

DeltaSol® BX+ V2

Short commissioning manual

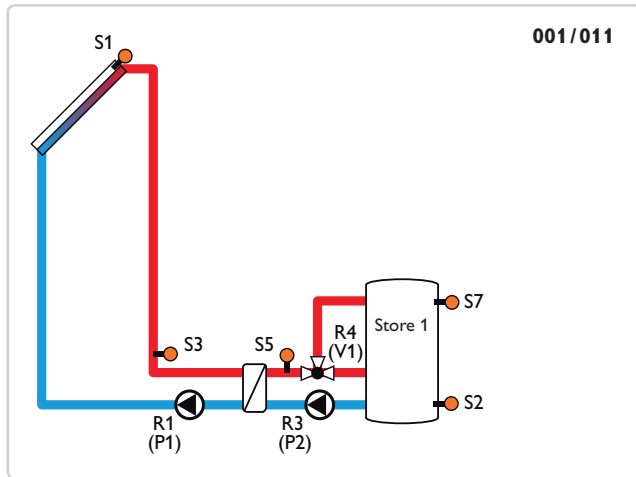


Thank you for buying this product.
Please read this manual carefully to get the best performance from this unit.
Please keep this manual carefully.

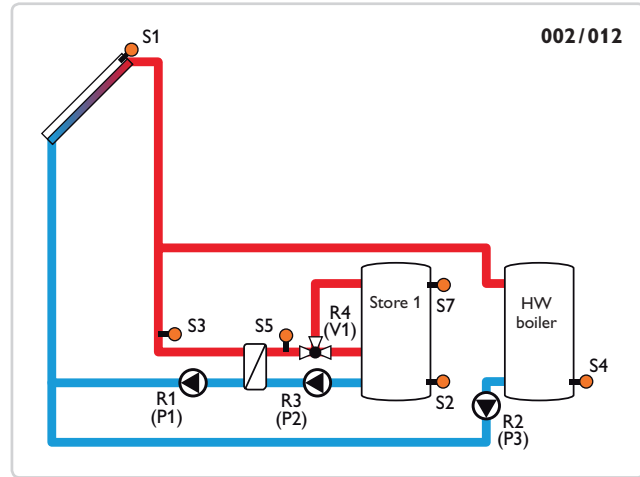
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Scheme overview

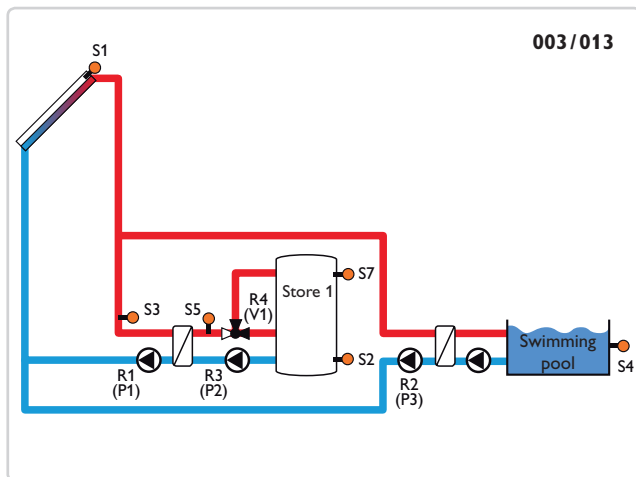
- 001 Scheme for using standard pumps
- 011 Scheme for using high-efficiency pumps



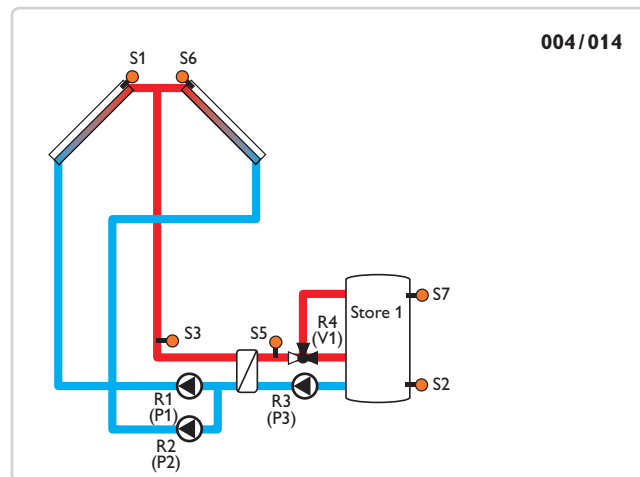
- 002 Scheme for using standard pumps
- 012 Scheme for using high-efficiency pumps



- 003 Scheme for using standard pumps
- 013 Scheme for using high-efficiency pumps



- 004 Scheme for using standard pumps
- 014 Scheme for using high-efficiency pumps



Make the following adjustments in the commissioning menu.

Commissioning menu			
Designation			Note
Language		Deutsch	
Scheme		xxx	Enter the scheme number here
Auto DST		Yes	Automatic daylight savings time adjustment will be activated
Time			Adjust the current clock time
Date			Adjust the current date

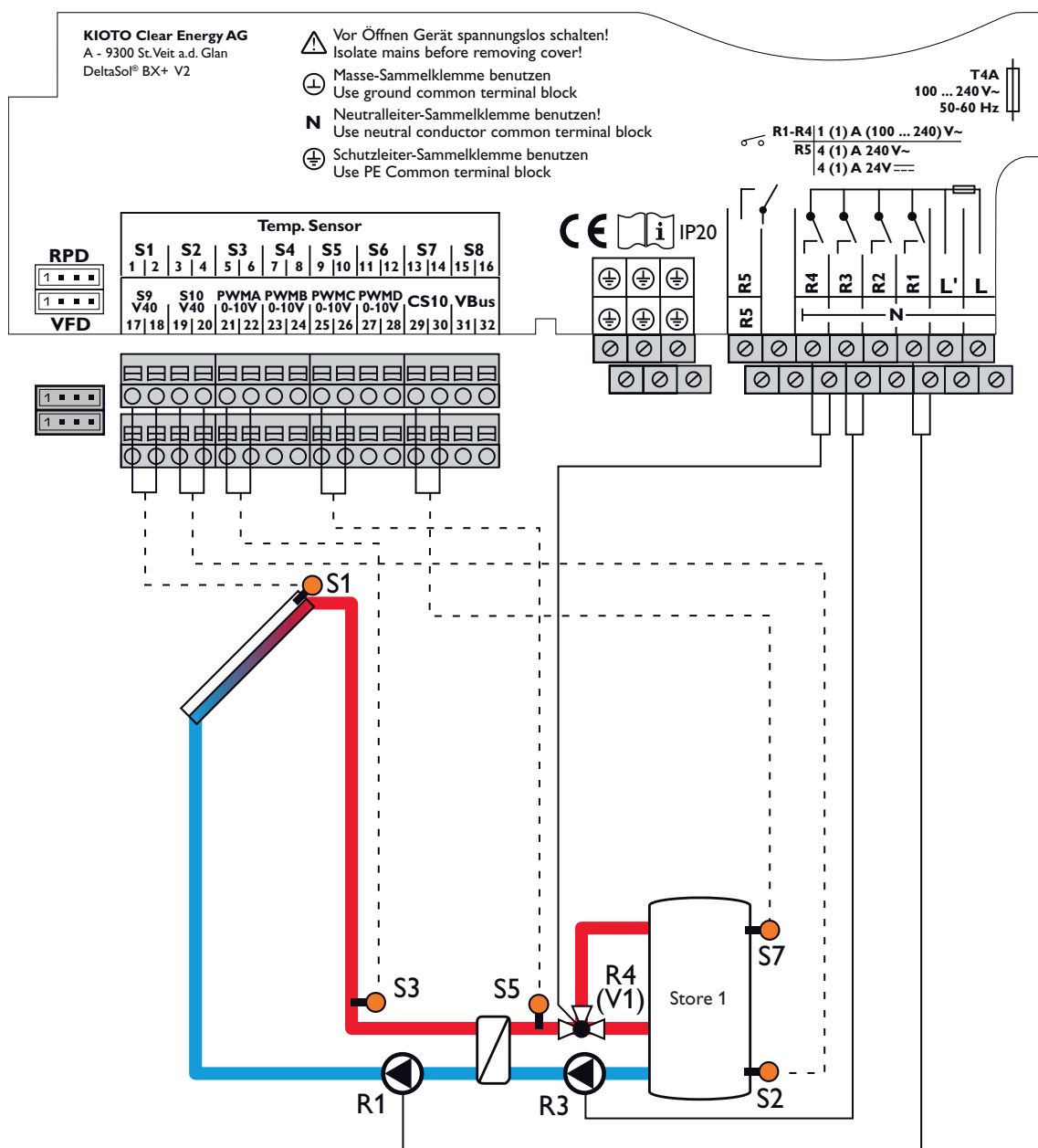
1. System description stratified layer module basic scheme (Scheme number 001/011)

The controller compares the temperature at collector sensor S1 with the temperature at store sensor S2 (store 1). If the temperature difference measured is higher than the adjusted switch-on temperature difference, the pump (R1) will be activated; the solar circuit will be heated.

The pump speed is controlled such that the adjustable temperature difference is reached. If the temperature difference between S3 and S2 exceeds the adjusted switch-on

temperature difference for the secondary pump (external heat exchanger), the secondary pump (R3) will be switched on. Store loading is controlled by means of an additional heat exchange function. The valve (R4) is normally open to load the central store zone.

If the temperature difference between S5 and S7 exceeds the switch-on temperature difference, the upper store zone will be loaded up to the adjusted set temperature.



Note: In scheme 011, connect the pump R1 to PWM A and R3 to PWM C additionally.

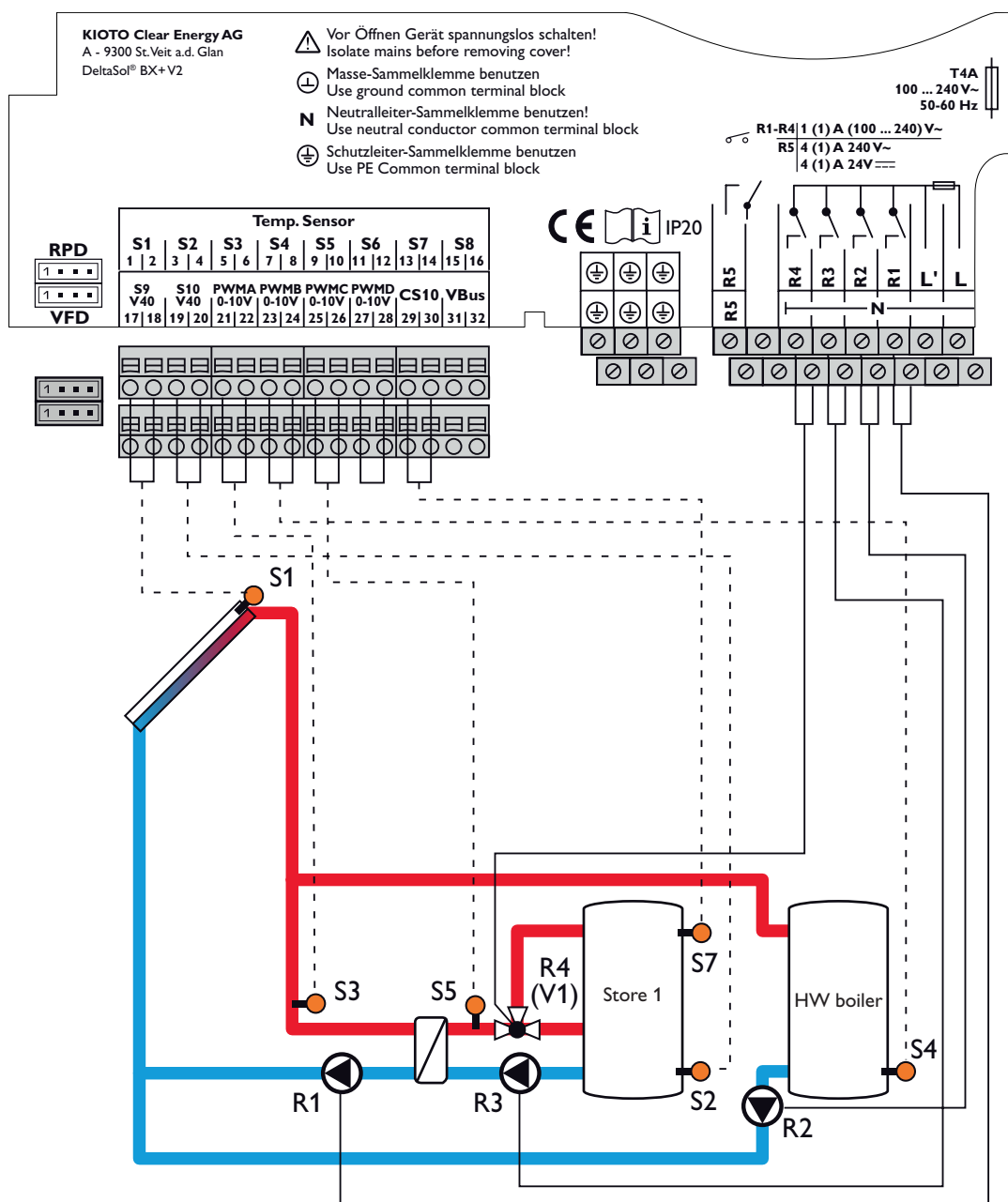
2. System description stratified layer module basic scheme with additional external heat source (Boiler) (Scheme number 002/012)

In this scheme, an additional store (store 2) for DHW heating is integrated in the solar circuit.

This store has a higher priority than the stratified store (store 1). I. e. the controller first checks whether there is a sufficient temperature difference between S1 and S4. Then, store 2 is loaded until the temperature difference falls be-

low the adjustable value or the maximum temperature is reached. After that, the controller checks if the switch-on conditions for loading the stratified store are fulfilled.

The stores will be loaded according to the adjusted store sequence control.

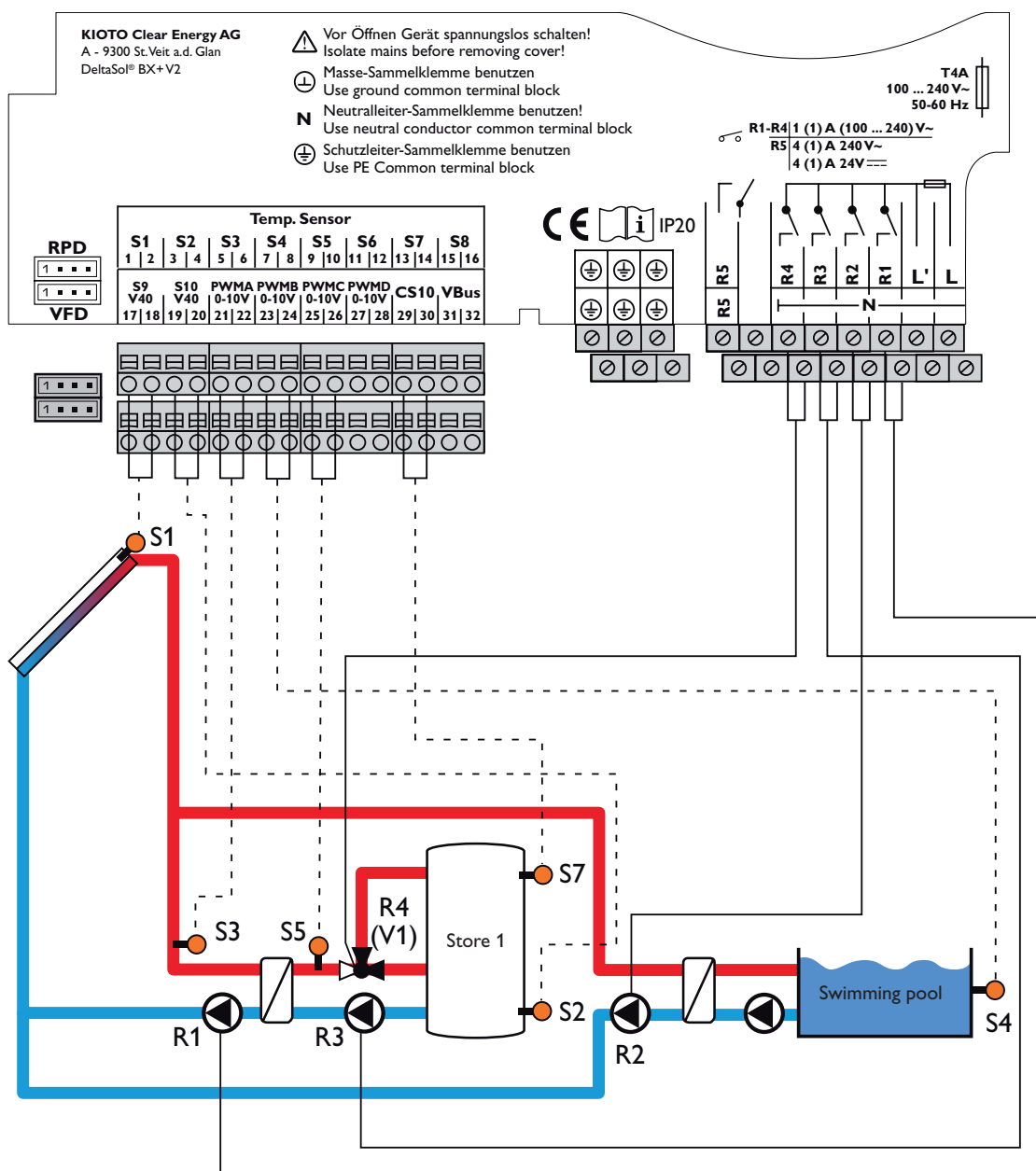


Note: In scheme 012, connect the pump R1 to PWMA, R3 to PWM C and R2 to PWM B additionally.

3. System description stratified layer module basic scheme with additional pool (Scheme number 003/013)

In this scheme, a pool is integrated into the solar circuit via a heat exchanger. In this case, the stratified store has first priority. Only when loading is not possible any more, will the controller switch to pool loading.

Relay 2 (R2) can be used as a control signal, e.g. for switching an external contactor that controls the additional pool loading pump.



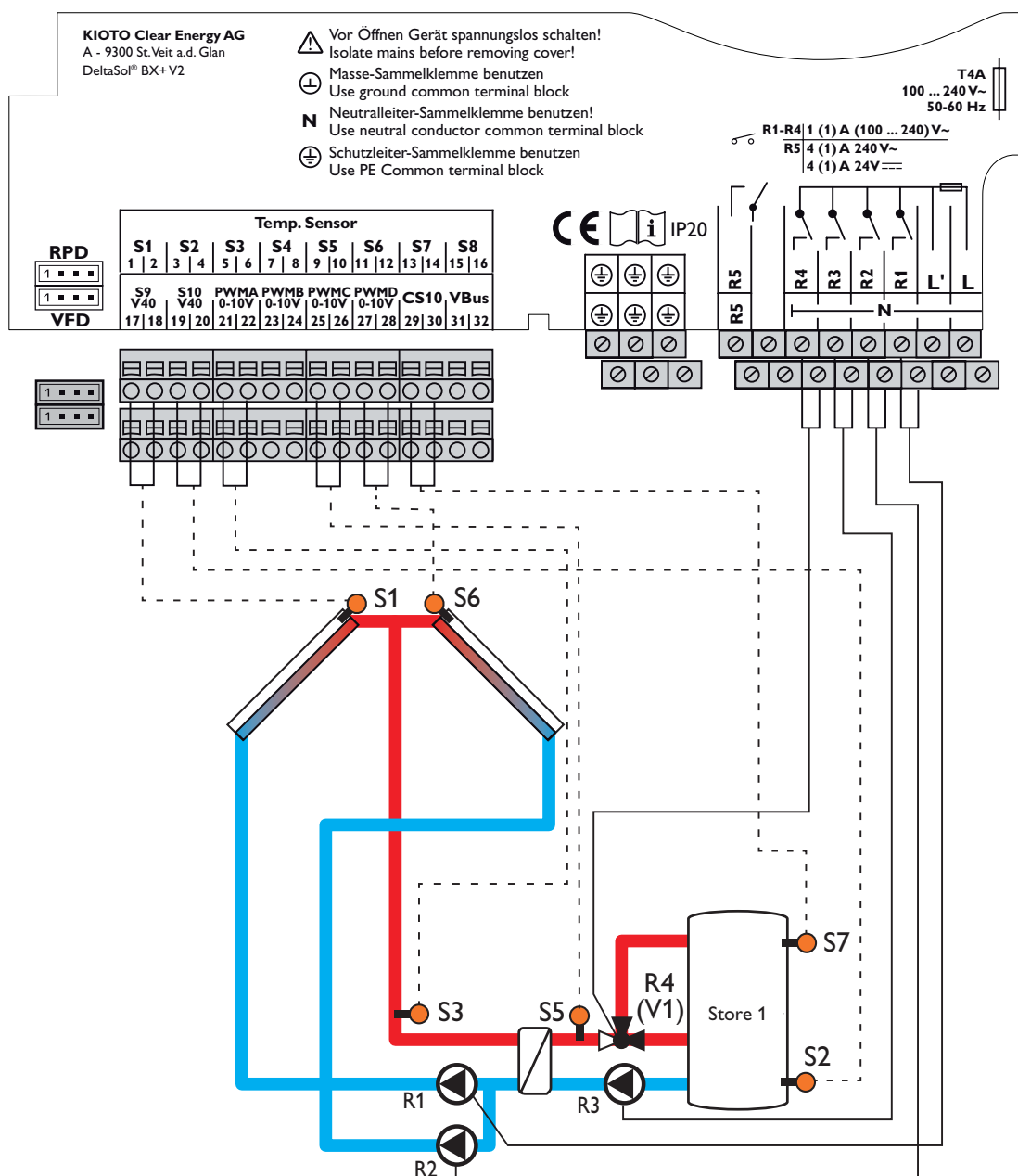
Note: In scheme 013, connect the pump R1 to PWMA, R3 to PWM C and R2 to PWM B additionally.

4. System description stratified layer module basic scheme with east/west collectors (Scheme number 004/014)

The controller compares the temperatures at the temperature sensors S1 and S6 to the temperature at sensor S2. If one of the temperature differences measured is higher than the adjusted switch-on temperature difference, the pump (R1 or R2) will be activated; the solar circuit will be heated. The controller will aim to hold the adjusted temperature difference. The pump speed is controlled such that the adjustable temperature difference is reached.

If the temperature difference between S3 and S2 exceeds the adjusted switch-on temperature difference for the secondary pump (external heat exchanger), the pump (R3) will be switched on. Store loading is controlled by means of an additional heat exchange function. The valve (R4) is normally open to load the central store zone.

If the temperature difference between S5 and S7 exceeds the switch-on temperature difference, the upper store zone will be loaded up to the adjusted set temperature.



Note: In scheme 014, connect the pump R1 to PWMA, R2 to PWM B and R3 to PWM C additionally.

Solar / Basic settings				
Designation	Factory setting			
Scheme	001/011	002/012	003/013	004/014
System	1	3.2	3.2	2.1
Collector 1				
Colmin.	10	10	10	10
Colmin.	Yes	Yes	Yes	Yes
Colem.	130	130	130	130
Collector 2				
Colmin.	Yes	Yes	Yes	Yes
Colmin.	10	10	10	10
Colem.	130	130	130	130
Store 1				
ΔTon	6K	6K	6K	6K
ΔToff	2	2	2	2
ΔTset	10K	10K	10K	10K
Stset	65	65	65	65
Stmax	95	95	95	95
Priority	1	2	1	1
HysSt	2K	2K	2K	2K
Rise	2K	2K	2K	2K
tMin	30s	30s	30s	30s
Min. speed	30%	30%	30%	30%
Deactivated	No	No	No	No
Store 2				
ΔTon	6K	6K	6K	6K
ΔToff	4K	2K	2K	4K
ΔTset	10K	10K	10K	10K
Stset	45°C	60°C	26°C	45°C
Stmax	60°C	60°C	30°C	60°C
Priority	2	1	2	2
HysSt	2K	2K	2K	2K
Rise	2K	2K	2K	2K
tMin	30s	30s	30s	30s
Min. speed	30%	30%	30%	30%
Deactivated	No	No	No	No
Loading logic				
Load. break	2 min	2 min	4 min	2 min
Circ.	15 min	60 min	30 min	15 min
Pause speed	No	No	No	No
Pump delay	30s	30s	30s	30s

Solar / Basic settings				
Ext. HX				
Designation	Factory setting			
Scheme	001/011	002/012	003/013	004/014
Relay	3	3	3	3
Min. speed	30%	30%	30%	30%
Store	1	1	1	1
Sensor ext. HX	3	3	3	3
Target temperature	No	No	No	No
ΔTon	5	5	5	5
ΔToff	3	3	3	3
Overrun	0	0	0	0
Function	activated	activated	activated	activated

Arrangement / Optional function				
Heat exchange				
Designation	Factory setting			
Scheme	001/011	002/012	003/013	004/014
Relay	4	4	4	4
Sen. Source	5	5	5	5
Sen. Sink	7	7	7	7
Ton	3	3	3	3
Toff	1	1	1	1
Tset	10 K	10 K	10 K	10 K
Min. speed	100	100	100	100
Tmax	95	95	95	95
Tmin	55	55	55	55
Timer	-	-	-	-
Function	activated	activated	activated	activated

HQM				
HQM1				
Designation	Factory setting			
Scheme	011	012	013	014
Flow sen.	S3	S3	S3	S3
Return sen.	Gd1	Gd1	Gd1	Gd1
Sen. flow r.	Yes	Yes	Yes	Yes
Sen. flow r.	Gd1	Gd1	Gd1	Gd1
Fluid type	Propyl.	Propyl.	Propyl.	Propyl.
Ratio	-	-	-	-

HQM				
HQM2				
Designation	Factory setting			
Scheme	011	012	013	014
Flow sen.	S5	S5	S5	S5
Return sen.	Gd2	Gd2	Gd2	Gd2
Sen. flow r.	Yes	Yes	Yes	Yes
Sen. flow r.	Gd2	Gd2	Gd2	Gd2
Fluid type	-	-	-	-

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