DeltaSol® SLT

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Application examples

System descriptions

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Application examples

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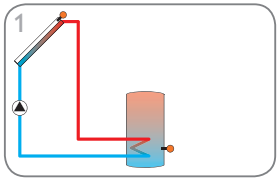
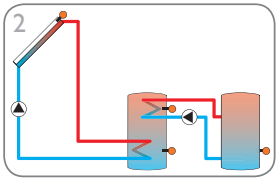
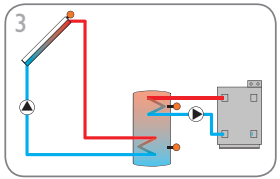


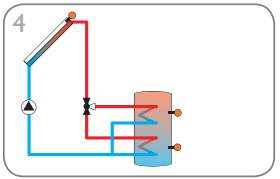
Solar system with 1 store (page 4)



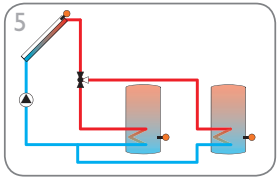
Solar system with 2 stores and heat exchange (page 5)



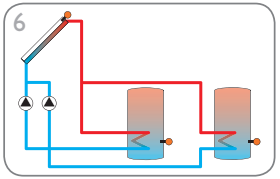
Solar system with 1 store and after-heating (page 6)



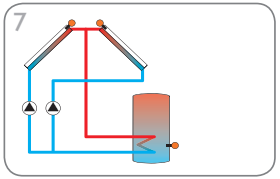
Solar system with 1 store and 3-port valve for store loading in layers (page 7)



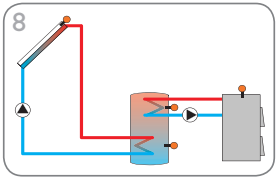
Solar system with 2 stores and valve logic (page 8)



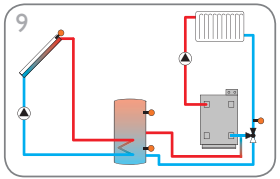
Solar system with 2 stores and pump logic (page 9)



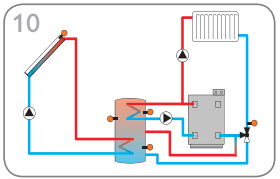
Solar system with east-/west collectors (page 10)



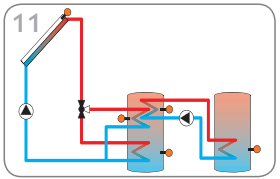
Solar system with 1 store and solid fuel boiler (page 11)



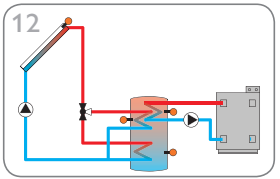
Solar system with 1 store and return preheating (page 12)



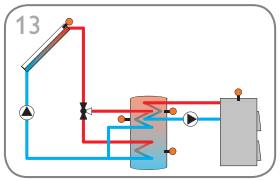
Solar system with 1 store, return pre-heating and afterheating (page 13)



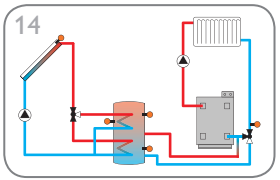
Solar system with store loading in layers and heat exchange (page 14)



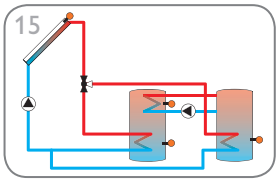
Solar system with store loading in layers and afterheating (page 15)



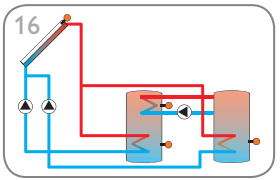
Solar system with store loading in layers and solid fuel boiler (page 16)



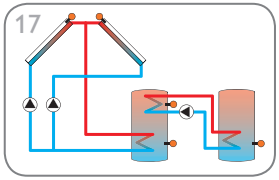
Solar system with store loading in layers and return preheating (page 17)



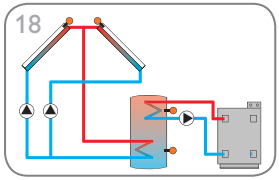
Solar system with 2 stores and heat exchange (page 18)



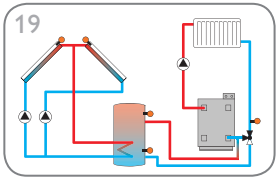
Solar system with 2 stores, pump logic and heat exchange (page 19)



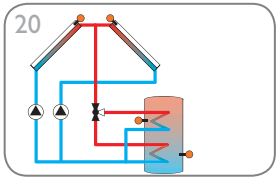
Solar system with 2 stores, pump logic and heat exchange (page 20)



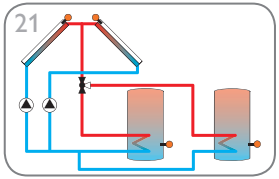
Solar system with east-/west collectors and thermostatic afterheating (page 21)



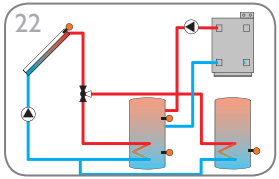
Solar system with east-/west collectors and return preheating (page 22)



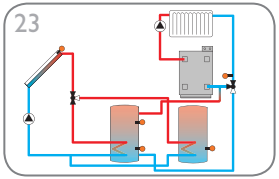
Solar system with east-/west collectors and store loading in layers (page 23)



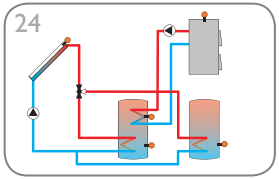
Solar system with with east-/west collectors, 2 stores and valve logic (page 24)



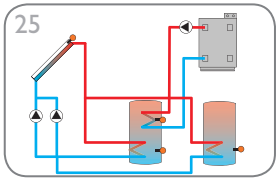
Solar system with 2 stores, valve logic and afterheating (page 25)



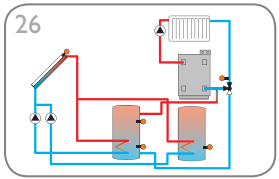
Solar system with 2 stores, valve logic and return preheating (page 26)



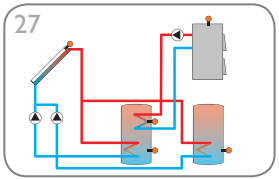
Solar system with 2 stores, valve logic and solid fuel boiler (page 27)



Solar system with 2 stores, pump logic and afterheating (page 28)

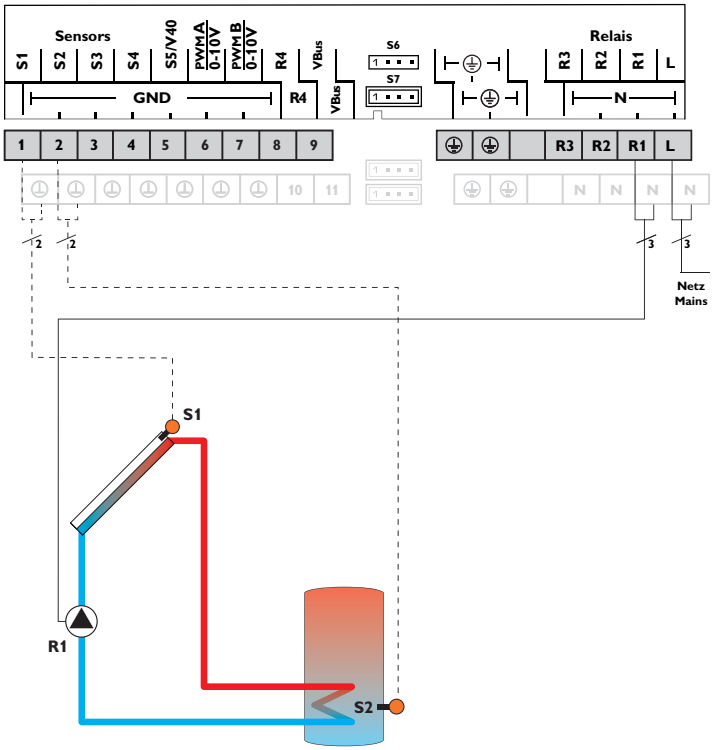


Solar system with 2 stores, pump logic and return preheating (page 29)



Solar system with 2 stores, pump logic and solid fuel boiler (page 30)

Scheme 1: Standard solar system with 1 store

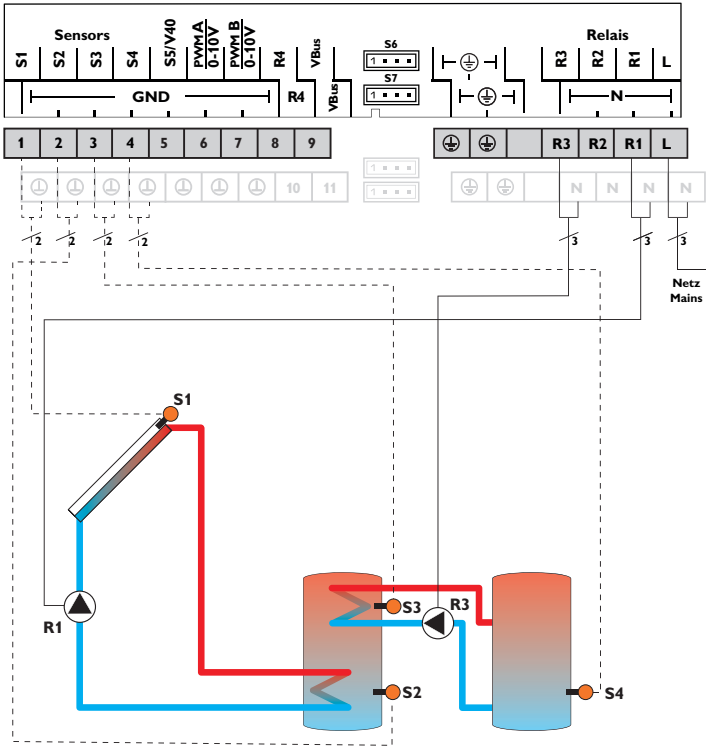


Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Free	3/GND
S4	Free	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Free	R2/N/PE
R3	Free	R3/N/PE
R4	Free	R4/R4

The controller calculates the temperature difference between collector sensor S1 and store sensor S2. If the difference is larger than or identical to the adjusted switch-on temperature difference, the pump (R1) will be switched on and the store will be loaded until the switch-off temperature difference or the maximum store temperature is reached.

Scheme 2: Solar system with 2 stores and heat exchange



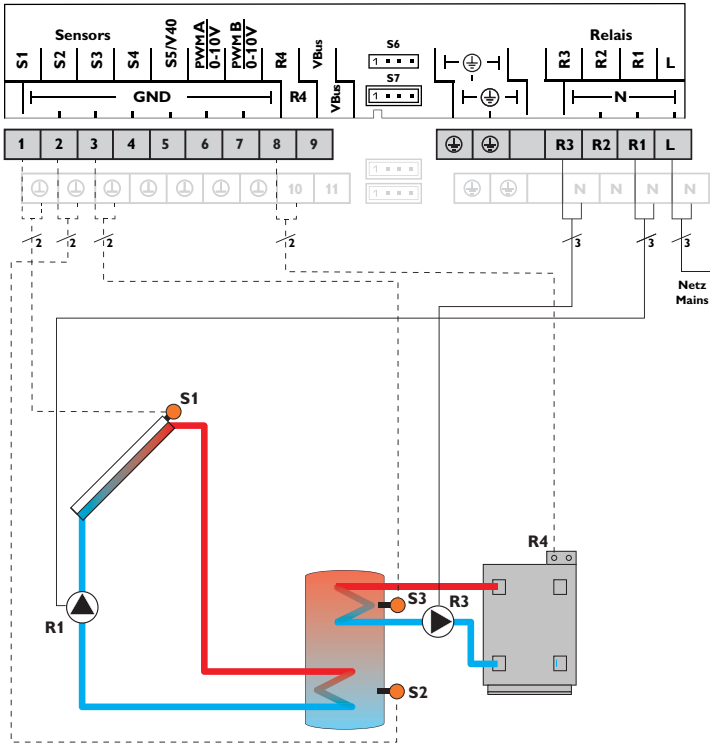
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature heat exchange source	3/GND
S4	Temperature heat exchange sink	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Free	R2/N/PE
R3	Store loading pump	R3/N/PE
R4	Free	R4/R4

The controller calculates the temperature difference between collector sensor S1 and store sensor S2. If the difference is larger than or identical to the adjusted switch-on temperature difference, the pump (R1) will be switched on and the store will be loaded until the switch-off temperature difference or the maximum store temperature is reached.

Heat exchange control to an existent store via an additional pump (R3) can be carried out with another temperature differential function (S3 heat source/S4 heat sink).

Scheme 3: Solar system with 1 store and afterheating



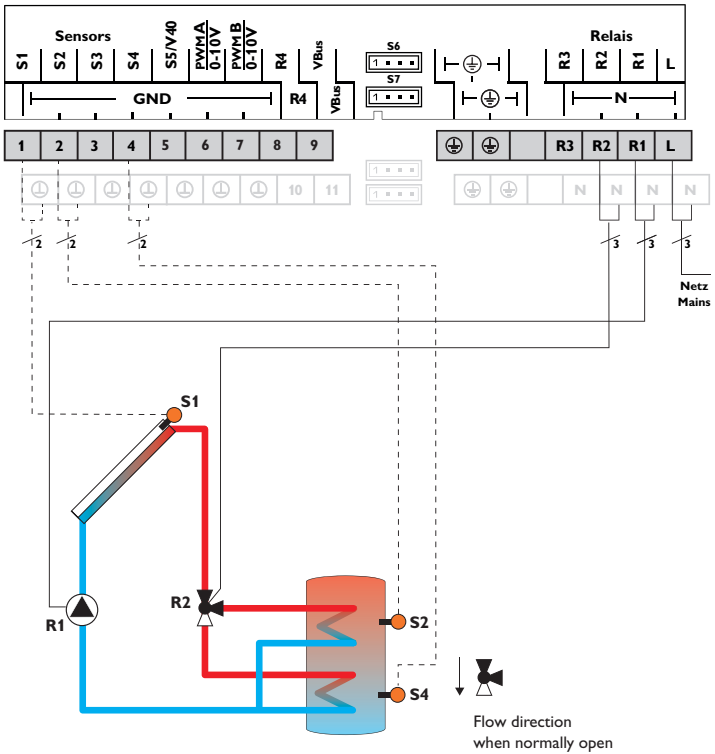
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature after-heating	3/GND
S4	Free	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Free	R2/N/PE
R3	Store loading pump	R3/N/PE
R4	Afterheating	R4/R4

The controller calculates the temperature difference between collector sensor S1 and store sensor S2. If the difference is larger than or identical to the adjusted switch-on temperature difference, the pump (R1) will be switched on and the store will be loaded until the switch-off temperature difference or the maximum store temperature is reached.

Afterheating (R3 and R4) can be carried out with a thermostat function (S3). If the value at S3 reaches the switch-on temperature for the afterheating, the relay is switched on. If the value exceeds the switch-off temperature for the afterheating, the relay is switched off again.

Scheme 4: Solar system with 1 store and 3-port valve for store loading in layers

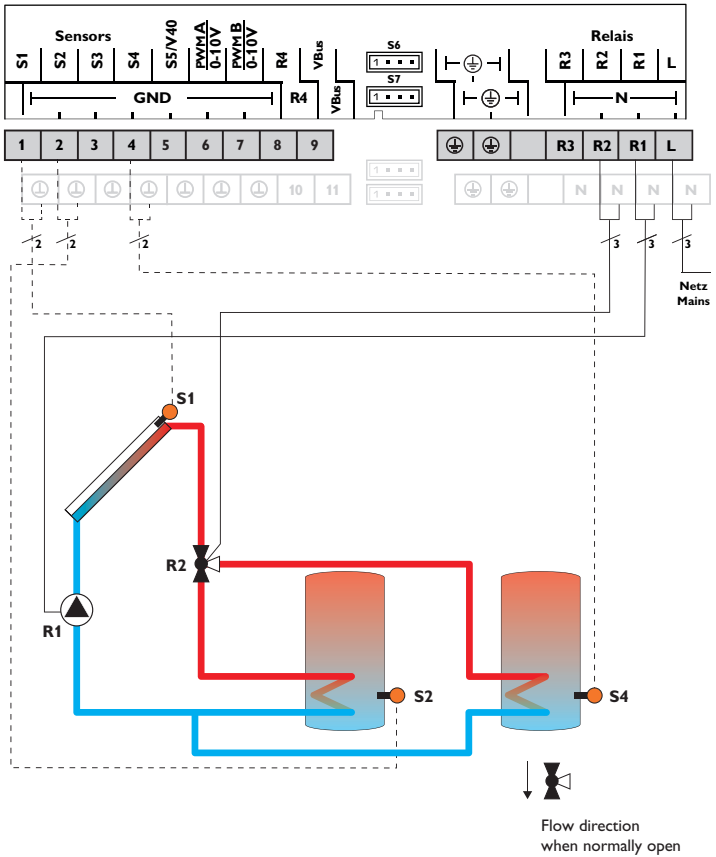


Sensors		
S1	Temperature collector	1/GND
S2	Temperature store top	2/GND
S3	Free	3/GND
S4	Temperature store base	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Valve solar circuit	R2/N/PE
R3	Free	R3/N/PE
R4	Free	R4/R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1) will be activated and the corresponding store zone will be loaded up to the adjusted store maximum or set temperature respectively via the valve (R2). The priority logic effects prior loading of the upper zone of the store.

Scheme 5: 2-store system with valve logic, 1 pump, 3 sensors and 3-port valve

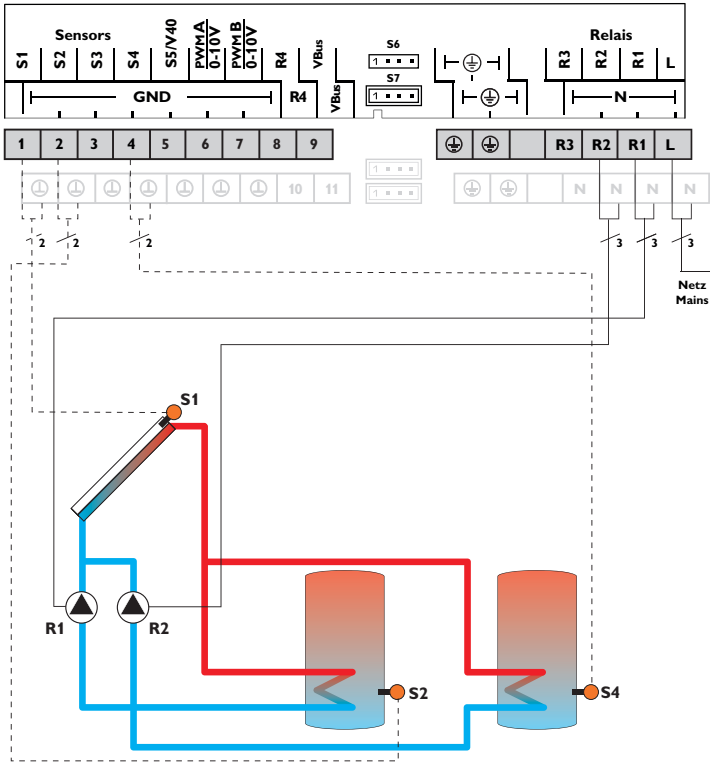


Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Free	3/GND
S4	Temperature store 2 base	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Valve solar circuit	R2/N/PE
R3	Free	R3/N/PE
R4	Free	R4/R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1) will be activated and the corresponding store will be loaded up to the adjusted store maximum or set temperature respectively via the valve (R2). The priority logic effects prior loading of store 1.

Scheme 6: 2-store solar system with pump logic

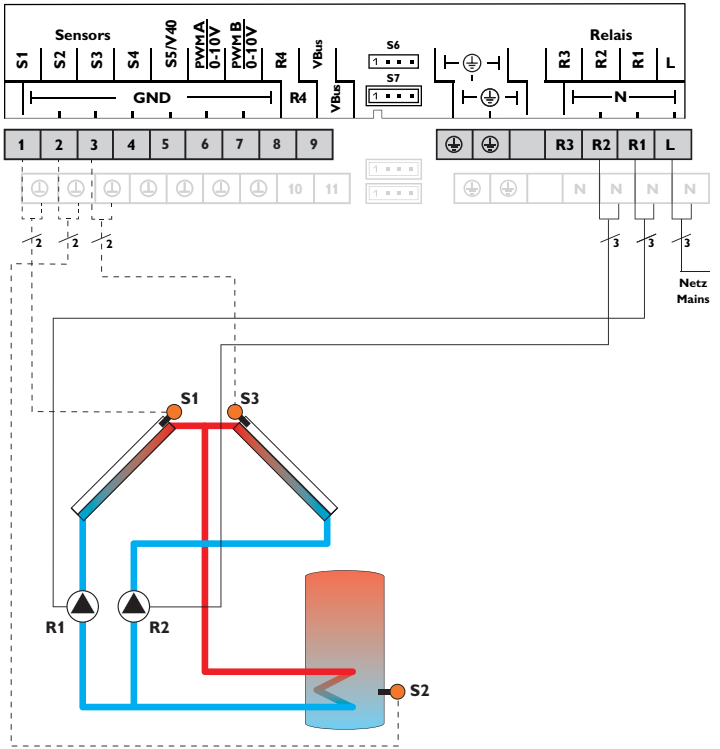


Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Free	3/GND
S4	Temperature store 2 base	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump store	R1/N/PE
R2	Solar pump store 2	R2/N/PE
R3	Free	R3/N/PE
R4	Free	R4/R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1 and/or R2) will be activated and the corresponding store will be loaded up to the adjusted store maximum or set temperature respectively at most. The priority logic effects prior loading of store 1.

Scheme 7: Solar system with east-/west collectors

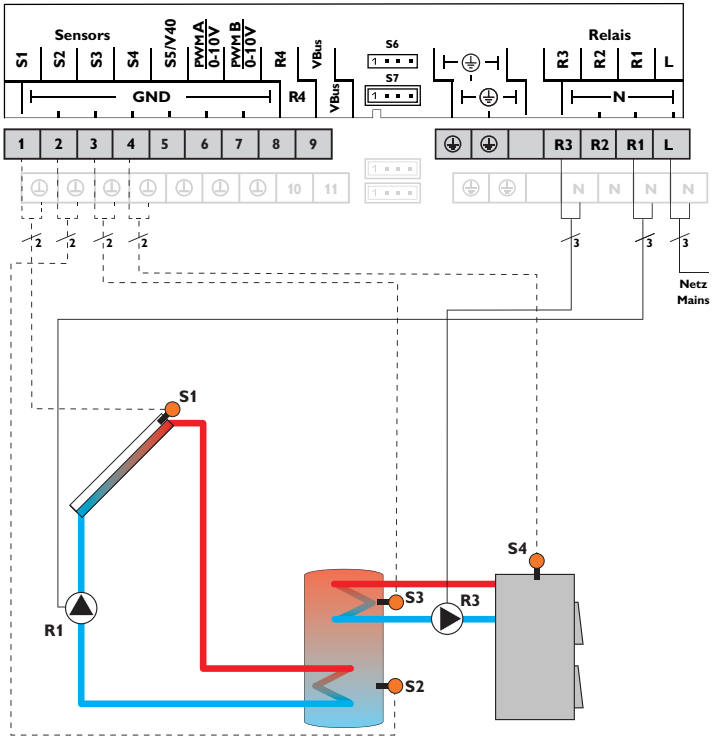


Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature collector 2	3/GND
S4	Free	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump collector	R1/N/PE
R2	Solar pump collector 2	R2/N/PE
R3	Free	R3/N/PE
R4	Free	R4/R4

The controller compares the temperatures at the collector sensors S1 and S3 to the store temperature at sensor S2. If one of the measured temperature difference is higher than the adusted switch-on temperature difference, the corresponding pump (R1 and/or R2) will be switched on, thus loading the store until either the switch-off temperature difference or the store maximum temperature is reached.

Scheme 8: Solar system with 1 store and afterheating with solid fuel boiler



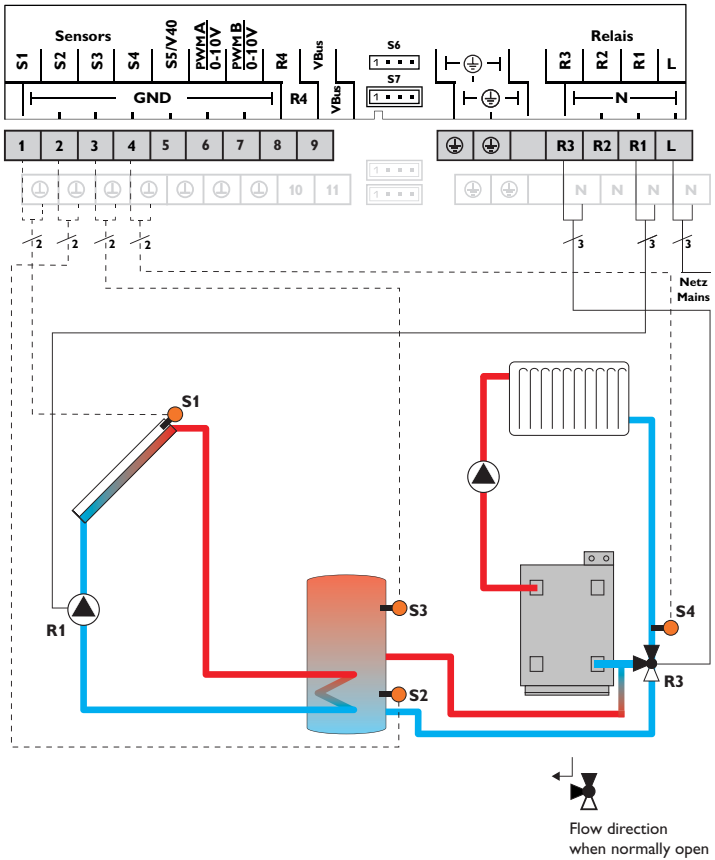
Sensors		
S1	Temperature collector	1 / GND
S2	Temperature store base	2 / GND
S3	Temperature store top	3 / GND
S4	Temperature solid fuel boiler	4 / GND
S5	Free	5 / GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1 / N / PE
R2	Free	R2 / N / PE
R3	Loading pump solid fuel boiler	R3 / N / PE
R4	Free	R4 / R4

The controller calculates the temperature difference between collector sensor S1 and store sensor S2. If the difference is larger than or identical to the adjusted switch-on temperature difference, the pump (R1) will be switched on and the store will be loaded until the switch-off temperature difference or the maximum store temperature is reached.

With another temperature differential function (S4 heat source/S3 heat sink), afterheating of the store with a solid fuel boiler can be carried out via another pump (R3).

Scheme 9: Solar system with 1 store and return preheating



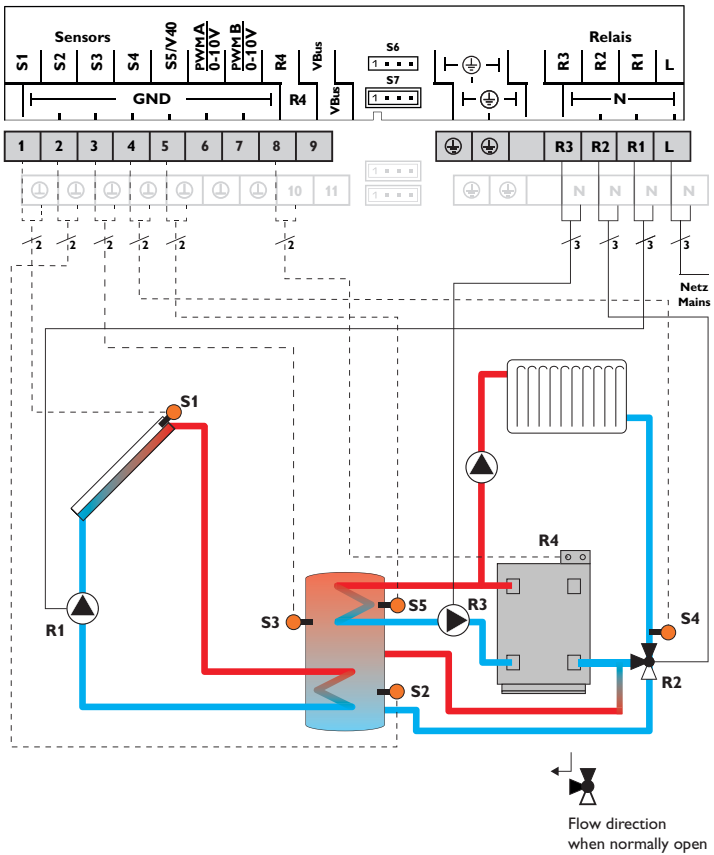
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature store return preheating	3/GND
S4	Temperature heating return	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Free	R2/N/PE
R3	Valve return preheating	R3/N/PE
R4	Free	R4/ R4

The controller calculates the temperature difference between collector sensor S1 and store sensor S2. If the difference is larger than or identical to the adjusted switch-on temperature difference, the pump (R1) will be switched on and the store will be loaded until the switch-off temperature difference or the maximum store temperature is reached.

With another temperature differential function (S3 heat source/S4 heat sink) return preheating (heating circuit backup) is possible via a valve (R3).

Scheme 10: Solar system with 1 store, return preheating and thermostatic afterheating



Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature store return preheating	3/GND
S4	Temperature heating return	4/GND
S5	Temperature afterheating	5/GND
S6	Free	S6
S7	Free	S7

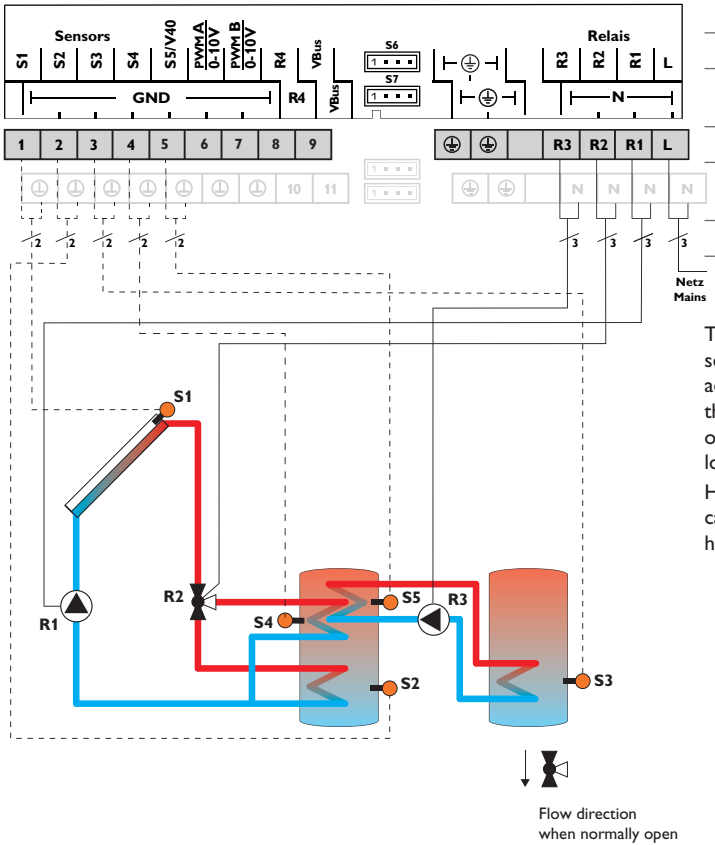
Relay		
R1	Solar pump	R1/N/PE
R2	Valve return preheating	R2/N/PE
R3	Store loading pump	R3/N/PE
R4	Afterheating	R4/ R4

The controller calculates the temperature difference between collector sensor S1 and store sensor S2. If the difference is larger than or identical to the adjusted switch-on temperature difference, the pump (R1) will be switched on and the store will be loaded until the switch-off temperature difference or the maximum store temperature is reached.

Afterheating (R3 and R4) can be carried out with a thermostat function (S5). If the value at S5 reaches the switch-on temperature for the afterheating, the relay is switched on. If the value exceeds the switch-off temperature for the afterheating, the relay is switched off again.

With another temperature differential function (S3 heat source/S4 heat sink) return preheating (heating circuit backup) is possible via a valve (R2).

Scheme 11: Solar system with store loading in layers and heat exchange control



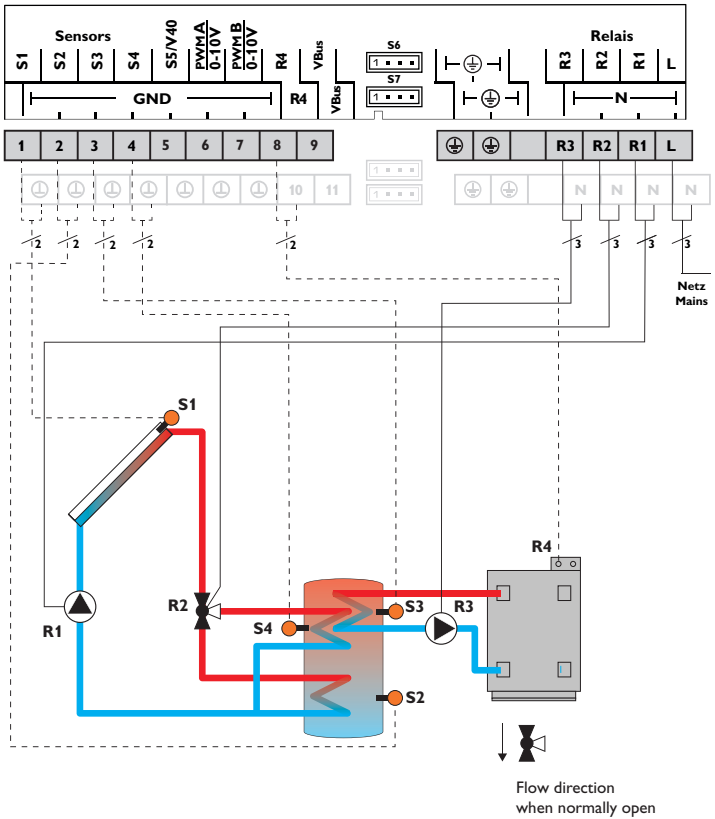
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature heat exchange sink	3/GND
S4	Temperature store top	4/GND
S5	Temperature heat exchange source	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Valve solar circuit	R2/N/PE
R3	Store loading pump	R3/N/PE
R4	Free	R4/ R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1) will be activated and the corresponding store zone will be loaded up to the adjusted store maximum or set temperature respectively via the valve (R2). The priority logic effects prior loading of the upper zone of the store.

Heat exchange control to an existent store via an additional pump (R3) can be carried out with another temperature differential function (S5 heat source/S3 heat sink).

Scheme 12: Solar system with store loading in layers and thermostatic afterheating



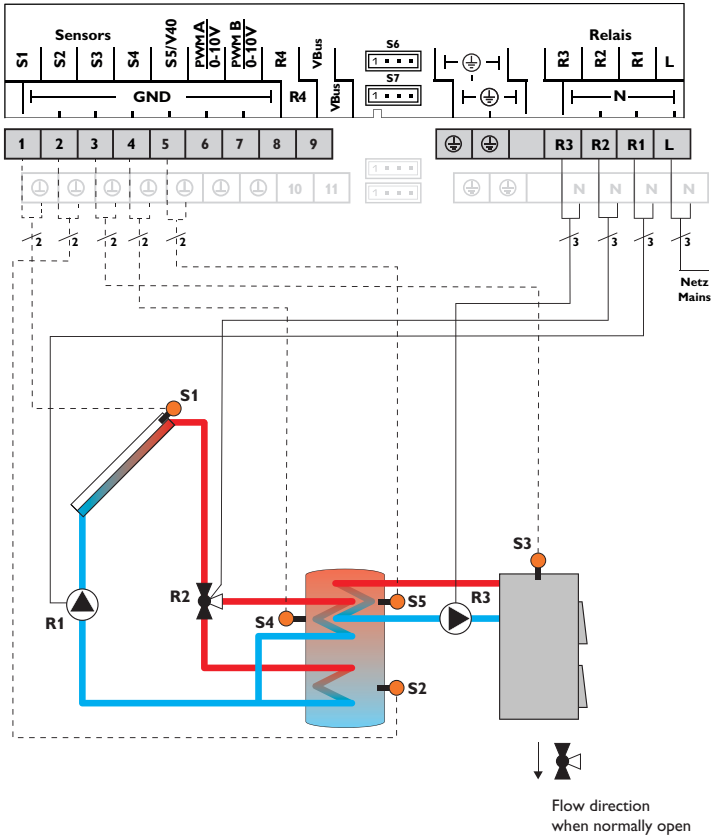
Sensors		
S1	Temperature collector	1 / GND
S2	Temperature store base	2 / GND
S3	Temperature afterheating	3 / GND
S4	Temperature store top	4 / GND
S5	Free	5 / GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1 / N / PE
R2	Valve solar circuit	R2 / N / PE
R3	Store loading pump	R3 / N / PE
R4	Afterheating	R4 / R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1) will be activated and the corresponding store zone will be loaded up to the adjusted store maximum or set temperature respectively via the valve (R2). The priority logic effects prior loading of the upper zone of the store.

Afterheating (R3 and R4) can be carried out with a thermostat function (S3). If the value at S3 reaches the switch-on temperature for the afterheating, the relay is switched on. If the value exceeds the switch-off temperature for the afterheating, the relay is switched off again.

Scheme 13: Solar system with store loading in layers and afterheating with solid fuel boiler



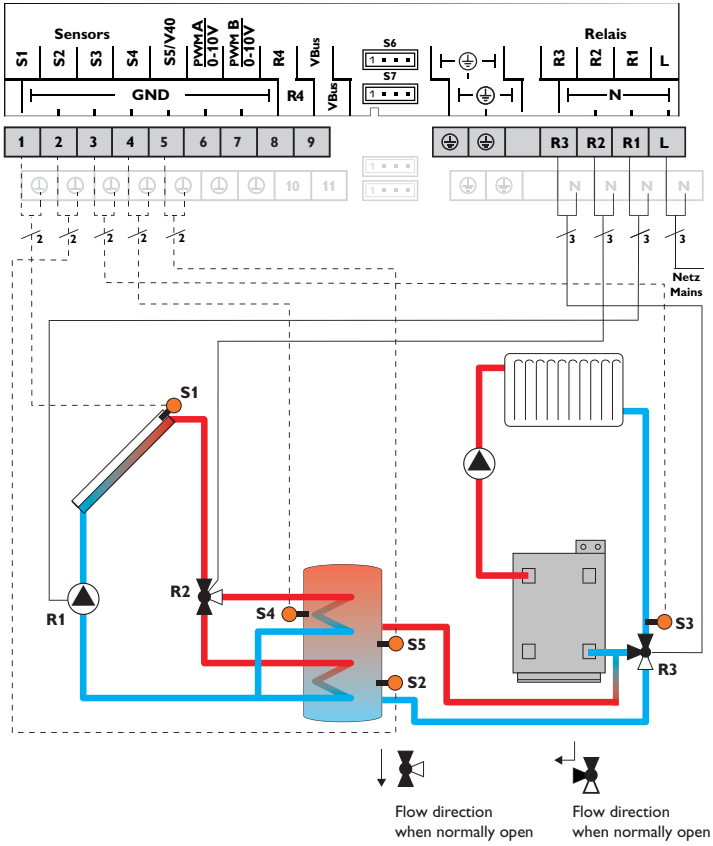
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature solid fuel boiler	3/GND
S4	Temperature store top	4/GND
S5	Temperature store – solid fuel boiler	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Valve solar circuit	R2/N/PE
R3	Loading pump solid fuel boiler	R3/N/PE
R4	Free	R4/ R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1) will be activated and the corresponding store zone will be loaded up to the adjusted store maximum or set temperature respectively via the valve (R2). The priority logic effects prior loading of the upper zone of the store.

With another temperature differential function (S3 heat source/S5 heat sink), afterheating of the store with a solid fuel boiler can be carried out via another pump (R3).

Scheme 14: Solar system with store loading in layers and return preheating



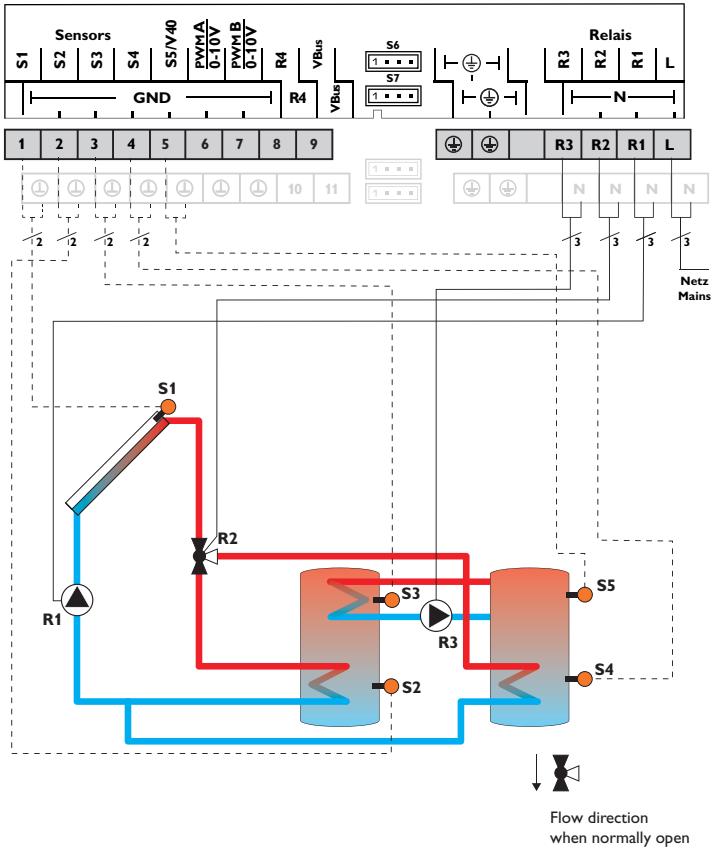
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature heating return	3/GND
S4	Temperature store top	4/GND
S5	Temperature store return preheating	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Valve solar circuit	R2/N/PE
R3	Valve return preheating	R3/N/PE
R4	Free	R4/ R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S3. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1) will be activated and the corresponding store zone will be loaded up to the adjusted store maximum or set temperature respectively via the valve (R2). The priority logic effects prior loading of the upper zone of the store.

With another temperature differential function (S5 heat source/S4 heat sink) return preheating (heating circuit backup) is possible via another valve (R3).

Scheme 15: 2-store solar system with valve logic and heat exchange control



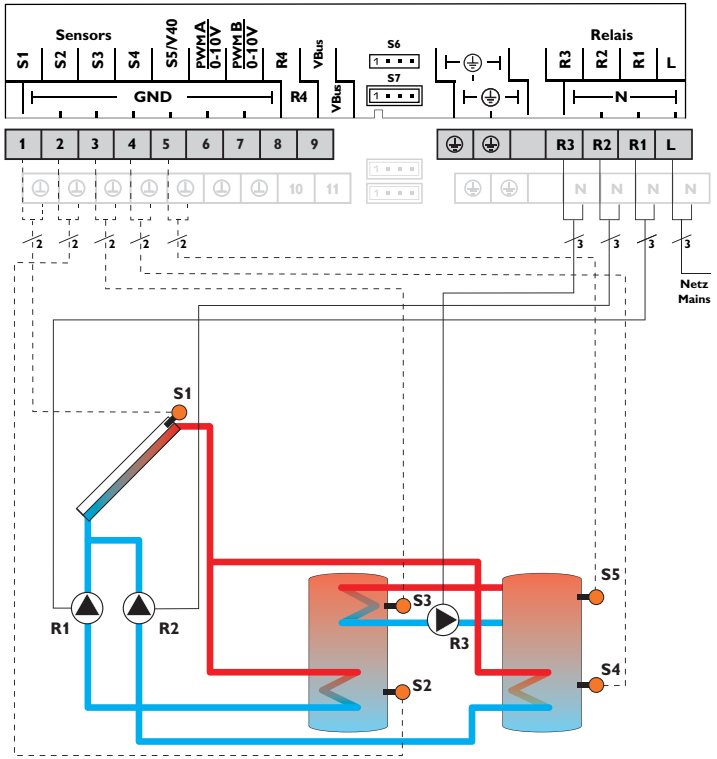
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature heat exchange sink	3/GND
S4	Temperature store 2 base	4/GND
S5	Temperature heat exchange source	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Valve solar circuit	R2/N/PE
R3	Store loading pump	R3/N/PE
R4	Free	R4/R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1) will be activated and the corresponding store will be loaded up to the adjusted store maximum or set temperature respectively via the valve (R2). The priority logic effects prior loading of store 1.

Heat exchange control to an existent store via an additional pump (R3) can be carried out with another temperature differential function (S5 heat source/S3 heat sink) .

Scheme 16: 2-store solar system with pump logic and heat exchange control



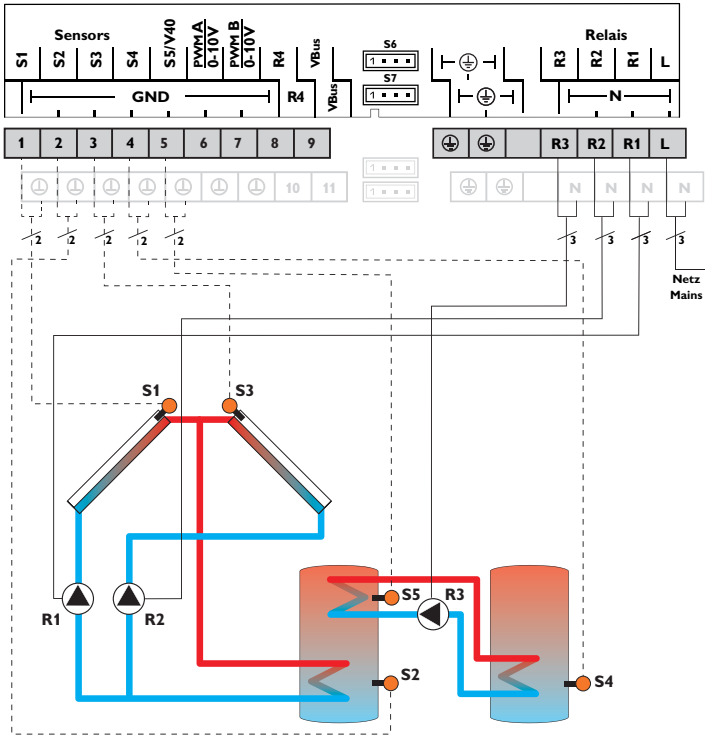
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature heat exchange sink	3/GND
S4	Temperature store 2 base	4/GND
S5	Temperature heat exchange source	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump store 1	R1/N/PE
R2	Solar pump store 2	R2/N/PE
R3	Store loading pump	R3/N/PE
R4	Free	R4/R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1 and/or R2) will be activated and the corresponding store will be loaded up to the adjusted store maximum or set temperature respectively at most. The priority logic effects prior loading of store 1.

Heat exchange control to an existent store via an additional pump (R3) can be carried out with another temperature differential function (S5 heat source/S3 heat sink).

Scheme 17: Solar system with east-/west collectors and heat exchange control



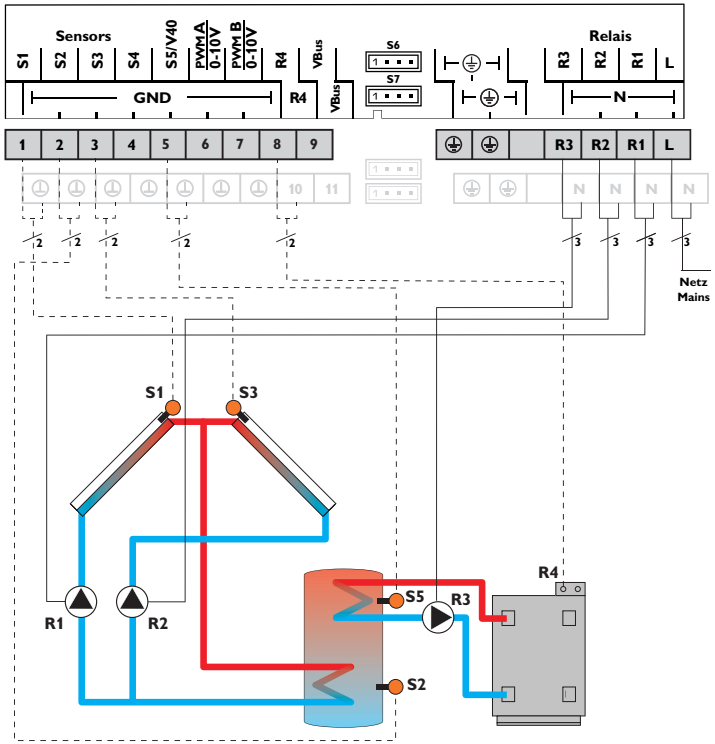
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature collector 2	3/GND
S4	Temperature heat exchange sink	4/GND
S5	Temperature heat exchange source	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump collector	R1/N/PE
R2	Solar pump collector 2	R2/N/PE
R3	Store loading pump	R3/N/PE
R4	Free	R4/R4

The controller compares the temperatures at the collector sensors S1 and S3 to the store temperature at sensor S2. If one of the measured temperature difference is higher than the adusted switch-on temperature difference, the corresponding pump (R1 and/or R2) will be switched on, thus loading the store until either the switch-off temperature difference or the store maximum temperature is reached.

Heat exchange control to an existent store via an additional pump (R3) can be carried out with another temperature differential function (S5 heat source/S4 heat sink).

Scheme 18: Solar system with east-/west collectors and thermostatic afterheating



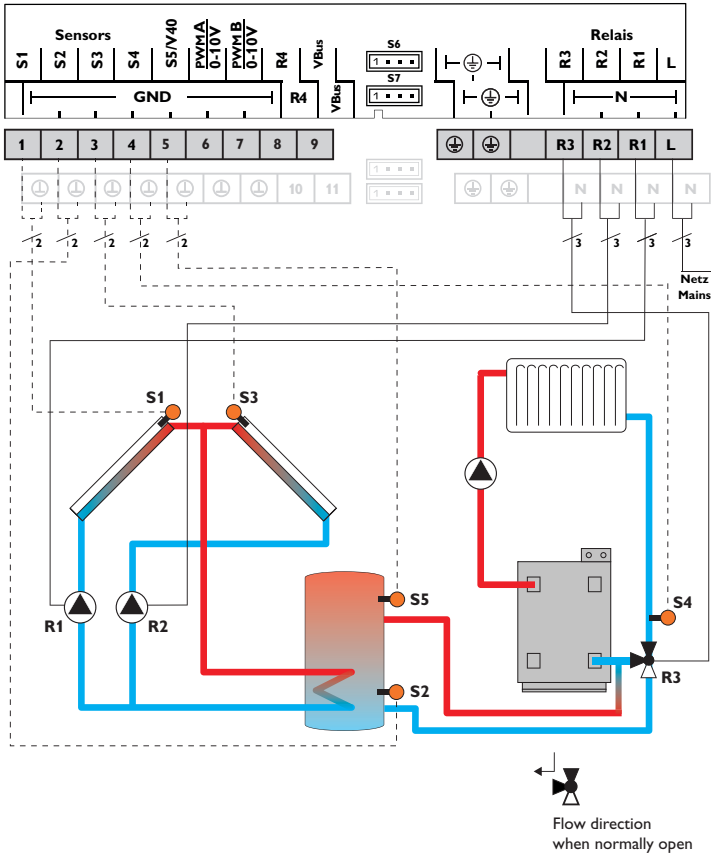
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature collector 2	3/GND
S4	Free	4/GND
S5	Temperature after-heating	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump collector	R1/N/PE
R2	Solar pump collector 2	R2/N/PE
R3	Store loading pump	R3/N/PE
R4	Afterheating	R4/R4

The controller compares the temperatures at the collector sensors S1 and S3 to the store temperature at sensor S2. If one of the measured temperature difference is higher than the adusted switch-on temperature difference, the corresponding pump (R1 and/or R2) will be switched on, thus loading the store until either the switch-off temperature difference or the store maximum temperature is reached.

Afterheating (R3 and R4) can be carried out with a thermostat function (S5). If the value at S5 reaches the switch-on temperature for the afterheating, the relay is switched on. If the value exceeds the switch-off temperature for the afterheating, the relay is switched off again.

Scheme 19: Solar system with east-/west collectors and return preheating



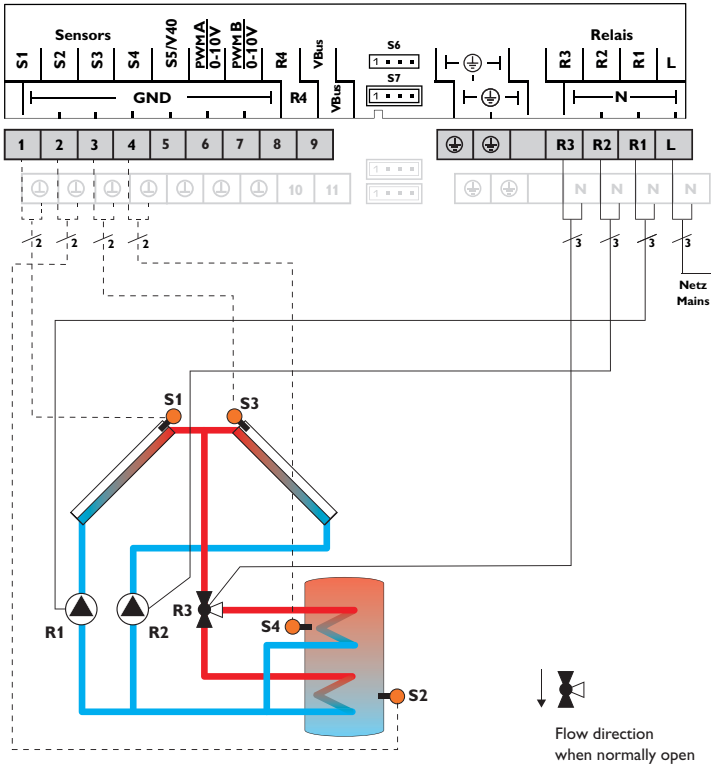
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature collector 2	3/GND
S4	Temperature heating return	4/GND
S5	Temperature store return preheating	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump collector	R1/N/PE
R2	Solar pump collector 2	R2/N/PE
R3	Valve return preheating	R3/N/PE
R4	Free	R4/R4

The controller compares the temperatures at the collector sensors S1 and S3 to the store temperature at sensor S2. If one of the measured temperature difference is higher than the adusted switch-on temperature difference, the corresponding pump (R1 and/or R2) will be switched on, thus loading the store until either the switch-off temperature difference or the store maximum temperature is reached.

With another temperature differential function (S5 heat source/S4 heat sink) return preheating (heating circuit backup) is possible via a valve (R3).

Scheme 20: Solar system with store loading in layers and east-/west collectors

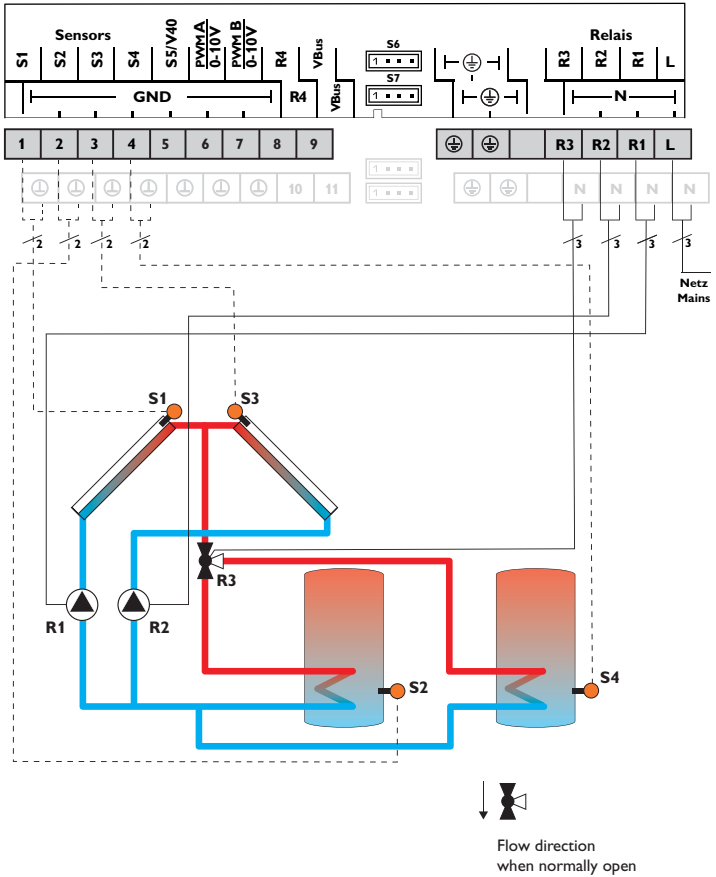


Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature collector 2	3/GND
S4	Temperature store top	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump collector	R1/N/PE
R2	Solar pump collector 2	R2/N/PE
R3	Valve solar circuit	R3/N/PE
R4	Free	R4/R4

The controller compares the temperatures at the collector sensors S1 and S3 to the store temperature at sensor S2 and S4. If one of the measured temperature differences is higher than the adjusted switch-on temperature difference, the corresponding pump (R1 and/or R2) will be activated and the corresponding store zone will be loaded up to the adjusted store maximum or set temperature respectively via the valve (R3). The priority logic effects prior loading of the upper zone of the store.

Scheme 21: Solar system with east-/west collectors and 2 stores (valve logic)

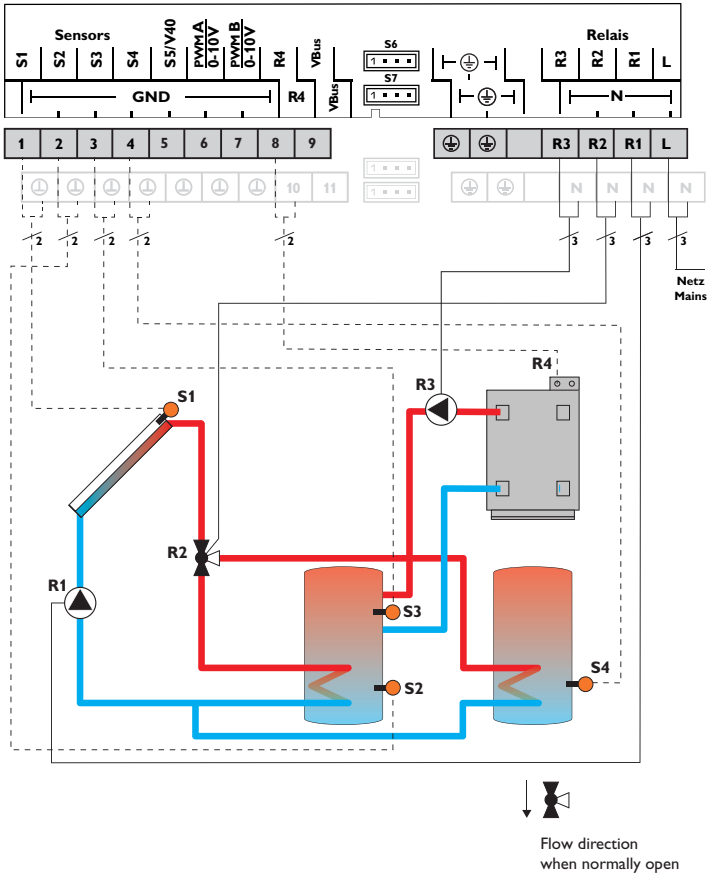


Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature collector 2	3/GND
S4	Temperature store 2 base	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump collector	R1/N/PE
R2	Solar pump collector 2	R2/N/PE
R3	Valve solar circuit	R3/N/PE
R4	Free	R4/R4

The controller compares the temperatures at the collector sensors S1 and S3 to the store temperature at sensor S2 and S4. If one of the measured temperature differences is higher than the adjusted switch-on temperature differences, the corresponding pump (R1, R2) or both pumps will be activated and the corresponding store will be loaded up to the adjusted maximum temperature via the valve (R3). The priority logic effects prior loading of store 1.

Scheme 22: 2-store system with valve logic, 1 pump, 3 sensors and 3-port valve and thermostatic afterheating



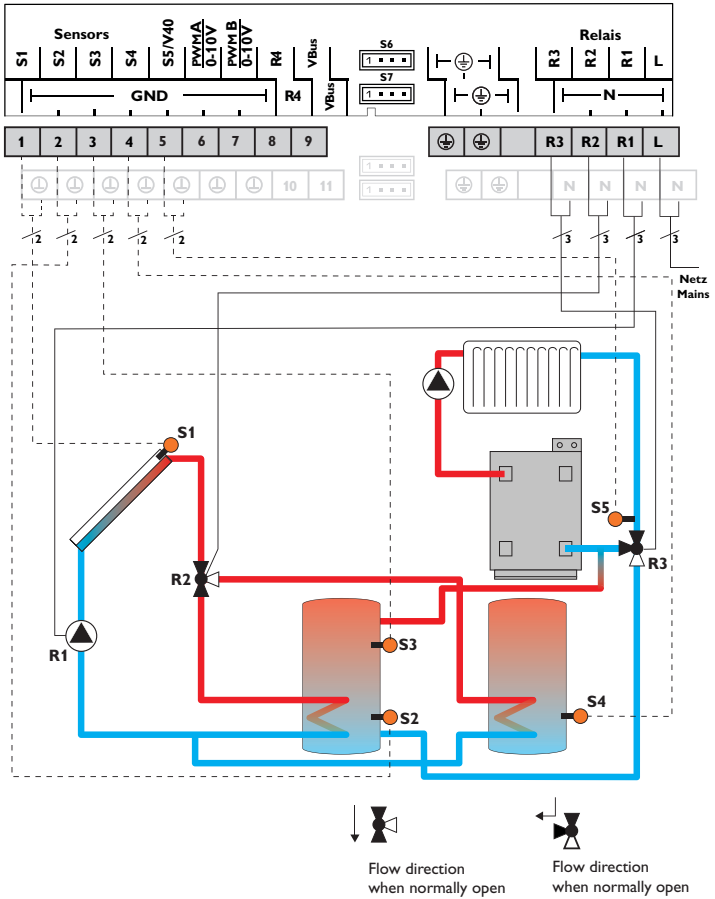
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature afterheating	3/GND
S4	Temperature store 2 base	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Valve solar circuit	R2/N/PE
R3	Store loading pump	R3/N/PE
R4	Afterheating demand	R4/R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1) will be activated and the corresponding store will be loaded up to the adjusted store maximum or set temperature respectively via the valve (R2). The priority logic effects prior loading of store 1.

Afterheating (R3 and R4) can be carried out with a thermostat function (S3). If the value at S3 reaches the switch-on temperature for the afterheating, the relay is switched on. If the value exceeds the switch-off temperature for the afterheating, the relay is switched off again.

Scheme 23: 2-store system with valve logic, 1 pump, 3 sensors and 3-port valve and return preheating



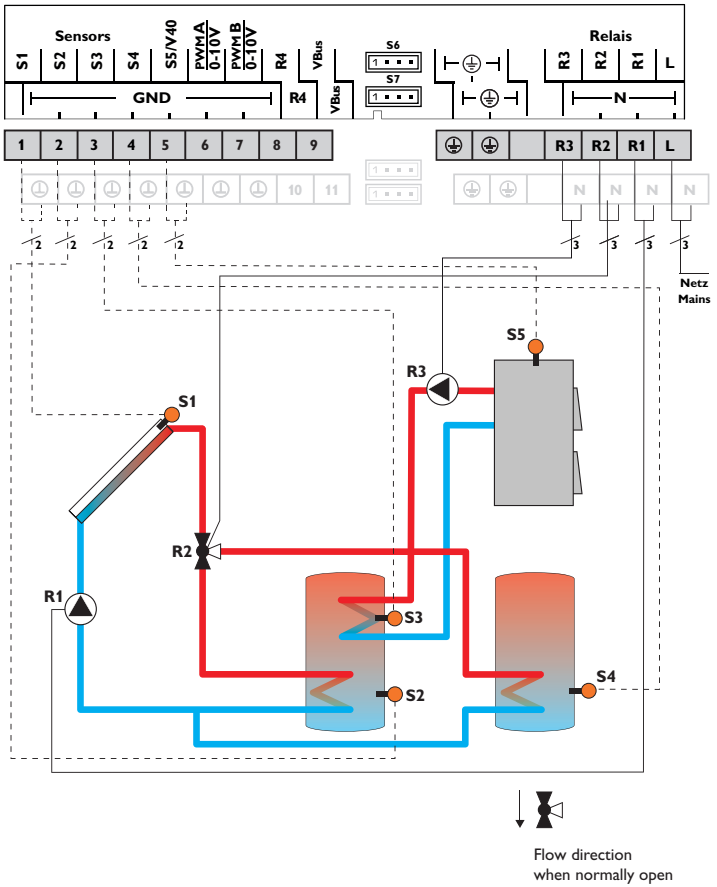
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature store return preheating	3/GND
S4	Temperature store 2 base	4/GND
S5	Temperature heating return	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Valve solar circuit	R2/N/PE
R3	Valve return preheating	R3/N/PE
R4	Free	R4/R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1) will be activated and the corresponding store will be loaded up to the adjusted store maximum or set temperature respectively via the valve (R2). The priority logic effects prior loading of store 1.

With another temperature differential function (S3 heat source/S5 heat sink) return preheating (heating circuit backup) is possible via another valve (R3).

Scheme 24: 2-store system with valve logic, 1 pump, 3 sensors and 3-port valve, solid fuel boiler



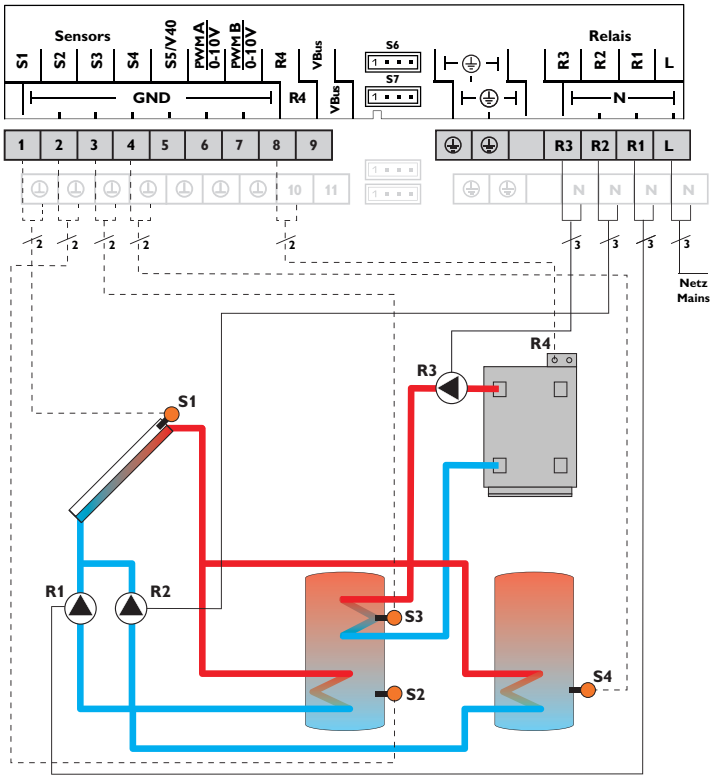
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature store – solid fuel boiler	3/GND
S4	Temperature store base	4/GND
S5	Temperature solid fuel boiler	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump	R1/N/PE
R2	Valve solar circuit	R2/N/PE
R3	Store loading pump	R3/N/PE
R4	Free	R4/R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1) will be activated and the corresponding store will be loaded up to the adjusted store maximum or set temperature respectively via the valve (R2). The priority logic effects prior loading of store 1.

With another temperature differential function (S5 heat source/S3 heat sink), afterheating of the store with a solid fuel boiler can be carried out via another pump (R3).

Scheme 25: 2-store solar system with pump logic, thermostatic afterheating



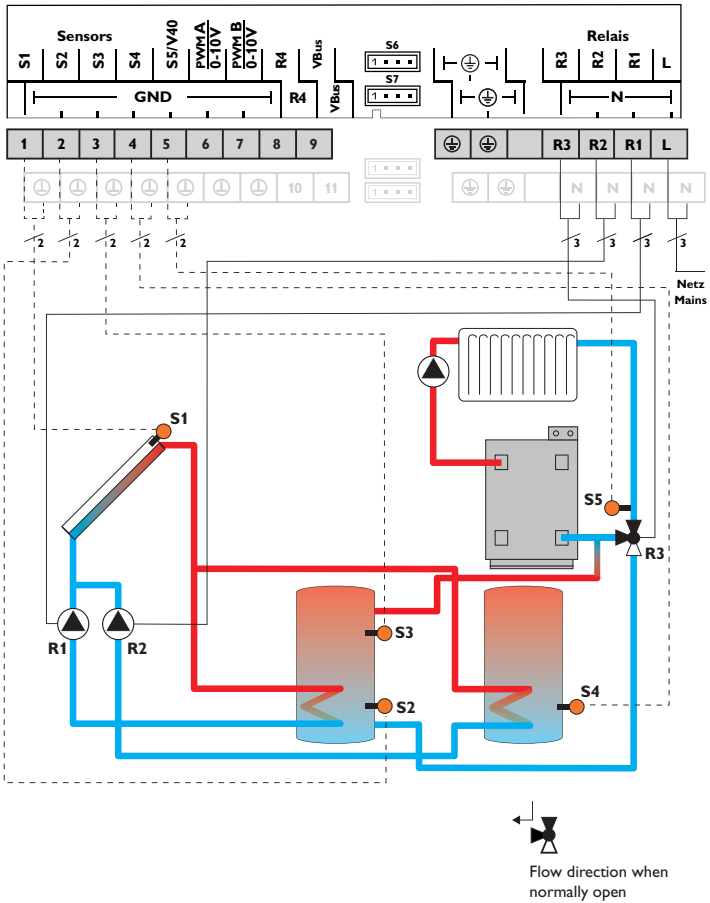
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature after-heating	3/GND
S4	Temperature store 2 base	4/GND
S5	Free	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump store 1	R1/N/PE
R2	Solar pump store 2	R2/N/PE
R3	Pump	R3/N/PE
R4	Afterheating	R4/R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1 and/or R2) will be activated and the corresponding store will be loaded up to the adjusted store maximum or set temperature respectively at most. The priority logic effects prior loading of store 1.

Afterheating (R3 and R4) can be carried out with a thermostat function (S3). If the value at S3 reaches the switch-on temperature for the afterheating, the relay is switched on. If the value exceeds the switch-off temperature for the afterheating, the relay is switched off again.

Scheme 26: 2-store solar system with pump logic and return preheating



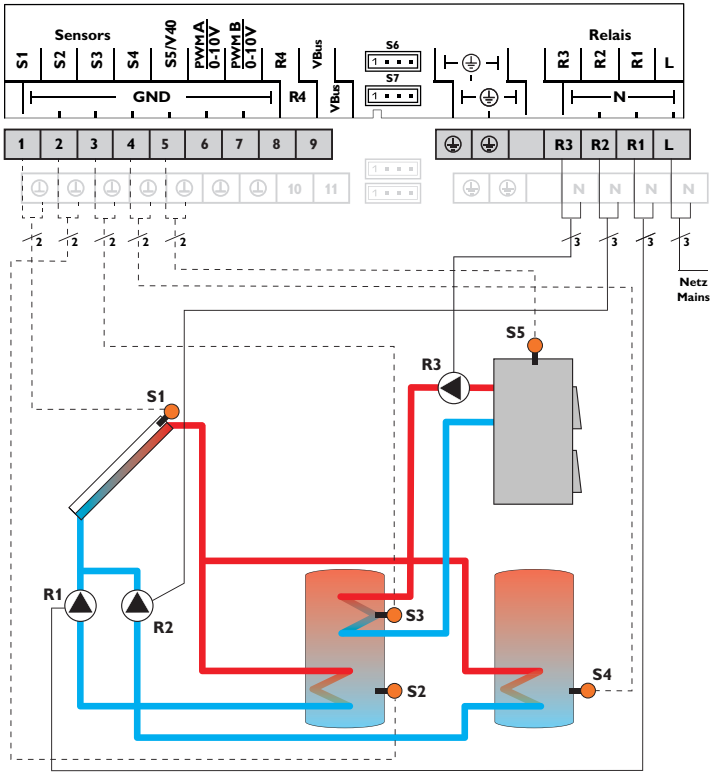
Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature store return preheating	3/GND
S4	Temperature store 2 base	4/GND
S5	Temperature heating return	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump store 1	R1/N/PE
R2	Solar pump store 2	R2/N/PE
R3	Valve return preheating	R3/N/PE
R4	Free	R4/R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1 and/or R2) will be activated and the corresponding store will be loaded up to the adjusted store maximum or set temperature respectively at most. The priority logic effects prior loading of store 1.

With another temperature differential function (S3 heat source/S5 heat sink) return preheating (heating circuit backup) is possible via a valve (R3).

Scheme 27: 2-store solar system with pump logic and solid fuel boiler



Sensors		
S1	Temperature collector	1/GND
S2	Temperature store base	2/GND
S3	Temperature store – solid fuel boiler	3/GND
S4	Temperature store 2 base	4/GND
S5	Temperature solid fuel boiler	5/GND
S6	Free	S6
S7	Free	S7

Relay		
R1	Solar pump store 1	R1/N/PE
R2	Solar pump store 2	R2/N/PE
R3	Loading pump solid fuel boiler	R3/N/PE
R4	Free	R4/R4

The controller compares the temperature at sensor S1 to the temperatures at sensors S2 and S4. If the measured temperature differences are higher than the adjusted switch-on temperature differences, the pump (R1 and/or R2) will be activated and the corresponding store will be loaded up to the adjusted store maximum or set temperature respectively at most. The priority logic effects prior loading of store 1.

With another temperature differential function (S5 heat source/S3 heat sink), afterheating of the store with a solid fuel boiler can be carried out via another pump (R3).

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Important note

The texts and drawings in this manual are correct to the best of our knowledge. As faults can never be excluded, please note:

Your own calculations and plans, under consideration of the current standards and directions should only be basis for your projects. We do not offer a guarantee for the completeness of the drawings and texts of this manual - they only represent some examples. They can only be used at your own risk. No liability is assumed for incorrect, incomplete or false information and / or the resulting damages.

Note

The design and the specifications can be changed without notice.

The illustrations may differ from the original product.

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