

Heating Plant, Flow Temperature Control

Synco™ 100 RLE132

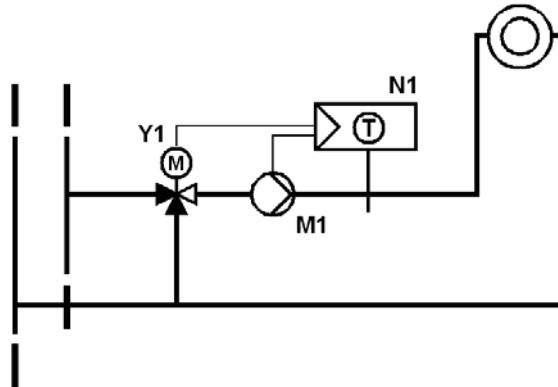


Flow temperature control in a common distribution circuit

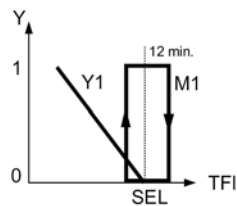
Flow temperature control in a heating zone with a common flow (e.g. d.h.w. distribution circuit) with one mixing valve and heating pump option

- Use**
- Residential buildings
 - Heating circuit or heater battery
 - Greenhouses

Plant diagram



Function diagrams Temperature control



TFI	Flow temperature	Y	Control signal
SEL	Setpoint	Y1	Heating sequence
		M1	Heating circuit pump

Description of Functions

Basic functions

- Controller (N1) with immersion built-in sensor to control the heating flow temperature via modulating control of the mixing valve (Y1)

Options

- Demand control switching of the heating circuit pump (M1). (See Engineering notes)

Device list

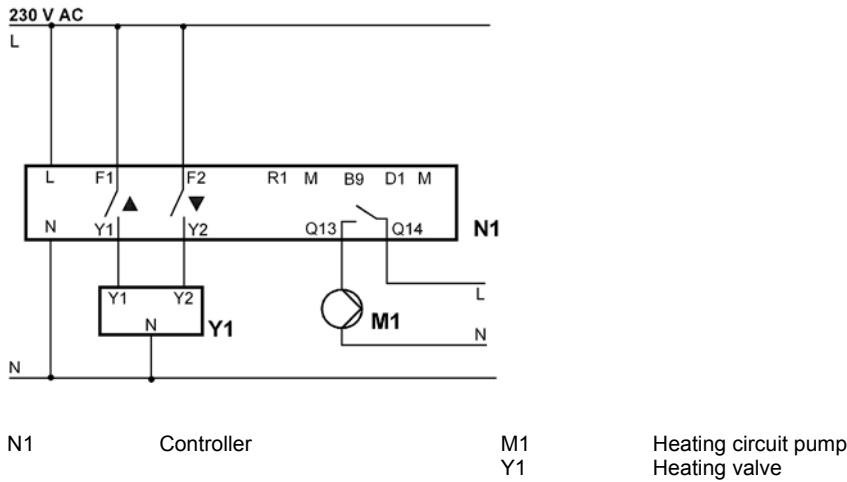
Legend	Type of unit	Data sheet	Product No.	Qty.
N1	Immersion temperature controller (with 3-position output)	N3334	RLE132	1
Y1	2- or 3-port stroke valve	+	VV.. / VX..	1
	3-position valve actuator, AC 230 V	+	S..3...	1

+ For selection of the actuators and valves, refer to the Product Catalog

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Connection diagram



Parameter settings	Function	No	Setting	DIP switch settings
RLE132 (controller N1)				
<p>ON</p> <p>Op. mode Appl. PI Test Run (s)</p>	Operating mode	1	Heating with ECO	OFF
		2		OFF
	Application (P/PI)	3	Temperature control (MEDIUM)	OFF
		4	PI integral action time = 120 s	OFF
	Test	5	Test mode = OFF	OFF
	Running time of actuator	6	≥120 s	OFF

Engineering

- Default values have been used whenever possible
- Some settings are plant-specific and may need altering after the initial commissioning of the controller
- We have not shown all plant interlocks in the connection diagram; only those directly connected to the controllers or associated equipment
- To check the control wiring, the controller can be switched into test mode (DIP switch 5 = ON) so that the response of the actuating device can be checked. In test mode, the control is switched off and the slider position drives the output(s):
 - A setpoint position of more than 104 °C drives the actuator open (via terminal Y1)
 - A setpoint position of less than 26 °C drives the actuator closed (via terminal Y2)
- If the control is unstable, increase the proportional band; if it is too slow, decrease the proportional band
- The main controller setpoint must be set to the desired setpoint (DAY or NORMAL mode)
- The relay Q13/14 switches ON when there is a demand of 5% at terminal Y1, and switches OFF when there is no demand (0 %) for a period of 12 minutes (PUMP OVERRUN)
- Note: Heat demand switching. A volt-free contact is provided specifically for demand control of a pump (heating circuit or circulation pump)