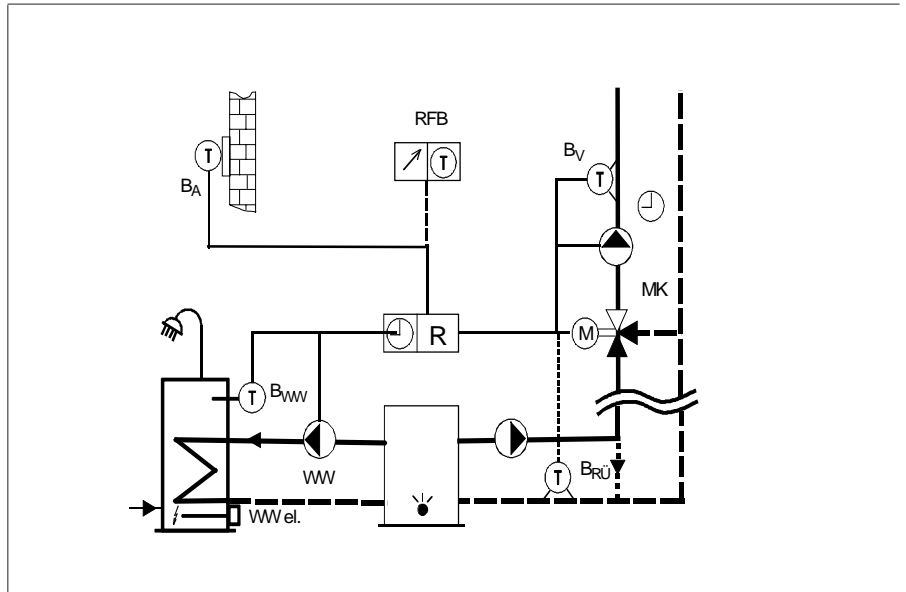


Application 04

Mixing valve-heating circuit
without boiler control
Domestic hot water



Application

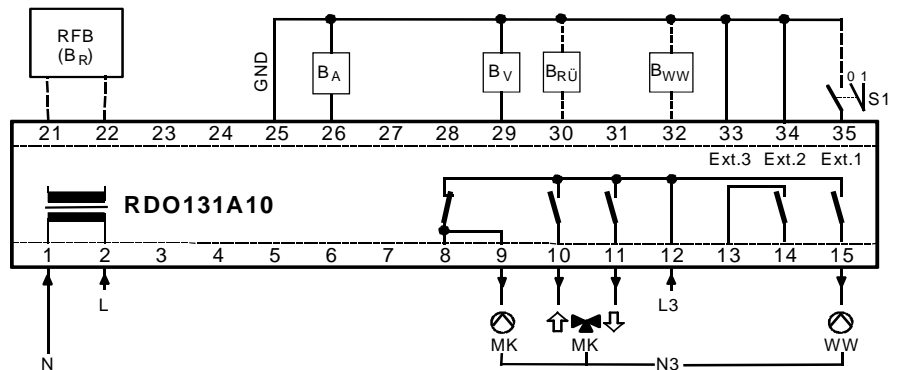
Mixing valve-heating circuit without boiler control for outside driven and/or room temperature driven control of the flow temperature (sensor BRÜ connected -> limitation of return temperature). The boiler can be controlled by external "fixed value"-control (i.e. through boiler thermostat). The **domestic hot water** with loading pump is controllable. (The boiler temperature has to be at least 10K over the domestic hot water temperatur)

Hint

Circuit for floor heating : room temperature controlled regulation is forbidden! The value of the return low limit temperature is adjustable with the "boiler low limit" potentiometer.

Installation / wiring diagram

Wire according to application diagram or total current flow plan. Connection through specialists according to local regulations. The temperature sensor- and remote control-connections to the controller are supplied with low voltage protection. It is advantageous to lay these separate from the power supply cables.



S1 : External standby heating (switching off the heating operation)
0 = Controller operation mode not influenced
1 = Heating blocked and hot water loading blocked ; frost protection active

Controller configuration:

Ext.3 (33)	Ext.2 (34)	Ext.2 : (terminal 34) Ext.3 : (terminal 33)	-- = open X = connected to GND
X	--	Direct boiler-heating circuit	
--	--	Mixing valve-heating circuit (with or without limitation of return temperature)	
--	X	Mixing valve-heating circuit for a floor heating-circuit and a direct boiler-heating circuit (auxiliary-heating circuit) for radiators with thermostat valve connected in series. (The Pumps will be energized with the same relay)	
X	X	Mixing valve-heating circuit (with or without limitation of return temp.) without boiler control. (by external "fixed value"-control of boiler; i.e. through boiler thermostat)	



Parameter list

Parameter	Adjustment	Factory	Min.	Max.	Installation value	Dim.
Boiler circuit						
switching differential (SD1)	Potentiometer	no function				
boiler low limit (TKmin)	Potentiometer	no function				
on activation of limitation of return temperature: return temperature low limit (TRÜmin)	(TKmin > TRÜmin + 5K)					
(O = boiler start up and hot water discharge protection, OFF)						
Mixing valve-heating circuit						
control with PI-characteristic		3-point				
mixing valve running time	fixed	4	3	5		min
slope mixing valve-heating circuit (S)	Potentiometer	1	0,2	3		
heating curve fixed-point	fixed	20				°C
overrun time heating circuit pump	fixed	4				min
summer operation interval heating circuit pump	fixed	on				
Domestic hot water circuit (WW-circuit)						
priority of hot water loading	fixed	no priority				
overrun time hot water loading pump	fixed	2				min
set value hot water temperature	Potentiometer	50	ϕ / 40	70		°C
(with position : ϕ = frost protection)						
set value hot water temperature "frost protection"	fixed	5				°C
switching differential	fixed	6				K
elevation of boiler temperature (compared to hot water set value)	fixed	20				K
Values						
set value room temperature "normal"	Potentiometer	20	14	26		°C
set value room temperature "reduced" (= f[room temp."normal"])	Potentiometer	-6	-2	-10		K
set value room temperature "frost protection"	fixed	5				°C
insert point of automatic day heating limit	f[S and room influence]					
system frost protection temperature (= f[outside temperature])	fixed	1				°C
room influence (BA&BR : room temperature influence)	fixed	25				%
(only BR : room temperature regulation)	fixed	150				%

Pos	Unit	Type	Pcs:
	We recommend: Heating controller DOMOTESTA Heating controller DOMOTESTA	Daily clock, with spring reserve; LED indication Weekly clock, with spring reserve; LED indication	RDO131A100 RDO131A102
BA	Outside temperature sensor	10kΩ NTC; IP40; Screw terminal	FT12A
BY	Clamp-on temperature sensor - strap for clamp-on sensor	1kΩ PTC; IP40; Screw terminal	FT1A ZB126
BWW	Immersion temperature sensor Cable, hot water sensor Cable, temperature sensor	1kΩ PTC; IP40; Screw terminal 1kΩ PTC; IP54; l=4,0m; Tmax= 80°C 1kΩ PTC; IP54; l=1,6m; Tmax=120°C 1kΩ PTC; IP54; l=2,5m; Tmax=120°C	FT2A RFT213A40 RFT203A16 RFT203A25
RFB	Room remote control Room remote control	like RFB411A with new case Wall mounting; 10kΩ NTC Room set value correction; Program switch ("normal"/Auto/"reduced")	RFB410A RFB411A
BR	Room sensor Room sensor	like RFT016A02 with new case Wall mounting; 10kΩ NTC (white)	RFT410A RFT016A02
	Connector strip for AMP Connector strip with screw terminals Base-plate 1 Accessory for base plate	2x15 terminals; without AMP-knife 2x15 terminals; wire cross section 2x1,5mm² with screw connector strip 2x15 Connection area expansion for cable glands	RZB500A RZB510A RZB520A RZB521A
RFV	Detector multiplier	230VAC; Sensor-Inputs : 1xNTC; 3xPTC max. 5 controllers per output connectable)	RFV400A
MK	Three-port slipper valves Four-port slipper valves Control motor for slipper valves	Various diameters ; max. 6 bar; 110°C Various diameters ; max. 6 bar; 110°C Torque 10 Nm; 280s; 230VAC (with universal mounting set for Elesta slipper valves)	H3G.../H3F... H4G.../H4F... NR230-22B
	Valves	On request	

