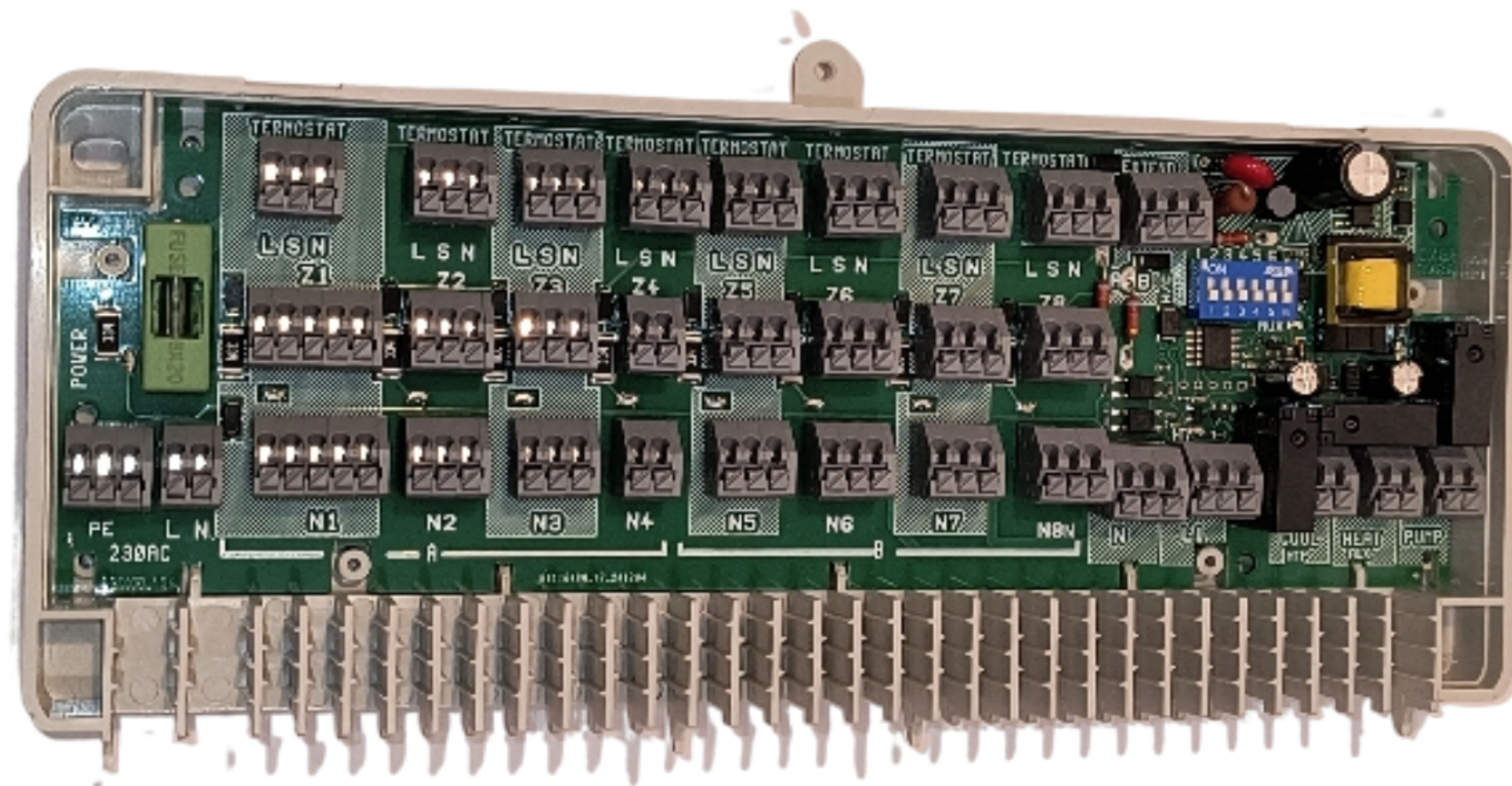




FHB8R3 – WIRING CENTER
8 ZONES, 3 RELAY OUTPUTS, 4 OPERATION MODES
230V

FHB8R3 - WIRED WIRING CENTER, 8 ZONES, 3 RELAY OUTPUTS, 4 OPERATING MODES / 230V - EN – V1.0

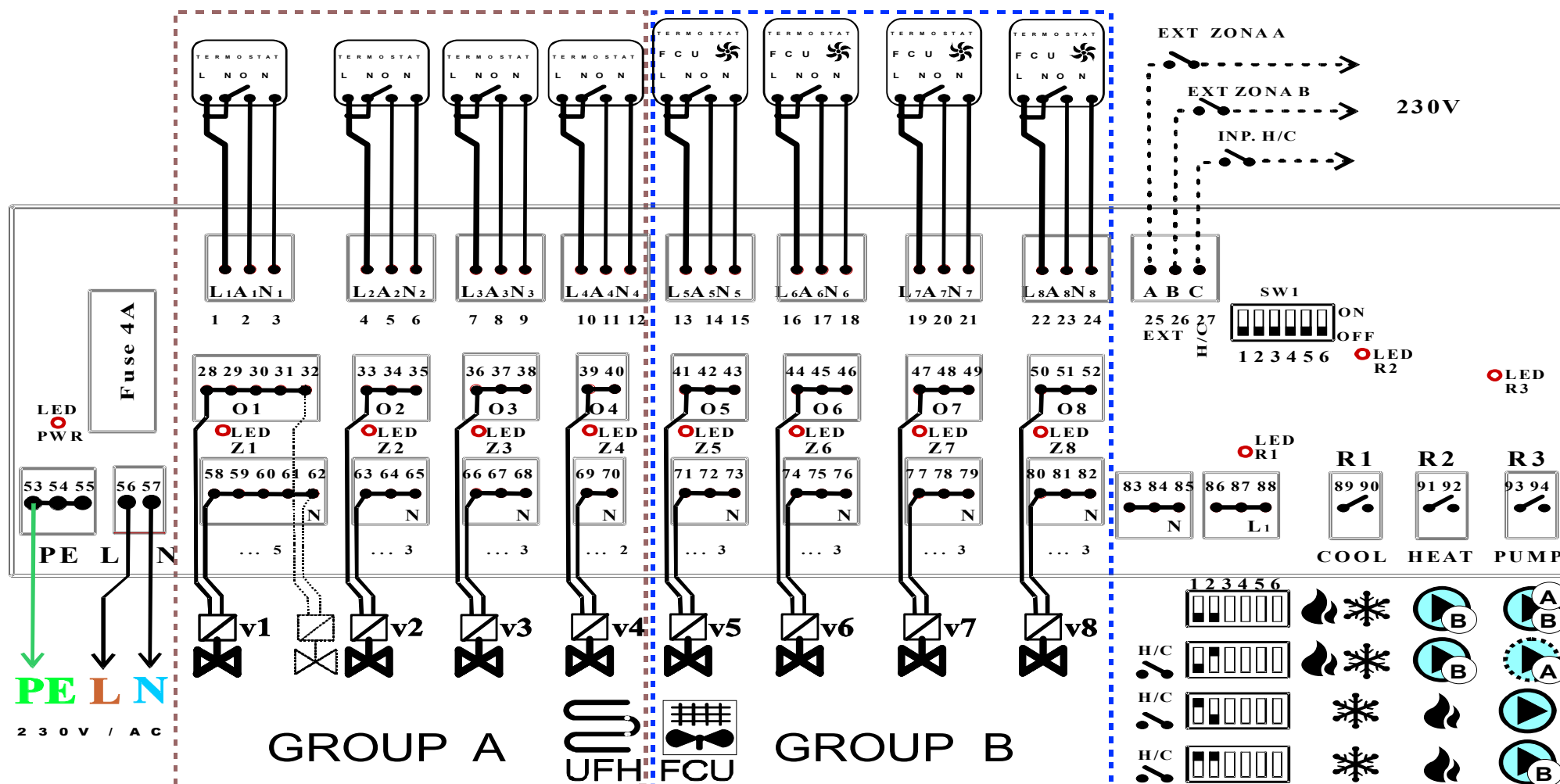
3 Relay outputs, voltage-free, independent:

- R1 - OUT.COOL/HTP
- R2 - OUT.HEAT/AUX
- R3 - OUT. PUMP
- DIP Switch for function selection
- Function: 8-zone terminal strip
- Selectable time delay and hold of outputs

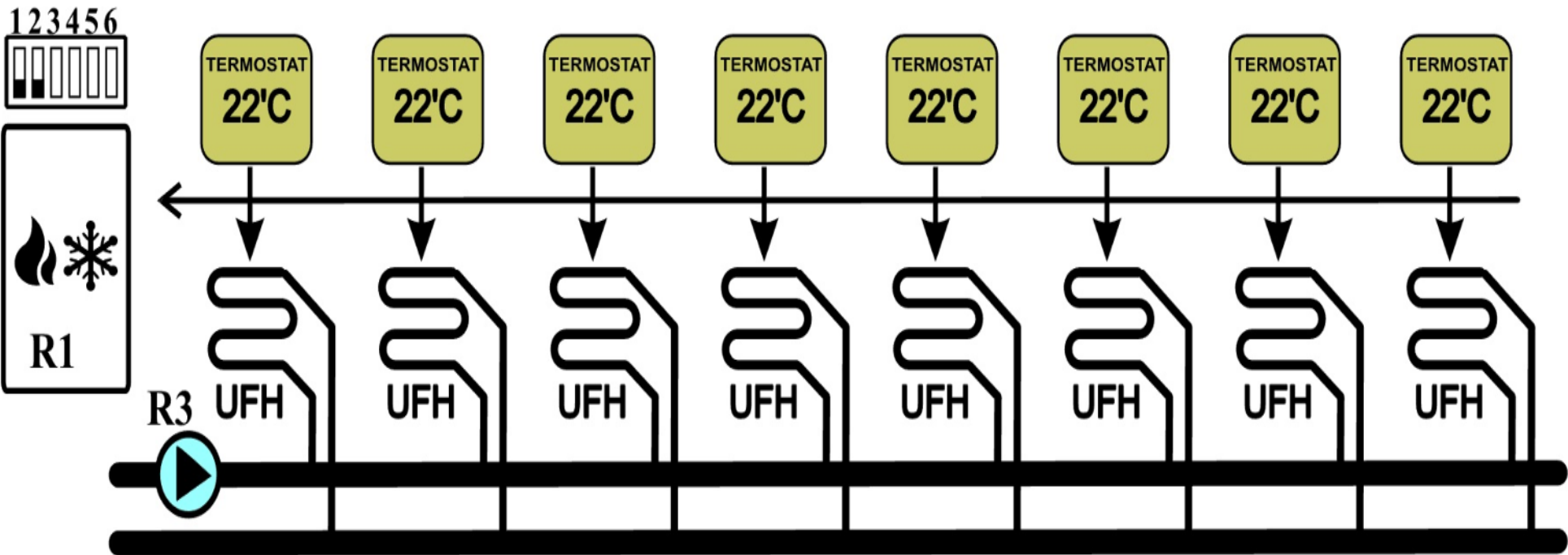
11 Inputs:

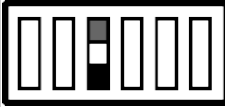
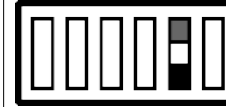
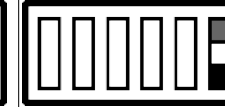
- Group A (230V) – 4 thermostats + 1 extension EXT.A
- Group B (230V) – 4 thermostats + 1 extension EXT.B
- H/C input (230V) – Heating/Cooling H/C mode
- actuator outputs with a different number for each zone
- Function: Combined terminal bus with 2 logic groups

Group A - 4 floor zones; group B - 4 convector zones

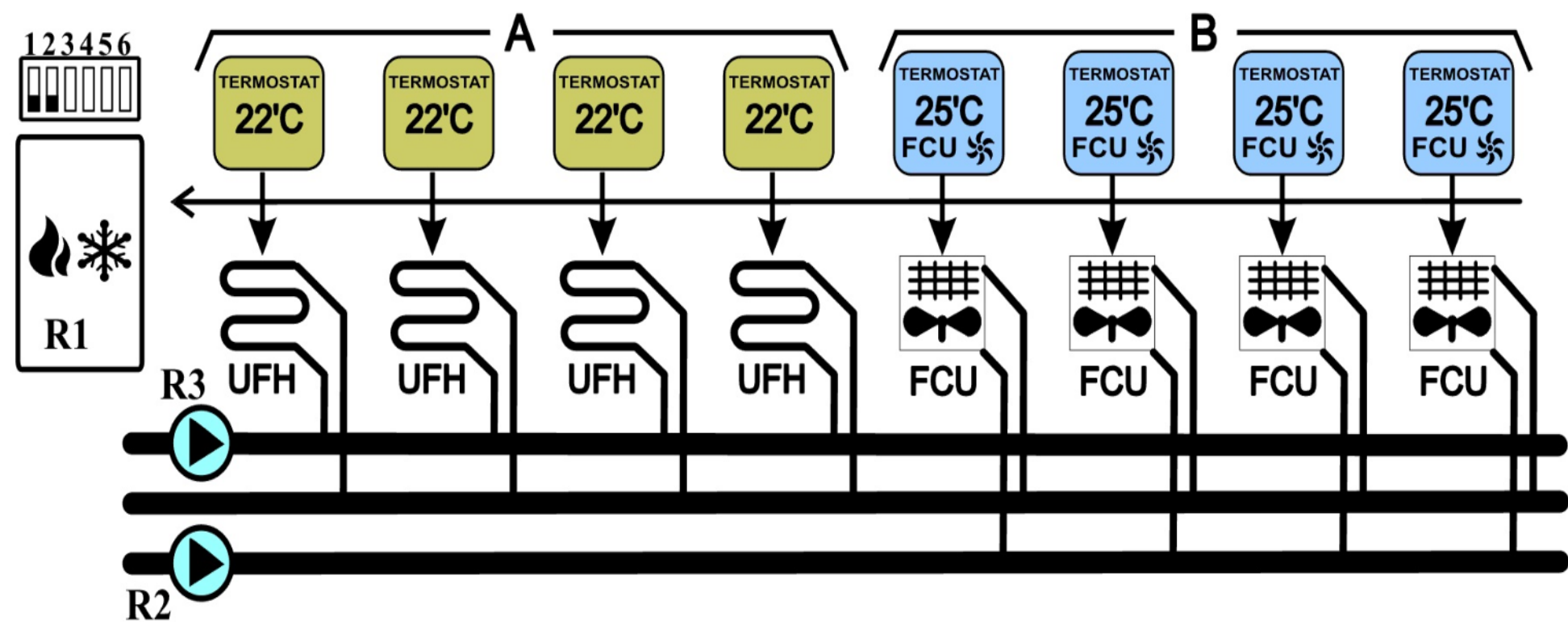


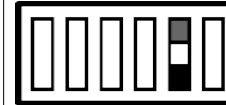
Scheme 1:



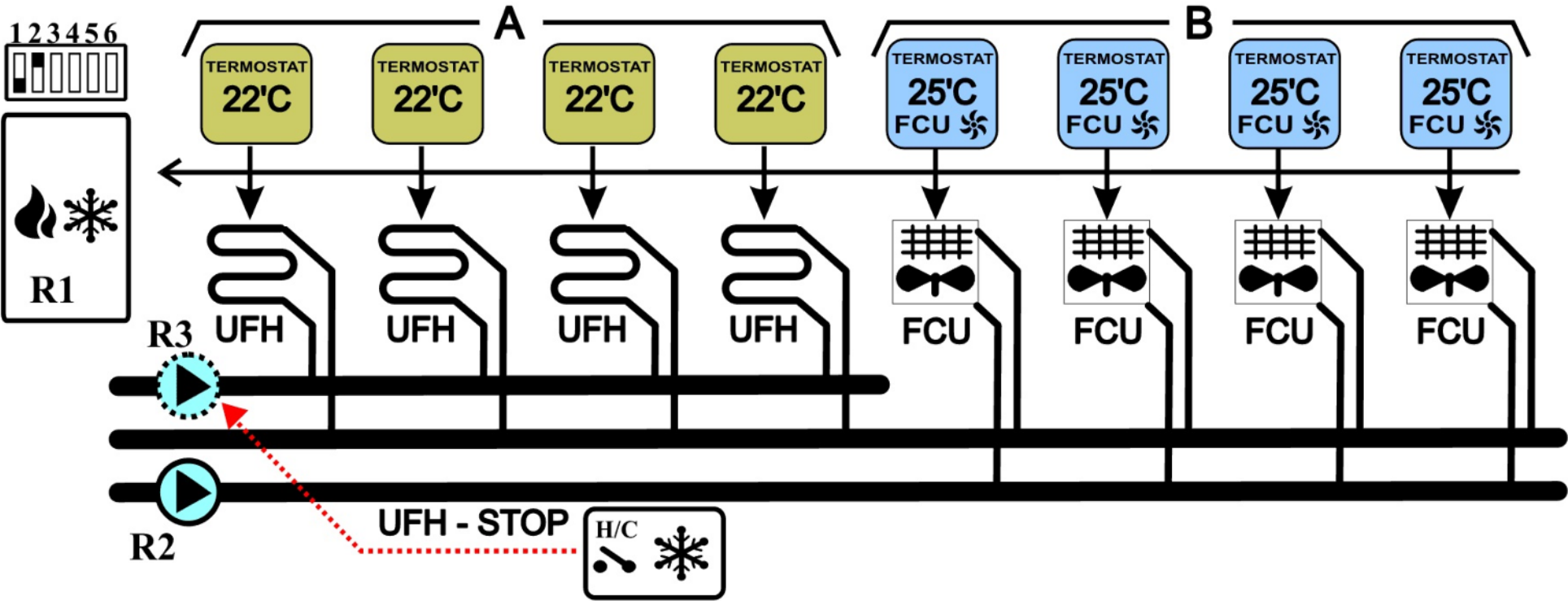
Functional diagram 1		Outputs:		INP.H/C when supplied with 230V, activates "Cooling" mode				
					DIP 3	DIP 4	DIP 5	DIP 6
					Pump blocking protection	Delay/Delay	Power-on delay	Shutdown delay
Standard terminal strip with 8 zones								
1		R1:	Start/Stop: HP / Boiler; Heating/Cooling; [A or B]	Not tracked		R1		
		R2	Pump group [B]		R2		R2	R2
		R3:	Common pump, [A or B]		R3		R3	R3

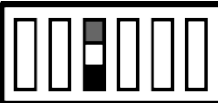
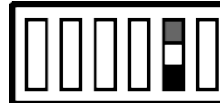
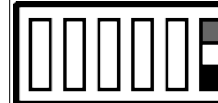
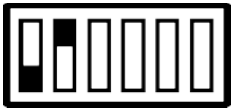
Scheme 1 – A:



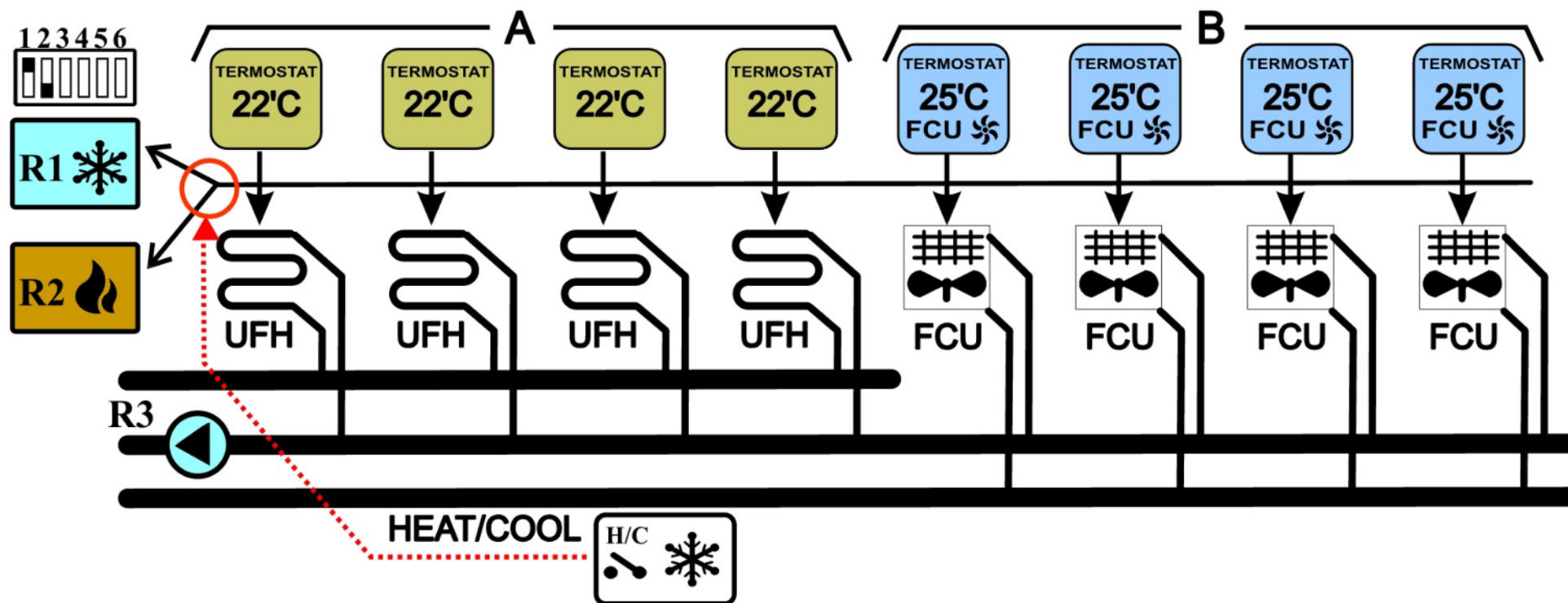
Functional diagram 1:		Outputs:	INP.H/C when supplied with 230V, activates "Cooling" mode				
				DIP 3	DIP 4	DIP 5	DIP 6
				Pump blocking protection	Delay/Delay	Power-on delay	Shutdown delay
Standard terminal strip with 8 zones							
1		R1: Start/Stop: HP / Boiler; Heating/Cooling; [A or B]	Not tracked		R1		
		R2: Pump group [B]		R2		R2	R2
		R3: Pump common, [A or B]		R3		R3	R3

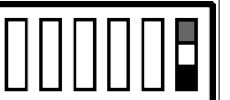
Scheme 2:



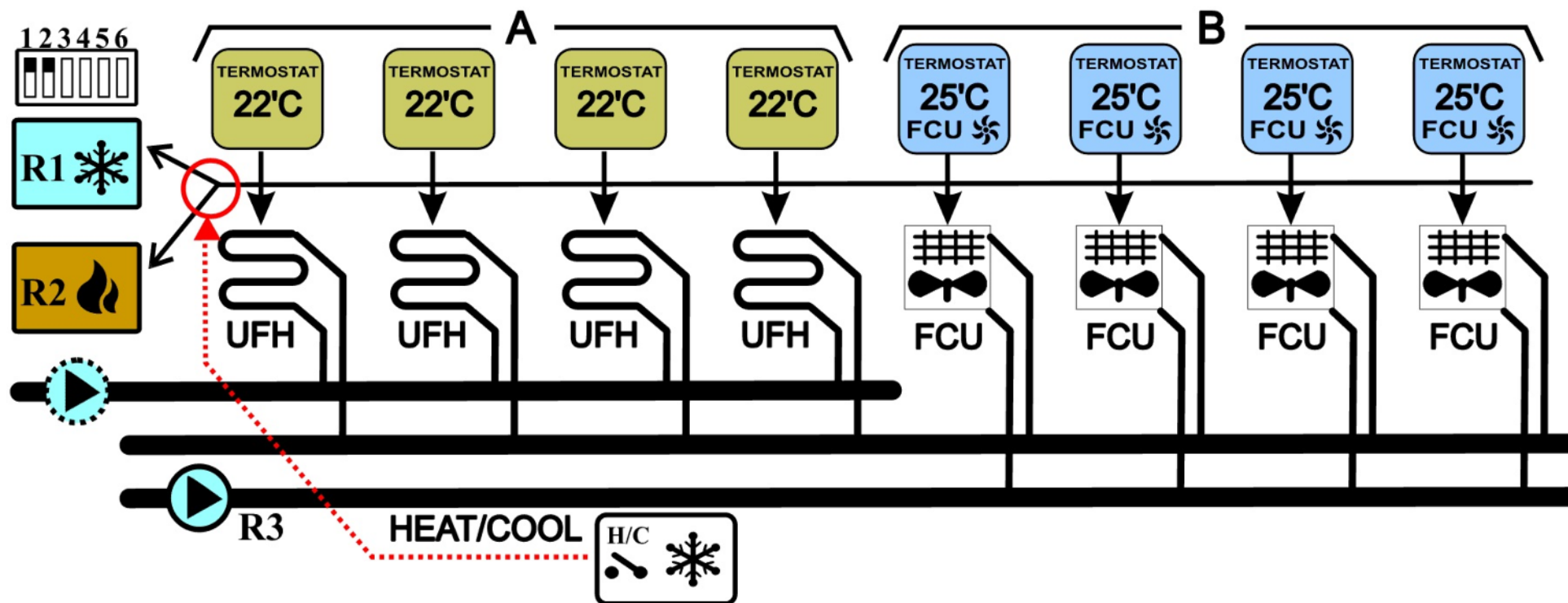
Functional diagram 2:		Outputs:		INP.H/C when supplied with 230V, activates "Cooling" mode				
					DIP 3	DIP 4	DIP 5	DIP 6
					Pump blocking protection	Delay/Delay	Power-on delay	Shutdown delay
Floor + convectors: 4+4 zones and floor pump shutdown in cooling								
2		R1:	Start/Stop: HP / Boiler; Heating/Cooling; [A or B]	in Cooling turns off R3		R1		
		R2:	Pump convectors - group [B]		R2		R2	R2
		R3:	Floor pump - group [A]		R3			

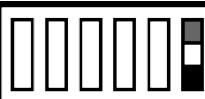
Scheme 3:



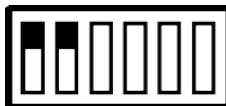
Functional diagram 3:		Outputs:		INP.H/C when supplied with 230V, activates "Cooling" mode				
					DIP 3	DIP 4	DIP 5	DIP 6
					Pump blocking protection	Delay/Delay	Power-on delay	Shutdown delay
Chiller/HP control in Cooling or Boiler/HP in Heating; external command Heating / Cooling with 8 zones								
3		R1:	Start/Stop: Chiller/HP in Cooling; [A or B]	in Cooling: turns off R2		R1		
		R2:	Start/Stop: Boiler/HP in Heating; [A or B]			R2		
		R3:	Pump common, [A or B]	in Heating: turns off R1	R3		R3	R3

Scheme 4:

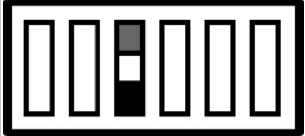
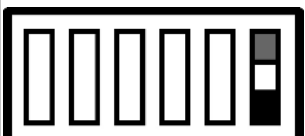


Functional diagram 4:		Outputs:		INP.H/C when supplied with 230V, activates "Cooling" mode				
					DIP 3	DIP 4	DIP 5	DIP 6
					Pump blocking protection	Delay/Delay	Power-on delay	Shutdown delay
Control of Chiller/HP in Cooling or Boiler/HP in Heating; external command Heating / Cooling; pump only by Group B (FCU.)								
4		R1:	Start/Stop: Chiller/HP in Cooling; [A or B]	in Cooling: turns off R2		R1		
		R2:	Start/Stop: Boiler/HP in Heating; [A or B]			R2		
		R3:	Pump Group [B] – convectors	in Heating: turns off R1	R3		R3	R3

FUNCTIONAL DIAGRAMS

Functional diagrams:		Outputs:		INP.H/C when supplied with 230V, activates "Cooling" mode				
					DIP 3	DIP 4	DIP 5	DIP 6
					Pump blocking protection	Delay/Delay	Power-on delay	Shutdown delay
Standard terminal strip with 8 zones								
1		R1:	Start/Stop: HP / Boiler; Heating/Cooling; [A+B]	Not tracked		R1		
		R2	Pump group [B]		R2		R2	R2
		R3:	Common pump, [A+B]		R3		R3	R3
Floor + convectors: 4+4 zones and floor pump shutdown in cooling								
2		R1:	Start/Stop: HP / Boiler; Heating/Cooling; [A+B]	in Cooling turns off R3		R1		
		R2	Pump convectors - group [B]		R2		R2	R2
		R3:	Floor pump - group [A]		R3			
Chiller/HP control in Cooling or Boiler/HP in Heating; external command Heating / Cooling with 8 zones								
3		R1:	Start/Stop: Chiller/HP in Cooling; [A+B]	in Cooling: turns off R2		R1		
		R2:	Start/Stop: Boiler/ TP in Heating; [A+B]	in Heating: turns off R1		R2		
		R3:	Common pump, [A+B]		R3		R3	R3
Control of Chiller/HP in Cooling or Boiler/HP in Heating; external command Heating / Cooling; pump only by Group B (FCU.)								
4		R1:	Start/Stop: Chiller/HP in Cooling; [A+B]	in Cooling: turns off R2		R1		
		R2:	Start/Stop: Boiler/ TP in Heating; [A+B]	in Heating: turns off R1		R2		
		R3:	Pump Group [B] – convectors		R3		R3	R3

ADDITIONAL FUNCTIONS

Additional functions set via SW1:		
Dip 3	Pump blocking protection function, activated for 1 min. every 7 days, for the selected "PUMP" outputs. = ON – the function is active;= OFF – the function is disabled	
Dip 4	Function of delay/hold in the operation of a specified output depending on the activation of a zone. = OFF – Waits when turned on for 3 min. Holds off for 1 min. = ON – Waits when turned on for 15 min. Holds off for 5 min.	
Dip 5	Delay in switching on a specified pump after zone activation. = OFF – 1 min = ON – 5 min	
Dip 6	The specified pump remains on for a time after zone shutdown = OFF – 0 min = ON – 3 min	
The expansion inputs EXT.A and EXT.B duplicate the operation corresponding to groups A and B, but are without output terminals.		

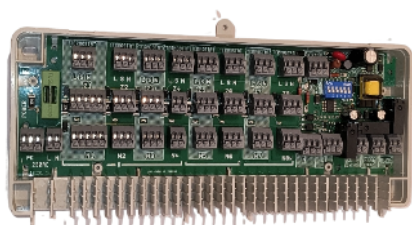
TECHNICAL PARAMETERS

Power supply: 230V±10% /50Hz. ≤ 3VA	Mounting on a 35mm DIN rail; or on a panel, for recessed mounting
Own consumption:	1.5VA + 0.25VA per activated circuit; Max11VA
Operating conditions: -25T45, RH80% Storage and transport -25/+60 ° C	Overall dimensions 110x235x50 mm. Protection type IP00
Relay outputs 3 pcs (volt free): R1,R2,R3 -230V 5A and 180W/AC3	Built-in fuse: 4A
Indication – light (LED):	8pcs. - for each circuit; 1 pc. - for power supply; 3 pcs. - for each output

Terminal description:	Zones:	Thermostat terminals:			Output, actuators, number			Outputs N.O:	
		L1	A	N	L	N	pc s	R1:	89-90
Power supply:	Zone Z1:	1	2	3	28-32	58-62	5	R2:	91-92
L - #56	Zone Z2:	4	5	6	33-35	63-65	3	R3:	93-94
N-#57	Zone Z3:	7	8	9	36-38	66-68	3	L1a	86-88
PE - #53,54,55	Zone Z4:	10	11	12	39-40	69-70	2	N1a	83-85
Extensions:	Zone Z5:	13	14	15	41-43	71-73	3	Terminals L1 supply “phase” through a 4A fuse	
EXT-A: #25	Zone Z6:	16	17	18	44-46	74-76	3		
EXT-B: #26	Zone Z7:	19	20	21	47-49	77-79	3		
INP.H/C: #27	Zone Z8:	22	23	24	50-52	80-82	3		

Note, functions via SW1:

- DIP 3: Pump blocking protection function, activated for 1 min. every 7 days for the selected outputs.
= ON – the function is active; = OFF – the function is disabled
 - DIP 4: Delay/hold function in the operation of a specified output in depending on zone activation.
= OFF– Waits for 3 minutes when turned on, delays turning off by 1 minute.
= ON – Waits for 15 minutes when turned on, delays turning off by 5 minutes.
 - DIP 5: Delay in switching on a specified pump after zone activation. = OFF – 1 min = ON – 5 min
 - DIP 6: The specified pump remains on for a time after switching off per zone = OFF – 0 min = ON – 3 min
- The expansion inputs EXT.A and EXT.B duplicate the operation corresponding to groups A and B. but are without output terminals.



Manufacturer:
Proxel Engineering Ltd., Plovdiv,
www.proxel-bg.com