F799 11 –14:

With relay output at 230 V: Up to 6 thermal actuators.

With Triac outputs at 24 V: Up to 4 thermal actuators.

3 F799 15 –18:

With relay output at 230 V: Up to 5 thermal actuators.

With Triac outputs at 24 V: Up to 4 thermal actuators.

The room temperature is measured by a temperature sensor and compared with the current setpoint. Depending on the control offset, the heating or cooling in the room is increased or reduced. If there is a heat or cooling requirement, the thermal actuator is activated. Room temperature adjustments, control and operation are performed using the rotary knob/ button.

Decrease:

In reduced mode, the defined temperature is decreased by 2 K. The room thermostat detects a voltage supplied by the electrical distributor or an external timer.

Heating/cooling:

The room thermostat is switched between heating and cooling via an external signal (voltage detection). There is no dead zone between heating and cooling.

Cooling lock:

A cooling lock is always possible by installing a jumper between two terminals. The cooling lock prevents the thermostat from switching to cooling mode in combination with the Herz electrical distributor 3 F798 02- 04.

Valve protection facility:

The valve protection facility is activated at 14-day intervals for 6 minutes if no temperature regulation has taken place (output open). The actuator is activated and opens the valve.

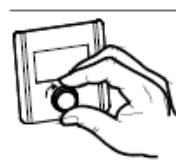
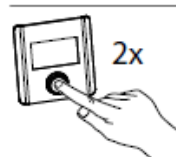
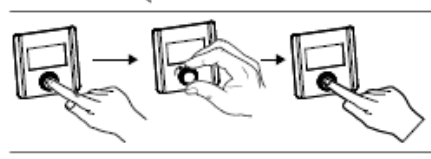
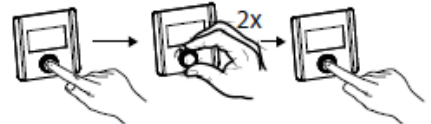
Frost protection facility:

The integrated frost protection facility is fixed at 6°C and prevents pipes from freezing during periods with no regulation.

3 F799 15 –18:

All the required symbols as well as the thermal actuator output are indicated in the large display. The symbol for heating or cooling flashes slowly if the output is active.







The following table shows basic operation of the setting knob.

	Adjust setpoint
	Change operating mode
	Set functions and values
	Parameters for technicians

Operating modes:

The operating mode can be set by pressing the knob twice.

The following options can be selected by turning the rotary knob to the left or right:

Normal operation	
ECO mode	
ECO-In/Auto	
Unoccupied (for 3 F977 17 and 18)	
Locking	
Switch-off	
Back	BACK

Note:

The operating mode currently set is not visible. If, for example, normal operation is active, only ECO mode and the operating mode ECO-In/Auto is shown.

“Normal” or “ECO” operating modes:

3 F7699 15-16:

If ECO operating mode is selected, ECO can be operated either using the pre-set and reduced temperature of 2 °C or via the external input with a timer. The room thermostat detects a voltage supplied by the electrical distributor, external timer or pilot signal from the 3 F799 17- 18. If the input is active, the room thermostat automatically switches to ECO mode. As soon as the ECO signal is inactive, it switches to normal operation.

3 F799 17- 18:

If ECO operating mode is selected, ECO can be operated either using the adjustable reduced temperatures or via the internal time programme. The preset temperature for normal operation (21 °C) or reduced operation (19 °C) is automatically accepted by manual change-over of the operating mode or when switching using the time programme. These values can be defined in the “Settings” menu. The pilot clock output is active in accordance with the time programme independent of the operating mode when parameter Par-230 = 0. When parameter Par-230 = 1, the pilot clock output is not active in accordance with the time programme. The time programme can be used for the local set-back. If the operating mode ECO is selected, the pilot clock output is active.

Locking the operating knob:

The “turn and push” operating knob can be locked. Press the button for 5 seconds to unlock.

3 F799 15 –18:

On the public authority version, the lock can be secured with an access code. For more information, see the parameter Par-030.

Switching off the thermostat:

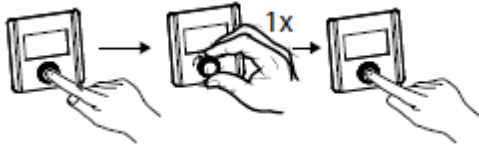
The room thermostat can be switched off. Temperature control is deactivated and the output is dormant. The valve protection and frost protection facility remain active at 5 °C, however.

3 F799 15 –18:

When parameter P-230 = 1 is activated, the pilot clock output can be used to switch-off via a separate relay in the system.

Settings:

The settings can be selected as follows:



Setpoint limitation:

A minimum and maximum setpoint limit can be set.

Actual value correction:

The effect of the wall temperature can be corrected by ± 2 °C. The corrected temperature is the temperature indicated in the display.

3 F799 15 –18:

Temperature specifications in normal operation – Heating:

The factory temperature setting is 21 °C. The advantage of this function is that the value is applied again when the operating mode is changed or when a switch is made using the switching programme.

Temperature specifications in ECO mode – Heating:

The factory temperature setting is 19 °C. The advantage of this function is that the value is applied again when the operating mode is changed or when a switch is made using the switching programme.

Temperature specifications in normal operation – Cooling:

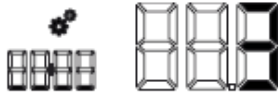
The factory temperature setting is 21 °C. The advantage of this function is that the value is applied again when the operating mode is changed or when a switch is made using the switching programme.

Temperature specifications in ECO mode – Cooling:

The factory temperature setting is 23 °C. The advantage of this function is that the value is applied again when the operating mode is changed or when a switch is made using the switching programme.

Temperature specifications for the floor sensor:

If a floor sensor is connected and activated in parameter 040, the following symbol is displayed next:



The factory setting is 3, which corresponds to approx. 22 °C. It is possible to change this:

°C	18	19	20	21	22	23	24	25	26	27	28
	1	2	3	4	5	6					

When serving as a floor sensor, a comfortable floor temperature is controlled. As soon as this comfort temperature has been reached, the internal sensor continues to control the room.

Temperature specifications in unoccupied mode:

The temperature for this mode can be adjusted between 5 °C and 20 °C. The factory setting is 16 °C.

Setpoint limitation:

A minimum and maximum setpoint limit can be set.

Time and weekday:

The time and weekday must be entered for the time programme. When restarting or once the 10-hour backup power supply has run out, this setting must be renewed.

Time programme:

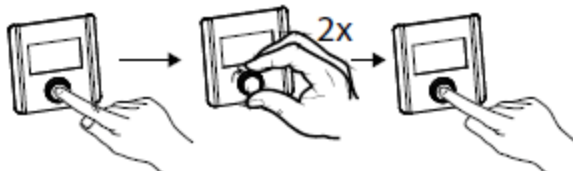
An individual temperature profile for each day provides the ideal comfort level with the minimum energy consumption. 4 time programmes for every day are available in the room thermostat. The settings can be made individually in blocks for the whole week (Monday to Sunday), for work days and weekends or every day. Two time programmes are preset for the week: Normal operation from 6 am to 10 am and from 3 pm to 10 pm. A set-back mode is activated for the hours in between. Additional time programmes can be programmed for temperature requirements that differ from these. The room thermostat includes a pilot clock output which is always active in accordance with the time programme and independently of the operating mode. This output can be used to switch further room thermostats to set-back mode, such as by using a Herz control distributor Herz electrical distributor (3 **F798** 02- 04), for example.

Resetting to factory settings:

All settings and changed access codes can be reset to factory settings. The button must be pressed for 5 seconds in order to confirm the reset. The room thermostat is restarted after the reset. The time and weekdays have to be re-entered.

Parameters:

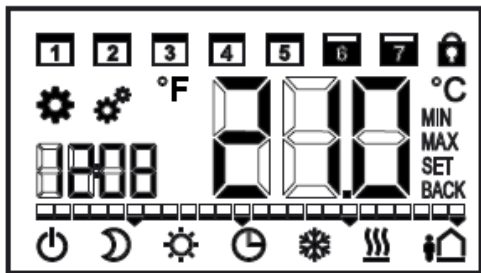
To set the parameters, please proceed as follows:



The corresponding settings are shown in the manual.



☑ **Display:**



☑ **Disposal and Safety Supply:**

Place of installation approx. 1.5 m above the floor on an interior wall. The location must be protected from direct sunlight and other heat sources, e.g. televisions, lamps or radiators, and also from draughts.

Once the backup power supply has run out (approx. 10 hours), the settings are not lost. Only the time and weekday have to be re-entered.

This product is only suitable for the purpose intended by the manufacturer, as described in the “Description of operation” section.

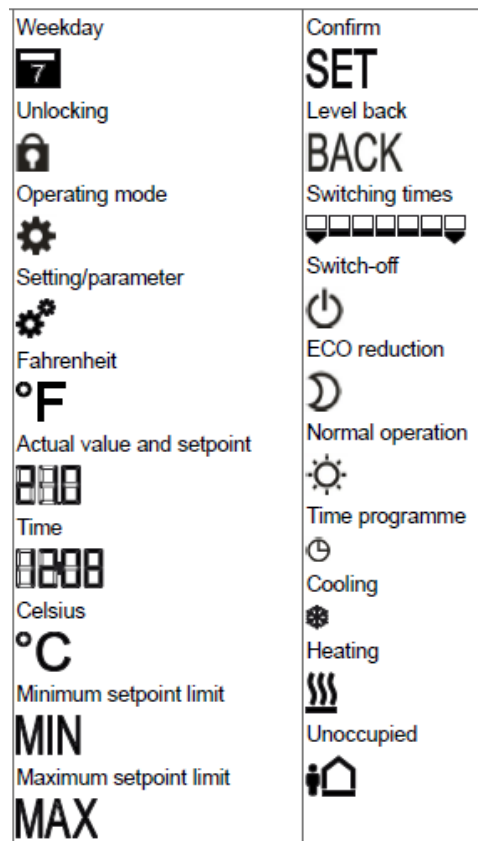
All related product documents must also be adhered to. Modifying or converting the product is not admissible.

Whether the switching output is active and the thermal actuator is being controlled is indicated on the display. If the output is active, the “Heating” or “Cooling” symbol flashes slowly. The switching output display can be activated or deactivated from the “Parameters” menu.

When disposing of the product, observe the currently applicable local laws. More information on materials can be found in the Declaration on materials and the environment for this product.

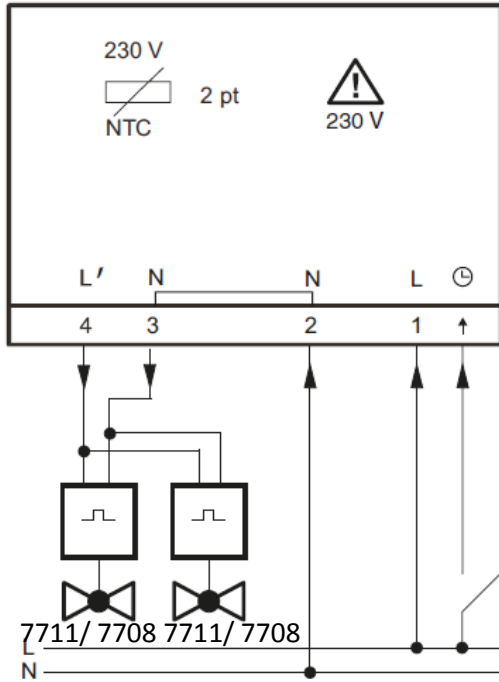
☑ **Accessories**

- 1 **7708 XX** Actuator 2-point, M28 x 1,5, 230V/ 24V
- 1 **7711 XX** Thermal Actuator M28 x 1,5, 230V/ 24V
- F **7793 41** Temperatur sensor, -50...160 °C, IP65
- 3 **F798 XX** Electric distributor, 24V~/ 230V~, 6 bzw. 10 channel

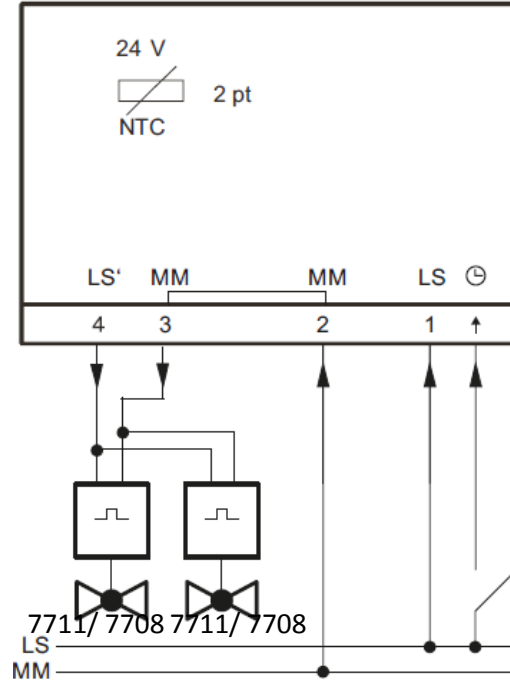


☑ Connection diagram

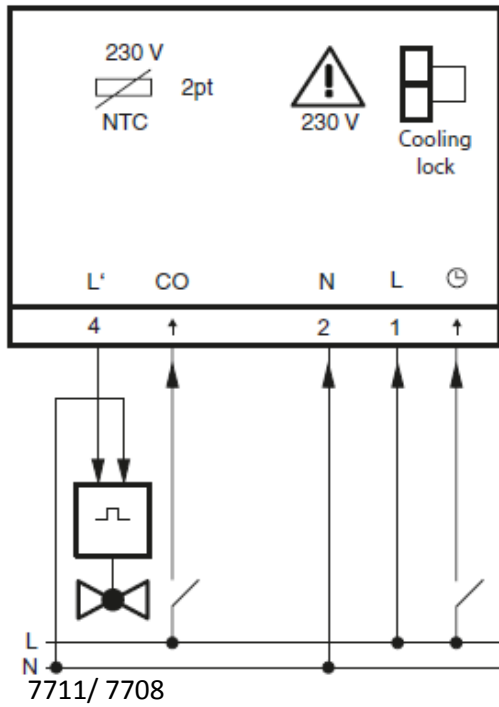
3 F799 11, 230V



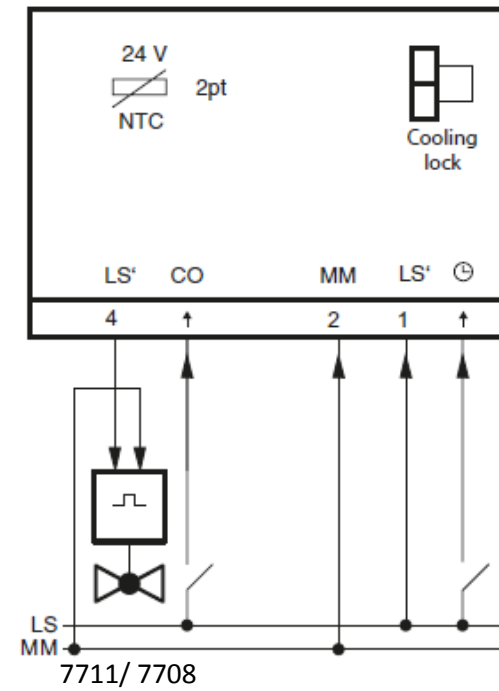
3 F799 12, 24V



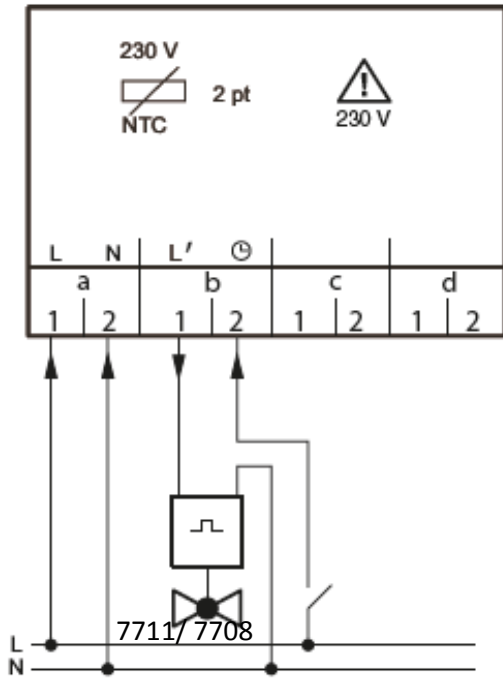
3 F799 13, 230V



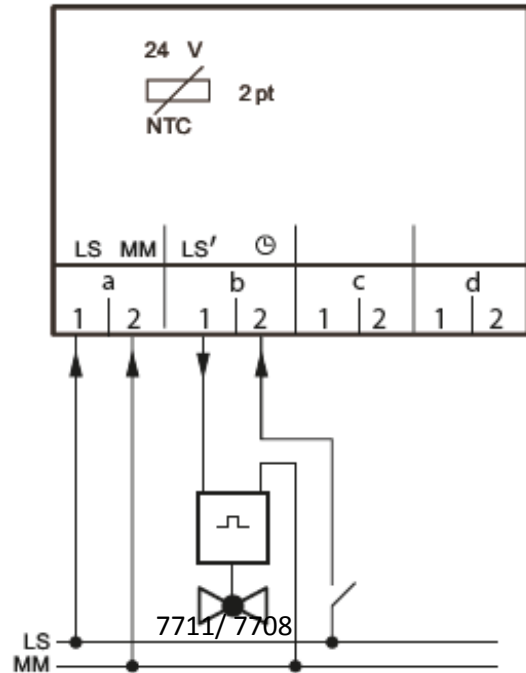
3 F799 14, 24V



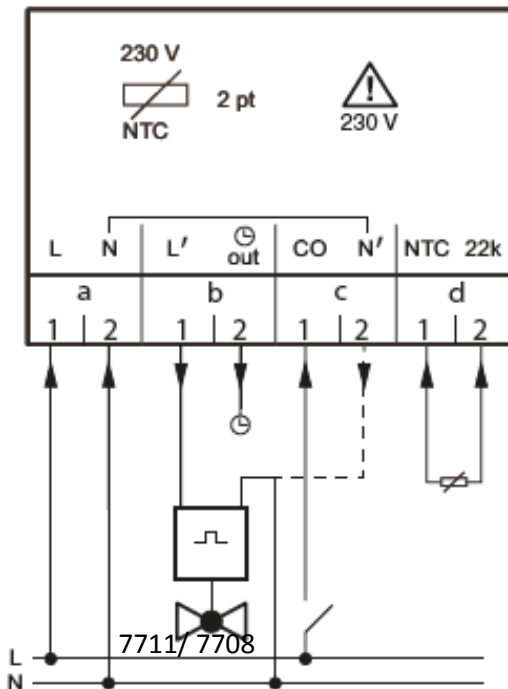
3 F799 15, 230V



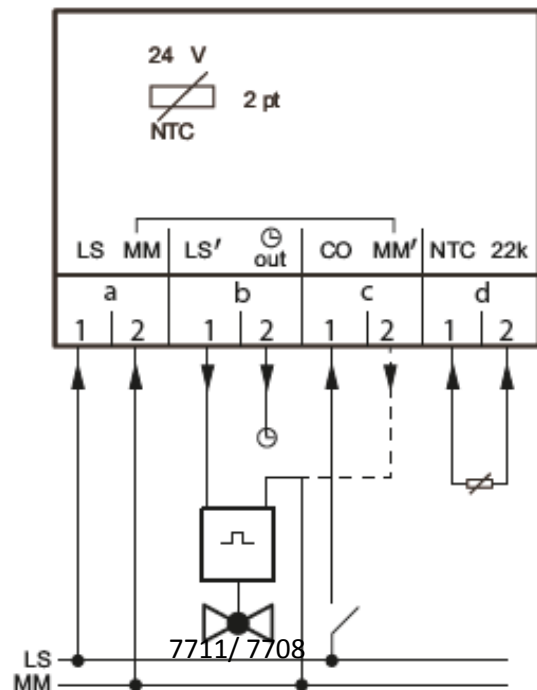
3 F799 16, 24V



3 F799 17, 230V



3 F799 18, 24V



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