

SIEMENS

Albatros²

**Hydraulic partial diagrams for heat pump
controllers**

Partial diagram catalog

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1 Overview of use

Solid fuel boiler

Partial diagrams	Heat pump		Zones	
	RVS61.84	RVS21.826	RVS46.543	RVS46.530
Ho				
Ho1	X	X		
Ho2	X	X		
Ho3	X	X		
Ho4	X	X		

Heat pump

Partial diagrams	Heat pump, from series F		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
WP				
WP10	X	X		
WP11	X			
WP14	X	X		
WP15	X			
WP16	X	X		
WP17	X	X		
WP18	X	X		
WP19	X			
WP20	X	X		
WP21	X	X		
WP22	X	X		
WP23	X			
WP24	X	X		
WP25	X	X		
WP30	X	X		
WP31	X			
WP34	X	X		
WP35	X			
WP36	X	X		
WP37	X	X		
WP38	X	X		
WP39	X			
WP40	X	X		
WP41	X	X		
WP42	X	X		

Partial diagrams	Heat pump, from series F		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
WP43	X			
WP44	X	X		
WP45	X	X		
WP50	X	X		
WP51	X			
WP52	X	X		
WP53	X	X		
WP54	X	X		
WP55	X	X		
WP56	X	X		
WP57	X	X		
WP58	X	X		
WP59	X	X		
WP60	X	X		
WP61	X			
WP62	X	X		
WP63	X	X		
WP64	X	X		
WP65	X	X		
WP66	X	X		
WP67	X	X		
WP68	X	X		
WP69	X	X		
WP70	X	X		
WP71	X	X		

Solar

Partial diagrams	Heat pump		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
Sol				
Sol1	X	X	X	
Sol2...13	X	X		
Sol14...27	X	X		
Sol31...41	X	X		
Sol42...47	X	X		
Sol48...52	X	X		

Buffer storage tank

Partial diagrams	Heat pump		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
Sp				
Sp1	X	X		
Sp 2	X	X		
Sp 4	X	X		
Sp 5	X	X		

DHW storage tank

Partial diagrams	Heat pump from series F		Zone	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
DHWSp				
DHWSp 1	X	X	X	
DHWSp 2		X	X	
DHWSp 4	X	X	X	
DHWSp 5	X	X	X	
DHWSp 13	X	X	X	
DHWSp 14	X	X	X	
DHWSp 16	X	X	X	
DHWSp 17	X	X	X	
DHWSp 19	X	X	X	
DHWSp 20	X	X	X	
DHWSp 22	X	X	X	
DHWSp 23	X	X	X	
DHWSp 25	X	X	X	
DHWSp 26	X	X	X	
DHWSp 28	X	X	X	
DHWSp 29	X	X	X	
DHWSp 31	X	X		
DHWSp 32	X	X		
DHWSp 34	X	X		
DHWSp 35	X	X		
DHWSp 37	X	X		
DHWSp 38	X	X		
DHWSp 40	X	X		
DHWSp 41	X	X		

Instantaneous DHW heater

Partial diagrams	Heat pump		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
DHWDI				
DHWDI3	X	X	X	
DHWDI8	X	X	X	

Heating/cooling circuit 1

Partial diagrams	Heat pump		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
Rh				
Rh1	X	X	X	X
Rh 2	X	X	X	X
Rh 3	X	X	X	X
Rh 5...7	X	X	X	X
Rh 8...10	X	X	X	X
Rh 12	X	X	X	X
Rh 14	X	X	X	X
Rh 15	X	X	X	X
Rh 16	X	X	X	X
Rh 20...27	X	X	X	X
Rh 30	X	X	X	X
Rh 31...32	X	X	X	X
Rh 33	X	X	X	X
Rh 34...35	X	X	X	X
Rh 36	X	X	X	X
Rh 37...38	X	X	X	X
Rh 40	X	X	X	X
Rh 41...42	X	X	X	X

Heating/cooling
circuit 2

Partial diagrams	Heat pump from series F		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
Rh				
Rh1	X	X	X	X
Rh 2	X	X	X	X
Rh 3	X	X	X	X
Rh 5...7	X	X		
Rh 8...10	X	X		
Rh 12	X	X		
Rh 14	X	X		
Rh 15	X	X		
Rh 16	X	X		
Rh 20...27	X	X		
Rh 30	X	X		
Rh 31...32	X	X		
Rh 33	X	X		
Rh 34...35	X	X		
Rh 36	X	X		
Rh 37...38	X	X		
Rh 40	X	X		
Rh 41...42	X	X		

Heating/cooling circuit 3

Partial diagrams	Heat pump from series F		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
Rh				
Rh1	X	X	X	X
Rh 2	X	X	X	X
Rh 3	X	X		
Rh 5...7	X	X		
Rh 8...10	X	X		
Rh 12	X	X		
Rh 14	X	X		
Rh 15	X	X		
Rh 16	X	X		
Rh 20...27	X	X		
Rh 30	X	X		
Rh 31...32	X	X		
Rh 33	X	X		
Rh 34...35	X	X		
Rh 36	X	X		
Rh 37...38	X	X		
Rh 40	X	X		
Rh 41...42	X	X		

Consumer circuits

Partial diagrams	Heat pump		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
Le				
Le1	X	X	X	X
Le 2	X	X	X	X
Le 4	X	X	X	X
Le 5	X	X	X	X
Le 7	X	X	X	X
Le 8	X	X	X	X

**Primary
controller/system pump
(heat exchanger)**

Partial diagrams	Heat pump		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
Uf				
Uf1	X	X	X	X
Uf2	X	X	X	X

Swimming pool

Partial diagrams	Heat pump		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
Sb				
Sb 1	X	X		
Sb 2	X	X		
Sb 3	X	X		
Sb 4	X	X		

Pressureless header

Partial diagrams	Heat pump		Zones	
	RVS61.843	RVS21.826	RVS46.543	RVS46.530
HWe				
HWe 1	X	X		
HWe 2	X	X		
HWe 3	X	X		
HWe 4	X	X		

2 Equipment designations

General abbreviations

BX	Multifunctional input/sensor
EM	Extension module
EX	Multifunctional power input
HX	Multifunctional low voltage input
MG	Mixing group
QX	Multifunctional power output, relay
UX	Multifunctional low voltage output
ZX	Multifunctional power output, triac

Mains voltage

Multifunctional
inputs EX

Path: Configuration > Function input EX1...

E5	Low-tariff E5	
E6	Electrical utility lock E6	
E9	Low-pressure switch E9	Sec. 4.2.1 HP brine / water, ...
E10	High-pressure switch E10	Sec. 4.2.1 HP brine / water, ...
E11	Overload compressor 1 E11	Sec. 4.2.1 HP brine / water, ...
E12	Overload compressor 2 E12	Sec. 4.2.1 HP brine / water, ...
E14	Overload source E14	
E15	Flow switch source E15	
E17	Manual defrost E17	
E20	Common fault HP E20	
E21	Mains supervision E21	
E21, E22, E23	3-phase current	
E24	Flow switch consumers E24	
E25	Fault soft starter E25	
E26	Pressure switch source E26	
E27	Fault soft starter 2 E27	
E28	Pressure diff defrost E28	
E29	Pres sw source int circ E29	
E30	Flow sw source int circ E30	
E61	Smart grid E61	
E62	Smart grid E62	

Multifunctional outputs QX

Path: Configuration > Relay output QX1...

K1*	Compressor stage 1 K1	Sec. 4.2.1 HP brine / water, ...
K2*	Compressor 2 K2	Sec. 4.2.1 HP brine / water, ...
K6	El imm heater DHW K6	Sec. 6.3 Auxiliary functions DHW
K8*	Solar ctrl elem buffer K8	Sec. 4.3.1 1 collector field, ...
K9*	Solar pump ext exch K9	Sec. 4.3.1 1 collector field, ...
K10	Alarm output K10	
K13	Time program 5 K13	
K16	El imm heater buffer K16	Sec. 5.2 Auxiliary functions buffer storage tank
K18*	Solar ctrl elem swi pool K18	Sec. 4.3.1 1 collector field, ...
K19*	Source pump Q8/fan K19	Sec. 4.2.3 HP air
K21	dT controller 1 K21	
K22	dT controller 2 K22	
K25	El imm heater 1 flow K25	Sec. 4.2.5 Auxiliary functions heat pump
K26	El imm heater 2 flow K26	Sec. 4.2.5 Auxiliary functions heat pump
K27	Heat request K27	Sec. 4.1.2 Supplementary source
K28	Refrigeration request K28	
K29	Air dehumidifier K29	
K31	Hot-gas temp K31	
K32	Suppl source control K32	Sec. 4.1.2 Supplementary source
K33	DHW heat pump K33	
K40	Crankcase heater K40	
K41	Drip tray heater K41	
K42	Status info heating K42	
K43	Status info cooling K43	
K44	Status info DHW charg K44	
K51*	Ventilation fan 1 K51	
K52*	Ventilation fan 2 K52	
K53*	Ventilation fan 3 K53	
K54	Ventilation bypass 1 K54	
K55	Ventilation bypass 2 K55	
K56	Ventilation bypass 3 K56	
K81	Valve evaporator K81	
K82	Valve EVI K82	
K83	Valve injection capillary K83	

* The output can be configured for speed control via "Configuration > Function output UX/ZX".

The following combinations are possible:

- As relay
- As relay and speed controlled
- Speed control only

Speed control over Modbus is also possible.

Q2*	Heat circuit pump HC1 Q2	Sec. 7.1 Control circuit room 1...3
Q3*	DHW ctrl elem Q3	Sec. 6.1.2 With charging pump, ...
Q4	Circulating pump Q4	Sec. 6.3 Auxiliary functions DHW
Q5*	Collector pump Q5	Sec. 4.3 Solar
Q6*	Heat circuit pump HC2 Q6	Sec. 7.1 Control circuit room 1...3
Q8*	Source pump Q8/fan K19	Sec. 4.2.1 HP brine / water, ...
Q9*	Condenser pump Q9	Sec. 4.2.1 HP brine / water, ...
Q10*	Solid fuel boiler pump Q10	Sec. 4.1.1 Solid fuel (wood)
Q11	St tank transfer pump Q11	Sec. 5.2 Auxiliary functions buffer storage tank
Q14	System pump Q14	Sec. 7.3 Primary controller / system pump ()
Q15	Cons circuit pump VK1 Q15	Sec. 7.2 Consumer circuit 1...2
Q16*	Collector pump 2 Q16	Sec. 4.3 Solar
Q17	Outside air temp contr Q17	
Q18	Cons circuit pump VK2 Q18	Sec.7.2 Consumer circuit 1...2
Q19	Swimming pool pump Q19	Sec. 7.4 Swimming pool
Q20*	Heat circuit pump HC3 Q20	Sec. 7.1 Control circuit room 1...3
Q21	2nd pump speed HC1 Q21	Sec. 7.1 Control circuit room 1...3
Q22	2nd pump speed HC2 Q22	Sec. 7.1 Control circuit room 1...3
Q23	2nd pump speed HC3 Q23	Sec. 7.1 Control circuit room 1...3
Q24	Cooling circ pump CC1 Q24	Sec. 7.1 Control circuit room 1...3
Q25	Cascade pump Q25	Sec. 7.5 Pressureless header
Q28	Cooling circ pump CC2 Q28	Sec. 7.1 Control circuit room 1...3
Q29	Cooling circ pump CC3 Q29	Sec. 7.1 Control circuit room 1...3
Q33*	DHW interm circ pump Q33	Sec. 6.1.5 Intermediate circuit (ext. heat exchanger)
Q34*	Instant WH ctrl elem Q34	Sec. 6.2 Instantaneous DHW heater
Q35	DHW mixing pump Q35	Sec. 6.3 Auxiliary functions DHW
Q44	System pump 2 Q44	
Q81	Source int circ pump Q81	

* The output can be configured for speed control via "Configuration > Function output UX/ZX".

The following combinations are possible:

- As relay
- As relay and speed controlled
- Speed control only

Speed control over Modbus is also possible.

Multifunctional outputs

Path: Configuration > Relay output QX1...

Y1/Y2*** Y4	Mixing valve Open/Closed heating circuit 1 Heat gen shutoff valve Y4	Sec. 7.1 Control circuit room 1...3 Sec. 5.1 Buffer storage tank
Y5/Y6*** Y9/Y10***	Mixing valve Open/Closed heating circuit 2 Mixing valve Open/Closed return control solid fuel boiler	Sec. 7.1 Control circuit room 1...3 Sec. 4.1.1 Solid fuel (wood)
Y11/Y12*** Y13	Mixing valve Open/Closed heating circuit 3 Common flow valve Y13	Sec. 7.1 Control circuit room 1...3
Y19/Y20*** Y21	Mixing valve Open/Closed primary controller Div valve HC/CC1 Y21	Sec. 7.3 Primary controller / system pump () Sec. 7.1.4 Heating or cooling circuit in 4-pipe system (common distribution)
Y22 Y23/Y24***	Process revers valve Y22 Mixing valve Open/Closed cooling circuit 1	Sec. 4.2 Heat pump Sec. 7.1.3 Cooling circuit in 2-pipe system, 7.1.5, ...
Y27 Y28	Div valve cooling cond Y27 Div valve cool source Y28	Sec. 4.2 Heat pump
Y29 Y31/Y32***	Div valve cooling flow Y29 Mixing valve Open/Closed DHW primary controller	Sec. 6.1.4 Primary controller, 6.1.5 Intermediate circuit (ext. heat exchanger) Sec. 6.2 Instantaneous DHW heater
Y33/Y34*** Y37/Y38	Mixing valve Open/Closed instantaneous DHW Mixing valve Open/Closed intermediate DHW	
Y41/42*** Y43/44***	Mixing valve Open/Closed cooling circuit 2 Mixing valve Open/Closed cooling circuit 3	
Y45 Y46	Div valve HC/CC2 Y45 Div valve HC/CC3 Y46	
Y47 Y81	Buffer reversing valve Y47 Source int circ div Y81	
Y91	Cond reversing valve Y91	

*** These outputs are not configured individually via Relay output QX1..., but rather via "Configuration > Function extension module 1..." or "> Function mixing group 1..."

Low voltage

Multifunctional inputs BX

Path: Configuration > Sensor input BX1...

B1*** B3 B4	Flow sensor heating circuit 1 DHW sensor B3 Buffer sensor B4	Sec. 7.1 Control circuit room 1...3 Sec. 6 Domestic hot water Sec. 5.1 Buffer storage tank, 5.2 Auxiliary functions buffer storage tank, 6.3 Auxiliary functions DHW
B5 B6 B9 B10 B11	Room sensor B5 Collector sensor B6 Outside sensor B9 Common flow sensor B10 Common flow sensor 2 B11	Sec. 4.3 Solar Sec. 7.5 Pressureless header
B12*** B13 B14*** B15*** B16***	Flow sensor heating circuit 2 Swimming pool sensor B13 Flow sensor heating circuit 3 Flow sensor prim controller Flow sensor cooling circuit 1	Sec. 7.1 Control circuit room 1...3 Sec. 7.4 Swimming pool Sec. 7.1 Control circuit room 1...3 Sec. 7.3 Primary controller / system pump () Sec. 7.1.3 Cooling circuit in 2-pipe system, 7.1.5 Heating or cooling circuit in 2-pipe system (separate distribution)
B17*** B18*** B19 B21 B22 B31 B35 B36 B38 B39 B41 B42 B52 B53 B61 B63 B64 B70	Flow sensor cooling circuit 2 B17 Flow sensor cooling circuit 3 B18 Outside air sensor B19 HP flow sensor B21 Solid fuel boiler sensor B22 DHW sensor B31 DHW prim contr sensor B35 DHW charging sensor B36 DHW outlet sensor B38 DHW circulation sensor B39 Buffer sensor B41 Buffer sensor B42 Room sensor B52 Room sensor B53 Collector sensor 2 B61 Solar flow sensor B63 Solar return sensor B64 Cascade return sensor B70	Sec. 4.2 Heat pump Sec. 4.1.1 Solid fuel (wood) Sec. 6 Domestic hot water Sec. 6.1.4 Primary controller, 6.1.5 Intermediate circuit (ext. heat exchanger) Sec. 6.1 DHW storage tank Sec. 6.2 Instantaneous DHW heater Sec. 6.2 Instantaneous DHW heater, 6.3 Auxiliary functions DHW Sec. 5.1 Buffer storage tank, 5.2 Auxiliary functions buffer storage tank Sec. 5.1 Buffer storage tank Sec. 4.3 Solar Sec. 7.5 Pressureless header

B71	HP return sensor B71	Sec. 4.2 Heat pump
B72	Solid fuel boil ret sens B72	Sec. 4.1.1 Solid fuel (wood)
B73	Common return sensor B73	Sec. 5.2 Auxiliary functions buffer storage tank
B81	Hot-gas sensor B81	
B82	Hot-gas sensor B82	
B83	Refrig sensor liquid B83	Sec. 4.2 Heat pump
B84	Source outl sens B92/B84	Sec. 4.2.3 HP air
B85	Suction gas sensor B85	
B86	Suction gas sensor EVI B86	
B87	Evaporation sensor EVI B87	
B88	Suction gas sensor cool B88	
B91	Source inlet sensor B91	Sec. 4.2 Heat pump
B92	Source outl sens B92/B84	Sec. 4.2.1 HP brine / water, 4.2.2 HP water
B93	Source int circ flow B93	
B94	Source int circ return B94	

*** These inputs are not configured individually via Sensor input BX1... , but rather via "Configuration > Function extension module 1..." or "> Function mixing group 1..."

RG1	Room unit 1
RG2	Room unit 2
RG3	Room unit 3
FS	Flow switch

3 Introduction

Content of the document

The following lists implemented partial diagrams available as variants.

Also listed in the catalog are the required operating lines which to be set to produce the respective partial diagrams, plus the sensors required for the relevant partial diagram.

The procedure used for selecting the required partial diagrams is described in the corresponding user's guide.

Inputs and outputs

The inputs and outputs may be configurable (multifunctional inputs/outputs) or fixed depending on the device.

Diagnostics

The diagnostic values are available to check set or effective partial diagrams.

Operator units

The following operating lines for operator units:

<i>Op line NO.</i>	<i>Operating line</i>
6212	Check no. heat source 1
6213	Check no. heat source 2
6215	Check no. storage tank
6217	Check no. heating circuits

The structure and interpretation of operator unit control numbers are described in the corresponding user's manual.

ACS790

For the ACS790 operating software, they are the operating lines of the syntax "...partial diagram ...", e.g. "...partial diagram heat pump".

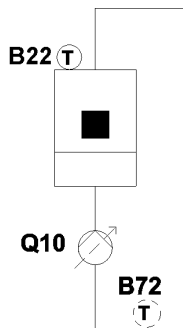
The ACS operating lines directly display the partial diagram number as per this catalog.

4 Source

4.1 Boiler

4.1.1 Solid fuel (wood)

Ho1



Required settings:

BX: Solid fuel boiler sensor B22

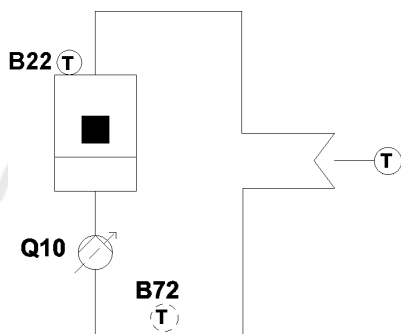
QX: Solid fuel boiler pump Q10*

Optional settings:

BX: Solid fuel boiler return sensor B72

* Q10: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Ho2



Required settings:

Solid fuel boiler > Connection DHW stor tank (4134): With B3 or With B31 or With B3 and B31

Solid fuel boiler > DHW charging with Q3 (4136): No

BX: Solid fuel boiler sensor B22

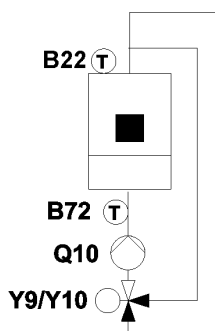
QX: Solid fuel boiler pump Q10*

Optional settings:

BX: Solid fuel boiler return sensor B72

* Q10: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Ho3



Required settings:

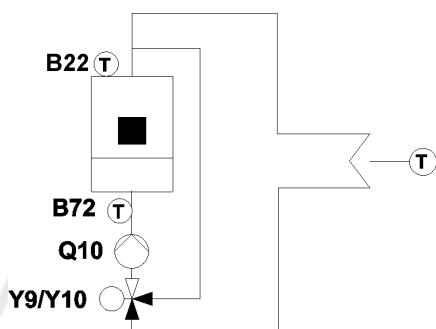
Function mixing group 1...: Ret temp contr sol fuel boil

BX: Solid fuel boiler sensor B22

Configuration variants:

Function extension module 1...: Solid fuel boiler

Ho4



Required settings:

Function mixing group 1...: Ret temp contr sol fuel boil

BX: Solid fuel boiler sensor B22

Configuration variants:

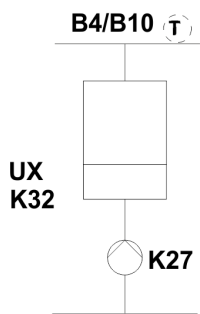
Function extension module 1...: Solid fuel boiler

Solid fuel boiler > Connection DHW stor tank (4134): With B3 or With B31 or With B3 and B31

Solid fuel boiler > DHW charging with Q3 (4136): No

4.1.2 Supplementary source

ZuE1



Required settings:

QX: Heat request K27

Use of supplementary source (ACS): Supplementary

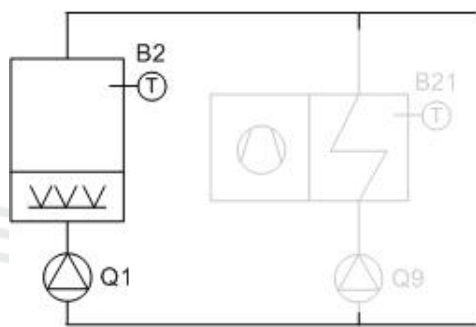
Optional settings:

QX: Suppl source control K32

Configuration > Function output UX > Output request or Heat request

BX: Buffer sensor B4 or Common flow sensor B10

ZuE2

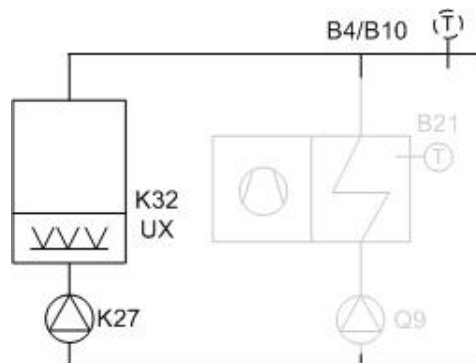


Required settings:

Gas boiler LMS connected to BSB

→ Automatic recognition

ZuE3



Required settings:

QX: Heat request K27

Use of supplementary source (ACS): Hybrid

Optional settings:

QX: Suppl source control K32

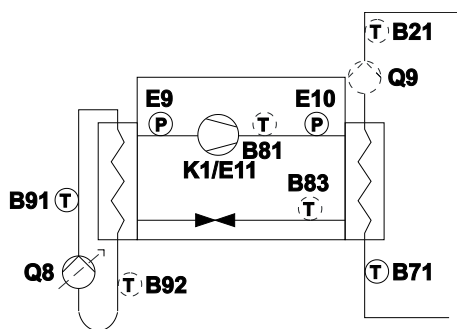
Configuration > Function output UX > Output request or Heat request

BX: Buffer sensor B4 or Common flow sensor B10

4.2 Heat pump

4.2.1 HP brine / water

WP10



Required settings:

Configuration > Heat source (5800): Brine

.. > Refrigeration (5807): Off

.. > Source prot sens brine HP (5804): Source inlet B91

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, Source pump Q8/fan K19*

Optional settings:

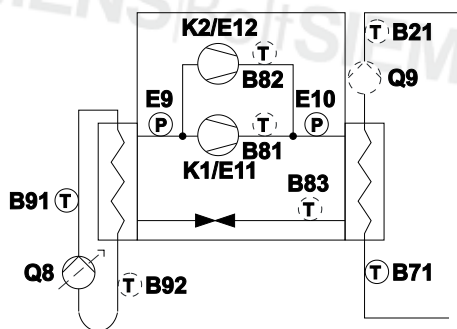
EX: Overload compressor 1 E11

BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source outl sens B92/B84

QX: Condenser pump Q9*

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP11



Required settings:

Configuration > Heat source (5800): Brine

.. > Refrigeration (5807): Off

.. > Source prot sens brine HP (5804): Source inlet B91

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*

Optional settings:

EX: Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source outl sens B92/B84

QX: Condenser pump Q9*

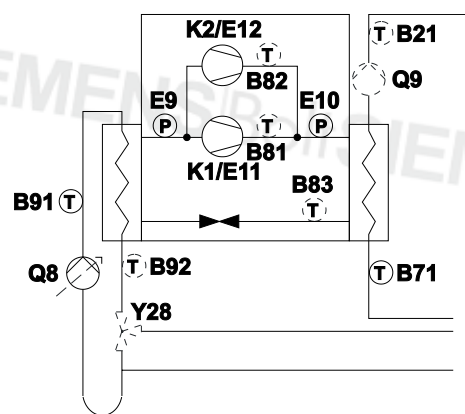
* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

The diagram shows a process unit with several internal components and external streams. Inside the unit, there are two heat exchangers, E9 and E10, both labeled with a 'P' (Pressure). A central vessel or reactor is labeled B81 and K1/E11. Below it is another vessel or reactor labeled B83. There are three temperature measurement points (T) inside the unit: one on the top line, one on the middle line, and one on the bottom line. The unit is connected to several external streams: B91 (Temperature T) enters from the left; Q8 (Temperature T) enters from the bottom left; B92 (Temperature T) enters from the bottom; Y28 enters from the bottom right; B71 (Temperature T) enters from the bottom right; Q9 (Temperature T) enters from the top right; and B21 (Temperature T) enters from the top right. A valve is located on the stream entering from the bottom right.

Configuration > Heat source (5800): Brine
 .. > Refrigeration (5807): Passive cooling
 .. > Cooling system (5808): 4-pipe system cooling
 .. > Source prot sens brine HP (5804): Source inlet B91
 EX: Low-pressure switch E9, High-pressure switch E10
 BX: Source inlet sensor B91, HP return sensor B71
 QX: Compressor stage 1 K1*, Source pump Q8/fan K19*

EX: Overload compressor 1 E11
 BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source outl sens B92/B84
 QX: Div valve cool source Y28, Condenser pump Q9*

WP15

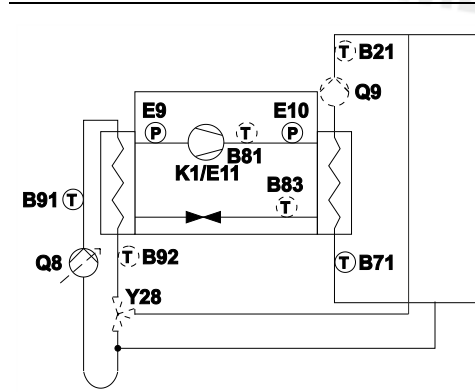


```
Configuration > Heat source (5800): Brine
.. > Refrigeration (5807): Passive cooling
.. > Cooling system (5808): 4-pipe system cooling
.. > Source prot sens brine HP (5804): Source inlet B91
```

QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*

EX: Overload compressor 1 E11, Overload compressor 2 E12
 BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82,
 Refrig sensor liquid B83, Source outl sens B92/B84
 QX: Div valve cool source Y28, Condenser pump Q9*

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2015-03-23



Required settings:

Configuration > Heat source (5800): Brine

.. > Refrigeration (5807): Passive cooling

```
.. > Cooling system (5808):2-pipe system cooling
```

.. > Source prot sens brine HP (5804): Source inlet B91

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, Source pump Q8/fan K19*

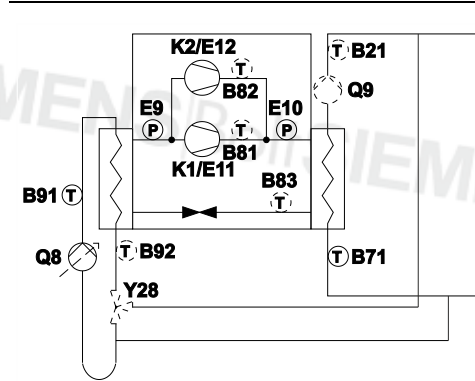
Optional settings:

EX: Overload compressor 1 E11

BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source outl sens B92/B84

QX: Div valve cool source Y28, Condenser pump Q9*

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"



Required settings:

Configuration > Heat source (5800): Brine

.. > Refrigeration (5807): Passive cooling

```
.. > Cooling system (5808):2-pipe system cooling
```

```
.. > Source prot sens brine HP (5804): Source inlet B91
```

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*

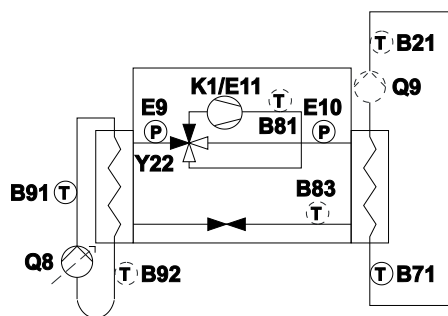
Optional settings:

EX: Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82,
Refrig sensor liquid B83, Source outl sens B92/B84

QX: Div valve cool source Y28, Condenser pump Q9*

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

**Required settings:**

Configuration > Heat source (5800): Brine

.. > Refrigeration (5807): Active cooling

.. > Cooling system (5808): 2-pipe system cooling

.. > Source prot sens brine HP (5804): Source inlet B91

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Process revers valve Y22**, Source pump Q8/fan K19*

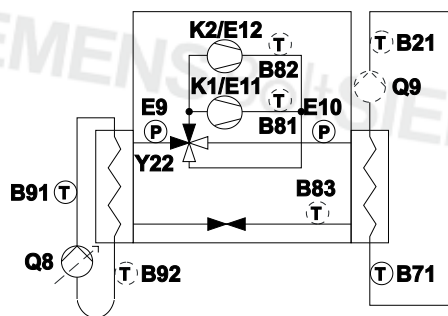
Optional settings:

EX: Overload compressor 1 E11

BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source outl sens B92/B84

QX: Condenser pump Q9*

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

**Required settings:**

Configuration > Heat source (5800): Brine

.. > Refrigeration (5807): Active cooling

.. > Cooling system (5808): 2-pipe system cooling

.. > Source prot sens brine HP (5804): Source inlet B91

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, **Process revers valve Y22**, Source pump Q8/fan K19*

Optional settings:

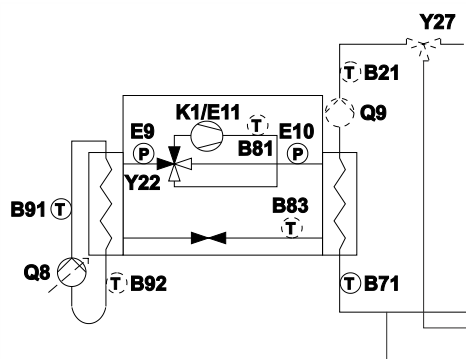
EX: Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source outl sens B92/B84

QX: Condenser pump Q9*

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP20



Required settings:

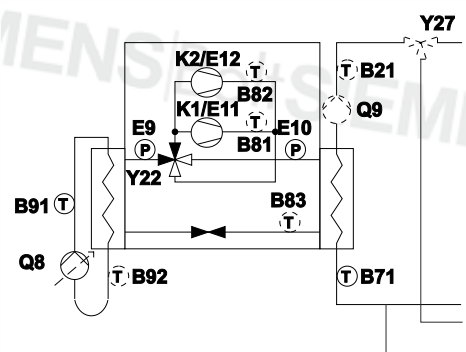
Configuration > Heat source (5800): Brine
 .. > Refrigeration (5807): Active cooling
 .. > Cooling system (5808): 4-pipe system cooling
 .. > Source prot sens brine HP (5804): Source inlet B91
 EX: Low-pressure switch E9, High-pressure switch E10
 BX: Source inlet sensor B91, HP return sensor B71
 QX: Compressor stage 1 K1*, **Process revers valve Y22**, Source pump Q8/fan K19*

Optional settings:

EX: Overload compressor 1 E11
 BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source outl sens B92/B84
 QX: Condenser pump Q9*, Div valve cooling cond Y27

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP21



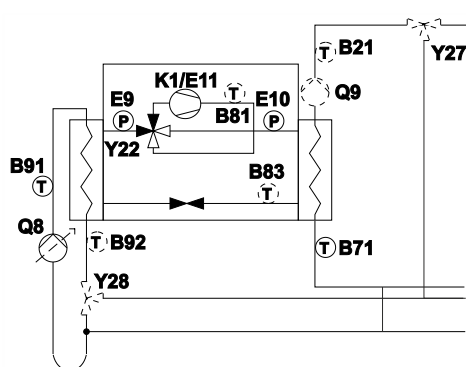
Required settings:

Configuration > Heat source (5800): Brine
 .. > Refrigeration (5807): Active cooling
 .. > Cooling system (5808): 4-pipe system cooling
 .. > Source prot sens brine HP (5804): Source inlet B91
 EX: Low-pressure switch E9, High-pressure switch E10
 BX: Source inlet sensor B91, HP return sensor B71
 QX: Compressor stage 1 K1*, **Compressor 2 K2**, **Process revers valve Y22**, Source pump Q8/fan K19*

Optional settings:

EX: Overload compressor 1 E11, Overload compressor 2 E12
 BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source outl sens B92/B84
 QX: Condenser pump Q9*, Div valve cooling cond Y27

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

**Required settings:**

Configuration > Heat source (5800): Brine

.. > Refrigeration (5807): Active and passive cooling

.. > Cooling system (5808): 4-pipe system cooling

.. > Source prot sens brine HP (5804): Source inlet B91

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Process revers valve Y22**, Source pump Q8/fan K19*

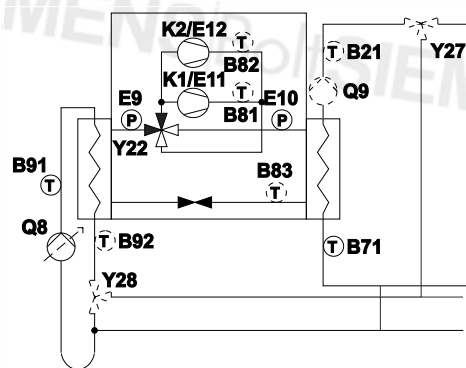
Optional settings:

EX: Overload compressor 1 E11

BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source outl sens B92/B84

QX: Div valve cool source Y28, Condenser pump Q9*, Div valve cooling cond Y27

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

**Required settings:**

Configuration > Heat source (5800): Brine

.. > Refrigeration (5807): Active and passive cooling

.. > Cooling system (5808): 4-pipe system cooling

.. > Source prot sens brine HP (5804): Source inlet B91

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, **Process revers valve Y22**, Source pump Q8/fan K19*

Optional settings:

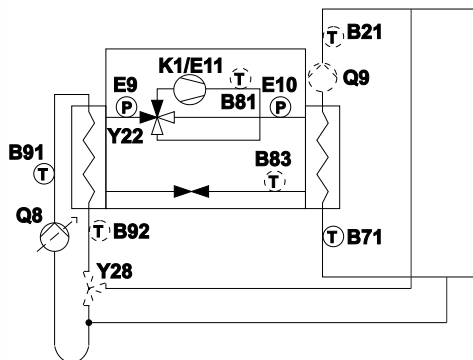
EX: Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source outl sens B92/B84

QX: Div valve cool source Y28, Condenser pump Q9*, Div valve cooling cond Y27

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP24



Required settings:

Configuration > Heat source (5800): Brine

.. > Refrigeration (5807): Active and passive cooling

.. > Cooling system (5808): 2-pipe system cooling

.. > Source prot sens brine HP (5804): Source inlet B91

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Process revers valve Y22**, Source pump Q8/fan K19*

Optional settings:

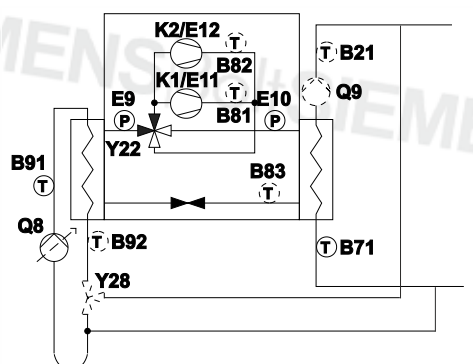
EX: Overload compressor 1 E11

BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source outl sens B92/B84

QX: Div valve cool source Y28, Condenser pump Q9*

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP25



Required settings:

Configuration > Heat source (5800): Brine

.. > Refrigeration (5807): Active and passive cooling

.. > Cooling system (5808): 2-pipe system cooling

.. > Source prot sens brine HP (5804): Source inlet B91

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, **Process revers valve Y22**, Source pump Q8/fan K19*

Optional settings:

EX: Overload compressor 1 E11, Overload compressor 2 E12

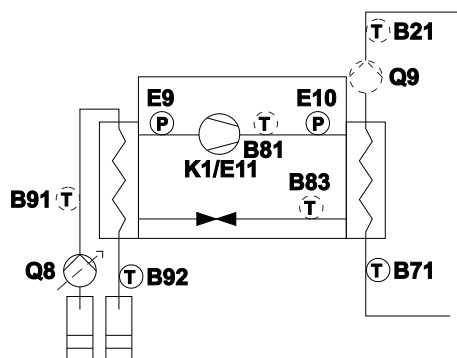
BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source outl sens B92/B84

QX: Div valve cool source Y28, Condenser pump Q9*

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

4.2.2 HP water

WP30



Required settings:

Configuration > Heat source (5800): Water

Configuration > Refrigeration (5807): Off

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source outl sens B92/B84, HP return sensor B71

QX: Compressor stage 1 K1*, Source pump Q8/fan K19*

Optional settings:

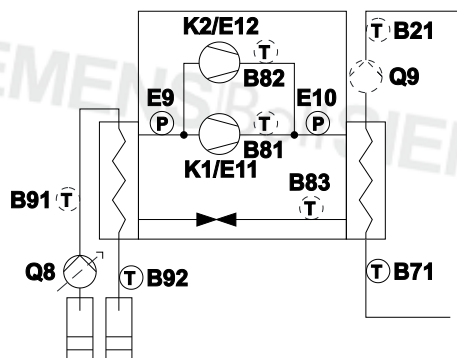
EX: Overload compressor 1 E11

BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91

QX: Condenser pump Q9*

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP31



Required settings:

Configuration > Heat source (5800): Water

Configuration > Refrigeration (5807): Off

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source outl sens B92/B84, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*

Optional settings:

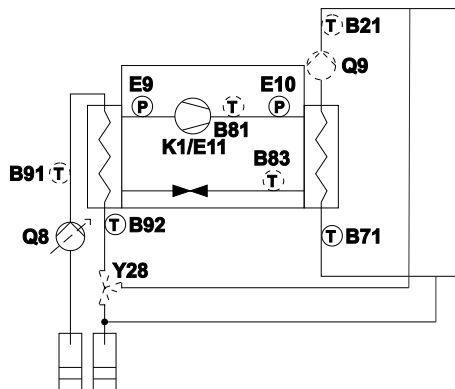
EX: Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91

QX: Condenser pump Q9*

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP36



Required settings:

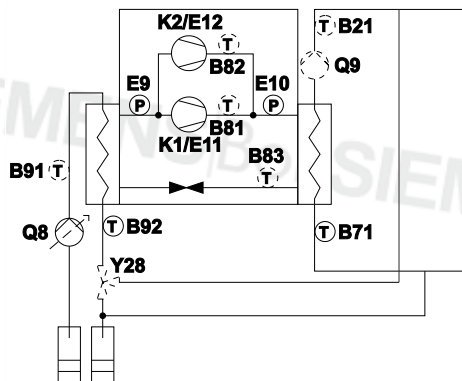
Configuration > Heat source (5800): Water
 .. > Refrigeration (5807): Passive cooling
 .. > Cooling system (5808): 2-pipe system cooling
 EX: Low-pressure switch E9, High-pressure switch E10
 BX: Source outl sens B92/B84, HP return sensor B71
 QX: Compressor stage 1 K1*, Source pump Q8/fan K19*

Optional settings:

EX: Overload compressor 1 E11
 BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91
 QX: Condenser pump Q9*, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP37



Required settings:

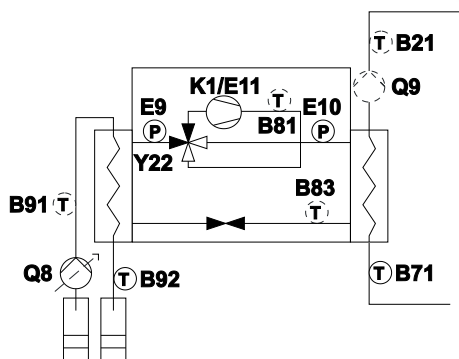
Configuration > Heat source (5800): Water
 .. > Refrigeration (5807): Passive cooling
 .. > Cooling system (5808): 2-pipe system cooling
 EX: Low-pressure switch E9, High-pressure switch E10
 BX: Source outl sens B92/B84, HP return sensor B71
 QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*

Optional settings:

EX: Overload compressor 1 E11, Overload compressor 2 E12
 BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91
 QX: Condenser pump Q9*, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP38



Required settings:

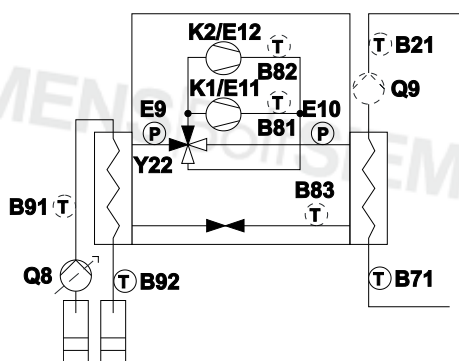
Configuration > Heat source (5800): Water
 .. > Refrigeration (5807): Active cooling
 .. > Cooling system (5808): 2-pipe system cooling
 EX: Low-pressure switch E9, High-pressure switch E10
 BX: Source outl sens B92/B84, HP return sensor B71
 QX: Compressor stage 1 K1*, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

EX: Overload compressor 1 E11
 BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91
 QX: Condenser pump Q9*

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP39



Required settings:

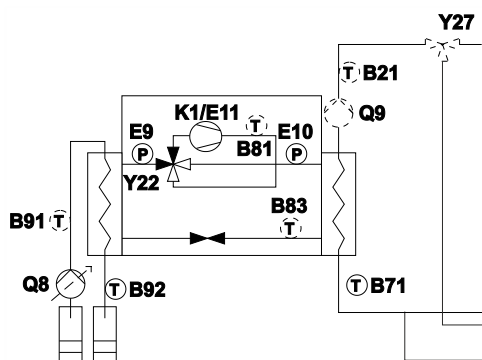
Configuration > Heat source (5800): Water
 .. > Refrigeration (5807): Active cooling
 .. > Cooling system (5808): 2-pipe system cooling
 EX: Low-pressure switch E9, High-pressure switch E10
 BX: Source outl sens B92/B84, HP return sensor B71
 QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

EX: Overload compressor 1 E11, Overload compressor 2 E12
 BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91
 QX: Condenser pump Q9*

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP40



Required settings:

Configuration > Heat source (5800): Water

.. > Refrigeration (5807): Active cooling

.. > Cooling system (5808): 4-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source outl sens B92/B84, HP return sensor B71

QX: Compressor stage 1 K1*, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

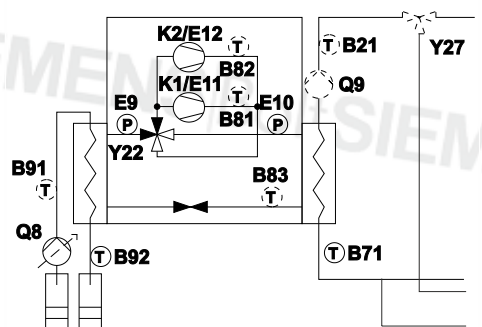
EX: Overload compressor 1 E11

BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91

QX: Condenser pump Q9*, Div valve cooling cond Y27

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP41



Required settings:

Configuration > Heat source (5800): Water

.. > Refrigeration (5807): Active cooling

.. > Cooling system (5808): 4-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source outl sens B92/B84, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

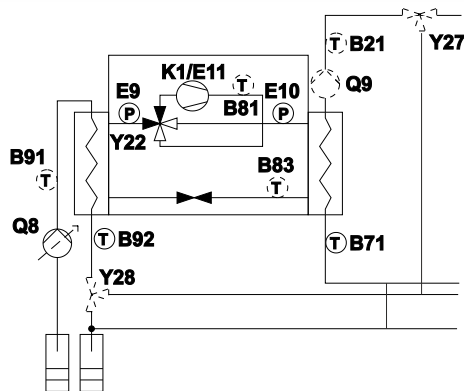
EX: Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91

QX: Condenser pump Q9*, Div valve cooling cond Y27

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP42



Required settings:

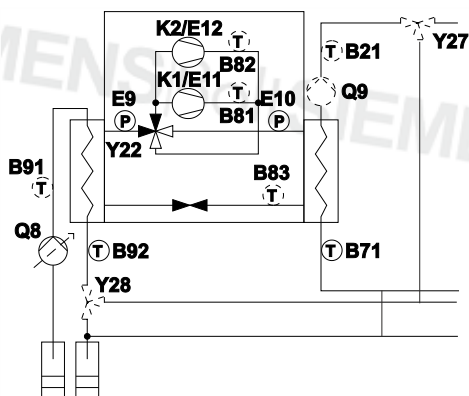
Configuration > Heat source (5800): Water
 .. > Refrigeration (5807): Active and passive cooling
 .. > Cooling system (5808): 4-pipe system cooling
 EX: Low-pressure switch E9, High-pressure switch E10
 BX: Source outl sens B92/B84, HP return sensor B71
 QX: Compressor stage 1 K1*, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

EX: Overload compressor 1 E11
 BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91
 QX: Condenser pump Q9*, Div valve cool source Y28, Div valve cooling cond Y27

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP43



Required settings:

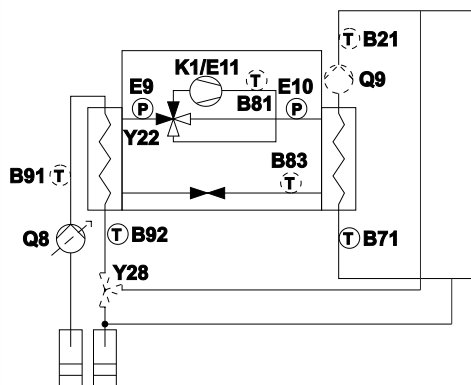
Configuration > Heat source (5800): Water
 .. > Refrigeration (5807): Active and passive cooling
 .. > Cooling system (5808): 4-pipe system cooling
 BX: Source outl sens B92/B84, HP return sensor B71
 EX: Low-pressure switch E9, High-pressure switch E10
 QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

EX: Overload compressor 1 E11, Overload compressor 2 E12
 BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91
 QX: Condenser pump Q9*, Div valve cool source Y28, Div valve cooling cond Y27

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP44



Required settings:

Configuration > Heat source (5800): Water

.. > Refrigeration (5807): Active and passive cooling

.. > Cooling system (5808): 2-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source outl sens B92/B84, HP return sensor B71

QX: Compressor stage 1 K1*, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

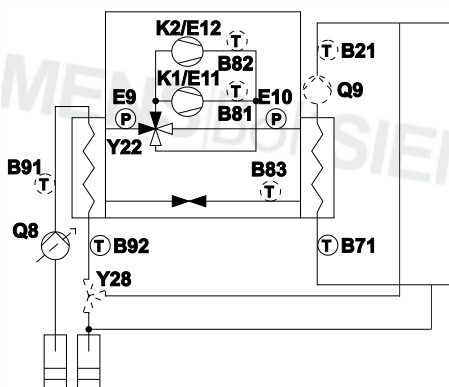
EX: Overload compressor 1 E11

BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91

QX: Condenser pump Q9*, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP45



Required settings:

Configuration > Heat source (5800): Water

.. > Refrigeration (5807): Active and passive cooling

.. > Cooling system (5808): 2-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source outl sens B92/B84, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

EX: Overload compressor 1 E11, Overload compressor 2 E12

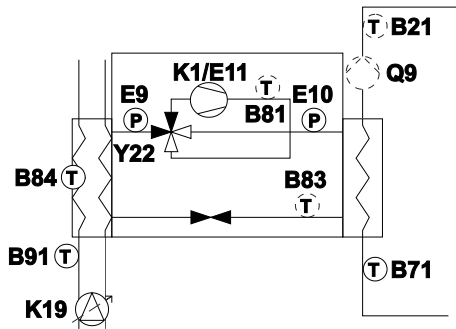
BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91

QX: Condenser pump Q9*, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

4.2.3 HP air

WP50



Required settings:

Configuration > Heat source (5800): Air

Configuration > Refrigeration (5807): Off or Active cooling

.. > Cooling system (5808): 2-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source outl sens B92/B84, Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

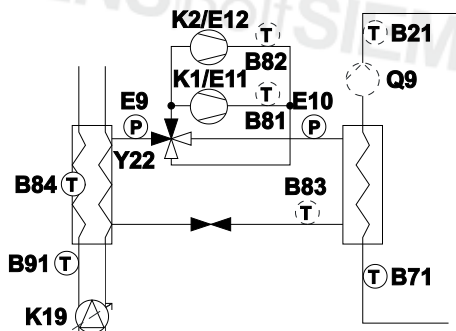
EX: Overload compressor 1 E11

BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83

QX: Condenser pump Q9*

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP51



Required settings:

Configuration > Heat source (5800): Air

Configuration > Refrigeration (5807): Off or Active cooling

.. > Cooling system (5808): 2-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source outl sens B92/B84, Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

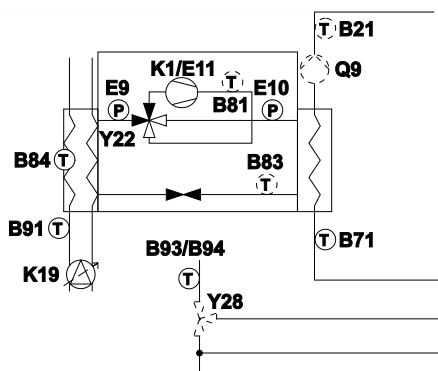
EX: Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83

QX: Condenser pump Q9*

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

WP52



Required settings:

Configuration > Heat source (5800): Air

Configuration > Refrigeration (5807): Passive cooling

.. > Cooling system (5808): 4-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source int circ flow B93/Source int circ return B94**, Source outl sens B92/B84, Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

EX: Overload compressor 1 E11

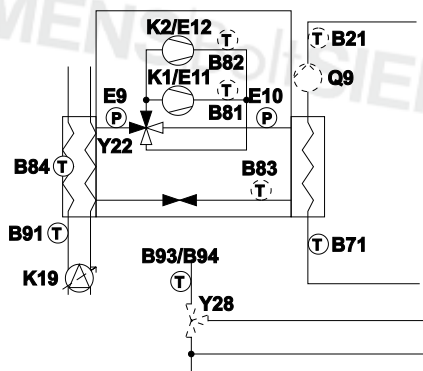
BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83

QX: Condenser pump Q9*, Div valve cool source Y28

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** Additional notes on the source int. circuit is available in the user's guide

WP53



Required settings:

Configuration > Heat source (5800): Air

Configuration > Refrigeration (5807): Passive cooling

.. > Cooling system (5808): 4-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source int circ flow B93/Source int circ return B94**, Source outl sens B92/B84, Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

EX: Overload compressor 1 E11, Overload compressor 2 E12

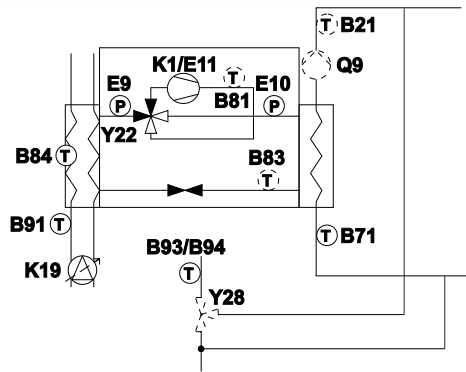
BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83

QX: Condenser pump Q9*, Div valve cool source Y28

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** Additional notes on the source int. circuit is available in the user's guide

WP54



Required settings:

Configuration > Heat source (5800): Air

Configuration > Refrigeration (5807): Passive cooling or Active and passive cooling

.. > Cooling system (5808): 2-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source int circ flow B93/Source int circ return B94**, Source outl sens B92/B84, Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

EX: Overload compressor 1 E11

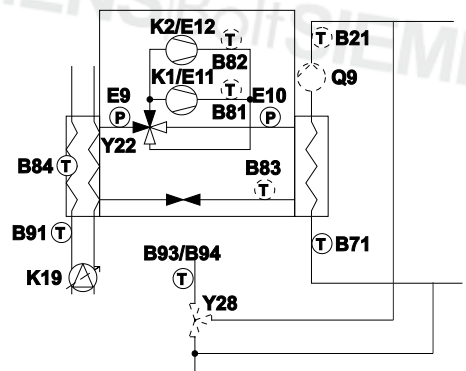
BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83

QX: Condenser pump Q9*, Div valve cool source Y28

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** Additional notes on the source int. circuit is available in the user's guide

WP55



Required settings:

Configuration > Heat source (5800): Air

Configuration > Refrigeration (5807): Passive cooling or Active and passive cooling

.. > Cooling system (5808): 2-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source int circ flow B93/Source int circ return B94**, Source outl sens B92/B84, Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

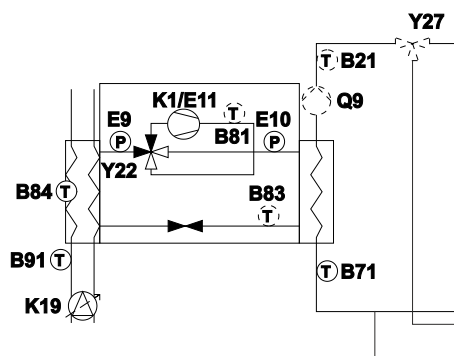
EX: Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83

QX: Condenser pump Q9*, Div valve cool source Y28

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** Additional notes on the source int. circuit is available in the user's guide

**Required settings:**

Configuration > Heat source (5800): Air

Configuration > Refrigeration (5807): Active cooling

.. > Cooling system (5808): 4-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source outl sens B92/B84, Source inlet sensor B91, HP return sensor B71

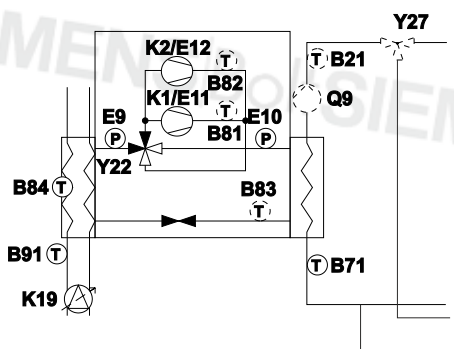
QX: Compressor stage 1 K1*, Source pump Q8/fan K19*, **Process revers valve Y22****Optional settings:**

EX: Overload compressor 1 E11

BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83

QX: Condenser pump Q9*, Div valve cooling cond Y27

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

**Required settings:**

Configuration > Heat source (5800): Air

Configuration > Refrigeration (5807): Active cooling

.. > Cooling system (5808): 4-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source outl sens B92/B84, Source inlet sensor B91, HP return sensor B71

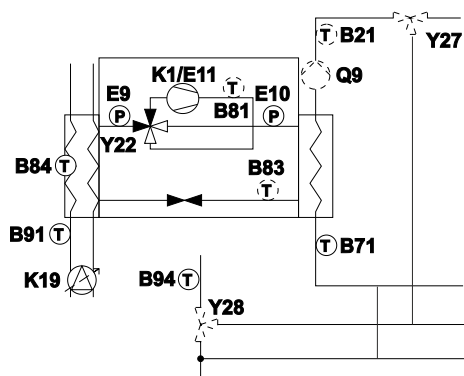
QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*, **Process revers valve Y22****Optional settings:**

EX: Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83

QX: Condenser pump Q9*, Div valve cooling cond Y27

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

**Required settings:**

Configuration > Heat source (5800): Air

Configuration > Refrigeration (5807): Active and passive cooling

.. > Cooling system (5808): 4-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source int circ return B94**, Source outl sens B92/B84, Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

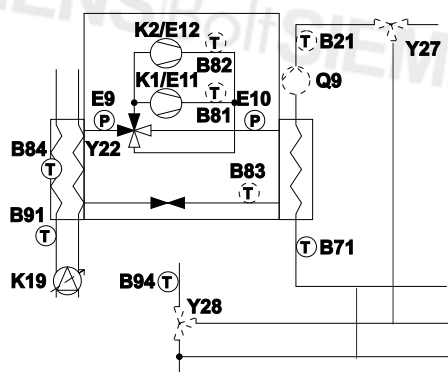
EX: Overload compressor 1 E11

BX: HP flow sensor B21, Hot-gas sensor B81, Refrig sensor liquid B83, Source int circ flow B93**

QX: Condenser pump Q9*, Div valve cooling cond Y27, Div valve cool source Y28

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** Additional notes on the source int. circuit is available in the user's guide

**Required settings:**

Configuration > Heat source (5800): Air

Configuration > Refrigeration (5807): Active and passive cooling

.. > Cooling system (5808): 4-pipe system cooling

EX: Low-pressure switch E9, High-pressure switch E10

BX: Source int circ return B94**, Source outl sens B92/B84, Source inlet sensor B91, HP return sensor B71

QX: Compressor stage 1 K1*, **Compressor 2 K2**, Source pump Q8/fan K19*, **Process revers valve Y22**

Optional settings:

EX: Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source int circ flow B93**

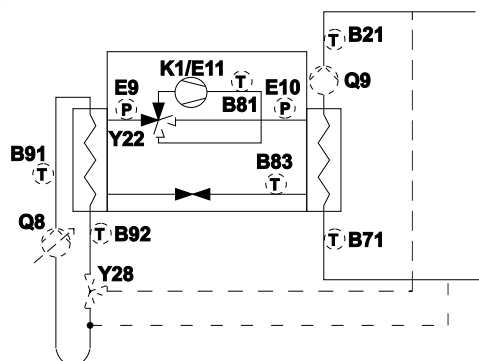
QX: Condenser pump Q9*, Div valve cooling cond Y27, Div valve cool source Y28

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** Additional notes on the source int. circuit is available in the user's guide

4.2.4 HP external

WP60



Required settings:

Configuration > Heat source (5800): Externally brine
 Configuration > Refrigeration (5807): "Off" or "Active cooling" or "Passive cooling" or "Active and passive cooling" **
 .. > Cooling system (5808): 2-pipe system cooling
 QX: Compressor stage 1 K1*

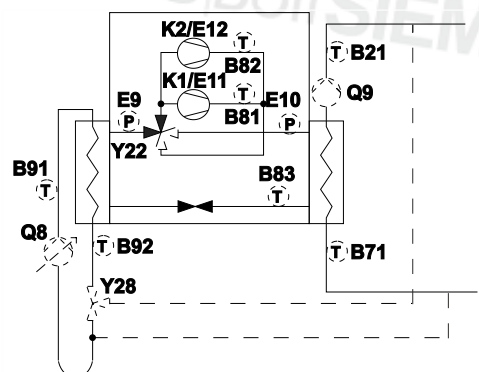
Optional settings:

EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11
 BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91**, Source outl sens B92/B84**
 QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

WP61



Required settings:

Configuration > Heat source (5800): Externally
 Configuration > Refrigeration (5807): "Off" or "Active cooling" or "Passive cooling" or "Active and passive cooling" **
 .. > Cooling system (5808): 2-pipe system cooling
 QX: Compressor stage 1 K1*, **Compressor 2 K2**

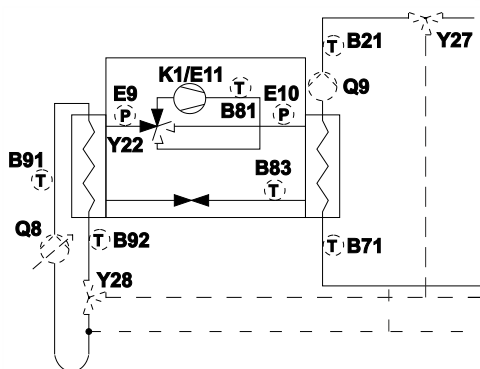
Optional settings:

EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11, Overload compressor 2 E12
 BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91**, Source outl sens B92/B84**
 QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

WP62



Required settings:

Configuration > Heat source (5800): Externally brine

Configuration > Refrigeration (5807): "Active cooling" or "Passive cooling" or "Active and passive cooling" **

.. > Cooling system (5808): 4-pipe system cooling

QX: Compressor stage 1 K1*

Optional settings:

EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11

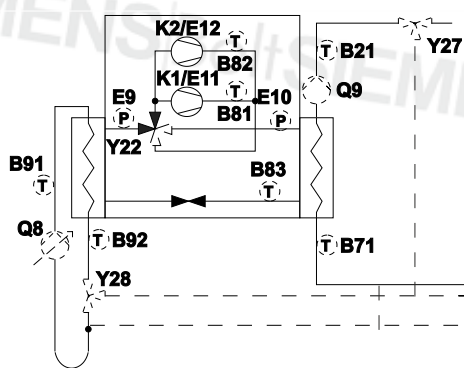
BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91**, Source outl sens B92/B84**

QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cooling cond Y27, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

WP63



Required settings:

Configuration > Heat source (5800): Externally brine

Configuration > Refrigeration (5807): "Active cooling" or "Passive cooling" or "Active and passive cooling" **

.. > Cooling system (5808): 4-pipe system cooling

QX: Compressor stage 1 K1*, **Compressor 2 K2**

Optional settings:

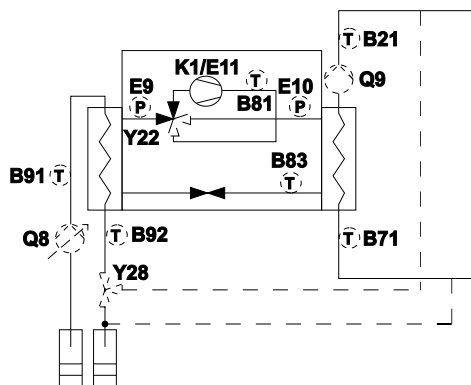
EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91**, Source outl sens B92/B84**

QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cooling cond Y27, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

**Required settings:**

Configuration > Heat source (5800): Externally water

Configuration > Refrigeration (5807): "Off" or "Active cooling" or "Passive cooling" or "Active and passive cooling" **

.. > Cooling system (5808): 2-pipe system cooling

QX: Compressor stage 1 K1*

Optional settings:

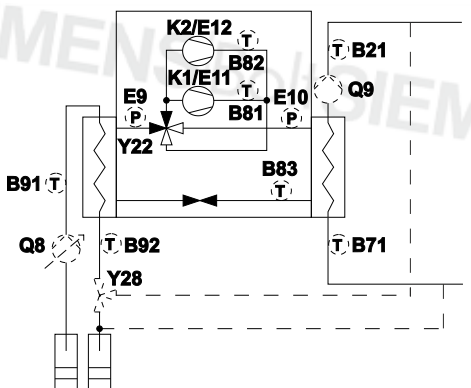
EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11

BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91**, Source outl sens B92/B84**

QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

**Required settings:**

Configuration > Heat source (5800): Externally water

Configuration > Refrigeration (5807): "Off" or "Active cooling" or "Passive cooling" or "Active and passive cooling" **

.. > Cooling system (5808): 2-pipe system cooling

QX: Compressor stage 1 K1*, **Compressor 2 K2**

Optional settings:

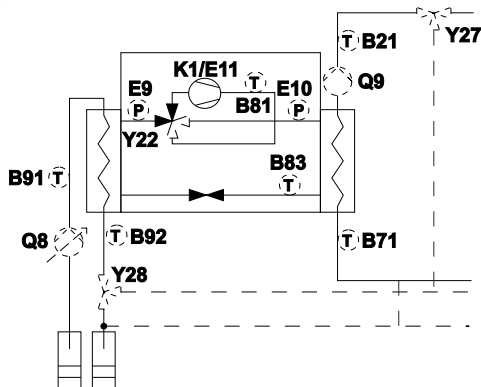
EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91**, Source outl sens B92/B84**

QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

**Required settings:**

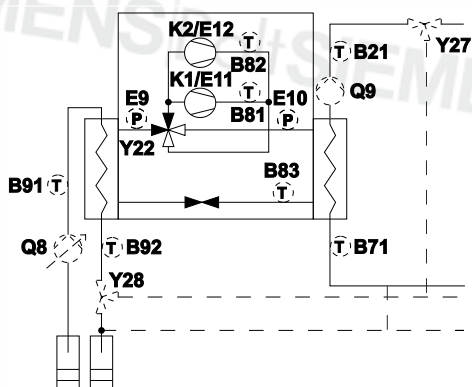
Configuration > Heat source (5800): Externally water
 Configuration > Refrigeration (5807): "Off" or "Active cooling" or "Passive cooling" or "Active and passive cooling" **
 .. > Cooling system (5808): 4-pipe system cooling
 QX: Compressor stage 1 K1*

Optional settings:

EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11
 BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91**, Source outl sens B92/B84**
 QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cooling cond Y27, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

**Required settings:**

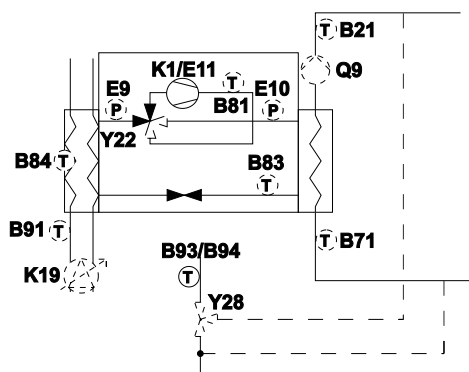
Configuration > Heat source (5800): Externally water
 Configuration > Refrigeration (5807): "Off" or "Active cooling" or "Passive cooling" or "Active and passive cooling" **
 .. > Cooling system (5808): 4-pipe system cooling
 QX: Compressor stage 1 K1*, **Compressor 2 K2**

Optional settings:

EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11, Overload compressor 2 E12
 BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91**, Source outl sens B92/B84**
 QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cooling cond Y27, Div valve cool source Y28

* K1, Q8, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

**Required settings:**

Configuration > Heat source (5800): Externally air

Configuration > Refrigeration (5807): "Off" or "Active cooling" or "Passive cooling" or "Active and passive cooling" **

.. > Cooling system (5808): 2-pipe system cooling

QX: Compressor stage 1 K1*

Optional settings:

EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11

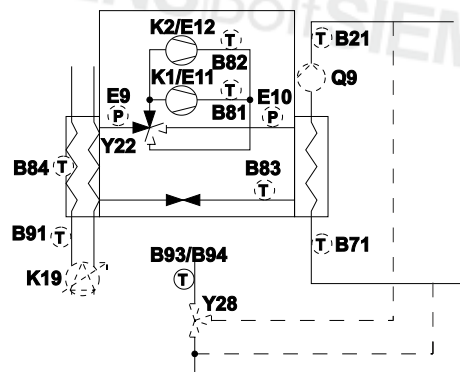
BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91**, Source int circ flow B93/Source int circ return B94***, Source outl sens B92/B84**

QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cool source Y28

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

** Additional notes on the source int. circuit is available in the user's guide

**Required settings:**

Configuration > Heat source (5800): Externally air

Configuration > Refrigeration (5807): "Off" or "Active cooling" or "Passive cooling" or "Active and passive cooling" **

.. > Cooling system (5808): 2-pipe system cooling

QX: Compressor stage 1 K1*, **Compressor 2 K2**

Optional settings:

EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11, Overload compressor 2 E12

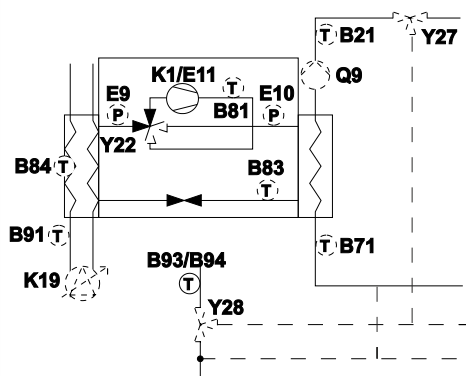
BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91**, Source int circ flow B93/Source int circ return B94***, Source outl sens B92/B84**

QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cool source Y28

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

** Additional notes on the source int. circuit is available in the user's guide

**Required settings:**

Configuration > Heat source (5800): Externally air

Configuration > Refrigeration (5807): "Off" or "Active cooling" or "Passive cooling" or "Active and passive cooling" **

.. > Cooling system (5808): 4-pipe system cooling

QX: Compressor stage 1 K1*

Optional settings:

EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11

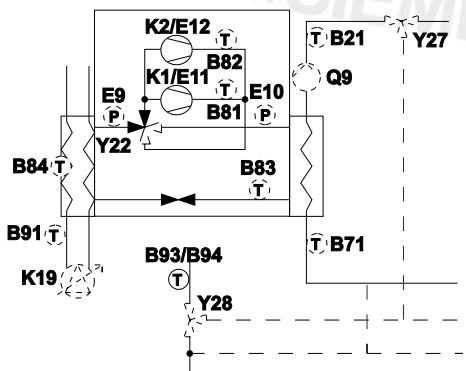
BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Refrig sensor liquid B83, Source inlet sensor B91**, Source outl sens B92/B84**, Source int circ flow B93/Source int circ return B94***

QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cooling cond Y27, Div valve cool source Y28

* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

** Additional notes on the source int. circuit is available in the user's guide

**Required settings:**

Configuration > Heat source (5800): Externally air

Configuration > Refrigeration (5807): "Off" or "Active cooling" or "Passive cooling" or "Active and passive cooling" **

.. > Cooling system (5808): 4-pipe system cooling

QX: Compressor stage 1 K1*, **Compressor 2 K2**

Optional settings:

EX: Low-pressure switch E9, High-pressure switch E10, Overload compressor 1 E11, Overload compressor 2 E12

BX: HP flow sensor B21, HP return sensor B71, Hot-gas sensor B81, Hot-gas sensor B82, Refrig sensor liquid B83, Source inlet sensor B91**, Source outl sens B92/B84**, Source int circ flow B93/Source int circ return B94***

QX: Source pump Q8/fan K19*, Condenser pump Q9*, Process revers valve Y22, Div valve cooling cond Y27, Div valve cool source Y28

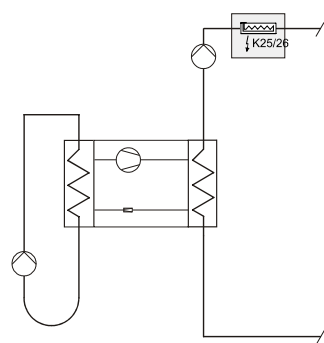
* K1, K19, Q9: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

** B91 or B92 required if passive cooling is (also) used

** Additional notes on the source int. circuit is available in the user's guide

4.2.5 Auxiliary functions heat pump

Flow
electric immersion heater
1, 2



Required settings:

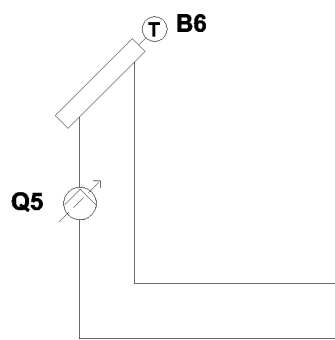
QX: El imm heater 1 flow K25, El imm heater 2 flow K26*

* Location and type of electrical immersion heater can be set using operating lines OL5805 and OLZ5806.

4.3 Solar

4.3.1 1 collector field

Sol1



Required settings:

QX: Collector pump Q5*

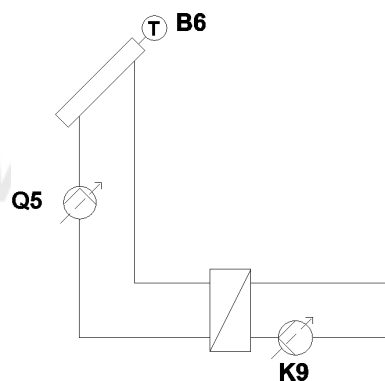
BX: Collector sensor B6

*Q5: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram also requires a valid partial diagram of the following:

- Buffer storage tank, Sp...
- Hot water storage tank, DHWSp...
- Swimming pool, Sb...

Sol3



Required settings:

QX: Collector pump Q5*, Solar pump ext exch K9*

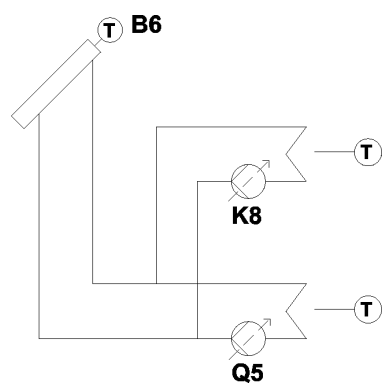
BX: Collector sensor B6

*Q5; K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram also requires a valid partial diagram of the following:

- Buffer storage tank, Sp...
- Hot water storage tank, DHWSp...
- Swimming pool, Sb...

Sol5



Required settings:

Configuration > Solar controlling element (5840): Charging pump

QX: Collector pump Q5*, Solar ctrl elem buffer K8*

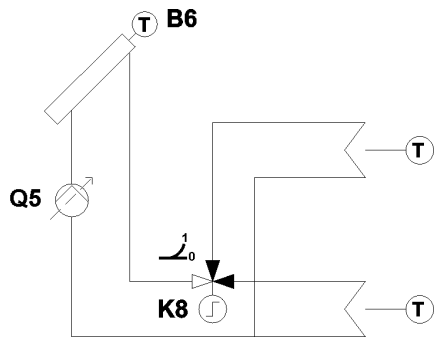
BX: Collector sensor B6

*Q5; K8: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol6



Required settings:

Configuration > Solar controlling element (5840): Diverting valve

QX: Collector pump Q5*, Solar ctrl elem buffer K8

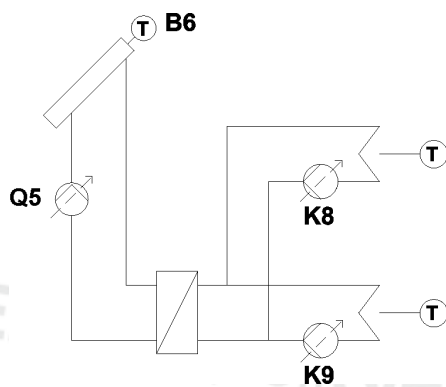
BX: Collector sensor B6

*Q5: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol8



Required settings:

Configuration > Solar controlling element (5840): Charging pump

Configuration > External solar exchanger (5841): Jointly

QX: Collector pump Q5*, Solar ctrl elem buffer K8*, Solar pump ext exch K9*

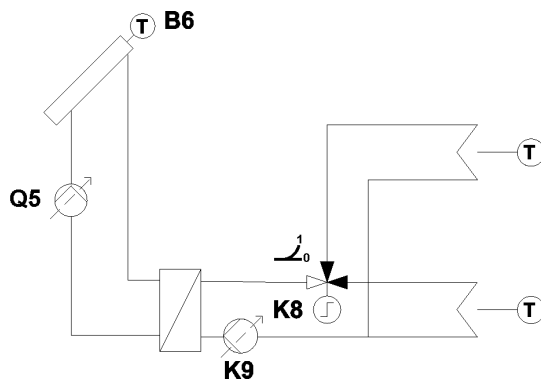
BX: Collector sensor B6

* Q5, K8, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol9



Required settings:

Configuration > Solar controlling element (5840): Diverting valve

Configuration > External solar exchanger (5841): Jointly

QX: Collector pump Q5*, Solar ctrl elem buffer K8, Solar pump ext exch K9*

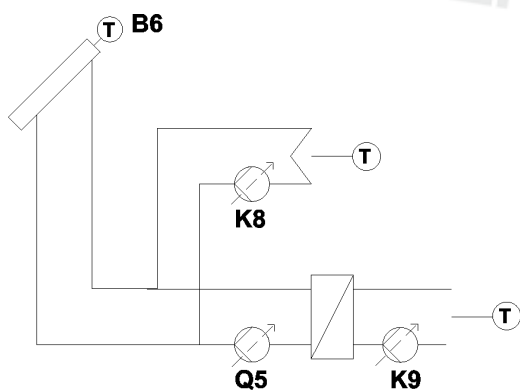
BX: Collector sensor B6

* Q5, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol10



Required settings:

Configuration > Solar controlling element (5840): Charging pump
Configuration > External solar exchanger (5841): DHW storage tank

QX: Collector pump Q5*, Solar ctrl elem buffer K8*, Solar pump ext exch K9*

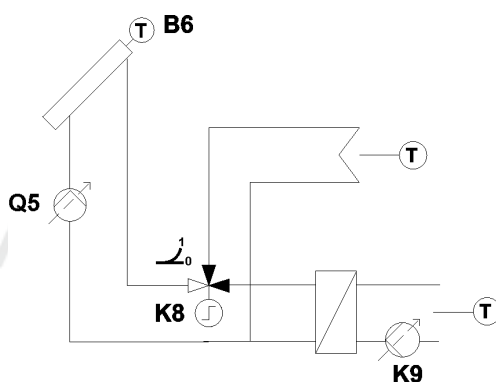
BX: Collector sensor B6

* Q5, K8, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol11



Required settings:

Configuration > Solar controlling element (5840): Diverting valve
Configuration > External solar exchanger (5841): DHW storage tank

QX: Collector pump Q5*, Solar ctrl elem buffer K8, Solar pump ext exch K9*

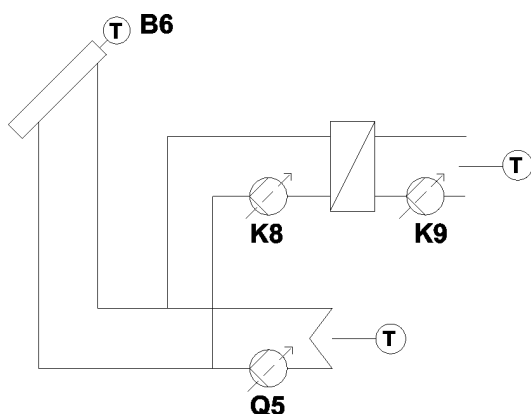
BX: Collector sensor B6

* Q5, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol12



Required settings:

Configuration > Solar controlling element (5840): Charging pump
Configuration > External solar exchanger (5841): Buffer storage tank

QX: Collector pump Q5*, Solar ctrl elem buffer K8*, Solar pump ext exch K9*

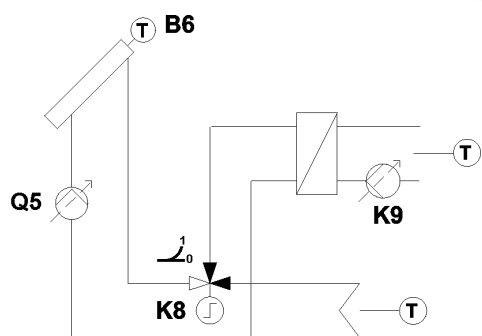
BX: Collector sensor B6

* Q5, K8, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol13



Required settings:

Configuration > Solar controlling element (5840): Diverting valve
Configuration > External solar exchanger (5841): Buffer storage tank

QX: Collector pump Q5*, Solar ctrl elem buffer K8, Solar pump ext exch K9*

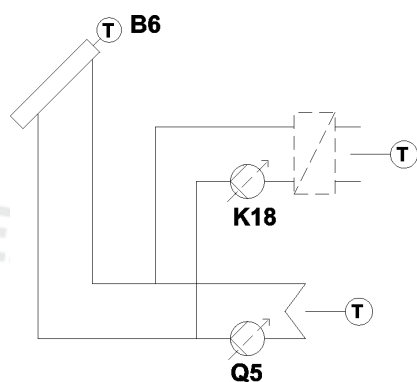
BX: Collector sensor B6

* Q5, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol14



Required settings:

Configuration > Solar controlling element (5840): Charging pump

QX: Collector pump Q5*, Solar ctrl elem swi pool K18*

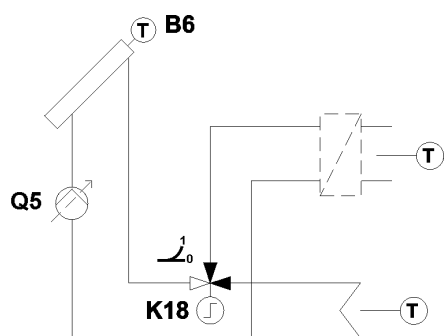
BX: Collector sensor B6

* Q5, K18: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Bottom: Hot water storage tank, DHWSp... or buffer storage tank, Sp...

Sol15



Required settings:

Configuration > Solar controlling element (5840): Diverting valve

QX: Collector pump Q5*, Solar ctrl elem swi pool K18

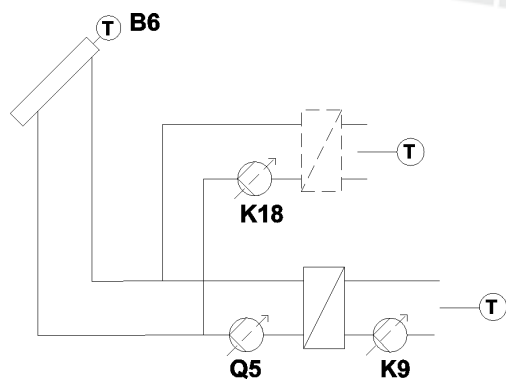
BX: Collector sensor B6

* Q5: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Bottom: Hot water storage tank, DHWSp... or buffer storage tank, Sp...

Sol17



Required settings:

Configuration > Solar controlling element (5840): Charging pump
QX: Collector pump Q5*, Solar pump ext exch K9*, Solar ctrl
elem swi pool K18*

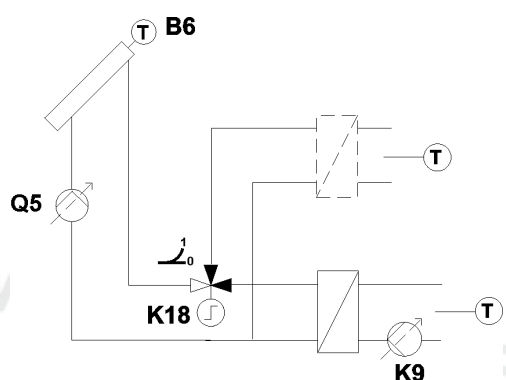
BX: Collector sensor B6

* Q5, K9, K18: speed-controlled as UX/ZX; additional notes available in
"Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Bottom: Hot water storage tank, DHWSp... or buffer storage tank, Sp...

Sol18



Required settings:

Configuration > Solar controlling element (5840): Diverting valve
QX: Collector pump Q5*, Solar pump ext exch K9*, Solar ctrl
elem swi pool K18

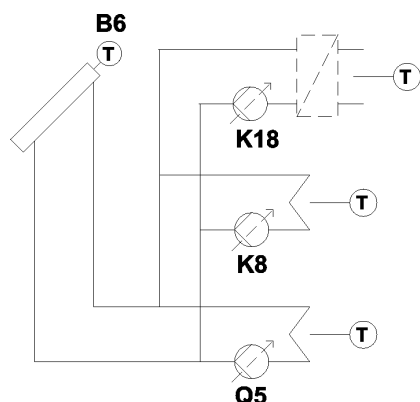
BX: Collector sensor B6

* Q5, K9: speed-controlled as UX/ZX; additional notes available in "Equipment
designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Bottom: Hot water storage tank, DHWSp... or buffer storage tank, Sp...

Sol19



Required settings:

Configuration > Solar controlling element (5840): Charging pump
QX: Collector pump Q5*, Solar ctrl elem buffer K8*, Solar ctrl
elem swi pool K18*

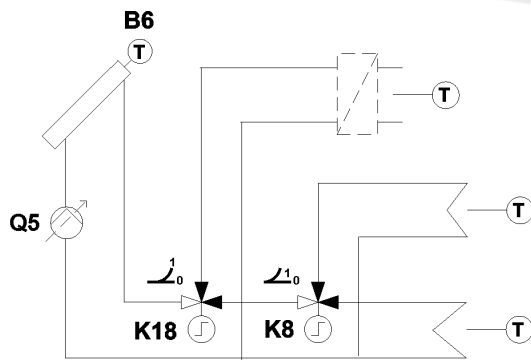
BX: Collector sensor B6

* Q5, K8, K18: speed-controlled as UX/ZX; additional notes available in
"Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

Sol20



Required settings:

Configuration > Solar controlling element (5840): Diverting valve

QX: Collector pump Q5*, Solar ctrl elem buffer K8, Solar ctrl elem swi pool K18

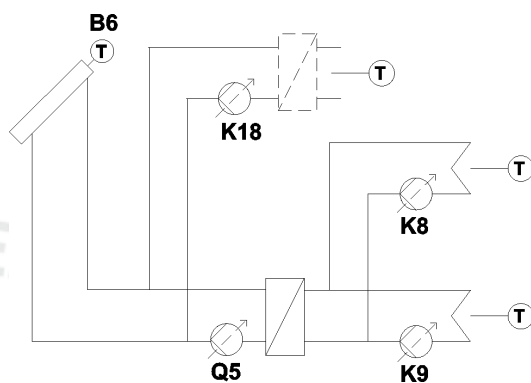
BX: Collector sensor B6

* Q5: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

Sol22



Required settings:

Configuration > Solar controlling element (5840): Charging pump

Configuration > External solar exchanger (5841): Jointly

QX: Collector pump Q5*, Solar ctrl elem buffer K8*, Solar pump ext exch K9*, Solar ctrl elem swi pool K18*

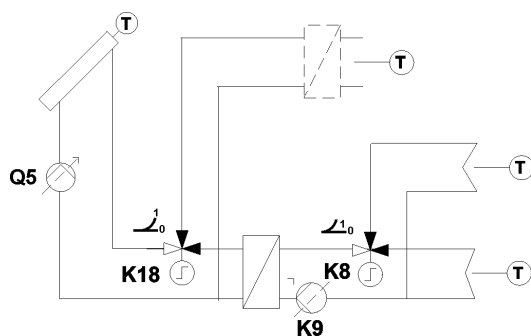
BX: Collector sensor B6

* Q5, K8, K9, K18: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

Sol23



Required settings:

Configuration > Solar controlling element (5840): Diverting valve

Configuration > External solar exchanger (5841): Jointly

QX: Collector pump Q5*, Solar ctrl elem buffer K8, Solar pump ext exch K9*, Solar ctrl elem swi pool K18

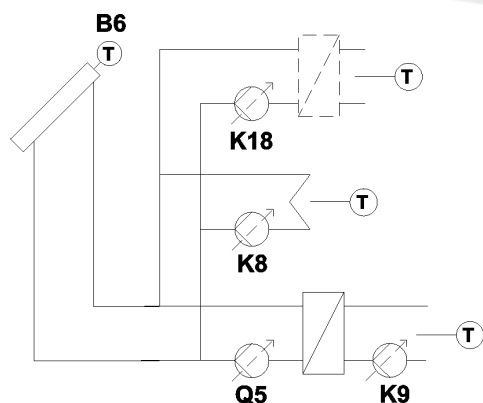
BX: Collector sensor B6

* Q5, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

Sol24



Required settings:

Configuration > Solar controlling element (5840): Charging pump

Configuration > External solar exchanger (5841): DHW storage tank

QX: Collector pump Q5*, Solar ctrl elem buffer K8*, Solar pump ext exch K9*, Solar ctrl elem swi pool K18*

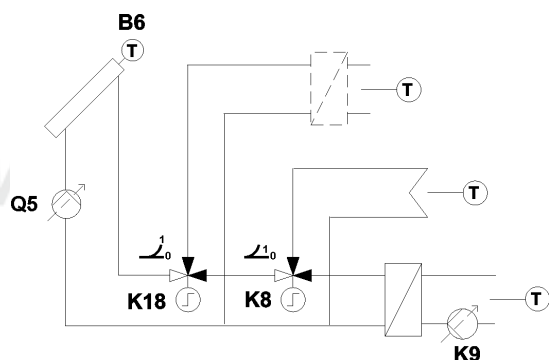
BX: Collector sensor B6

* Q5, K8, K9, K18: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

Sol25



Required settings:

Configuration > Solar controlling element (5840): Diverting valve

Configuration > External solar exchanger (5841): DHW storage tank

QX: Collector pump Q5*, Solar ctrl elem buffer K8, Solar pump ext exch K9*, Solar ctrl elem swi pool K18

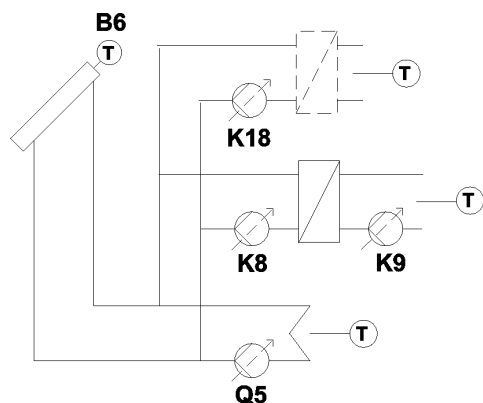
BX: Collector sensor B6

* Q5, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

Sol26



Required settings:

Configuration > Solar controlling element (5840): Charging pump

Configuration > External solar exchanger (5841): Buffer storage tank

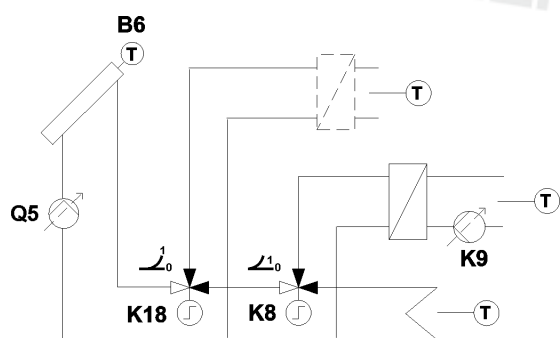
QX: Collector pump Q5*, Solar ctrl elem buffer K8*, Solar pump ext exch K9*, Solar ctrl elem swi pool K18*

BX: Collector sensor B6

* Q5, K8, K9, K18: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

**Required settings:**

Configuration > Solar controlling element (5840): Diverting valve

Configuration > External solar exchanger (5841): Buffer storage tank

QX: Collector pump Q5*, Solar ctrl elem buffer K8, Solar pump ext exch K9*, Solar ctrl elem swi pool K18

BX: Collector sensor B6

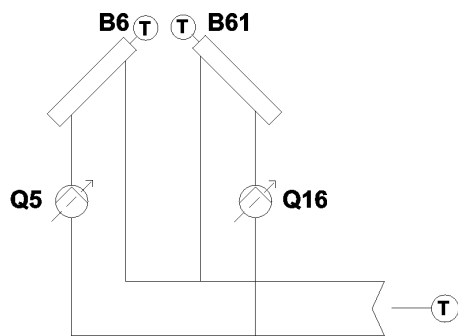
* Q5, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

4.3.2 2 collector fields

Sol31



Required settings:

QX: Collector pump Q5*, Collector pump 2 Q16*

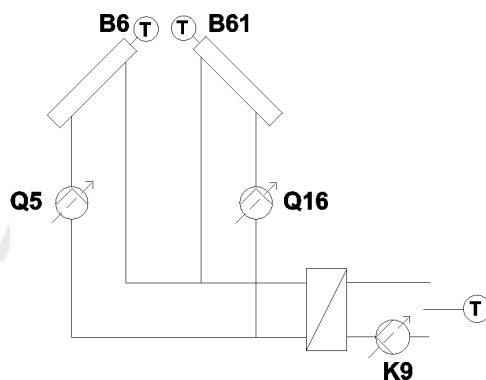
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram also requires a valid partial diagram of the following:

- Buffer storage tank, Sp...
- Hot water storage tank, DHWSp...
- Swimming pool, Sb...

Sol33



Required settings:

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar pump ext exch K9*

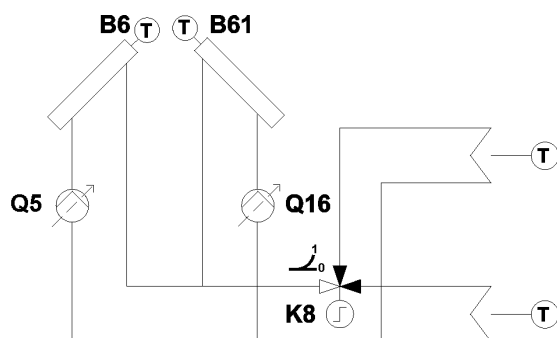
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram also requires a valid partial diagram of the following:

- Buffer storage tank, Sp...
- Hot water storage tank, DHWSp...
- Swimming pool, Sb...

Sol35



Required settings:

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8

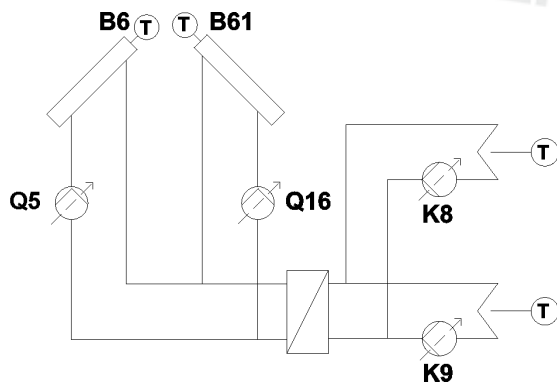
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol37



Required settings:

Configuration > Solar controlling element (5840): Charging pump

Configuration > External solar exchanger (5841): Jointly
QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8*, Solar pump ext exch K9*

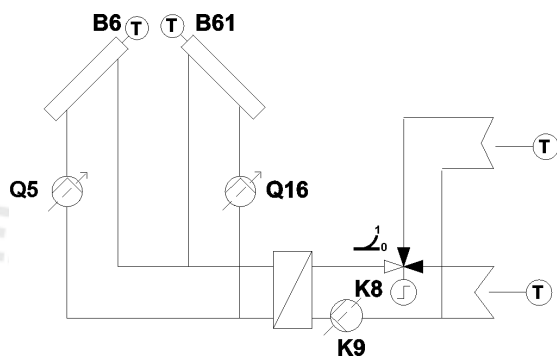
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K8, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol38



Required settings:

Configuration > Solar controlling element (5840): Diverting valve

Configuration > External solar exchanger (5841): Jointly
QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8, Solar pump ext exch K9*

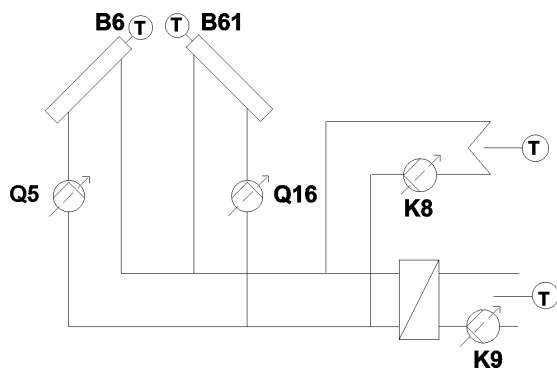
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol 39



Required settings:

Configuration > Solar controlling element (5840): Charging pump

Configuration > External solar exchanger (5841): DHW storage tank

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8*, Solar pump ext exch K9*

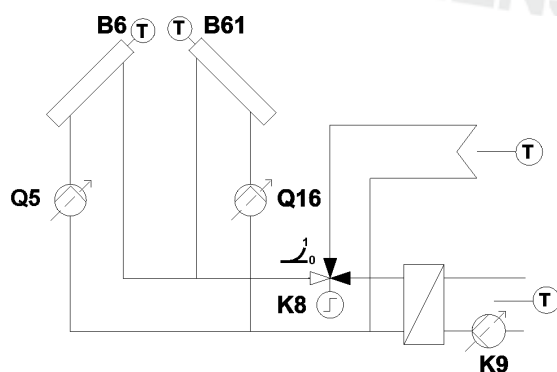
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K8, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol40



Required settings:

Configuration > Solar controlling element (5840): Diverting valve

Configuration > External solar exchanger (5841): DHW storage tank

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8, Solar pump ext exch K9*

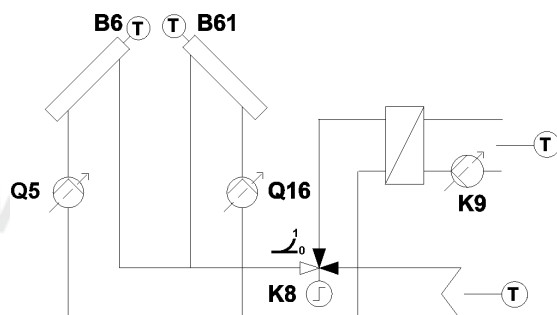
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol41



Required settings:

Configuration > External solar exchanger (5841): Buffer storage tank

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8, Solar pump ext exch K9*

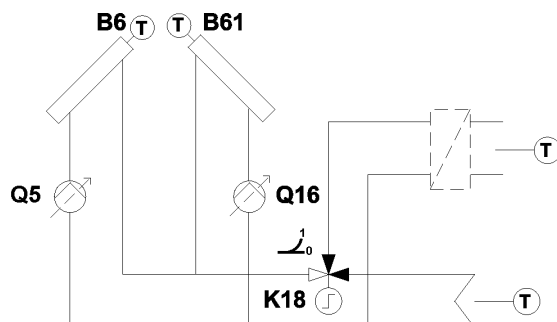
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp... or swimming pool, Sb...

Sol42



Required settings:

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem swi pool K18

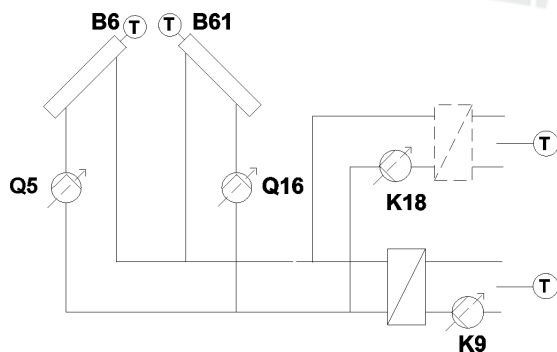
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Bottom: Hot water storage tank, DHWSp... or buffer storage tank, Sp...

Sol44



Required settings:

Configuration > Solar controlling element (5840): Charging pump

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar pump ext exch K9*, Solar ctrl elem swi pool K18*

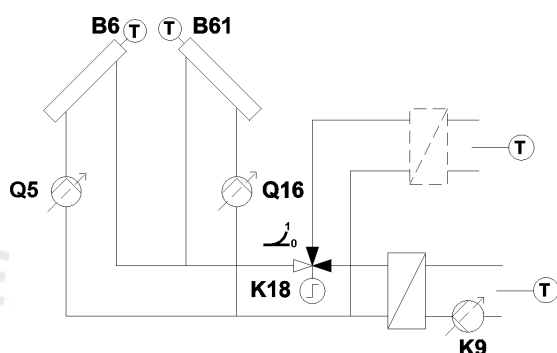
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K9, K18: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Bottom: Hot water storage tank, DHWSp... or buffer storage tank, Sp...

Sol45



Required settings:

Configuration > Solar controlling element (5840): Diverting valve

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar pump ext exch K9*, Solar ctrl elem swi pool K18

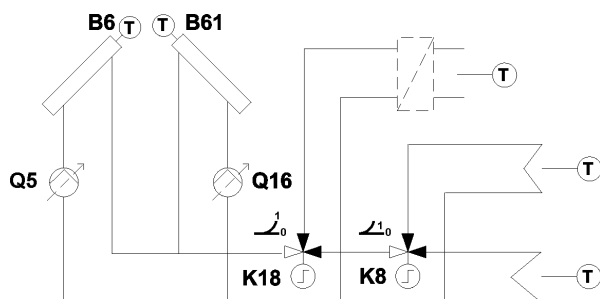
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Bottom: Hot water storage tank, DHWSp... or buffer storage tank, Sp...

Sol46



Required settings:

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8, Solar ctrl elem swi pool K18

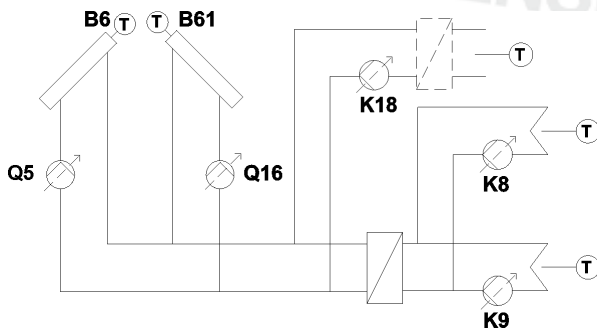
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

Sol48



Required settings:

Configuration > Solar controlling element (5840): Charging pump

Configuration > External solar exchanger (5841): Jointly
 QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8*, Solar pump ext exch K9*, Solar ctrl elem swi pool K18*

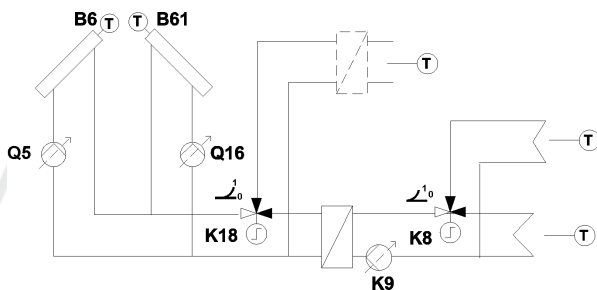
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K8, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

Sol49



Required settings:

Configuration > Solar controlling element (5840): Diverting valve

Configuration > External solar exchanger (5841): Jointly
 QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8, Solar pump ext exch K9*, Solar ctrl elem swi pool K18

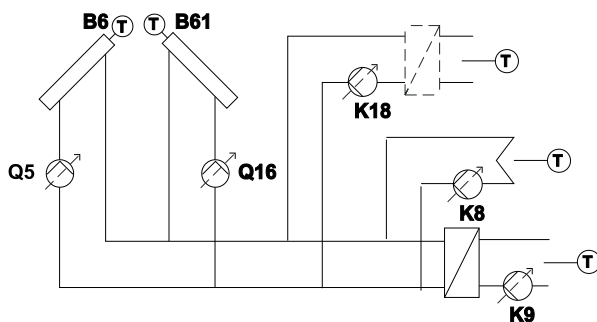
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

Sol50



Required settings:

Configuration > Solar controlling element (5840): Charging pump

Configuration > External solar exchanger (5841): DHW storage tank

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8*, Solar pump ext exch K9*, Solar ctrl elem swi pool K18*

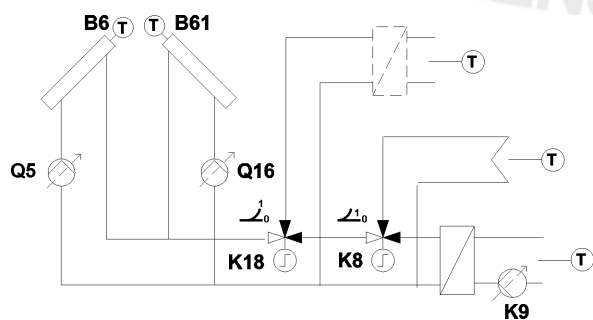
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K8, K9, K18: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

Sol51

**Required settings:**

Configuration > Solar controlling element (5840): Diverting valve

Configuration > External solar exchanger (5841): DHW storage tank

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8, Solar pump ext exch K9*, Solar ctrl elem swi pool K18

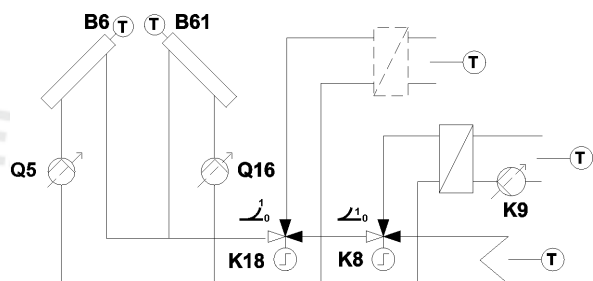
BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

Sol52

**Required settings:**

Configuration > External solar exchanger (5841): Buffer storage tank

QX: Collector pump Q5*, Collector pump 2 Q16*, Solar ctrl elem buffer K8, Solar pump ext exch K9*, Solar ctrl elem swi pool K18

BX: Collector sensor B6, Collector sensor 2 B61

* Q5, Q16, K9: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

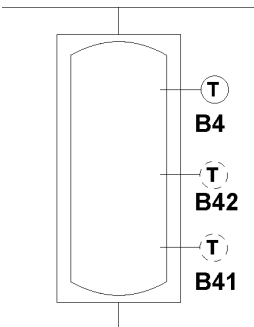
The diagram requires additional, valid partial diagrams to the sensors:

- Top: Swimming pool, Sb...
- Middle: Buffer storage tank, Sp...
- Bottom: Hot water storage tank, DHWSp...

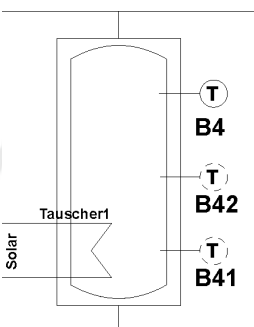
5 Heat storage tank

5.1 Buffer storage tank

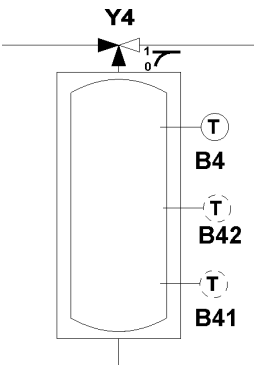
Sp1

	Required settings: Buffer storage tank > With solar integration (4783): No BX: Buffer sensor B4 Optional settings: BX: Buffer sensor B41, Buffer sensor B42
---	---

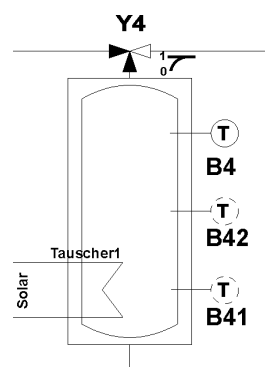
Sp2

	Required settings: Buffer storage tank > With solar integration (4783): Yes BX: Buffer sensor B4 Optional settings: BX: Buffer sensor B41, Buffer sensor B42
--	--

Sp4

	Required settings: Buffer storage tank > With solar integration (4783): No BX: Buffer sensor B4 QX: Heat gen shutoff valve Y4 Optional settings: BX: Buffer sensor B41, Buffer sensor B42
---	--

Sp5



Required settings:

Buffer storage tank > With solar integration (4783): Yes

BX: Buffer sensor B4

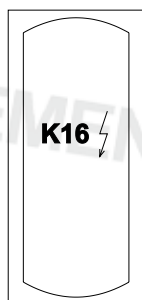
QX: Heat gen shutoff valve Y4

Optional settings:

BX: Buffer sensor B41, Buffer sensor B42

5.2 Auxiliary functions buffer storage tank

Buffer storage tank,
electric immersion heater



Required settings:

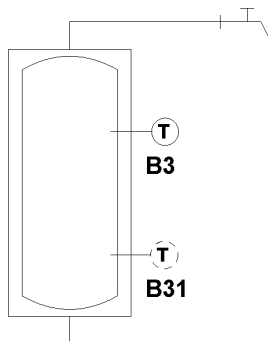
QX: El imm heater buffer K16

6 Domestic hot water

6.1 DHW storage tank

6.1.1 Without actuating device

DHWSp1

**Required settings:**

DHW storage tank > With solar integration (5093): No

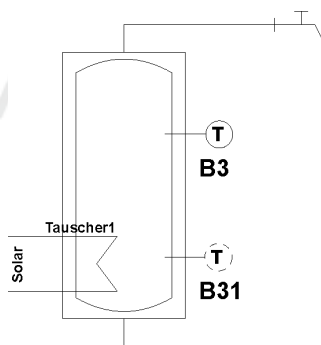
Configuration > DHW ctrl elem Q3 (5731): No charging request

BX: DHW sensor B3

Optional settings:

BX: DHW sensor B31

DHWSp2

**Required settings:**

DHW storage tank > With solar integration (5093): Yes

Configuration > DHW ctrl elem Q3 (5731): No charging request

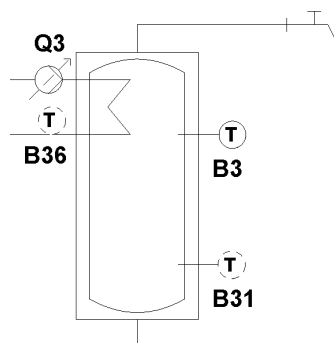
BX: DHW sensor B3

Optional settings:

BX: DHW sensor B31

6.1.2 With charging pump

DHWSp4



Required settings:

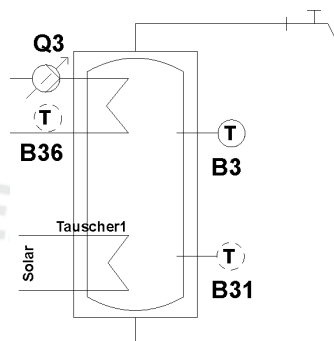
DHW storage tank > With solar integration (5093): No
 Configuration > DHW ctrl elem Q3 (5731): Charging pump
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

* Q3: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp5



Required settings:

DHW storage tank > With solar integration (5093): Yes
 Configuration > DHW ctrl elem Q3 (5731): Charging pump
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3*

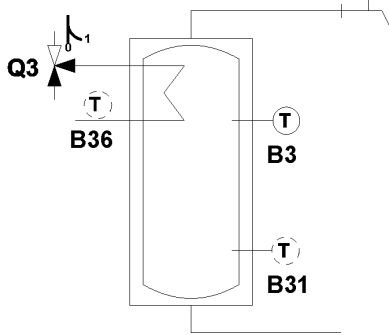
Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

* Q3: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

6.1.3 Diverting valve

DHWSp13



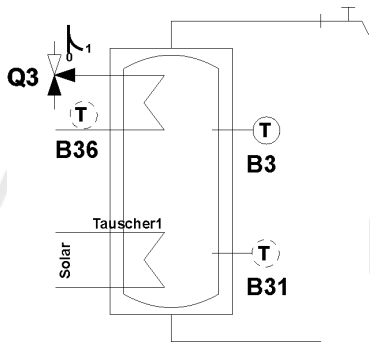
Required settings:

DHW storage tank > With solar integration (5093): No
 Configuration > DHW ctrl elem Q3 (5731): Diverting valve
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

DHWSp14



Required settings:

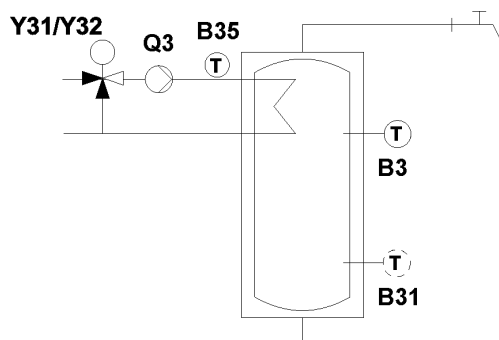
DHW storage tank > With solar integration (5093): Yes
 Configuration > DHW ctrl elem Q3 (5731): Diverting valve
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

6.1.4 Primary controller

DHWSp16



Required settings:

Configuration > Function mixing group 1...: DHW primary controller

Configuration variants:

Configuration > Function extension module 1...: DHW primary controller

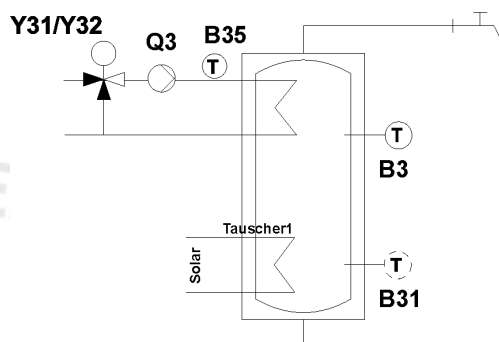
DHW storage tank > With solar integration (5093): No

BX: DHW sensor B3

Optional settings:

BX: DHW sensor B31

DHWSp17



Required settings:

Configuration > Function mixing group 1...: DHW primary controller

Configuration variants:

Configuration > Function extension module 1...: DHW primary controller

DHW storage tank > With solar integration (5093): Yes

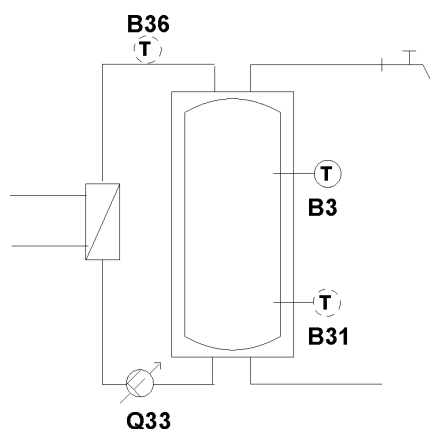
BX: DHW sensor B3

Optional settings:

BX: DHW sensor B31

6.1.5 Intermediate circuit (ext. heat exchanger)

DHWSp19



Required settings:

DHW storage tank > With solar integration (5093): No

BX: DHW sensor B3

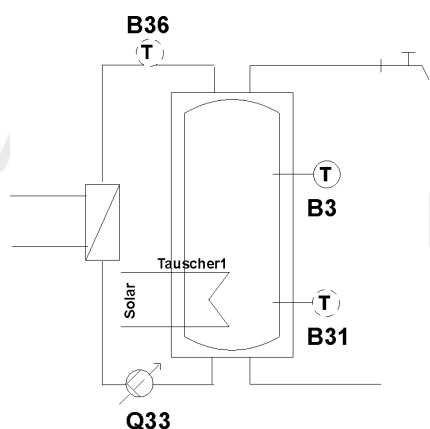
QX: DHW interm circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

* Q33: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp20



Required settings:

DHW storage tank > With solar integration (5093): Yes

BX: DHW sensor B3

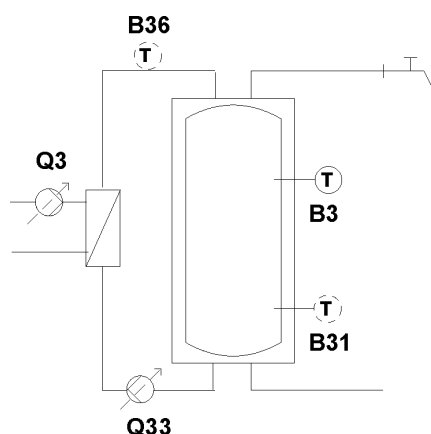
QX: DHW interm circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

* Q33: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp22



Required settings:

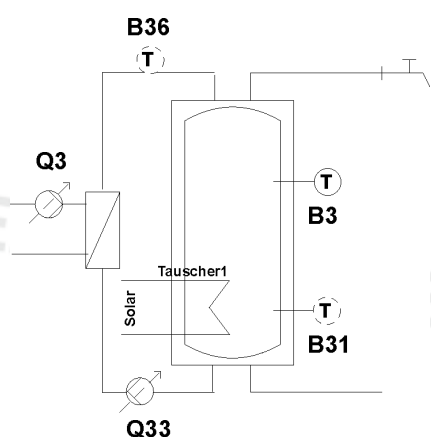
DHW storage tank > With solar integration (5093): No
 Configuration > DHW ctrl elem Q3 (5731): Charging pump
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3*, DHW interm circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

* Q3, Q33: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp23



Required settings:

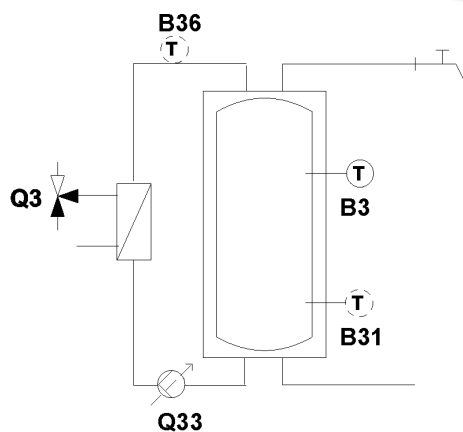
DHW storage tank > With solar integration (5093): Yes
 Configuration > DHW ctrl elem Q3 (5731): Charging pump
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3*, DHW interm circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

* Q3, Q33: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp25



Required settings:

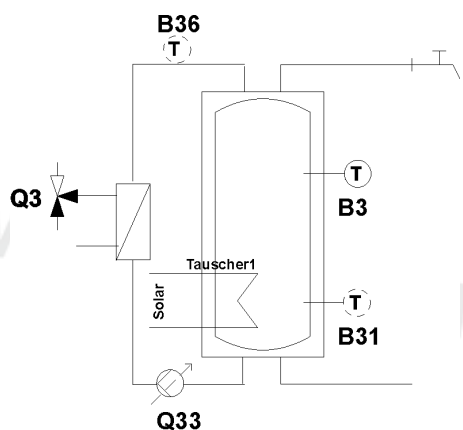
DHW storage tank > With solar integration (5093): No
 Configuration > DHW ctrl elem Q3 (5731): Diverting valve
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3, DHW intern circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

* Q33: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp26



Required settings:

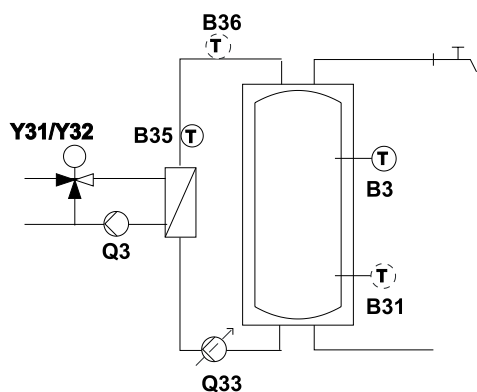
DHW storage tank > With solar integration (5093): Yes
 Configuration > DHW ctrl elem Q3 (5731): Diverting valve
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3, DHW intern circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

* Q33: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp28



Required settings:

Configuration > Function mixing group 1...: DHW primary controller

Configuration variants:

Configuration > Function extension module 1...: DHW primary controller

DHW storage tank > With solar integration (5093): No

BX: DHW sensor B3

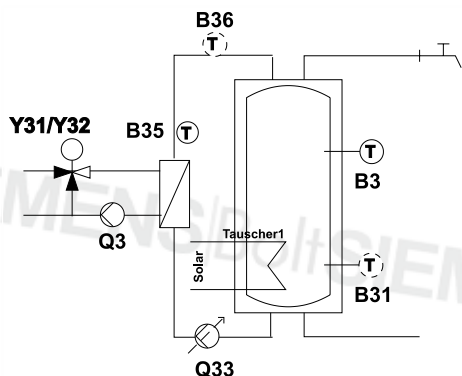
QX: DHW interm circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

* Q33: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp29



Required settings:

Function mixing group 1...: DHW primary controller

Configuration variants:

Function extension module 1...: DHW primary controller

DHW storage tank > With solar integration (5093): Yes

BX: DHW sensor B3

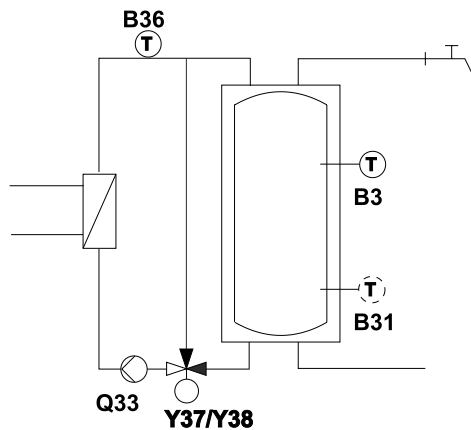
QX: DHW interm circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

* Q33: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp31



Required settings:

Configuration > Function mixing group 1...: DHW intern circuit controller

Configuration variants:

Configuration > Function extension module 1...: DHW intern circuit controller

DHW storage tank > With solar integration (5093): No

BX: DHW sensor B3

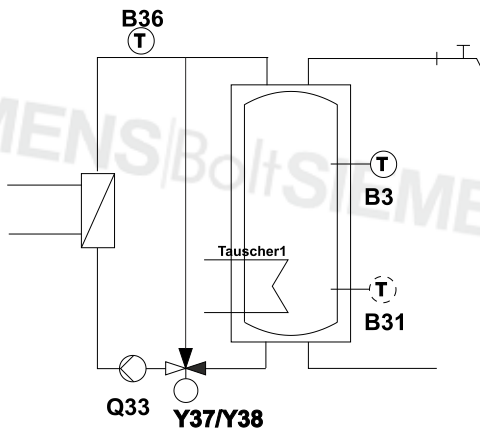
QX: DHW intern circ pump Q33*

Optional settings:

BX: DHW sensor B31

* Q33: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp32



Required settings:

Function mixing group 1...: DHW intern circuit controller

Configuration variants:

Function extension module 1...: DHW intern circuit controller

DHW storage tank > With solar integration (5093): Yes

BX: DHW sensor B3

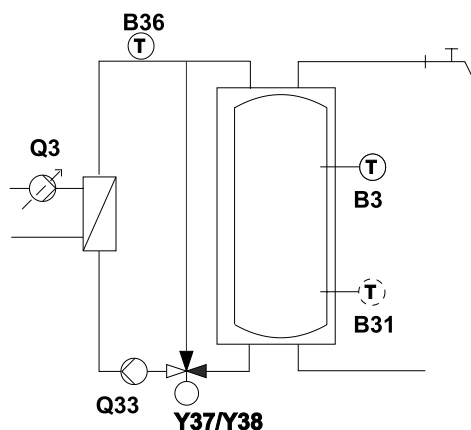
QX: DHW intern circ pump Q33*

Optional settings:

BX: DHW sensor B31

* Q33: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp34



Required settings:

Configuration > Function mixing group 1...: DHW intern circuit controller

Configuration variants:

Configuration > Function extension module 1...: DHW intern circuit controller

DHW storage tank > With solar integration (5093): No

Configuration > DHW ctrl elem Q3 (5731): Charging pump

BX: DHW sensor B3

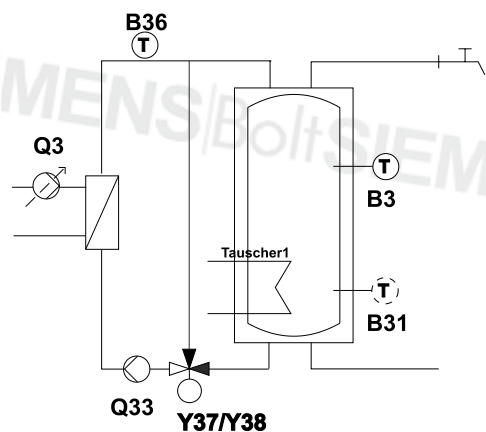
QX: DHW ctrl elem Q3*, DHW intern circ pump Q33

Optional settings:

BX: DHW sensor B31

* Q3: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp35



Required settings:

Function mixing group 1...: DHW intern circuit controller

Configuration variants:

Function extension module 1...: DHW intern circuit controller

DHW storage tank > With solar integration (5093): Yes

DHW ctrl elem Q3 (5731): Charging pump

BX: DHW sensor B3

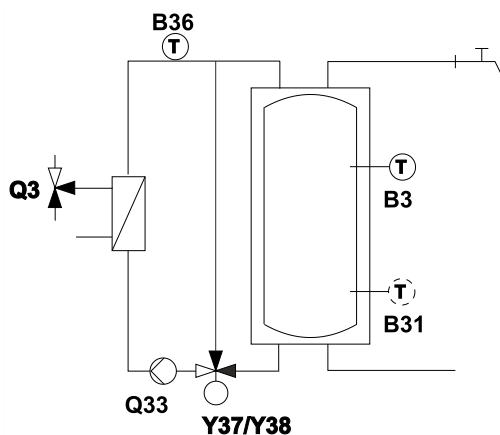
QX: DHW ctrl elem Q3*, DHW intern circ pump Q33

Optional settings:

BX: DHW sensor B31

* Q3: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

DHWSp37



Required settings:

Configuration > Function mixing group 1...: DHW interm circuit controller

Configuration variants:

Configuration > Function extension module 1...: DHW interm circuit controller

DHW storage tank > With solar integration (5093): No

Configuration > DHW ctrl elem Q3 (5731): Diverting valve

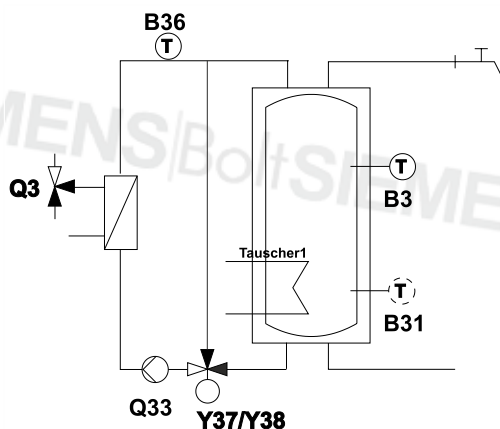
BX: DHW sensor B3

QX: DHW ctrl elem Q3, DHW interm circ pump Q33

Optional settings:

BX: DHW sensor B31

DHWSp38



Required settings:

Function mixing group 1...: DHW interm circuit controller

Configuration variants:

Function extension module 1...: DHW interm circuit controller

DHW storage tank > With solar integration (5093): Yes

DHW ctrl elem Q3 (5731): Diverting valve

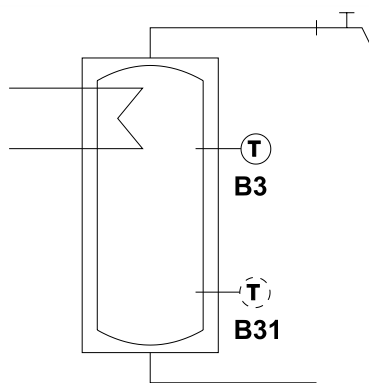
BX: DHW sensor B3

QX: DHW ctrl elem Q3, DHW interm circ pump Q33

Optional settings:

BX: DHW sensor B31

DHWSp40



Required settings:

DHW storage tank > With solar integration (5093): No

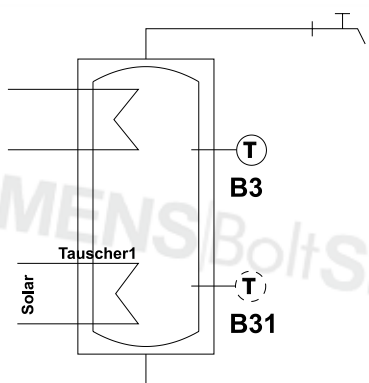
Configuration > DHW ctrl elem Q3 (5731): Charging pump or Diverting valve

BX: DHW sensor B3

Optional settings:

BX: DHW sensor B31

DHWSp41



Required settings:

DHW storage tank > With solar integration (5093): Yes

DHW ctrl elem Q3 (5731): Charging pump or Diverting valve

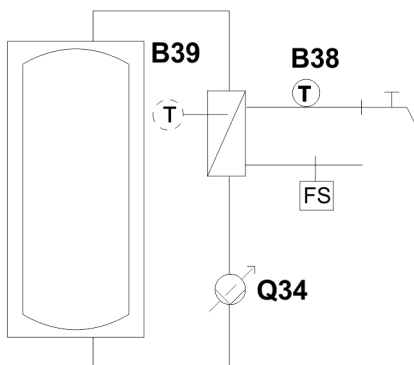
BX: DHW sensor B3

Optional settings:

BX: DHW sensor B31

6.2 Instantaneous DHW heater

DHWDI3



Required settings:

BX: DHW outlet sensor B38

QX: Instant WH ctrl elem Q34*

HX: DHW flow switch

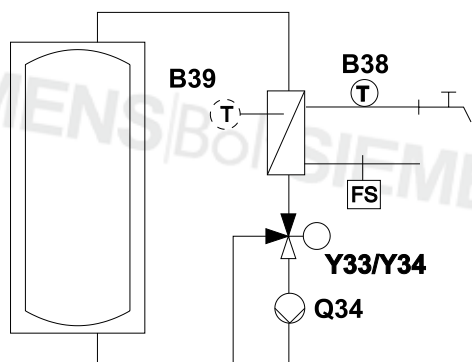
Optional settings:

BX: DHW circulation sensor B39

* Q34: speed-controlled as UX/ZX; additional notes available in "Equipment designations".

Note: Conditional on additional, valid partial diagram for type hot water storage tank, DHWSp... or buffer storage tank, Sp...

DHWDI8



Required settings:

Function mixing group 1...: Instantaneous water heater

Configuration variants:

Function extension module 1...: Instantaneous water heater

BX: DHW outlet sensor B38

HX: DHW flow switch

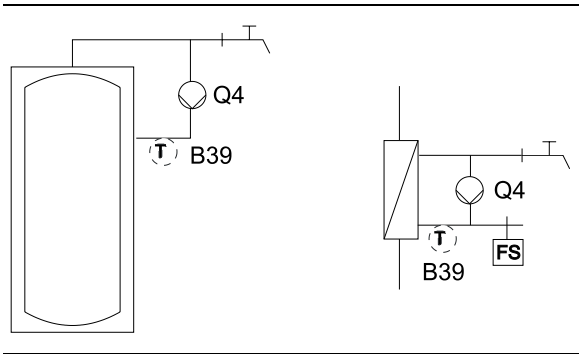
Optional settings:

BX: DHW circulation sensor B39

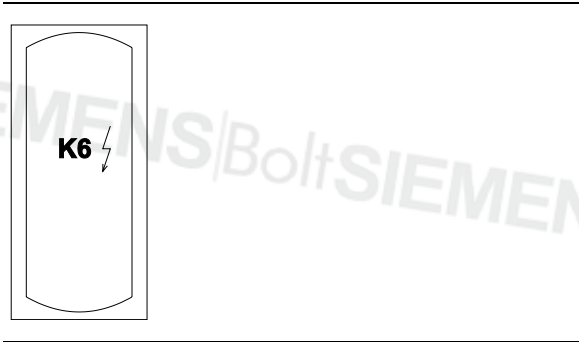
Note: Conditional on additional, valid partial diagram for type hot water storage tank, DHWSp... or buffer storage tank, Sp...

6.3 Auxiliary functions DHW

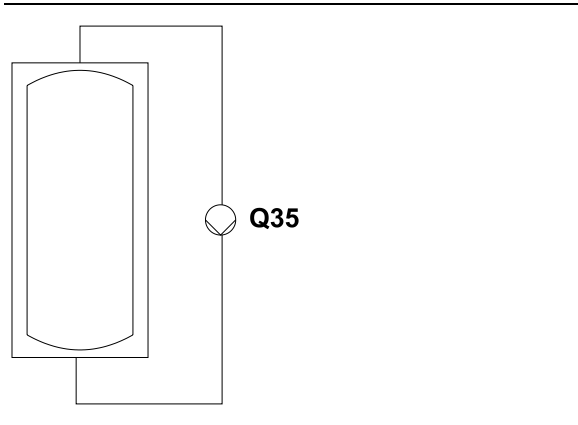
DHW circulating pump

	Required settings: QX: Circulating pump Q4
	Optional settings: BX: DHW circulation sensor B39

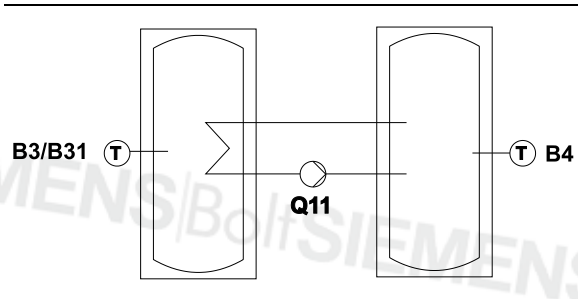
Electric immersion heater
for DHW electric
immersion heater

	Required settings: QX: El imm heater DHW K6
--	---

DHW mixing pump

	Required settings: QX: DHW mixing pump Q35
---	---

Storage tank transfer pump

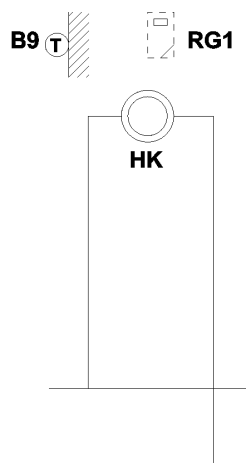
	Required settings: BX: DHW sensor B3, Buffer sensor B4 QX: St tank transfer pump Q11
	Optional settings: BX: DHW sensor B31

7 Distribution

7.1 Control circuit room 1...3

7.1.1 Heating circuit

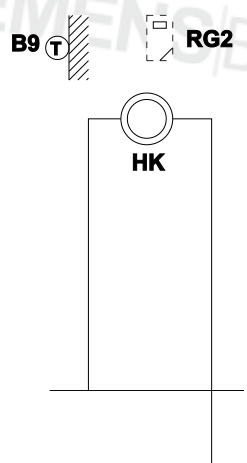
Rh1/1



Required settings:

Configuration > Heating circuit 1 (5710): On

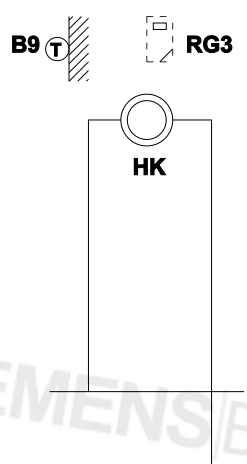
Rh1/2



Required settings:

Configuration > Heating circuit 2 (5715): On

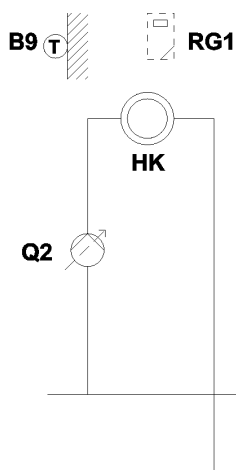
Rh1/3



Required settings:

Configuration > Heating circuit 3 (5721): On

Rh2/1

**Required settings:**

Configuration > Heating circuit 1 (5710): On

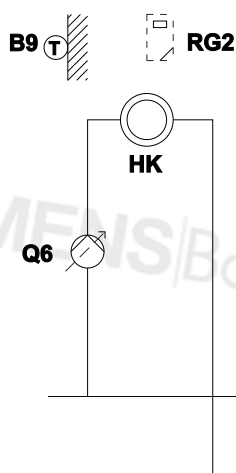
QX: Heat circuit pump HC1 Q2*

Optional settings:

QX: 2nd pump speed HC1 Q21

* Q2: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh2/2

**Required settings:**

Configuration > Heating circuit 2 (5715): On

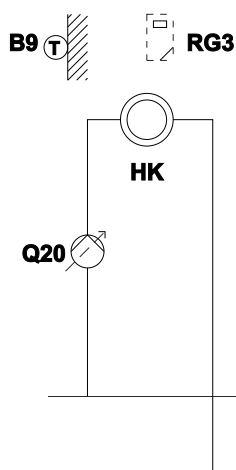
QX: Heat circuit pump HC2 Q6*

Optional settings:

QX: 2nd pump speed HC2 Q22

* Q6: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh2/3

**Required settings:**

Configuration > Heating circuit 3 (5721): On

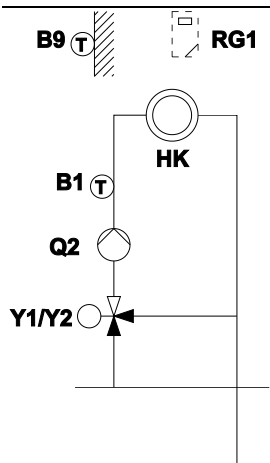
QX: Heat circuit pump HC3 Q20*

Optional settings:

QX: 2nd pump speed HC3 Q23

* Q20: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh3/1



Required settings:

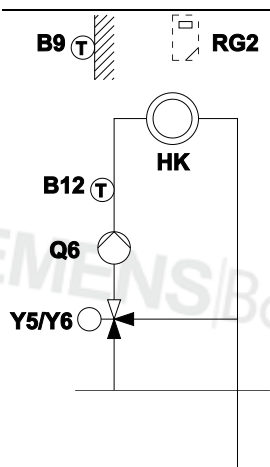
Function mixing group 1...: Heating circuit 1

Configuration variants:

Function extension module 1...: Heating circuit 1

Configuration > Heating circuit 1 (5710): On

Rh3/2

**Required settings:**

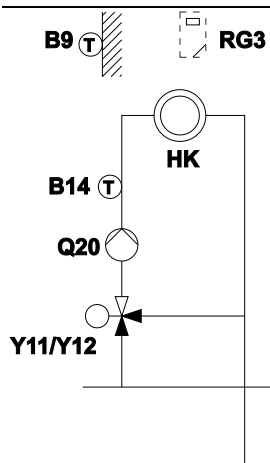
Function mixing group 1...: Heating circuit 2

Configuration variants:

Function extension module 1...: Heating circuit 2

Configuration > Heating circuit 2 (5715): On

Rh3/3

**Required settings:**

Function mixing group 1...: Heating circuit 3

Configuration variants:

Function extension module 1...: Heating circuit 3

Configuration > Heating circuit 3 (5721): On

7.1.2 Heating or cooling circuit in 2-pipe system (common distribution)

Rh5/1

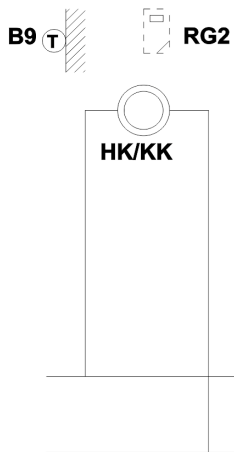


Required settings:

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

Rh5/2

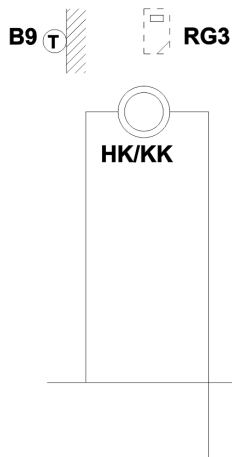


Required settings:

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

Rh5/3

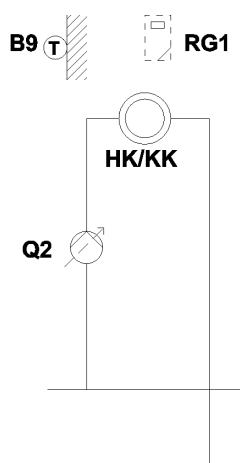


Required settings:

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

Rh6/1

**Required settings:**

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

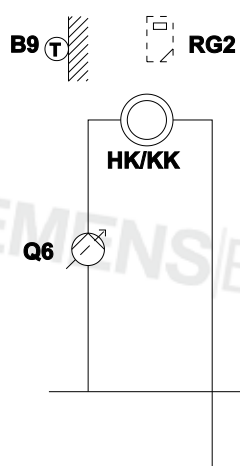
QX: Heat/cool circ pump 1 Q2*

Optional settings:

QX: 2nd pump speed HC1 Q21

* Q2: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh6/2

**Required settings:**

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

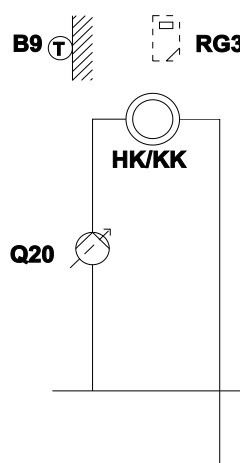
QX: Heat/cool circ pump 2 Q6*

Optional settings:

QX: 2nd pump speed HC2 Q22

* Q6: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh6/3

**Required settings:**

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

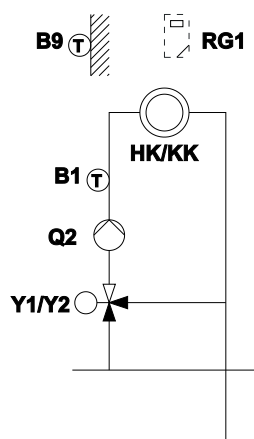
QX: Heat/cool circ pump 3 Q20*

Optional settings:

QX: 2nd pump speed HC3 Q23

* Q20: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh7/1

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 1

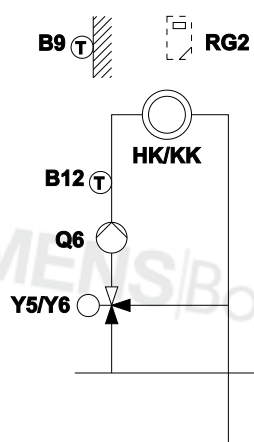
Configuration variants:

Function extension module 1...: Heating circ/cooling circ 1

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

Rh7/2

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 2

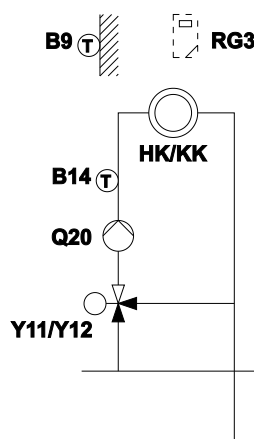
Configuration variants:

Function extension module 1...: Heating circ/cooling circ 2

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

Rh7/3

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 3

Configuration variants:

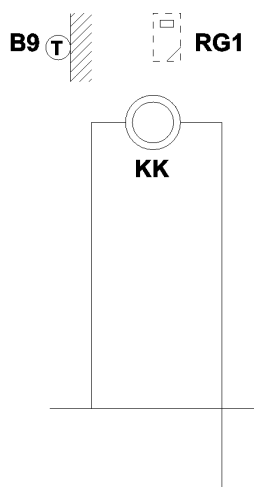
Function extension module 1...: Heating circ/cooling circ 3

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

7.1.3 Cooling circuit in 2-pipe system

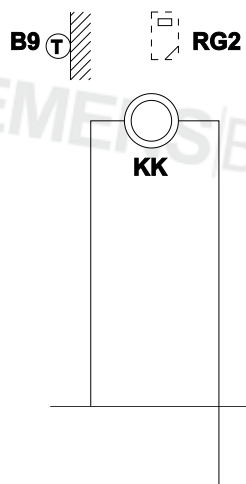
Rh8/1



Required settings:

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

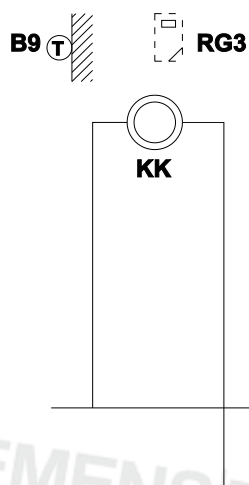
Rh8/2



Required settings:

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

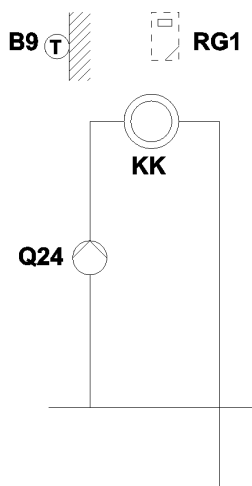
Rh8/3



Required settings:

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

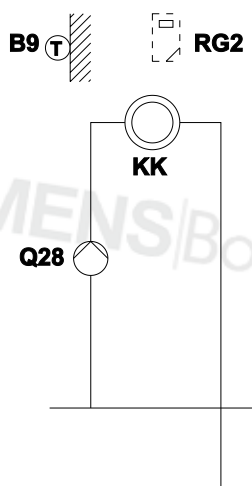
Rh9/1

**Required settings:**

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

QX: Cooling circ pump CC1 Q24

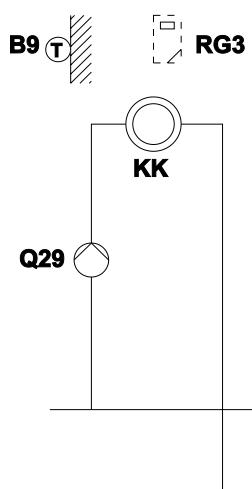
Rh9/2

**Required settings:**

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

QX: Cooling circ pump CC2 Q28

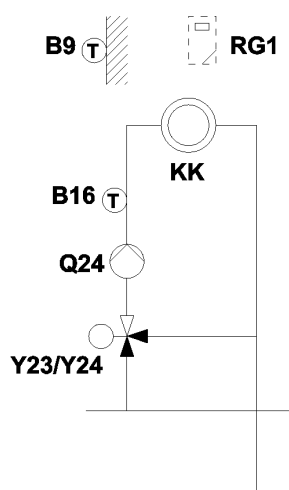
Rh9/3

**Required settings:**

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

QX: Cooling circ pump CC3 Q29

Rh10/1

**Required settings:**

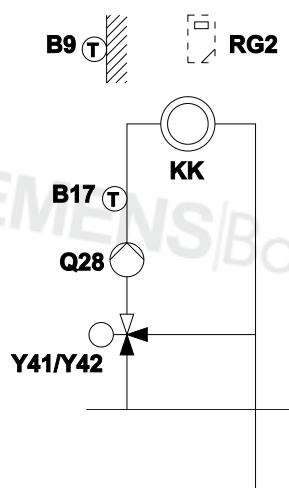
Function mixing group 1...: Cooling circuit 1

Configuration variants:

Function extension module 1...: Cooling circuit 1

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

Rh10/2

**Required settings:**

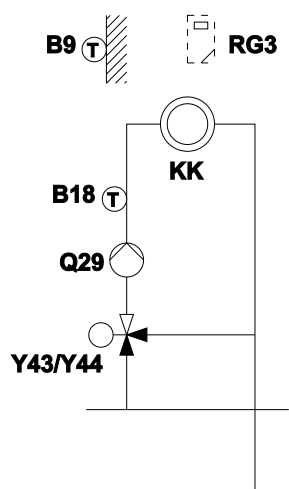
Function mixing group 1...: Cooling circuit 2

Configuration variants:

Function extension module 1...: Cooling circuit 2

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

Rh10/3

**Required settings:**

Function mixing group 1...: Cooling circuit 3

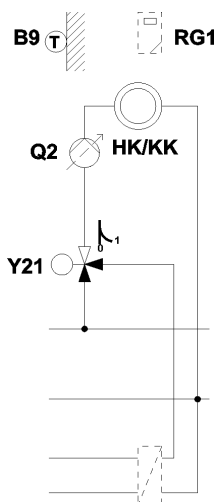
Configuration variants:

Function extension module 1...: Cooling circuit 3

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

7.1.4 Heating or cooling circuit in 4-pipe system (common distribution)

Rh12/1



Required settings:

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

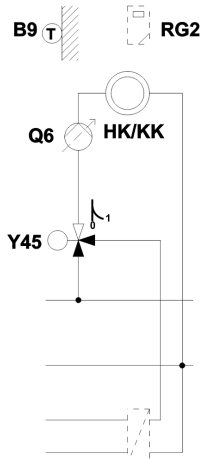
QX: Div valve HC/CC1 Y21, Heat/cool circ pump 1 Q2*

Optional settings:

QX: 2nd pump speed HC1 Q21

* Q2: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh12/2



Required settings:

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

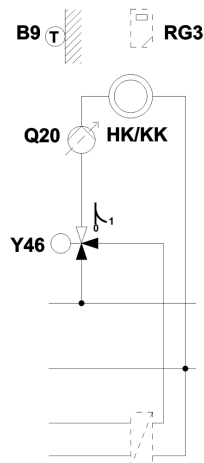
QX: Div valve HC/CC2 Y45, Heat/cool circ pump 2 Q6*

Optional settings:

QX: 2nd pump speed HC2 Q22

* Q6: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh12/3



Required settings:

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

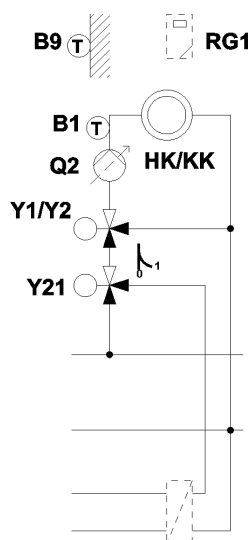
QX: Div valve HC/CC3 Y46, Heat/cool circ pump 3 Q20*

Optional settings:

QX: 2nd pump speed HC3 Q23

* Q20: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh14/1

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 1

Configuration variants:

Function extension module 1...: Heating circ/cooling circ 1

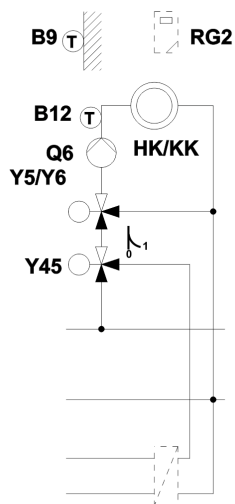
Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

Configuration > Use of mixing valve 1 (5712): Heating and cooling

QX: Diverting valve cooling Y21

Rh14/2

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 2

Configuration variants:

Function extension module 1...: Heating circ/cooling circ 2

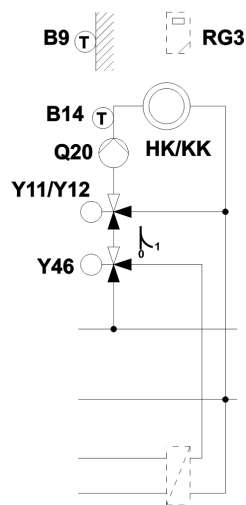
Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

Configuration > Use of mixing valve 2 (5717): Heating and cooling

QX: Div valve HC/CC2 Y45

Rh14/3

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 3

Configuration variants:

Function extension module 1...: Heating circ/cooling circ 3

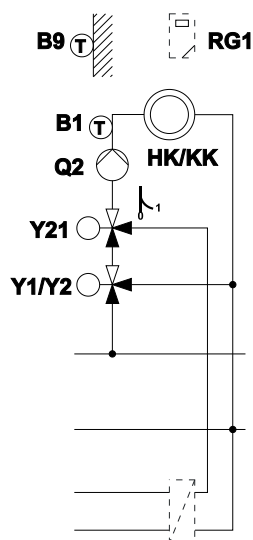
Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

Configuration > Use of mixing valve 3 (5723): Heating and cooling

QX: Div valve HC/CC3 Y46

Rh15/1

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 1

Configuration variants:

Function extension module 1...: Heating circ/cooling circ 1

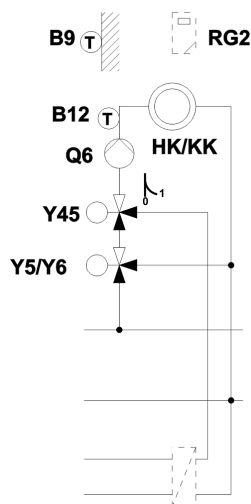
Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

Configuration > Use of mixing valve 1 (5712): Heating

QX: Diverting valve cooling Y21

Rh15/2

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 2

Configuration variants:

Function extension module 1...: Heating circ/cooling circ 2

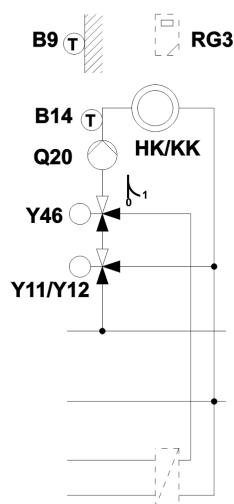
Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

Configuration > Use of mixing valve 2 (5717): Heating

QX: Div valve HC/CC2 Y45

Rh15/3

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 3

Configuration variants:

Function extension module 1...: Heating circ/cooling circ 3

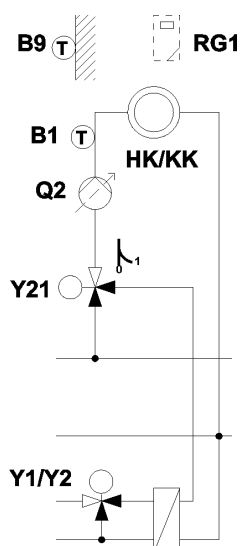
Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

Configuration > Use of mixing valve 3 (5723): Heating

QX: Div valve HC/CC3 Y46

Rh16/1

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 1

Configuration variants:

Function extension module 1...: Heating circ/cooling circ 1

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

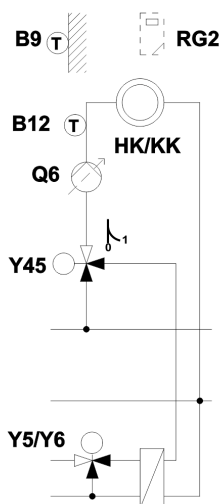
Configuration > Use of mixing valve 1 (5712): Cooling

QX: Diverting valve cooling Y21

Optional settings:

QX: 2nd pump speed HC1 Q21

Rh16/2

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 2

Configuration variants:

Function extension module 1...: Heating circ/cooling circ 2

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

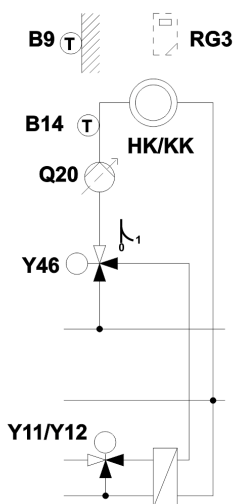
Configuration > Use of mixing valve 2 (5717): Cooling

QX: Div valve HC/CC2 Y45

Optional settings:

QX: 2nd pump speed HC2 Q22

Rh16/3

**Required settings:**

Function mixing group 1...: Heating circ/cooling circ 3

Configuration variants:

Function extension module 1...: Heating circ/cooling circ 3

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

Configuration > Use of mixing valve 3 (5723): Cooling

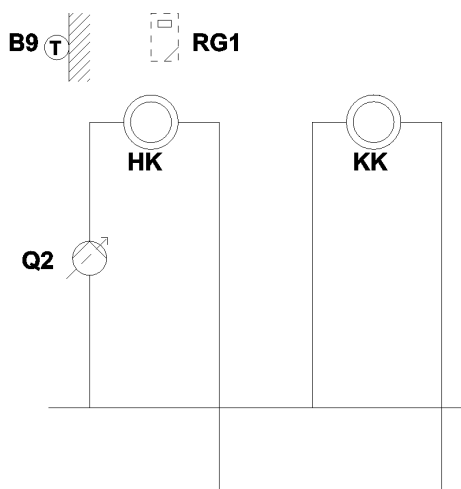
QX: Div valve HC/CC3 Y46

Optional settings:

QX: 2nd pump speed HC3 Q23

7.1.5 Heating or cooling circuit in 2-pipe system (separate distribution)

Rh20/1



Required settings:

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

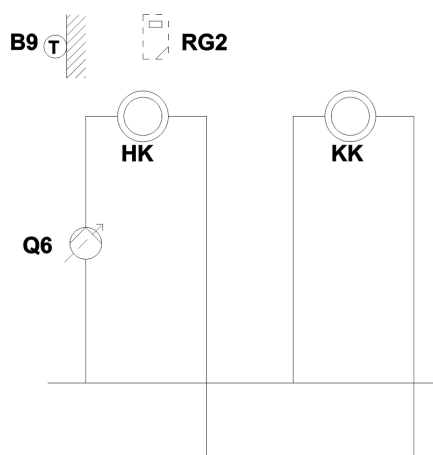
QX: Heat circuit pump HC1 Q2*

Optional settings:

QX: 2nd pump speed HC1 Q21

* Q2: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh20/2



Required settings:

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

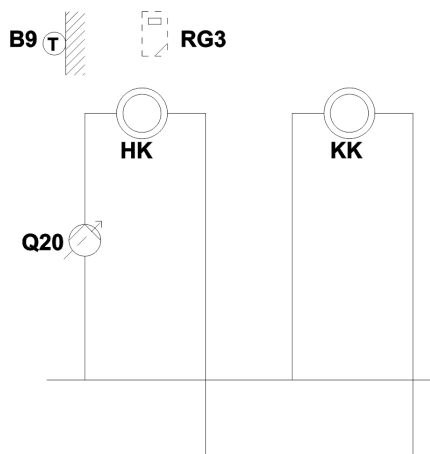
QX: Heat circuit pump HC2 Q6*

Optional settings:

QX: 2nd pump speed HC2 Q22

* Q6: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh20/3



Required settings:

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

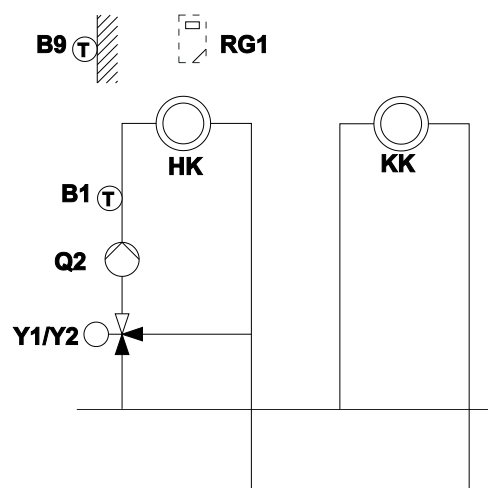
QX: Heat circuit pump HC3 Q20*

Optional settings:

QX: 2nd pump speed HC3 Q23

* Q20: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh21/1

**Required settings:**

Function mixing group 1...: Heating circuit 1

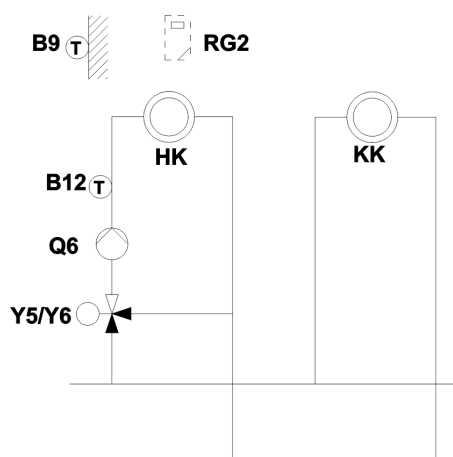
Configuration variants:

Function extension module 1...: Heating circuit 1

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

Rh21/2

**Required settings:**

Function mixing group 1...: Heating circuit 2

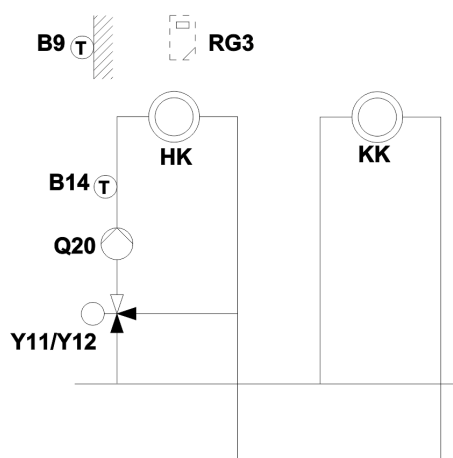
Configuration variants:

Function extension module 1...: Heating circuit 2

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

Rh21/3

**Required settings:**

Function mixing group 1...: Heating circuit 3

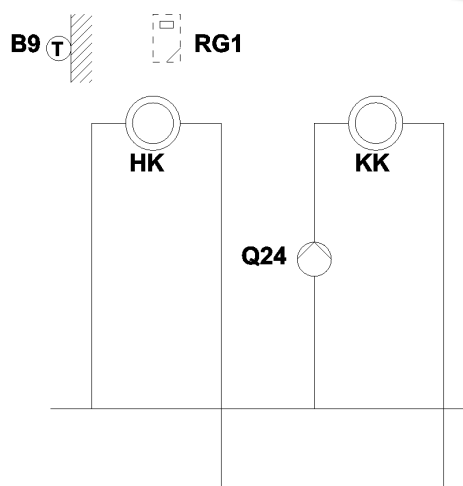
Configuration variants:

Function extension module 1...: Heating circuit 3

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

Rh22/1

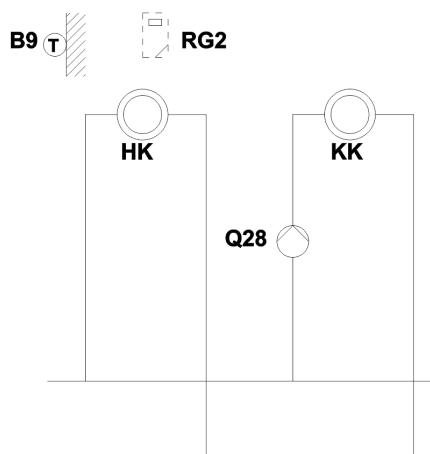
**Required settings:**

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

QX: Cooling circ pump CC1 Q24

Rh22/2

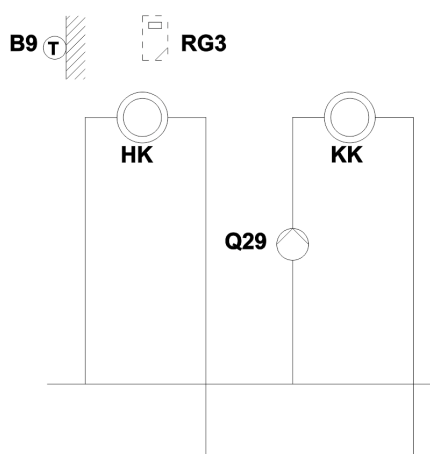
**Required settings:**

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

QX: Cooling circ pump CC2 Q28

Rh22/3

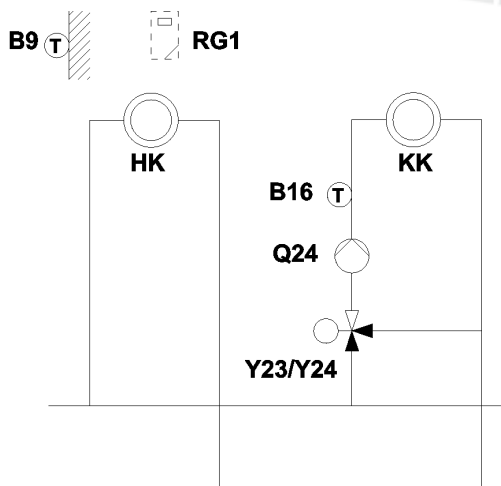
**Required settings:**

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

QX: Cooling circ pump CC3 Q29

Rh23/1

**Required settings:**

Function mixing group 1...: Cooling circuit 1

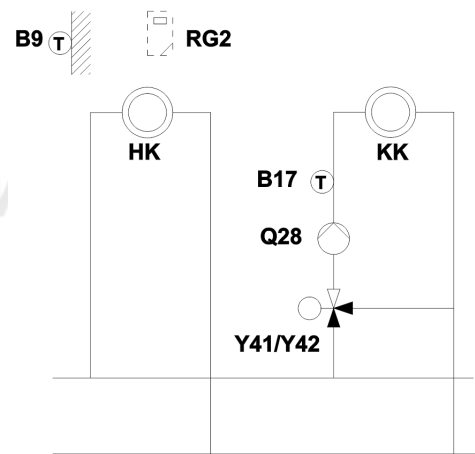
Configuration variants:

Function extension module 1...: Cooling circuit 1

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

Rh23/2

**Required settings:**

Function mixing group 1...: Cooling circuit 2

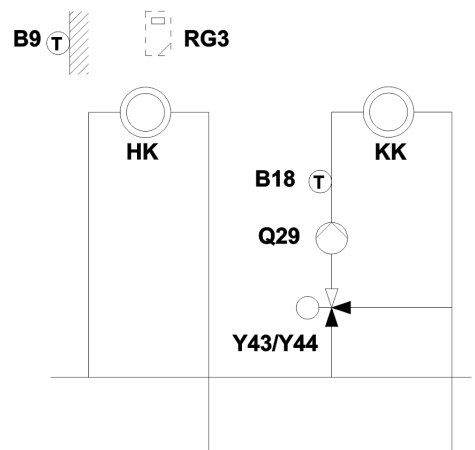
Configuration variants:

Function extension module 1...: Cooling circuit 2

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

Rh23/3

**Required settings:**

Function mixing group 1...: Cooling circuit 3

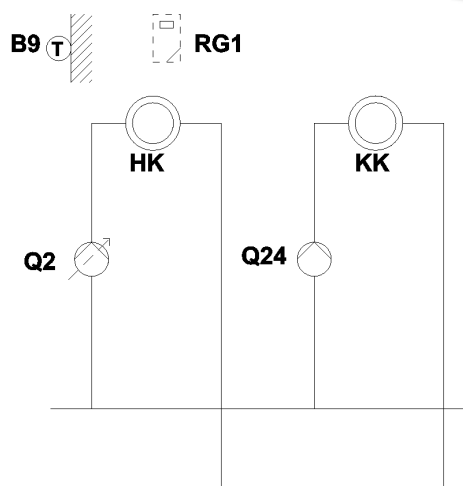
Configuration variants:

Function extension module 1...: Cooling circuit 3

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

Rh24/1

**Required settings:**

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

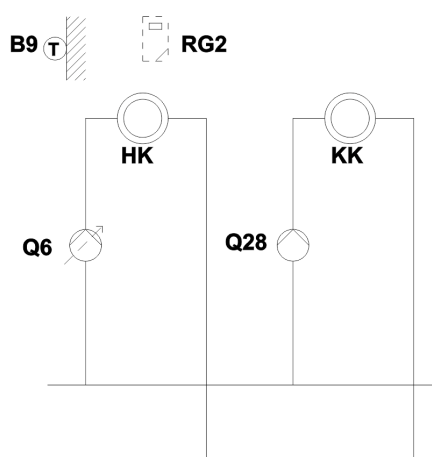
QX: Heat circuit pump HC1 Q2*, Cooling circ pump CC1 Q24

Optional settings:

QX: 2nd pump speed HC1 Q21

* Q2: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh24/2

**Required settings:**

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

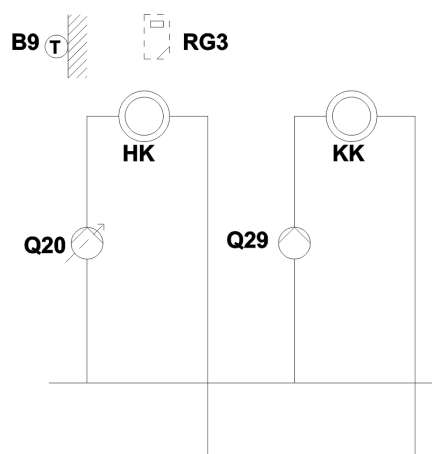
QX: Heat circuit pump HC2 Q6*, Cooling circ pump CC2 Q28

Optional settings:

QX: 2nd pump speed HC2 Q22

* Q6: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh24/3

**Required settings:**

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

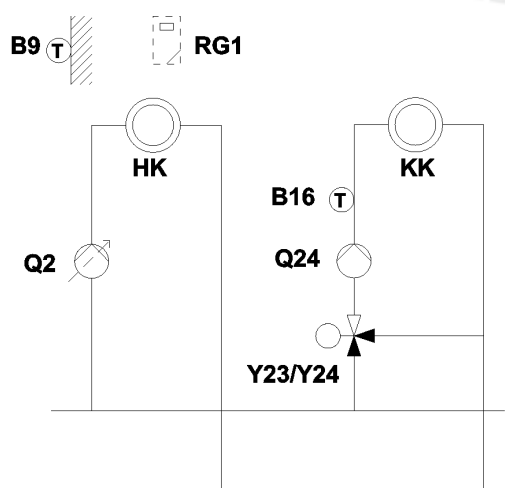
QX: Heat circuit pump HC3 Q20*, Cooling circ pump CC3 Q29

Optional settings:

QX: 2nd pump speed HC3 Q23

* Q20: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh25/1

**Required settings:**

Function mixing group 1...: Cooling circuit 1

Configuration variants:

Function extension module 1...: Cooling circuit 1

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

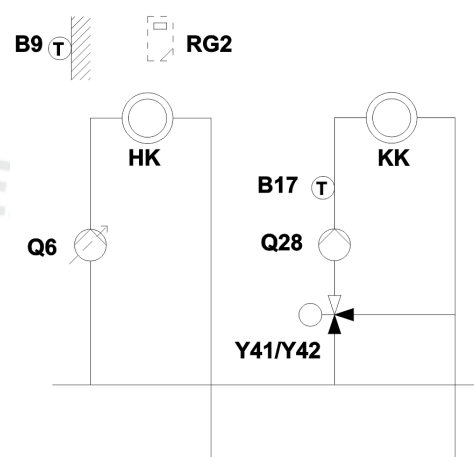
QX: Heat circuit pump HC1 Q2*

Optional settings:

QX: 2nd pump speed HC1 Q21

* Q2: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh25/2

**Required settings:**

Function mixing group 1...: Cooling circuit 2

Configuration variants:

Function extension module 1...: Cooling circuit 2

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

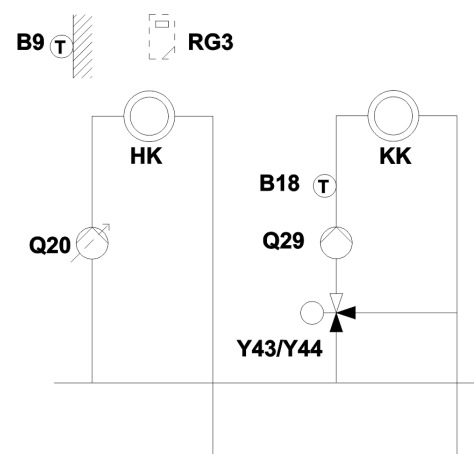
QX: Heat circuit pump HC2 Q6*

Optional settings:

QX: 2nd pump speed HC2 Q22

* Q6: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh25/3

**Required settings:**

Function mixing group 1...: Cooling circuit 3

Configuration variants:

Function extension module 1...: Cooling circuit 3

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

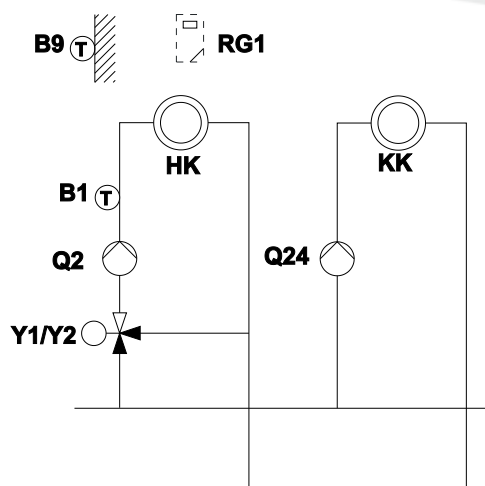
QX: Heat circuit pump HC3 Q20*

Optional settings:

QX: 2nd pump speed HC3 Q23

* Q20: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh26/1

**Required settings:**

Function mixing group 1...: Heating circuit 1

Configuration variants:

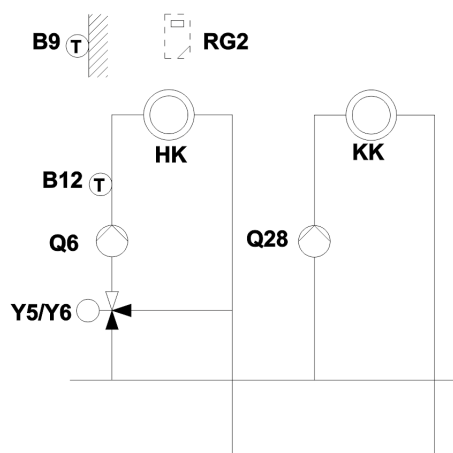
Function extension module 1...: Heating circuit 1

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

QX: Cooling circ pump CC1 Q24

Rh26/2

**Required settings:**

Function mixing group 1...: Heating circuit 2

Configuration variants:

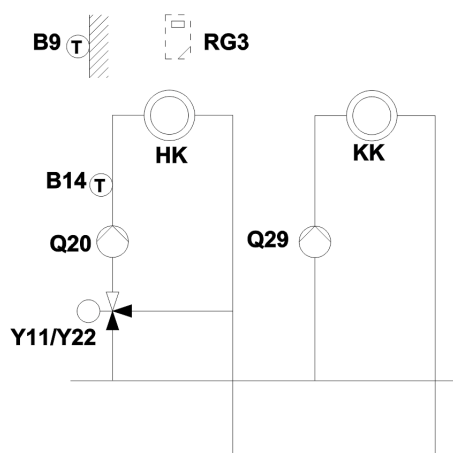
Function extension module 1...: Heating circuit 2

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

QX: Cooling circ pump CC2 Q28

Rh26/3

**Required settings:**

Function mixing group 1...: Heating circuit 3

Configuration variants:

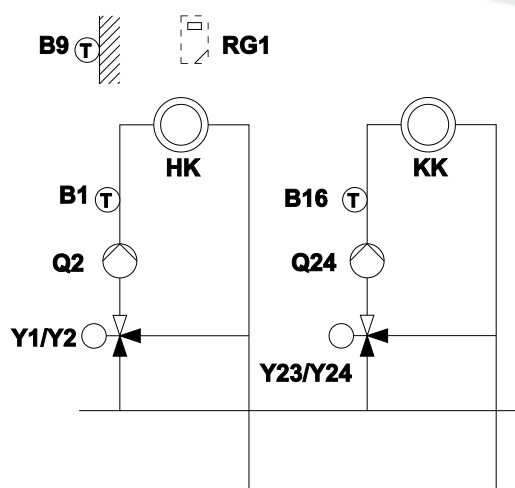
Function extension module 1...: Heating circuit 3

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

QX: Cooling circ pump CC3 Q29

Rh27/1

**Required settings:**

Function mixing group 1...: Heating circuit 1

Function mixing group 1...: Cooling circuit 1

Configuration variants:

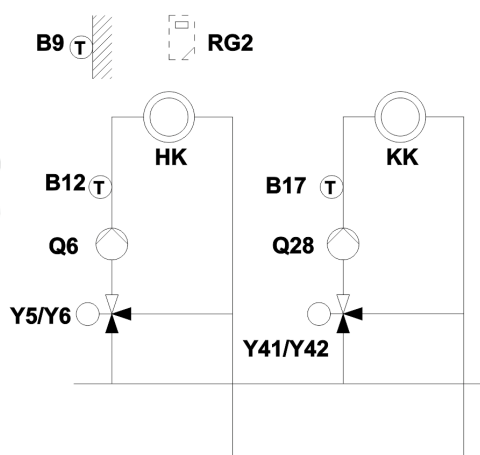
Function extension module 1...: Heating circuit 1

Function extension module 1...: Cooling circuit 1

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

Rh27/2

**Required settings:**

Function mixing group 1...: Heating circuit 2

Function mixing group 1...: Cooling circuit 2

Configuration variants:

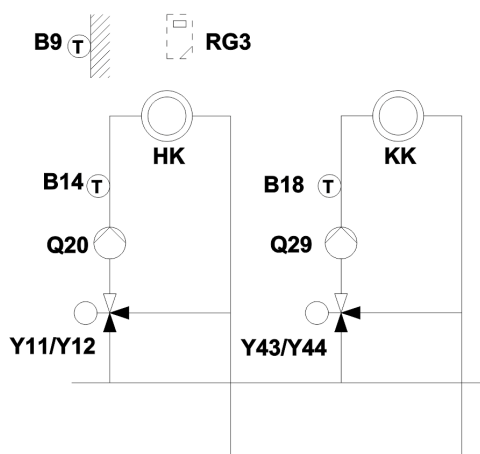
Function extension module 1...: Heating circuit 2

Function extension module 1...: Cooling circuit 2

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 2-pipe system cooling

Rh27/3

**Required settings:**

Function mixing group 1...: Heating circuit 3

Function mixing group 1...: Cooling circuit 3

Configuration variants:

Function extension module 1...: Heating circuit 3

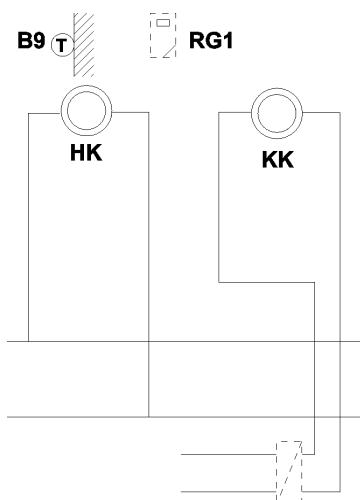
Function extension module 1...: Cooling circuit 3

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 2-pipe system cooling

7.1.6 Heating or cooling circuit in 4-pipe system (separate distribution)

Rh30/1

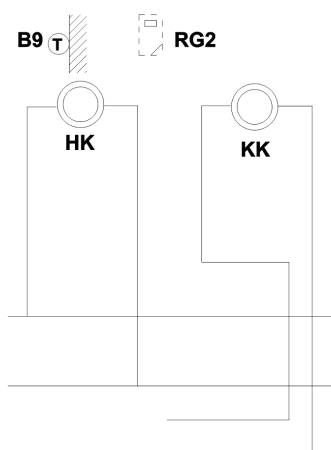


Required settings:

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

Rh30/2

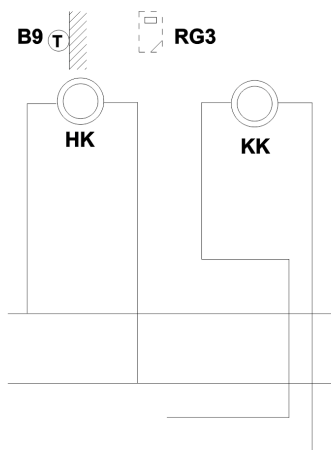


Required settings:

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

Rh30/3

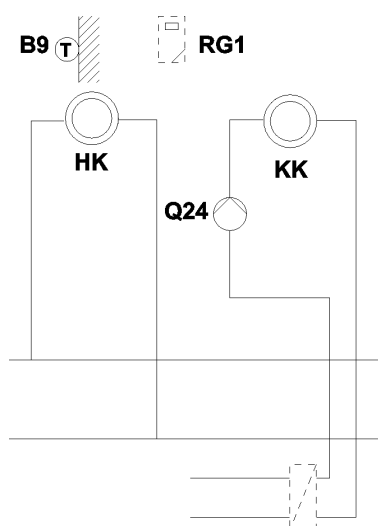


Required settings:

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

Rh31/1

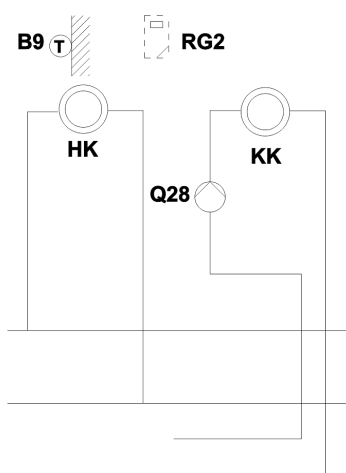
**Required settings:**

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

QX: Cooling circ pump CC1 Q24

Rh31/2

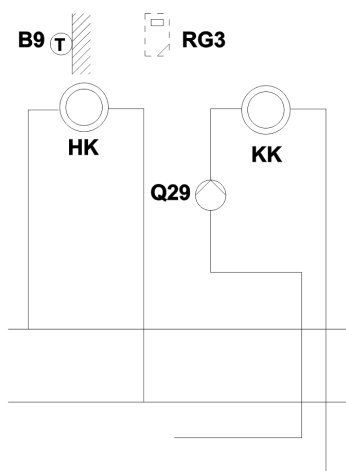
**Required settings:**

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

QX: Cooling circ pump CC2 Q28

Rh31/3

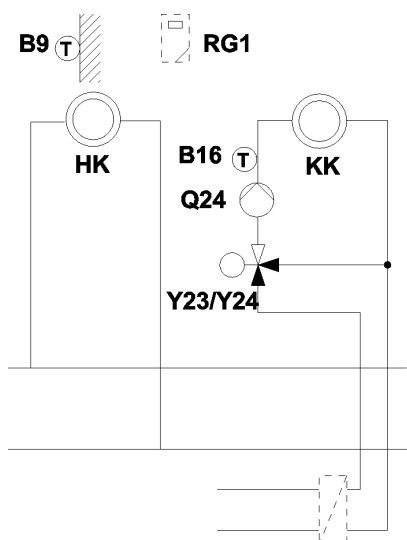
**Required settings:**

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

QX: Cooling circ pump CC3 Q29

Rh32/1

**Required settings:**

Function mixing group 1...: Cooling circuit 1

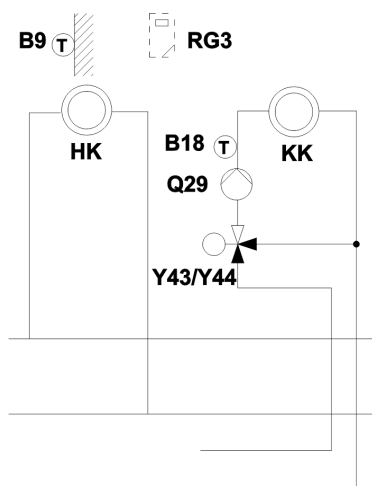
Configuration variants:

Function extension module 1...: Cooling circuit 1

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

Rh32/2

**Required settings:**

Function mixing group 1...: Cooling circuit 2

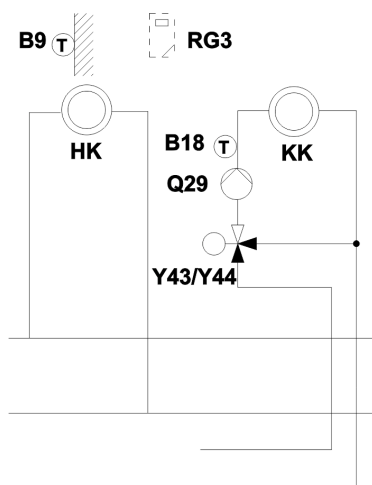
Configuration variants:

Function extension module 1...: Cooling circuit 2

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

Rh32/3

**Required settings:**

Function mixing group 1...: Cooling circuit 3

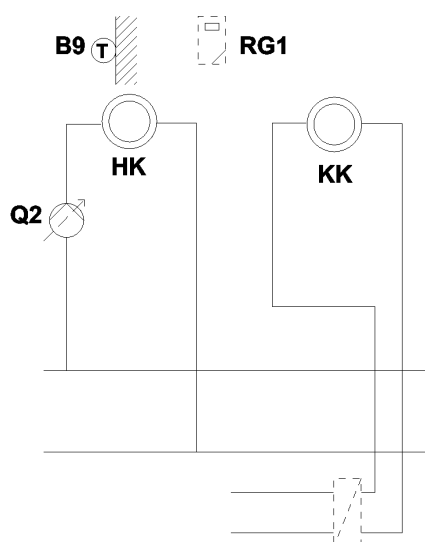
Configuration variants:

Function extension module 1...: Cooling circuit 3

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

Rh33/1

**Required settings:**

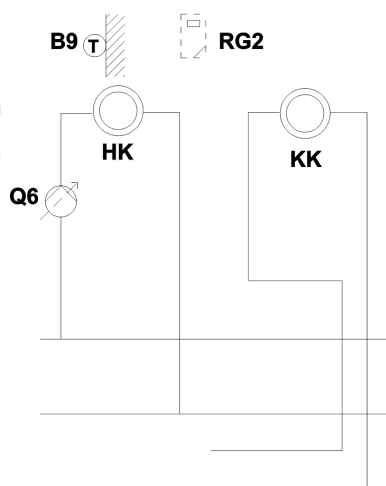
Configuration > Heating circuit 1 (5710): On
 Configuration > Cooling circuit 1 (5711): 4-pipe system cooling
 QX: Heat circuit pump HC1 Q2*
 BX: Outside sensor B9

Optional settings:

QX: 2nd pump speed HC1 Q21

* Q2: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh33/2

**Required settings:**

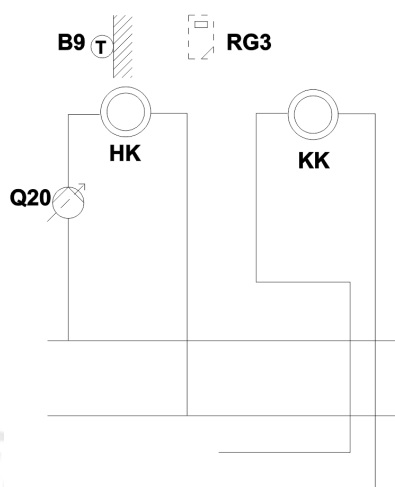
Configuration > Heating circuit 2 (5715): On
 Configuration > Cooling circuit 2 (5716): 4-pipe system cooling
 QX: Heat circuit pump HC2 Q6*
 BX: Outside sensor B9

Optional settings:

QX: 2nd pump speed HC2 Q22

* Q6: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh33/3

**Required settings:**

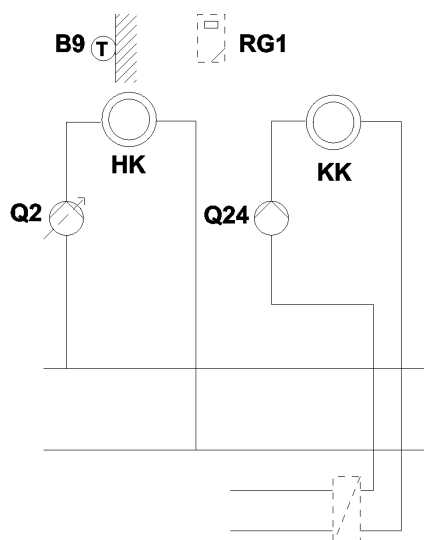
Configuration > Heating circuit 3 (5721): On
 Configuration > Cooling circuit 3 (5722): 4-pipe system cooling
 QX: Heat circuit pump HC3 Q20*
 BX: Outside sensor B9

Optional settings:

QX: 2nd pump speed HC3 Q23

* Q20: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh34/1

**Required settings:**

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

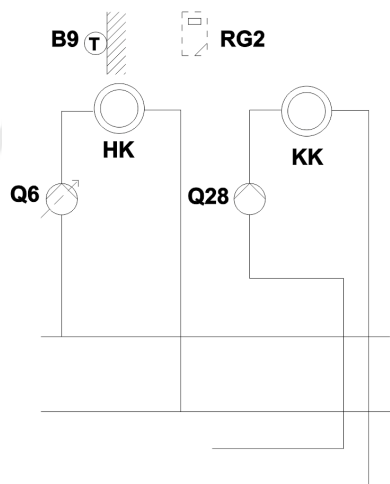
QX: Heat circuit pump HC1 Q2*, Cooling circ pump CC1 Q24

Optional settings:

QX: 2nd pump speed HC1 Q21

* Q2: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh34/2

**Required settings:**

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

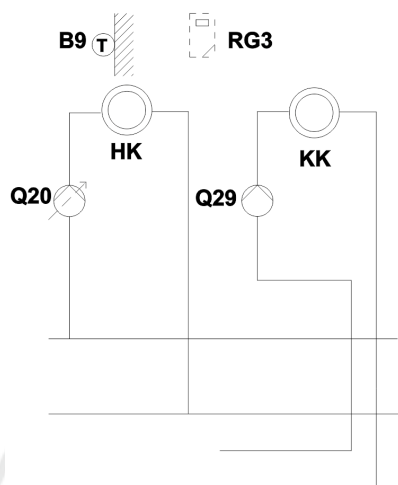
QX: Heat circuit pump HC2 Q6*, Cooling circ pump CC2 Q28

Optional settings:

QX: 2nd pump speed HC2 Q22

* Q6: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh34/3

**Required settings:**

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

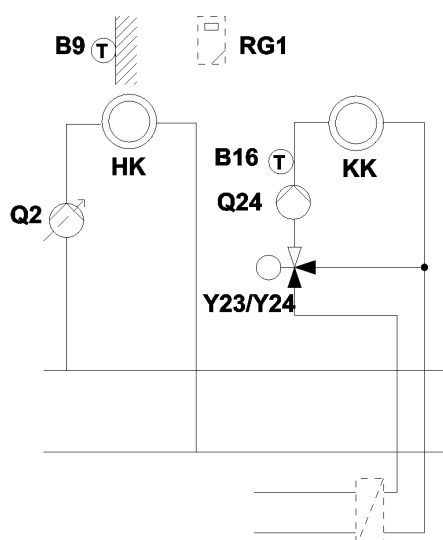
QX: Heat circuit pump HC3 Q20*, Cooling circ pump CC3 Q29

Optional settings:

QX: 2nd pump speed HC3 Q23

* Q20: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh35/1

**Required settings:**

Function mixing group 1...: Cooling circuit 1

Configuration variants:

Function extension module 1...: Cooling circuit 1

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

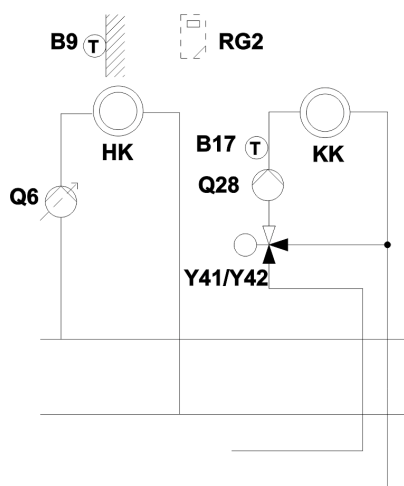
QX: Heat circuit pump HC1 Q2*

Optional settings:

QX: 2nd pump speed HC1 Q21

* Q2: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh35/2

**Required settings:**

Function mixing group 1...: Cooling circuit 2

Configuration variants:

Function extension module 1...: Cooling circuit 2

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

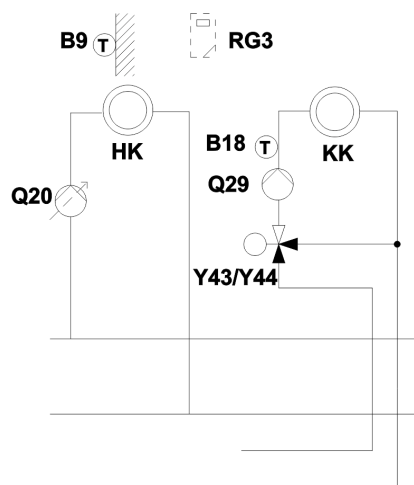
QX: Heat circuit pump HC2 Q6*

Optional settings:

QX: 2nd pump speed HC2 Q22

* Q6: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

Rh35/3

**Required settings:**

Function mixing group 1...: Cooling circuit 3

Configuration variants:

Function extension module 1...: Cooling circuit 3

Configuration > Heating circuit 3 (5721): On

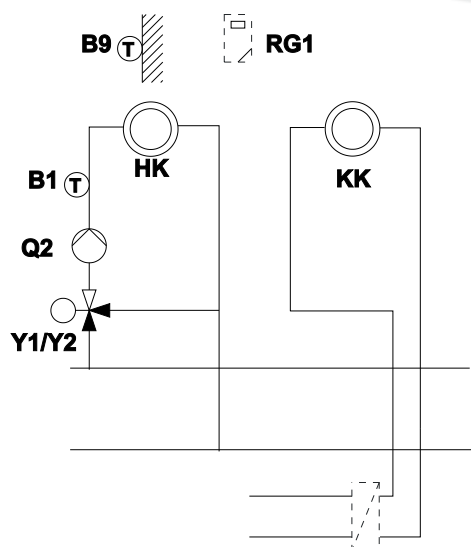
Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

QX: Heat circuit pump HC3 Q20*

Optional settings:

QX: 2nd pump speed HC3 Q23

* Q20: speed-controlled as UX/ZX; additional notes available in "Equipment designations"

**Required settings:**

Function mixing group 1...: Heating circuit 1

Configuration variants:

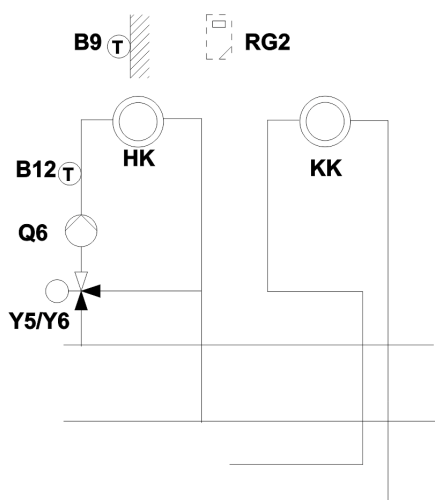
Function extension module 1...: Heating circuit 1

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

Optional settings:

QX: 2nd pump speed HC1 Q21

**Required settings:**

Function mixing group 1...: Heating circuit 2

Configuration variants:

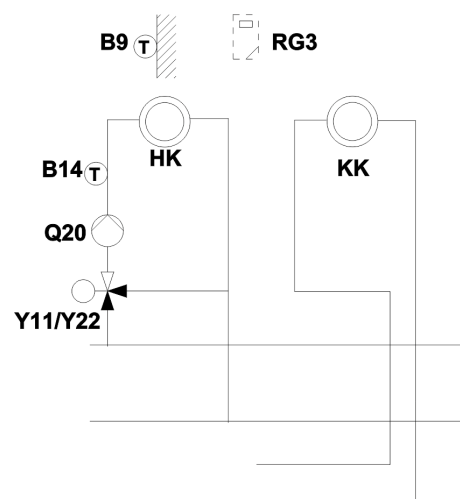
Function extension module 1...: Heating circuit 2

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

Optional settings:

QX: 2nd pump speed HC2 Q22

**Required settings:**

Function mixing group 1...: Heating circuit 3

Configuration variants:

Function extension module 1...: Heating circuit 3

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

Optional settings:

QX: 2nd pump speed HC3 Q23

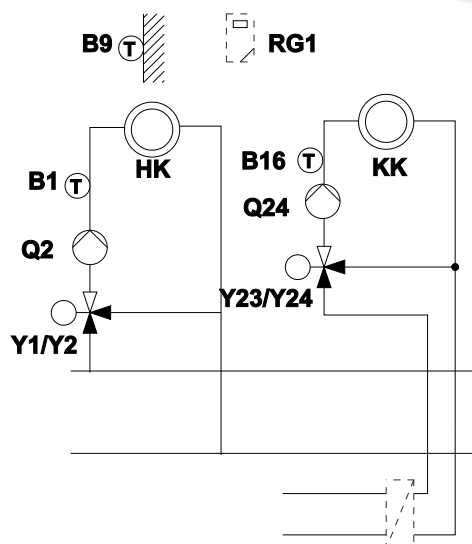
QX: Cooling circ pump CC1 Q24

QX: Cooling circ pump CC2 Q28

The schematic diagram illustrates the control circuit for the crane. It features a power source B9 connected to a thermal relay HK and a contactor KK. A stop button Q20 is connected in series with the HK branch. A limit switch Y11/Y12 is connected to the KK branch. A thermal relay Q29 is also shown in the circuit.

QX: Cooling circ pump CC3 Q29

Rh38/1

**Required settings:**

Function mixing group 1...: Heating circuit 1

Function mixing group 1...: Cooling circuit 1

Configuration variants:

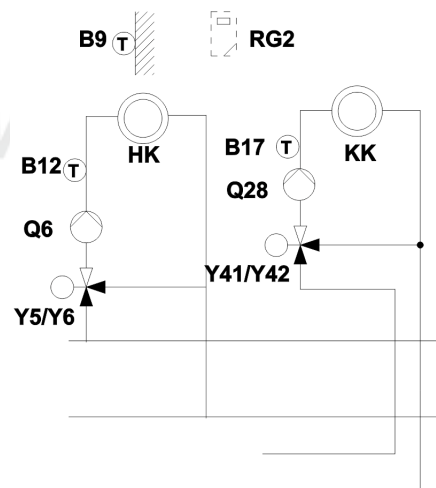
Function extension module 1...: Heating circuit 1

Function extension module 1...: Cooling circuit 1

Configuration > Heating circuit 1 (5710): On

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

Rh38/2

**Required settings:**

Function mixing group 1...: Heating circuit 2

Function mixing group 1...: Cooling circuit 2

Configuration variants:

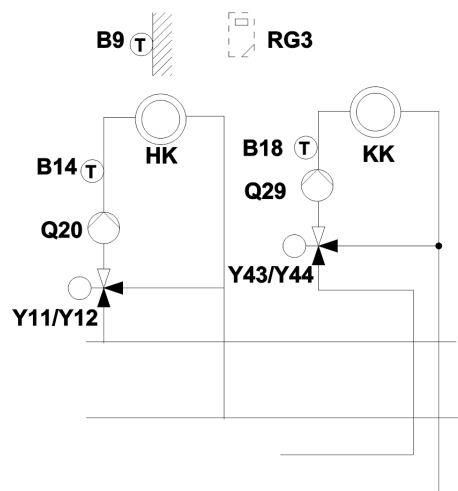
Function extension module 1...: Heating circuit 2

Function extension module 1...: Cooling circuit 2

Configuration > Heating circuit 2 (5715): On

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

Rh38/3

**Required settings:**

Function mixing group 1...: Heating circuit 3

Function mixing group 1...: Cooling circuit 3

Configuration variants:

Function extension module 1...: Heating circuit 3

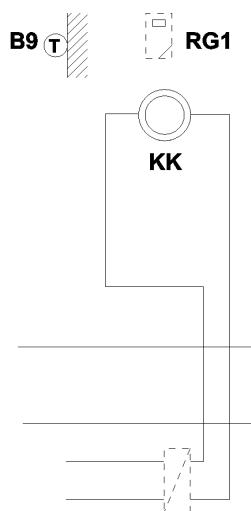
Function extension module 1...: Cooling circuit 3

Configuration > Heating circuit 3 (5721): On

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

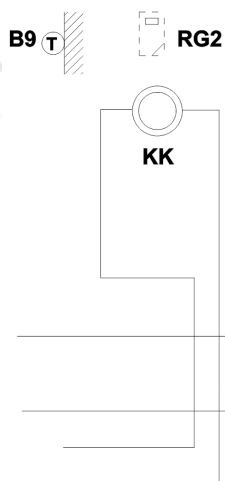
7.1.7 Cooling circuit in 4-pipe system

Rh40/1

**Required settings:**

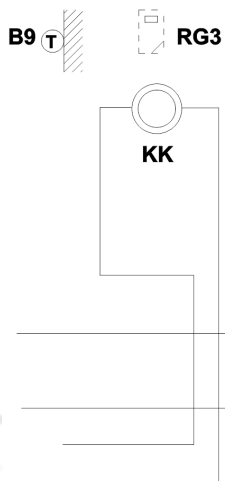
Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

Rh40/2

**Required settings:**

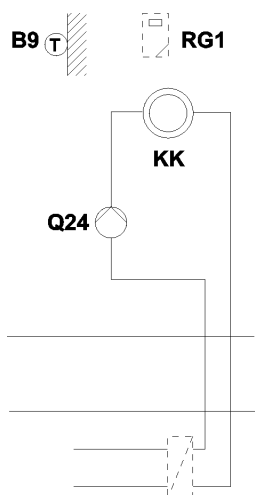
Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

Rh40/3

**Required settings:**

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

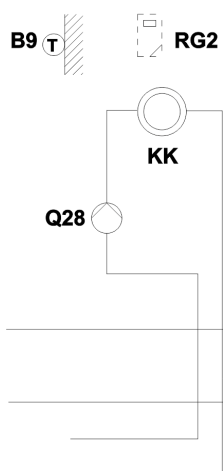
Rh41/1

**Required settings:**

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

QX: Cooling circ pump CC1 Q24

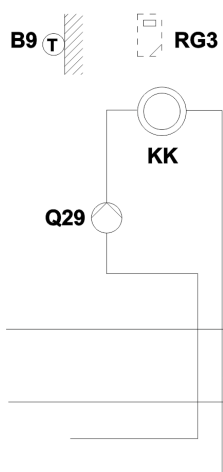
Rh41/2

**Required settings:**

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

QX: Cooling circ pump CC2 Q28

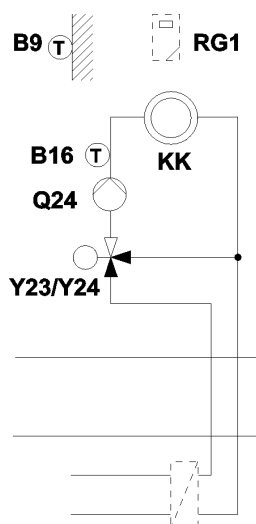
Rh41/3

**Required settings:**

Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

QX: Cooling circ pump CC3 Q29

Rh42/1

**Required settings:**

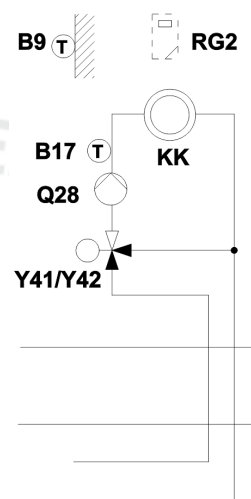
Function mixing group 1...: Cooling circuit 1

Configuration variants:

Function extension module 1...: Cooling circuit 1

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

Rh42/2

**Required settings:**

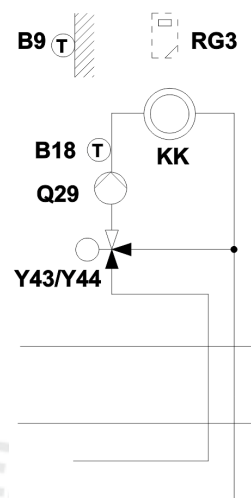
Function mixing group 1...: Cooling circuit 2

Configuration variants:

Function extension module 1...: Cooling circuit 2

Configuration > Cooling circuit 2 (5716): 4-pipe system cooling

Rh42/3

**Required settings:**

Function mixing group 1...: Cooling circuit 3

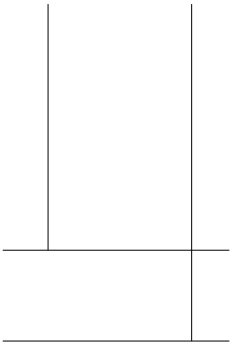
Configuration variants:

Function extension module 1...: Cooling circuit 3

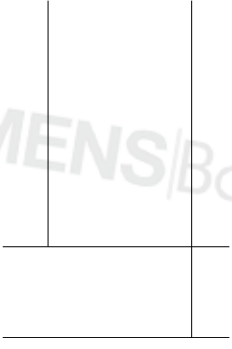
Configuration > Cooling circuit 3 (5722): 4-pipe system cooling

7.2 Consumer circuit 1...2

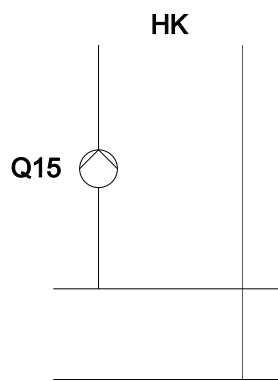
Le1/1

HK 	Required settings: Configuration > Function input H1...: Consumer request VK1 or Consumer request VK1 10V Configuration > Consumer circuit 1 (5750): Heating
--	---

Le1/2

HK 	Required settings: Configuration > Function input H1...: Consumer request VK2 or Consumer request VK2 10V Configuration > Consumer circuit 2 (5751): Heating
---	---

Le2/1



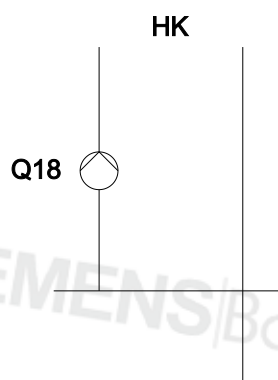
Required settings:

Configuration > Function input H1...: Consumer request VK1 or Consumer request VK1 10V

Configuration > Consumer circuit 1 (5750): Heating

QX: Cons circuit pump VK1 Q15

Le2/2



Required settings:

Configuration > Function input H1...: Consumer request VK2 or Consumer request VK2 10V

Configuration > Consumer circuit 2 (5751): Heating

QX: Cons circuit pump VK2 Q18

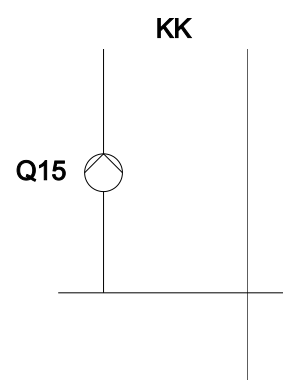
Le4/1

KK	Required settings: Configuration > Function input H1...: Consumer request VK1 or Consumer request VK1 10V Configuration > Consumer circuit 1 (5750): 2-pipe system cooling
---	---

Le4/2

KK	Required settings: Configuration > Function input H1...: Consumer request VK2 or Consumer request VK2 10V Configuration > Consumer circuit 2 (5751): 2-pipe system cooling
---	---

Le5/1

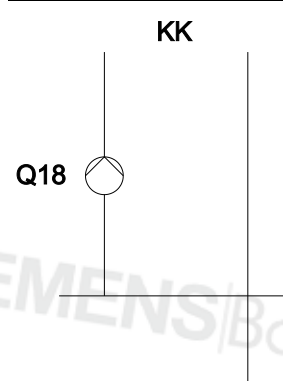
**Required settings:**

Configuration > Function input H1...: Consumer request VK1 or Consumer request VK1 10V

Configuration > Consumer circuit 1 (5750): 2-pipe system cooling

QX: Cons circuit pump VK1 Q15

Le5/2

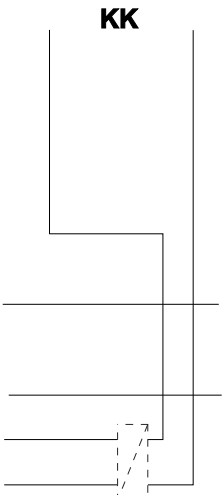
**Required settings:**

Configuration > Function input H1...: Consumer request VK2 or Consumer request VK2 10V

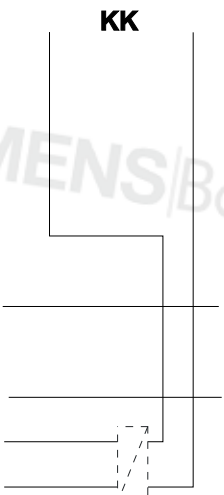
Configuration > Consumer circuit 2 (5751): 2-pipe system cooling

QX: Cons circuit pump VK2 Q18

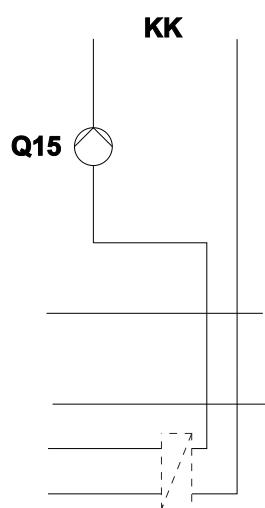
Le7/1

	Required settings: Configuration > Function input H1...: Consumer request VK1 or Consumer request VK1 10V Configuration > Consumer circuit 1: (5750): 4-pipe system cooling
---	---

Le7/2

	Required settings: Configuration > Function input H1...: Consumer request VK2 or Consumer request VK2 10V Configuration > Consumer circuit 2: (5751): 4-pipe system cooling
--	---

Le8/1



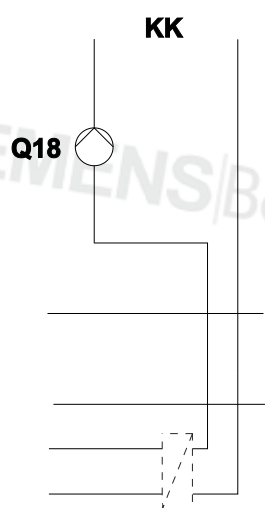
Required settings:

Configuration > Function input H1...: Consumer request VK1 or Consumer request VK1 10V

Configuration > Consumer circuit 1: (5750): 4-pipe system cooling

QX: Cons circuit pump VK1 Q15

Le8/2



Required settings:

Configuration > Function input H1...: Consumer request VK2 or Consumer request VK2 10V

Configuration > Consumer circuit 2: (5751): 4-pipe system cooling

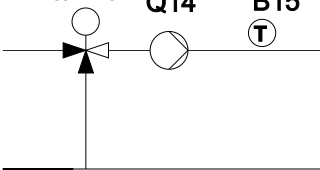
QX: Cons circuit pump VK2 Q18

7.3 Primary controller / system pump (heat converter)

Uf1

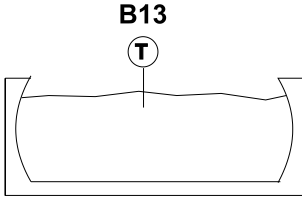
	Required settings: QX: System pump Q14
---	--

Uf2

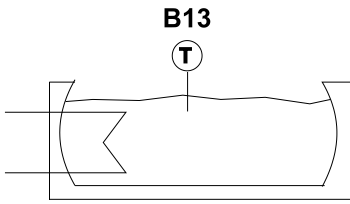
	Required settings: Function mixing group 1...: Primary contr/system pump Configuration variants: Function extension module 1...: Primary contr/system pump
---	--

7.4 Swimming pool

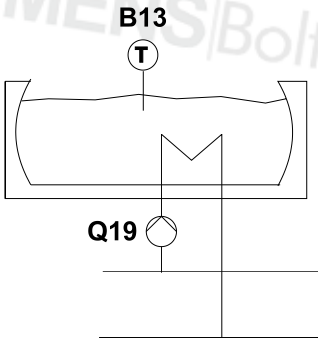
Sb1

	Required settings: BX: Swimming pool sensor B13
---	---

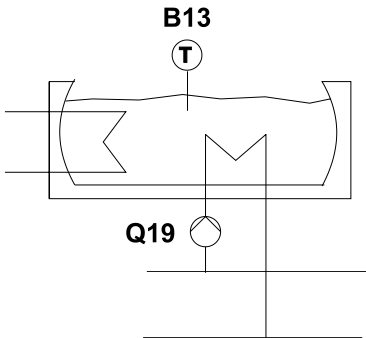
Sb2

	Required settings: Swimming pool > With solar integration (2080): Yes BX: Swimming pool sensor B13
---	---

Sb3

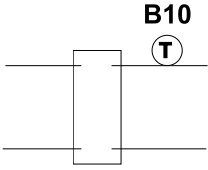
	Required settings: Configuration > Function input H1...: Release swi pool source heat BX: Swimming pool sensor B13 QX: Swimming pool pump Q19
--	--

Sb4

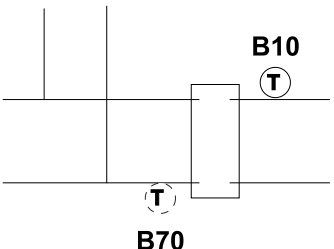
	Required settings: Swimming pool > With solar integration (2080): Yes Configuration > Function input H1...: Release swi pool source heat BX: Swimming pool sensor B13 QX: Swimming pool pump Q19
---	--

7.5 Pressureless header

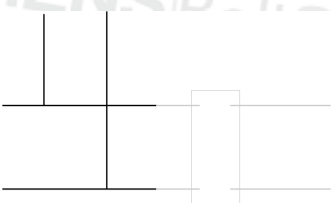
HWe1

	Required settings: LPB system> Device address (6600): 0 or 1 BX: Common flow sensor B10
---	--

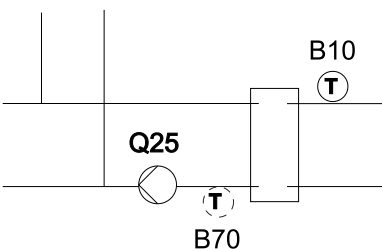
HWe2

	Required settings: LPB system> Device address (6600): 1 (cascade master) BX: Common flow sensor B10 Optional settings: BX: Cascade return sensor B70
---	--

HWe3

	Required settings: LPB system > Device address (6600): 2...16 (cascade slave)
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HWe4

	Required settings: LPB system > Device address (6600): 1 (cascade master) QX: Cascade pump Q25 BX: Common flow sensor B10 Optional settings: BX: Cascade return sensor B70
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Subject to change