

Albatros² **Hydraulic partial diagrams for boiler controllers** **Partial diagram catalog**

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1 About this document

1.1 Revision history

Version	Date	Changes	Section
b	Current edition	Controllers RVS13.123, RVS53.183, RVS43.143, RVS63.243, and RVC32.430 are no longer listed	2
		OeG22 to OeG25 no longer included	5.1.3
		New partial diagrams DHWDI10...12	7.2
		New partial diagrams for Modbus integration: OeG16 (external generation) and RhExt1 (external consumer)	5.1.2 and 8.6
		All heating/cooling circuits have a new Modbus signal option	8.1
a	2015-03-23	First edition as separate partial diagram catalog for boiler controllers	

2 Overview of use

Oil / gas boiler

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
OeG						
OeG1	X	X	X			
OeG2	X	X	X			
OeG3	X	X	X			
OeG4	X	X	X			
OeG5	X	X	X			
OeG6	X	X	X			
OeG 7	X	X	X			
OeG 8	X	X	X			
OeG 9		X	X			
OeG 10		X	X			
OeG 11		X	X	X		
OeG 12		X	X	X		
OeG 13		X	X			
OeG 14		X	X			
OeG 15		X	X			
OeG 16			X			

Solid fuel boiler

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
Ho						
Ho1		X	X	X		
Ho2		X	X	X		
Ho3			X			
Ho4			X			

Solar

Partial diagrams	Oil / gas			Boiler	Zone	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
Sol						
Sol1	X	X	X	X	X	
Sol2 ...13		X	X	X		
Sol14...27		X	X	X		
Sol31...41		X	X			
Sol42...47		X	X			
Sol48...52		X	X			

Buffer storage tank

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
Sp						
Sp1		X	X	X		
Sp 2		X	X	X		
Sp 4		X	X	X		
Sp 5		X	X	X		

DHW storage tank

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
DHWSp						
DHWSp 1	X	X	X	X	X	
DHWSp 2	X	X	X	X	X	
DHWSp 4	X	X	X	X	X	
DHWSp 5	X	X	X	X	X	
DHWSp 13	X	X	X	X	X	
DHWSp 14	X	X	X	X	X	
DHWSp 16		X	X		X	
DHWSp 17		X	X		X	
DHWSp 19		X	X	X	X	
DHWSp 20		X	X	X	X	
DHWSp 22		X	X	X	X	
DHWSp 23		X	X	X	X	
DHWSp 25		X	X	X	X	
DHWSp 26		X	X	X	X	
DHWSp 28		X	X		X	
DHWSp 29		X	X		X	

Instantaneous DHW heater

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
DHWDI						
DHWDI 2				X		
DHWDI 3			X		X	
DHWDI 4			X	X		
DHWDI 6			X	X		
DHWDI 8		X	X		X	
DHWDI 9			X			

Heating/cooling circuit 1

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
Rh						
Rh1	X	X	X	X	X	X
Rh 2	X	X	X	X	X	X
Rh 3	X	X	X	X	X	X
Rh 5...7			X		X	X
Rh 8...10			X		X	X
Rh 12			X		X	X
Rh 14			X		X	X
Rh 15			X		X	X
Rh 16			X		X	X
Rh 20...27			X		X	X
Rh 30			X	X	X	X
Rh 31...32			X		X	X
Rh 33			X	X	X	X
Rh 34...35			X		X	X
Rh 36			X	X	X	X
Rh 37...38			X		X	X
Rh 40			X	X	X	X
Rh 41...42			X		X	X

Heating circuit 2

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
Rh						
Rh1		X	X	X	X	X
Rh 2		X	X	X	X	X
Rh 3		X	X	X	X	X

Heating circuit P / 3

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
Rh						
Rh1		X	X	X	X	X
Rh 2		X	X	X	X	X
Rh 3		X	X	X		

Consumer circuits

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
Le						
Le1	X	X	X	X	X	X
Le 2	X	X	X	X	X	X
Le 4			X		X	X
Le 5			X		X	X
Le 7			X		X	X
Le 8			X		X	X

Primary controller/system pump (heat exchanger)

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
Uf						
Uf1		X	X	X	X	X
Uf2		X	X	X	X	X

Swimming pool

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
Sb						
Sb 1		X	X	X		
Sb 2		X	X	X		
Sb 3		X	X	X		
Sb 4		X	X	X		

Pressureless header

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
HWe						
HWe 1		X	X	X		
HWe 2		X	X	X		
HWe 3		X	X	X		
HWe 4		X	X	X		
HWe 6		X	X			

External heat request

Partial diagrams	Oil / gas			Boiler	Zones	
	RVS13.143	RVS63.283	RVS43.345		LMS 14/15	RVS46.543
RhExt						
RhExt1			X	X		

3 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
PX	Multifunctional PWM output
ZX	Multifunctional power output (Triac)

Mains voltage

Multifunctional outputs QX

Path: Configuration > Relay output QX1...

K6	El imm heater DHW K6	Sec. 7.3 Auxiliary functions DHW
K8*	Solar ctrl elem buffer K8	Sec. 5.2.1 1 collector field, ...
K9*	Solar pump ext exch K9	Sec. 5.2.1 1 collector field, ...
K10	Alarm output K10	
K11	Excess heat discharge K11	
K13	Time program 5 K13	
K17	Flue gas relay K17	Sec. 5.1.4 Auxiliary functions oil/gas and solid fuel
K18*	Solar ctrl elem swi pool K18	Sec. 5.2.1 1 collector field, ...
K21	dT controller 1 K21	
K22	dT controller 2 K22	
K27	Heat request K27	Sec. 5.1.5 Supplementary source
K28	Refrigeration request K28	
K29	Air dehumidifier K29	
K30	Assisted firing fan K30	Sec. 5.1.4 Auxiliary functions oil/gas and solid fuel
K32	Suppl source control K32	Sec. 5.1.5 Supplementary source
K34	Water refill K34	
K35	Status output K35	
K36	Status information K36	
K37	Flue gas damper K37	
K38	Fan shutdown K38	

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

The following combinations are possible:

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

Terminals K4, K5, Y17/Y18

K4 (T2)**	Burner 1st stage	Sec. 5.1.1 Oil/Gas staged, ...
K5 (T8)**	Burner 2nd stage	Sec. 5.1.1 Oil/Gas staged, ...
Y17/Y18**	Damper actuator Open/Closed, burner modulation	Sec. 5.1.2 Oil / gas modulating

** The setting for parameter "Source type" (5770) defines the assignment of the boiler outputs (Definition of K4, K5, Y17, Y18).

Terminal labeling is specific to the device and is available in the corresponding User's Guide.

Q1*	Boiler pump Q1	Sec. 5.1.1 Oil/Gas staged, 5.1.2 Oil / gas modulating, ...
Q2*	Heat circuit pump HC1 Q2	Sec. 8 Distribution ...3
Q3*	DHW ctrl elem Q3	Sec. 7.1.2 , ...
Q4	Circulating pump Q4	Sec. 7.3 Auxiliary functions DHW
Q5*	Collector pump Q5	Sec. 5.2.1 1 collector field, ...
Q6*	Heat circuit pump HC2 Q6	Sec. 8 Distribution
Q10*	Solid fuel boiler pump Q10	Sec. 5.1.3 Solid fuel (wood)
Q11	St tank transfer pump Q11	Sec. 6.2 Auxiliary functions buffer storage tank
Q12	Bypass pump Q12	Sec. 5.1.1 Oil/Gas staged
Q14	System pump Q14	Sec. 8.3 Primary controller / system pump (heat converter)
Q15	Cons circuit pump VK1 Q15	Sec. 8.2 Consumer circuit 1...2
Q16*	Collector pump 2 Q16	Sec. 5.2.2 2 collector fields,...
Q18	Cons circuit pump VK2 Q18	Sec. 8.2 Consumer circuit 1...2
Q19	Swimming pool pump Q19	Sec. 8.2 Consumer circuit 1...2
Q20*	Heat circuit pump HC3 Q20	Sec. 8 Pressureless header
Q21	2nd pump speed HC1 Q21	Sec. 8 Distribution
Q22	2nd pump speed HC2 Q22	
Q23	2nd pump speed HC3 Q23	Sec. 8 Distribution
Q24	Cooling circ pump CC1 Q24	Sec. 8 Distribution
Q25	Cascade pump Q25	Sec. 8.5 Pressureless header
Q33*	DHW interm circ pump Q33	Sec. 7.1.5 Intermediate circuit (ext. heat exchanger)
Q34*	Instant WH ctrl elem Q34	Sec. 7.2 Instantaneous DHW heater
Q35	DHW mixing pump Q35	Sec. 7.3 Auxiliary functions DHW

* The output can be configured for speed control via "Configuration > Function output UX/PX/ZX". The following combinations are possible:

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

Y1/Y2***	Mixing valve heating circuit 1 Open/Closed	Sec. 8 Distribution
Y4	Heat gen shutoff valve Y4	Sec. 6 Heat storage tank
Y5/Y6***	Mixing valve heating circuit 2 Open/Closed	Sec. 8 Distribution
Y7/Y8***	Mixing valve return control Open/Closed	Sec. 5.1.1 Oil/Gas staged
Y9/Y10***	Mixing valve return control Open/Closed solid fuel boiler	Sec. 5.1.3 Solid fuel (wood)
Y11/Y12***	Mixing valve heating circuit 3 Open/Closed	Sec. 8 Distribution
Y15	Buffer return valve Y15	Sec. 6.2 Auxiliary functions buffer storage tank
Y19/Y20***	Mixing valve Open/Closed primary controller	Sec. 8.3 Primary controller / system pump (heat converter)
Y21	Diverting valve cooling Y21	Sec. 8.1.4 Heating or cooling circuit in 4-pipe system (common distribution)
Y23/Y24***	Mixing valve Open/Closed cooling circuit 1	Sec. 8.1.3 Cooling circuit in 2-pipe system, 8.1.5,...
Y25/Y26***	Mixing valve Open/Closed cascade	Sec. 8.5 Pressureless header
Y31/Y32***	Mixing valve Open/Closed DHW primary controller	Sec. 7.1.4 Primary controller, 7.1.5 Intermediate circuit (ext. heat exchanger)
Y33/Y34***	Mixing valve Open/Closed instantaneous DHW	Sec. 7.2 Instantaneous DHW heater

*** 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***	Flow temperature sensor heating circuit 1	Sec. 8 Distribution
B2	Boiler sensor B2	Sec. 5.1.1 Oil/Gas staged, 5.1.2,...
B3	DHW sensor B3	Sec. 5.1.3 Solid fuel (wood) (old devices), 7 Domestic hot water
B4	Buffer sensor B4	Sec. 5.1.3 Solid fuel (wood), 6 Heat storage tank , 6.2 Auxiliary functions buffer storage tank, 7.3 Auxiliary functions DHW
B5	Room sensor B5	
B6	Collector sensor B6	Sec. 5.2 Solar
B7	Return sensor B7	Sec. 5.1.1 Oil/Gas staged, 5.1.2,...
B8	Flue gas temp sensor B8	Sec. 5.1.4
B9	Outside sensor B9	Sec. 8 Distribution
B10	Common flow sensor B10	Sec. 8.5 Pressureless header
B12***	Flow temperature sensor heating circuit 2	
B13	Swimming pool sensor B13	Sec. 8.4 Swimming pool
B14***	Flow sensor heating circuit 3	Sec. 8 Distribution
B15***	Flow sensor prim controller	Sec. 8.3 Primary controller / system pump (heat converter)
B16***	Flow sensor cooling circuit 1	Sec. 8.1.3 Cooling circuit in 2-pipe system, 8.1.5 Heating or cooling circuit in 2-pipe system (separate distribution)
B20	2. boiler sensor B20	
B22	Solid fuel boiler sensor B22	Sec. 5.1.3 Solid fuel (wood)
B23	Casing temp sensor B23	
B26	Primary exch sensor B26	
B31	DHW sensor B31	Sec. 5.1.3 Solid fuel (wood) (old devices), 7 Domestic hot water
B35***	DHW prim contr sensor B35	Sec. 7.1.4 Primary controller, 7.1.5 Intermediate circuit (ext. heat exchanger)
B36	DHW charging sensor B36	Sec. 7 Domestic hot water
B37	Instant WH sensor B37	Sec. 7.2 Instantaneous DHW heater
B38	DHW outlet sensor B38	Sec. 7.2 Instantaneous DHW heater
B39	DHW circulation sensor B39	Sec. 7.2 Instantaneous DHW heater, 7.3 Auxiliary functions DHW
B41	Buffer sensor B41	Sec. 5.1.3 Solid fuel (wood), 6 Heat storage tank , 6.2 Auxiliary functions buffer storage tank
B42	Buffer sensor B42	Sec. 6 Heat storage tank
B52	Room sensor B52	
B53	Room sensor B53	
B61	Collector sensor 2 B61	Sec. 5.2 Solar
B62	Solar sensor ext exch B62	
B63	Solar flow sensor B63	Sec. 5.2.3 Auxiliary functions solar
B64	Solar return sensor B64	Sec. 5.2.3 Auxiliary functions solar
B70	Cascade return sensor B70	Sec. 8.5 Pressureless header
B72	Solid fuel boil ret sens B72	Sec. 5.1.3 Solid fuel (wood)
B73	Common return sensor B73	Sec. 6.2 Auxiliary functions buffer storage tank
B74	Return sensor B74	

*** 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

4 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 boiler controller user's manual.

ACS790

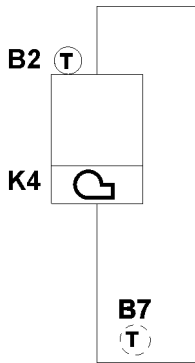
For the ACS790 operating software, they are the operating lines of the syntax "partial diagram ...", e.g. "partial diagram boiler".
The ACS operating lines directly display the partial diagram number as per this catalog.

5 Source

5.1 Boiler

5.1.1 Oil/Gas staged

OeG1

**Required settings:**

Configuration > Source type (5770): 1-stage

BX: Boiler sensor B2

Plant variant (without graphic):

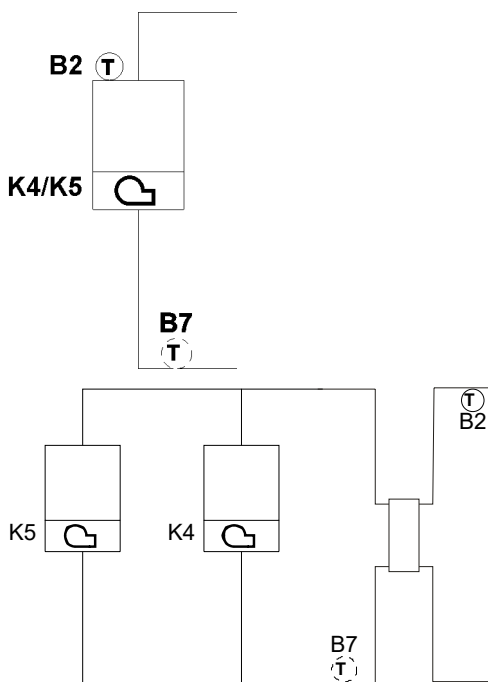
Configuration > Source type (5770): Without boiler sensor

Optional settings:

BX: Return sensor B7

Additional notes on K4 in "Equipment designation"

OeG2

**Required settings:**

Configuration > Source type (5770): 2-stage

Plant variant (graphic below):

Configuration > Source type (5770): 2x1 cascade

BX: Boiler sensor B2

Optional settings:

BX: Return sensor B7

Additional notes on K4/K5 in "Equipment designation"

OeG3

	Required settings: Configuration > Source type (5770): 1-stage BX: Boiler sensor B2
	Plant variant (without graphic): Configuration > Source type (5770): Without boiler sensor
	QX: Boiler pump Q1*
	Optional settings: BX: Return sensor B7
	*Q1: speed-controlled as UX/PX/ZX; additional notes available in "Equipment designation". Additional notes on K4 in "Equipment designation"

OeG4

	Required settings: Configuration > Source type (5770): 2-stage Plant variant (graphic below): Configuration > Source type (5770): 2x1 cascade
	BX: Boiler sensor B2 QX: Boiler pump Q1*
	Optional settings: BX: Return sensor B7
	*Q1: speed-controlled as UX/PX/ZX; additional notes available in "Equipment designation". Additional notes on K4/K5 in "Equipment designation"

OeG5

	Required settings: Configuration > Source type (5770): 1-stage BX: Boiler sensor B2
	Plant variant (without graphic): Configuration > Source type (5770): Without boiler sensor
	QX: Bypass pump Q12
	Optional settings: BX: Return sensor B7
	Additional notes on K4 in "Equipment designation"

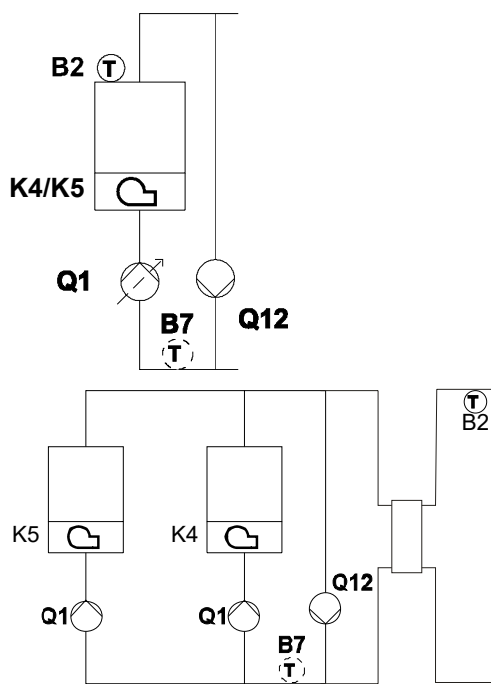
OeG6

	<p>Required settings:</p>
	<p>Configuration > Source type (5770): 2-stage</p>
	<p>Plant variant (graphic below):</p>
	<p>Configuration > Source type (5770): 2x1 cascade</p>
	<p>BX: Boiler sensor B2</p>
<p>QX: Bypass pump Q12</p>	
<p>Optional settings:</p>	
<p>BX: Return sensor B7</p>	
<p>Additional notes on K4/K5 in "Equipment designation"</p>	

OeG7

	<p>Required settings:</p>
	<p>Configuration > Source type (5770): 1-stage</p>
	<p>BX: Boiler sensor B2</p>
	<p>Plant variant (without graphic): Configuration > Source type (5770): Without boiler sensor</p>
	<p>QX: Boiler pump Q1*, Bypass pump Q12</p>
<p>Optional settings:</p>	
<p>BX: Return sensor B7</p>	
<p>Additional notes on K4 in "Equipment designation"</p>	

OeG8



Required settings:

Configuration > Source type (5770): 2-stage

Plant variant (graphic below):

Configuration > Source type (5770): 2x1 cascade

BX: Boiler sensor B2

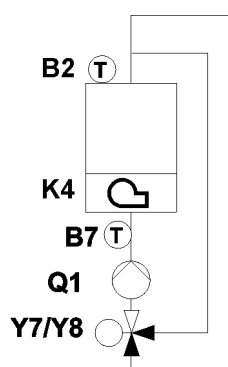
QX: Boiler pump Q1*, Bypass pump Q12

Optional settings:

BX: Return sensor B7

Additional notes on K4/K5 in "Equipment designation"

OeG9



Required settings:

Function mixing group 1...: Return temp controller

Configuration variants:

Function extension module 1...: Return temp controller

Configuration > Source type (5770): 1-stage

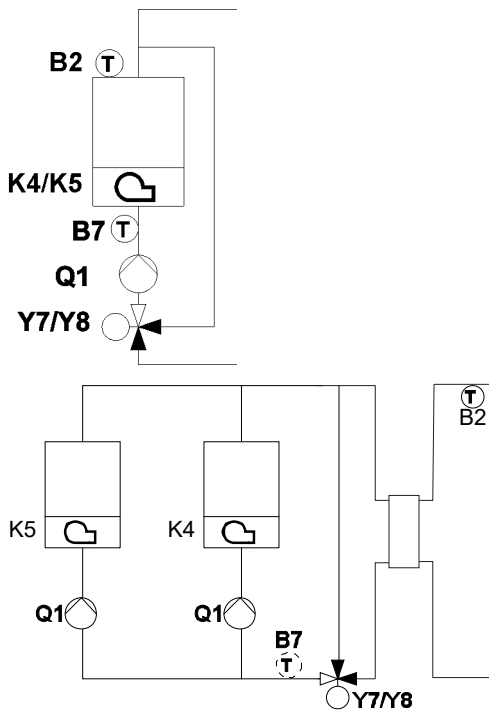
BX: Boiler sensor B2

Plant variant (without graphic):

Configuration > Source type (5770): Without boiler sensor

Additional notes on K4 in "Equipment designation"

OeG10



Required settings:
 Function mixing group 1...: Return temp controller

Configuration variants:
 Function extension module 1...: Return temp controller

Configuration > Source type (5770): 2-stage

Plant variant (graphic below):
 Configuration > Source type (5770): 2x1 cascade

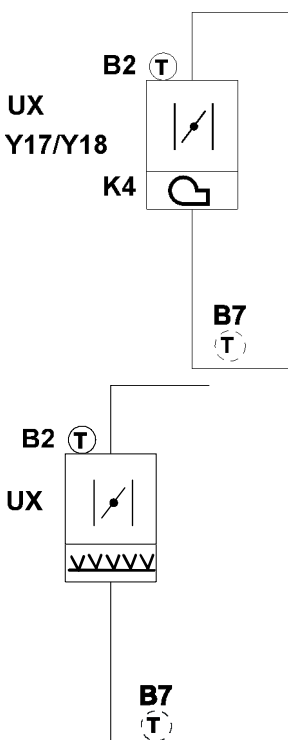
BX: Boiler sensor B2

Additional notes on K4/K5 in "Equipment designation"

5.1.2 Oil / gas modulating

Modulating oil/gas burner with 3-point damper actuator or voltage output UX.

OeG11



Required settings:
 Configuration > Source type (5770): Modulating 3-position

Plant variants (same graphics):
 Configuration > Source type (5770): Modulating UX

BX: Boiler sensor B2

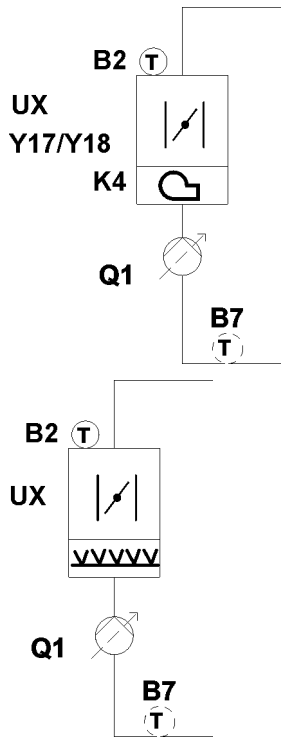
Optional settings:
 BX: Return sensor B7

Required settings (graphic below):
 Source type (fixed preselection): Modulating 3-position
 BX: Boiler sensor B2

Optional settings:
 BX4/BX4 Sec: Return sensor B7

Additional notes on Y17/Y18 and K4 in "Equipment designation"

OeG12



Required settings (graphic above):

Configuration > Source type (5770): Modulating 3-position

Plant variant (same graphics):

Configuration > Source type (5770): Modulating UX

BX: Boiler sensor B2

QX: Boiler pump Q1*

Optional settings:

BX: Return sensor B7

Required settings (graphic below):

Source type (fixed preselection): Modulating 3-position

BX: Boiler sensor B2

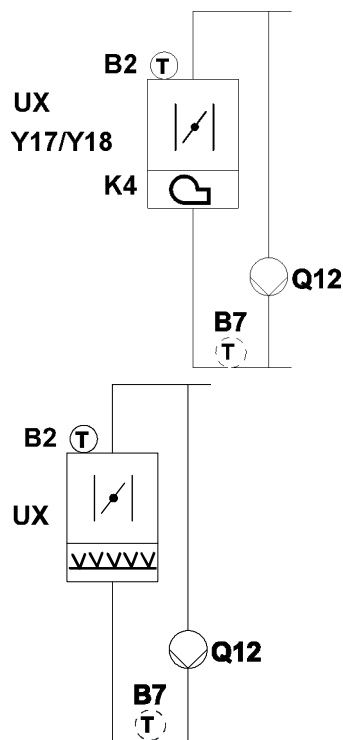
QX: Boiler pump Q1*

Optional settings:

BX4/BX4 Sec: Return sensor B7

*Q1: speed-controlled as UX/PX/ZX; additional notes available in "Equipment designation".
Additional notes on Y17/Y18 and K4 in "Equipment designation"

OeG13



Required settings:

Configuration > Source type (5770): Modulating 3-position

Plant variants (same graphics):

Configuration > Source type (5770): Modulating UX

BX: Boiler sensor B2

QX: Bypass pump Q12

Optional settings:

BX: Return sensor B7

Required settings (graphic below):

Source type (fixed preselection): Modulating 3-position

BX: Boiler sensor B2

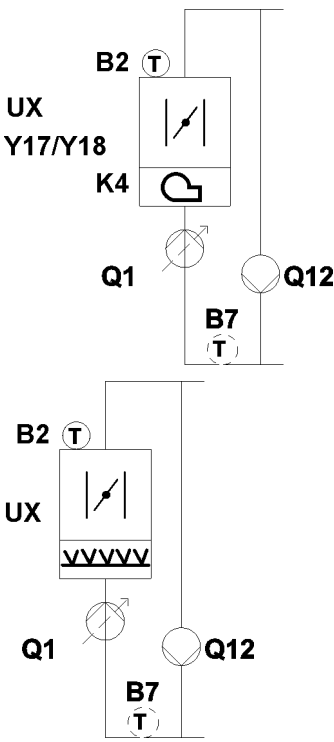
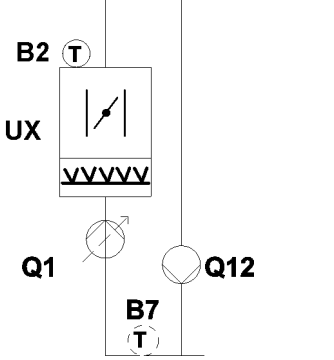
QX: Bypass pump Q12

Optional settings:

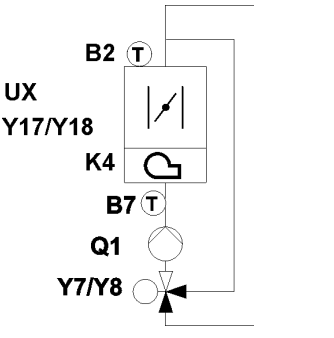
BX4/BX4 Sec: Return sensor B7

Additional notes on Y17/Y18 and K4 in "Equipment designation"

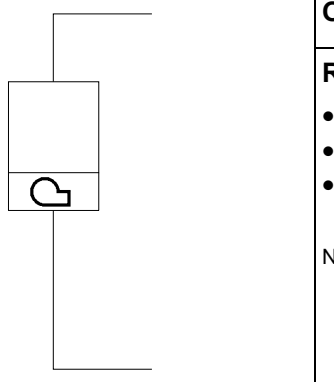
OeG14

	Required settings (graphic above): Configuration > Source type (5770): Modulating 3-position
	Plant variants (same graphics): Configuration > Source type (5770): Modulating UX BX: Boiler sensor B2 QX: Boiler pump Q1*, Bypass pump Q12
	Optional settings: BX: Return sensor B7
	Required settings (graphic below): Source type (fixed preselection): Modulating 3-position BX: Boiler sensor B2 QX: Boiler pump Q1*, Bypass pump Q12
	Optional settings: BX4/BX4 Sec: Return sensor B7
	*Q1: speed-controlled as UX/PX/ZX; additional notes available in "Equipment designation" Additional notes on Y17/Y18 and K4 in "Equipment designation"

OeG15

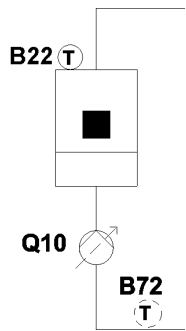
	Required settings: Function mixing group 1...: Return temp controller
	Configuration variants: Function extension module 1...: Return temp controller
	Configuration > Source type (5770): Modulating 3-position
	Plant variants (same graphic): Configuration > Source type (5770): Modulating UX
	BX: Boiler sensor B2
	Additional notes on Y17/Y18 and K4 in "Equipment designation"

OeG16

	OeG16 integrates external generation via Modbus in the LPB system.
	Required settings: <ul style="list-style-type: none"> • Controller is a Modbus slave: Modbus > Slave address (6651): 1...247. • Source status written to Modbus register 41990. • Source request is read from Modbus register 41984. <p>Note: LPB address 16 cannot be used in the same segment.</p>

5.1.3 Solid fuel (wood)

Ho1



Required settings:

BX: Solid fuel boiler sensor B22

QX: Solid fuel boiler pump Q10*

Optional settings:

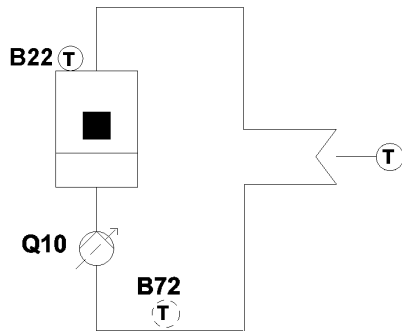
BX: Solid fuel boiler return sensor B72

Old devices:

Solid fuel boiler > Comparative temp (4133): Flow temp setpoint or Setpoint min

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

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:

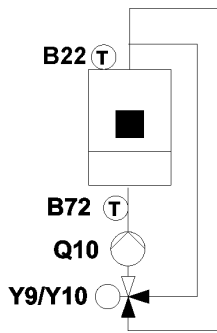
BX: Solid fuel boiler return sensor B72

Old devices:

Solid fuel boiler > Comparative temp (4133): DHW sensor B3 or DHW sensor B31 or Buffer sensor B4 or Buffer sensor B41

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

Ho3

**Required settings:**

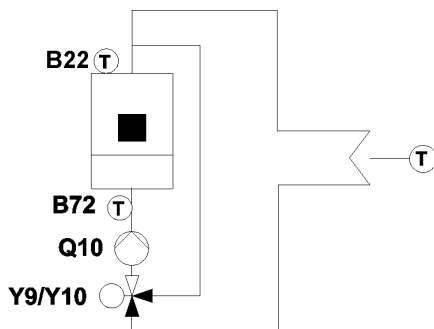
Function mixing group 1...: Ret temp contr sol fuel boil

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:

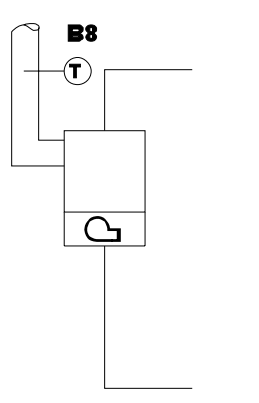
Function extension module 1...: Solid fuel boiler

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

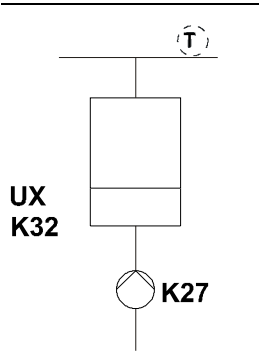
5.1.4 Auxiliary functions oil/gas and solid fuel

Flue gas temperature sensor

	<p>Required settings: BX: Flue gas temp sensor B8</p> <p>Optional settings: QX: Flue gas relay K17, Assisted firing fan K30</p>
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5.1.5 Supplementary source

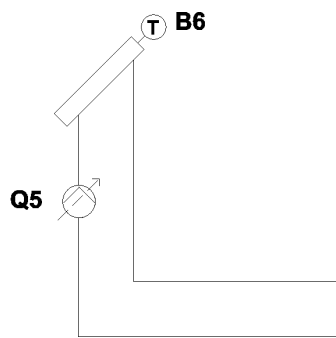
Supplementary source

	<p>Required settings: QX: Heat request K27</p> <p>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</p>
--	--

5.2 Solar

5.2.1 1 collector field

Sol1

**Required settings:**

QX: Collector pump Q5*

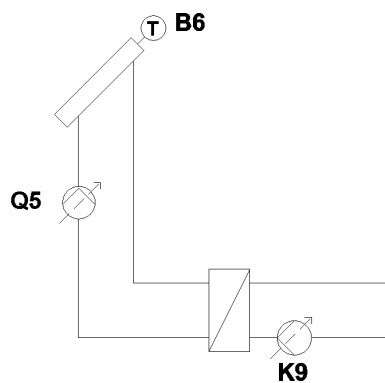
BX: Collector sensor B6

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

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*

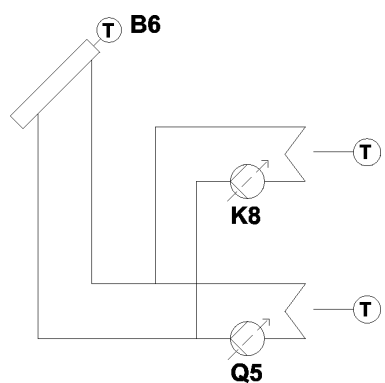
BX: Collector sensor B6

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

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*

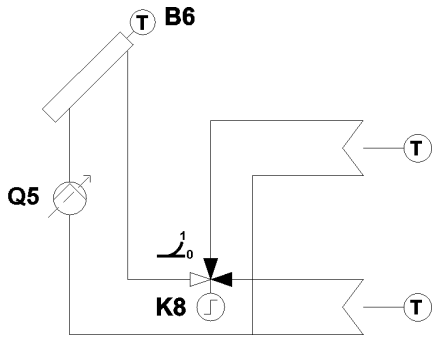
BX: Collector sensor B6

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

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

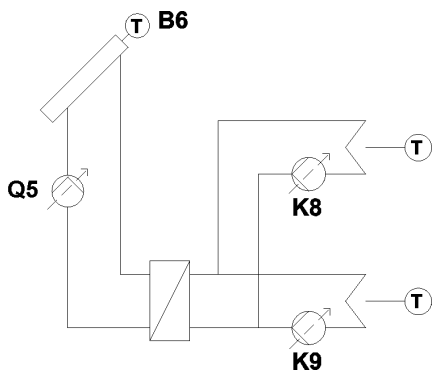
BX: Collector sensor B6

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

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*

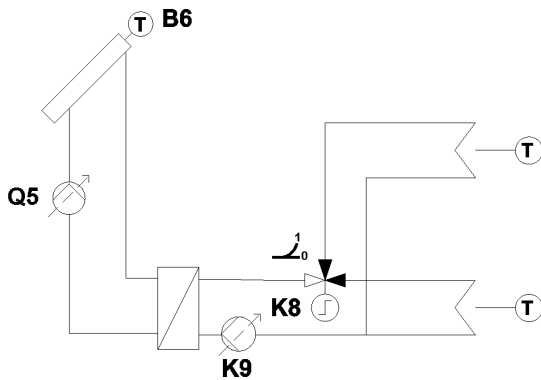
BX: Collector sensor B6

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

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*

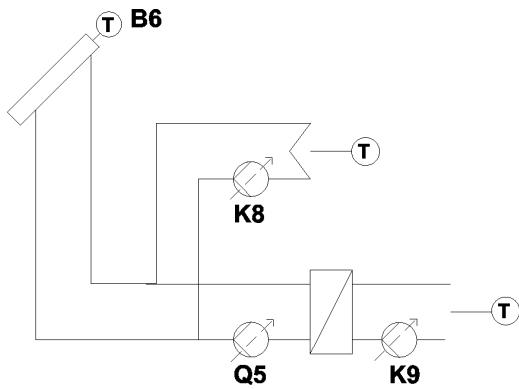
BX: Collector sensor B6

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

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*

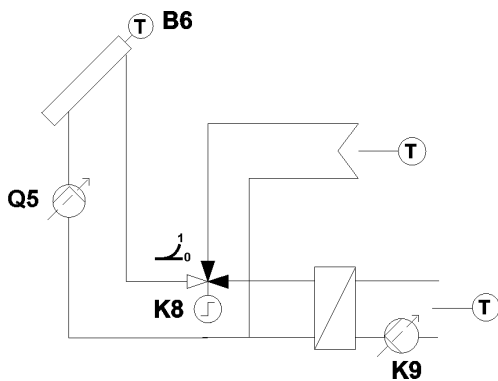
BX: Collector sensor B6

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

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*

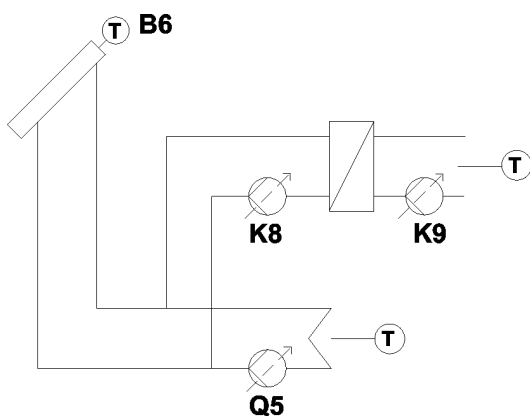
BX: Collector sensor B6

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

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*

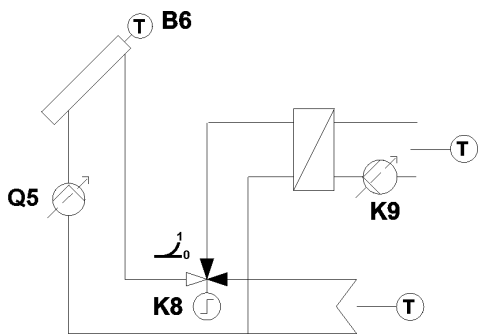
BX: Collector sensor B6

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

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*

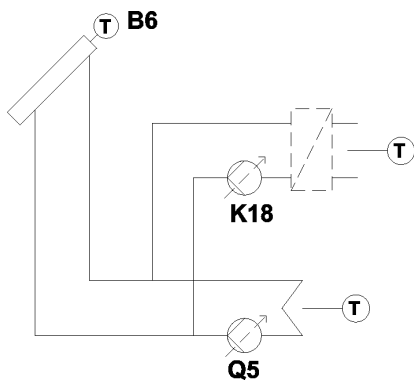
BX: Collector sensor B6

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

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*

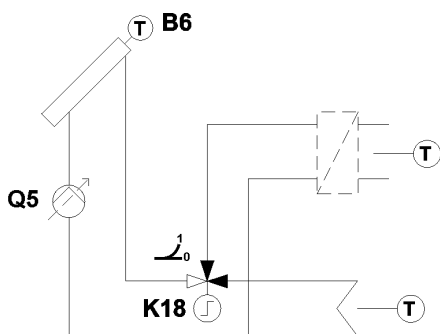
BX: Collector sensor B6

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

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

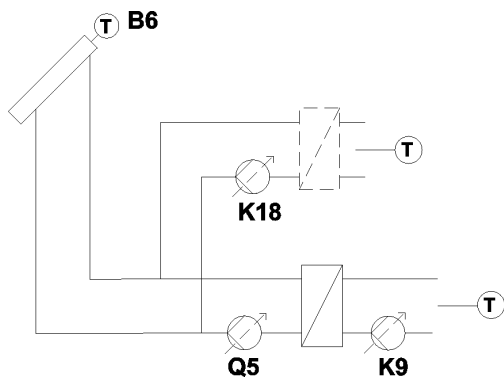
BX: Collector sensor B6

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

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*

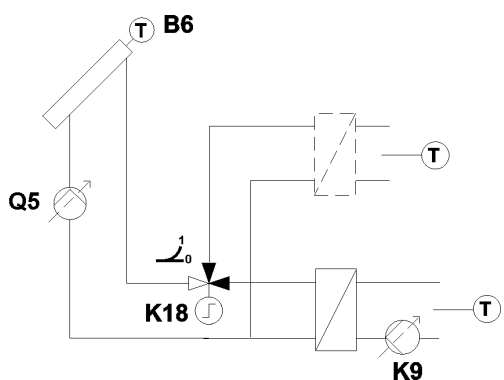
BX: Collector sensor B6

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

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

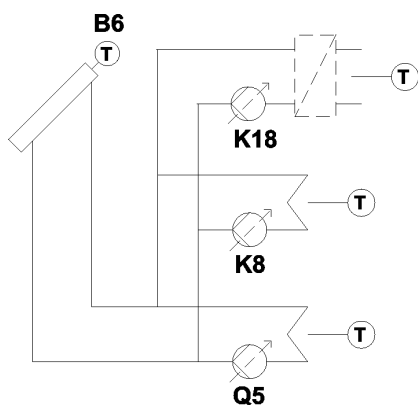
BX: Collector sensor B6

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

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*

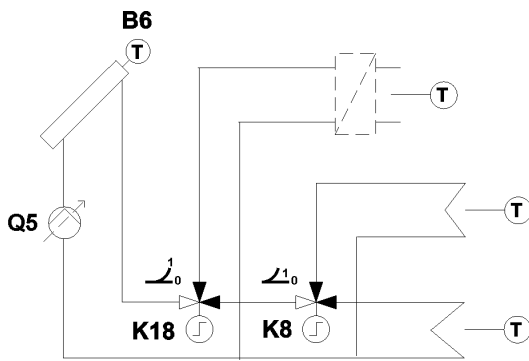
BX: Collector sensor B6

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

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

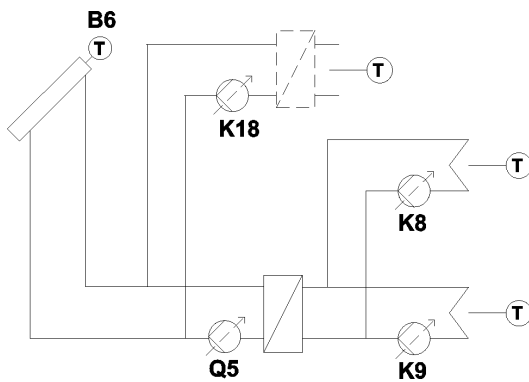
BX: Collector sensor B6

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

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

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

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*

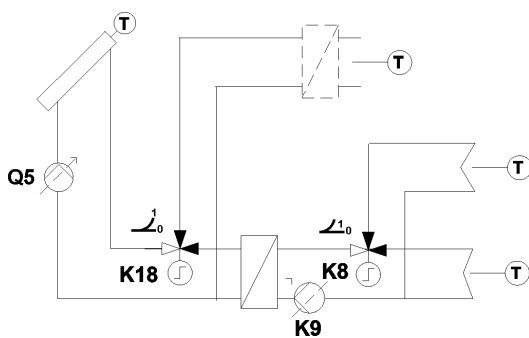
BX: Collector sensor B6

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

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

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

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

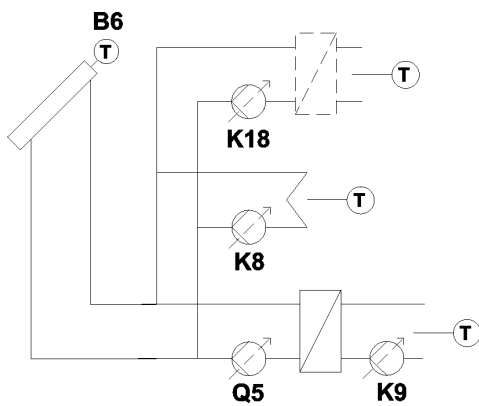
BX: Collector sensor B6

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

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

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

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*

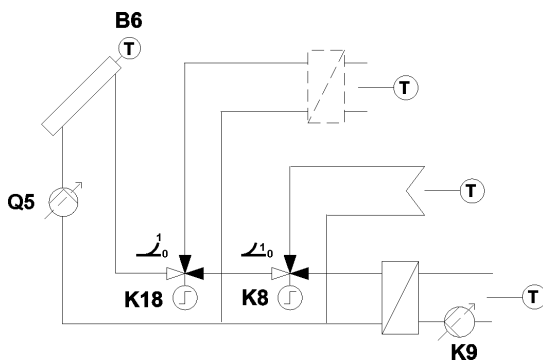
BX: Collector sensor B6

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

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

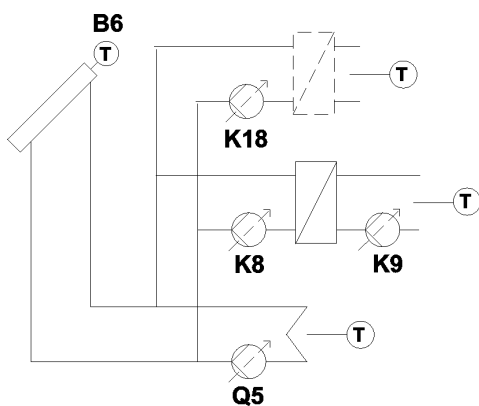
BX: Collector sensor B6

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

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

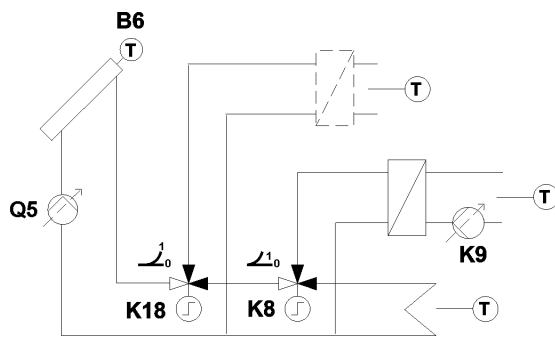
QX: Collector pump Q5*, Solar ctrl elem buffer K8*, Solar pump ext exch K9*, Solar ctrl elem swi pool K18*

BX: Collector sensor B6

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

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

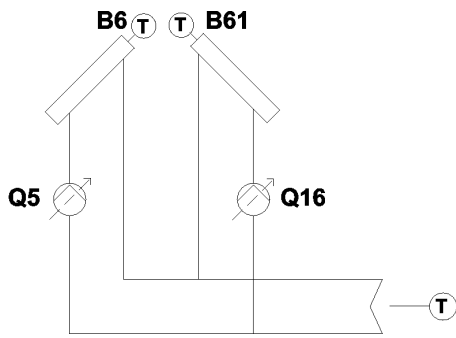
*Q5, K9: speed-controlled as UX/PX/ZX; additional notes available in "Equipment designation".

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

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

5.2.2 2 collector fields

Sol31



Required settings:

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

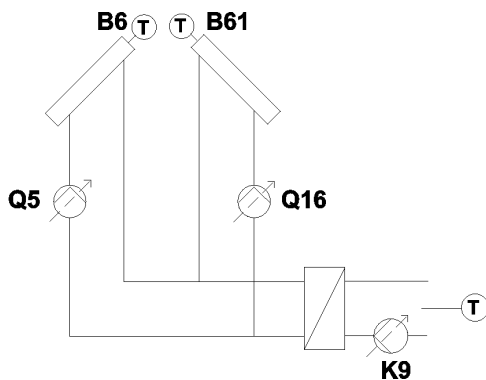
BX: Collector sensor B6, Collector sensor 2 B61

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

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*

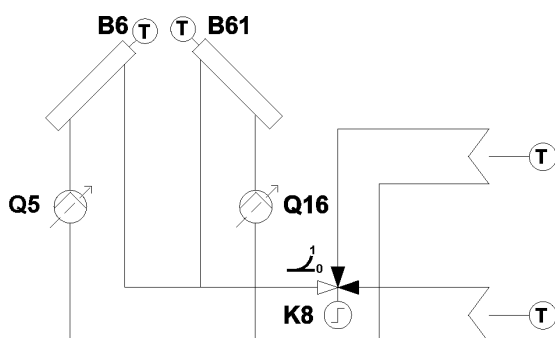
BX: Collector sensor B6, Collector sensor 2 B61

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

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

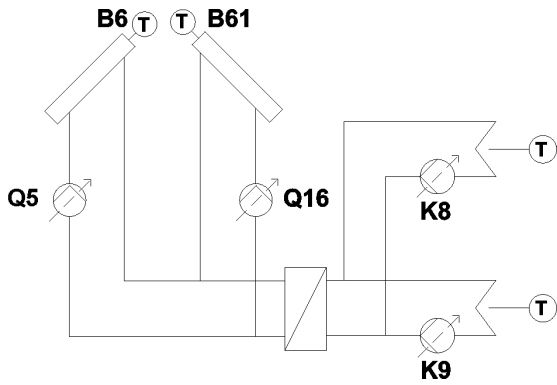
BX: Collector sensor B6, Collector sensor 2 B61

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

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*

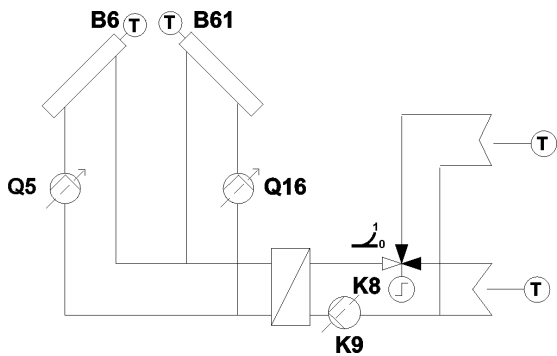
BX: Collector sensor B6, Collector sensor 2 B61

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

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*

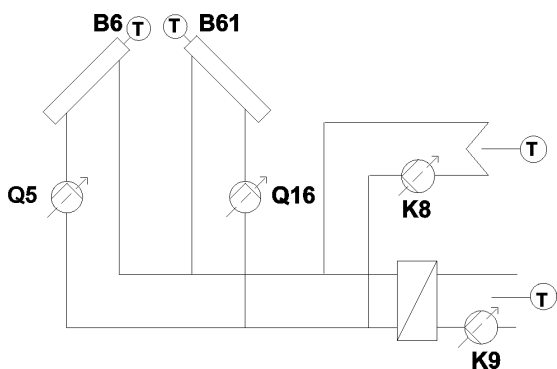
BX: Collector sensor B6, Collector sensor 2 B61

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

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*

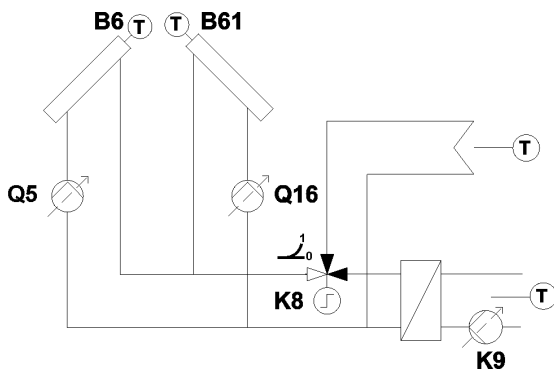
BX: Collector sensor B6, Collector sensor 2 B61

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

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*

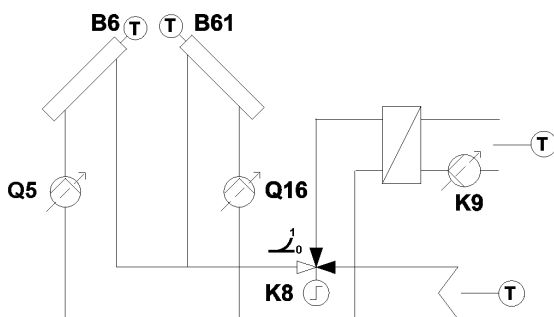
BX: Collector sensor B6, Collector sensor 2 B61

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

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*

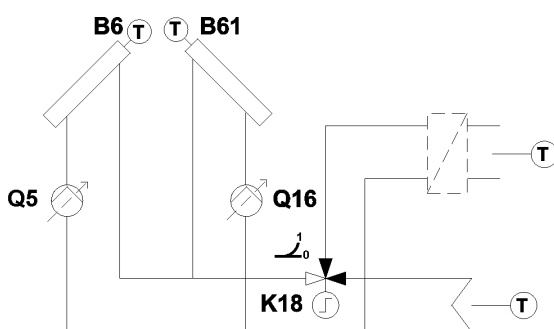
BX: Collector sensor B6, Collector sensor 2 B61

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

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

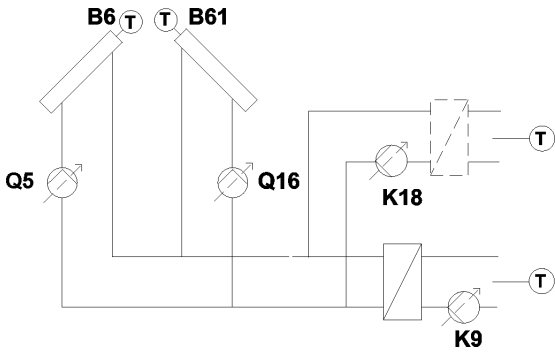
BX: Collector sensor B6, Collector sensor 2 B61

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

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*

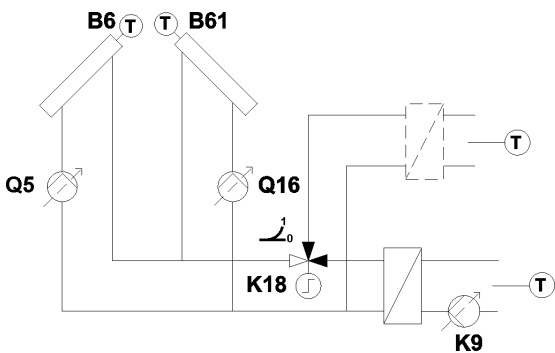
BX: Collector sensor B6, Collector sensor 2 B61

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

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

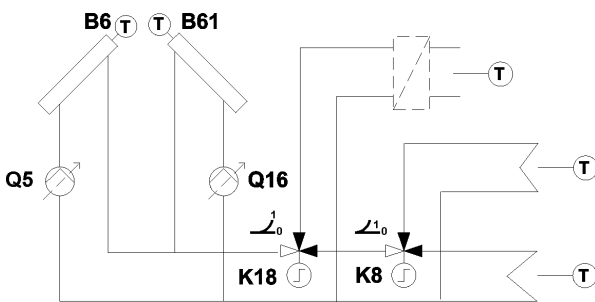
BX: Collector sensor B6, Collector sensor 2 B61

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

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

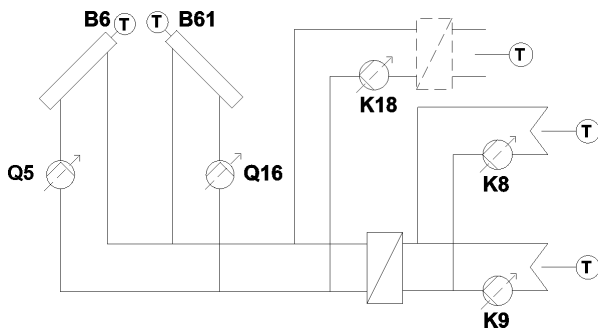
BX: Collector sensor B6, Collector sensor 2 B61

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

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*

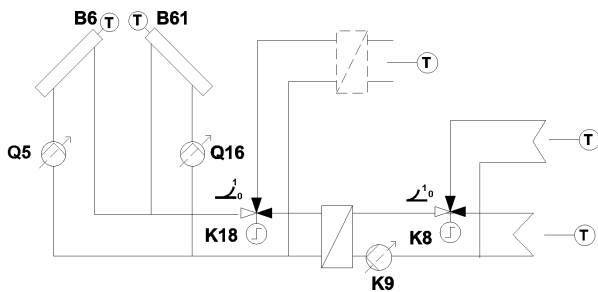
BX: Collector sensor B6, Collector sensor 2 B61

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

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

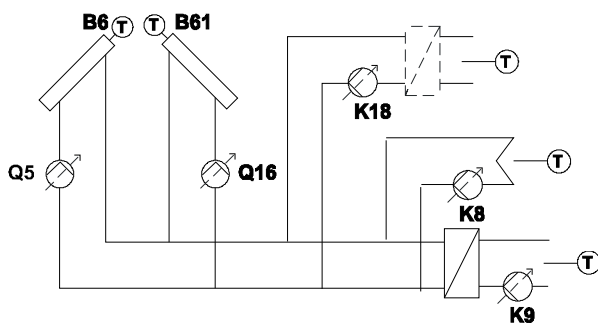
BX: Collector sensor B6, Collector sensor 2 B61

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

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*

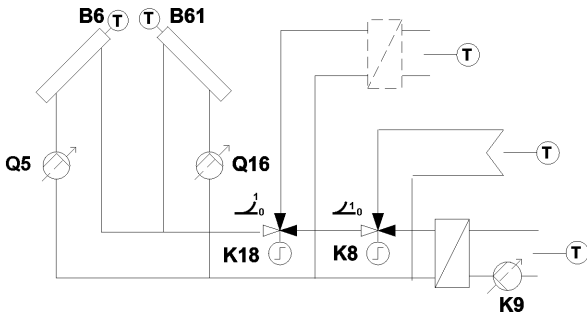
BX: Collector sensor B6, Collector sensor 2 B61

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

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

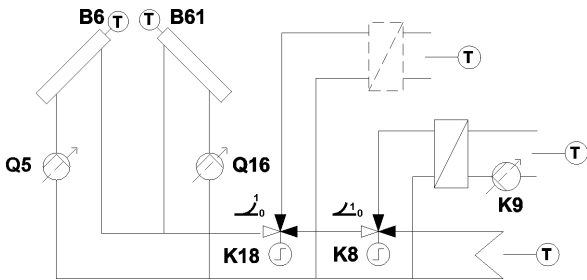
BX: Collector sensor B6, Collector sensor 2 B61

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

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/PX/ZX; additional notes available in "Equipment designation".

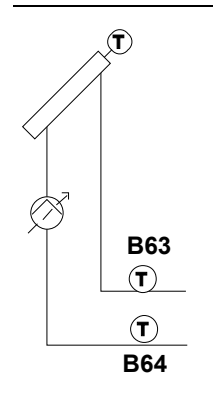
The diagram requires additional, valid partial diagrams to the sensors:

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

5.2.3 Auxiliary functions solar

The auxiliary functions expand the functional scope of partial diagrams.

dTSolar yield measurement



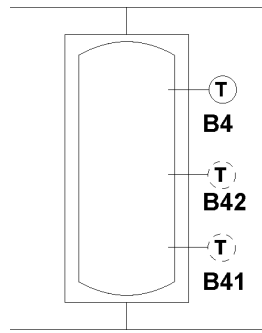
Required settings:

BX: Solar flow sensor B63 (hot), Solar return sensor B64 (cold)

6 Heat storage tank

6.1 Buffer storage tank

Sp1

**Required settings:**

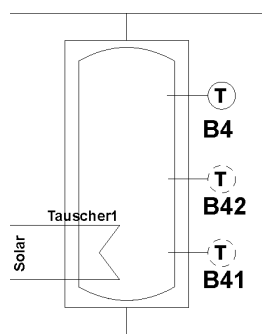
Buffer storage tank > With solar integration (4783): No

BX: Buffer sensor B4

Optional settings:

BX: Buffer sensor B41, Buffer sensor B42

Sp2

**Required settings:**

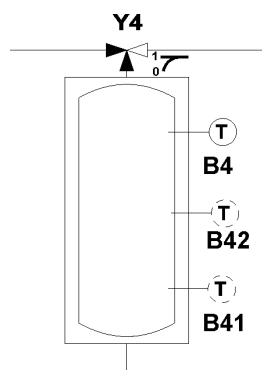
Buffer storage tank > With solar integration (4783): Yes

BX: Buffer sensor B4

Optional settings:

BX: Buffer sensor B41, Buffer sensor B42

Sp4

**Required settings:**

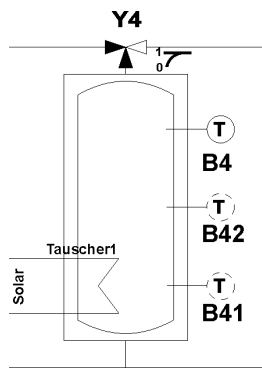
Buffer storage tank > With solar integration (4783): No

BX: Buffer sensor B4

QX: Heat gen shutoff valve Y4

Optional settings:

BX: Buffer sensor B41, Buffer sensor B42



Required settings:

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

BX: Buffer sensor B4

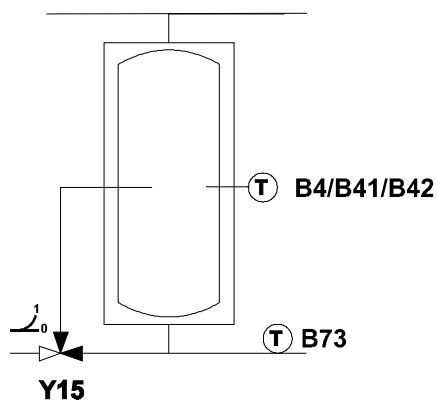
QX: Heat gen shutoff valve Y4

Optional settings:

BX: Buffer sensor B41, Buffer sensor B42

6.2 Auxiliary functions buffer storage tank

Return diverting valve



Required settings:

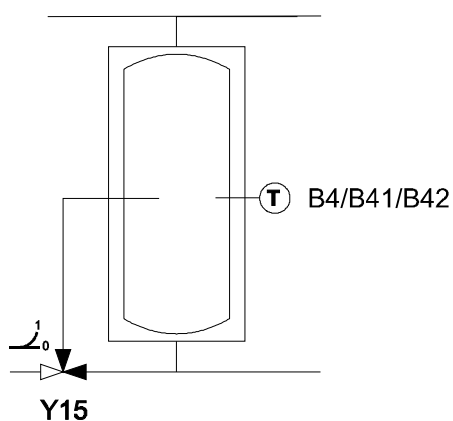
BX: Buffer sensor B4, Common return sensor B73

QX: Buffer return valve Y15

Optional settings:

BX: Buffer sensor B41, Buffer sensor B42

Storage tank, partial charging



Required settings:

BX: Buffer sensor B4

QX: Buffer return valve Y15

Optional settings:

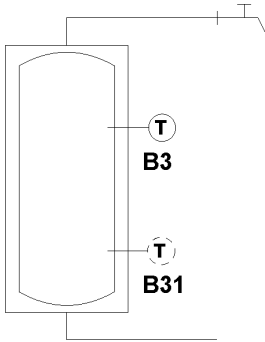
BX: Buffer sensor B41, Buffer sensor B42

7 Domestic hot water

7.1 DHW storage tank

7.1.1 Without actuating device

DHWSp1

**Required settings:**

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

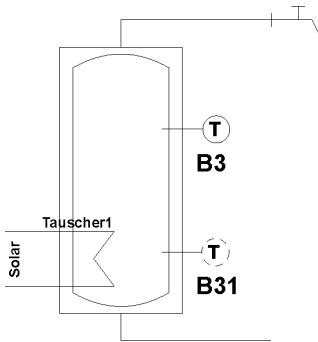
Configuration > DHW ctrl elem Q3 (5731): No charging request

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

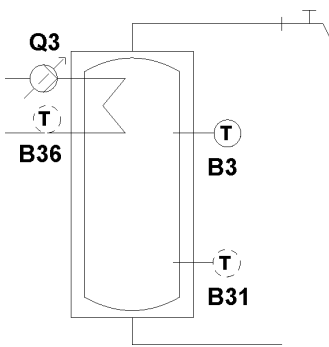
BX: DHW sensor B3

Optional settings:

BX: DHW sensor B31

7.1.2 With charging pump

DHWSp4



Required settings:

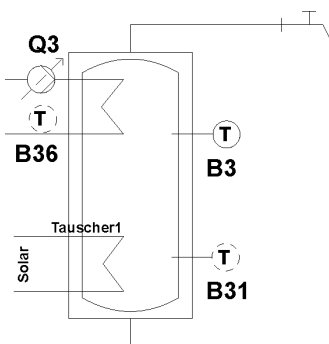
DHW storage tank > With solar integration (5093): No
 Configuration > DHW ctrl elem Q3 (5731): Charging pump
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

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

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*

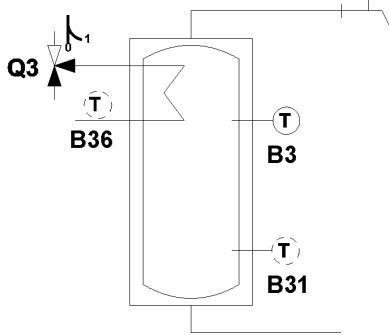
Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

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

7.1.3 Diverting valve

DHWSp13



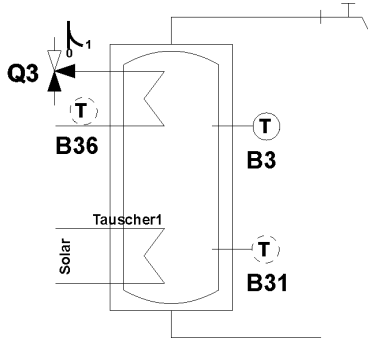
Required settings:

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:

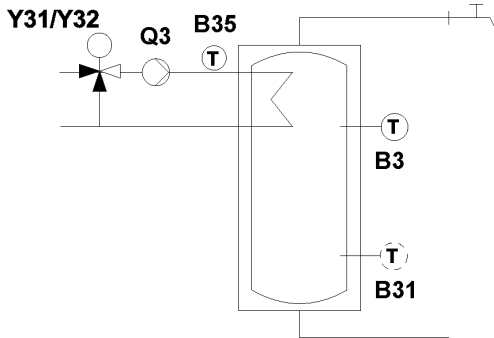
DHW storage tank > With solar integration (5093): Yes
 Configuration > DHW ctrl elem Q3 (5731): Diverting valve
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

7.1.4 Primary controller

DHWSp16



Required settings:

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

Configuration variants:

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

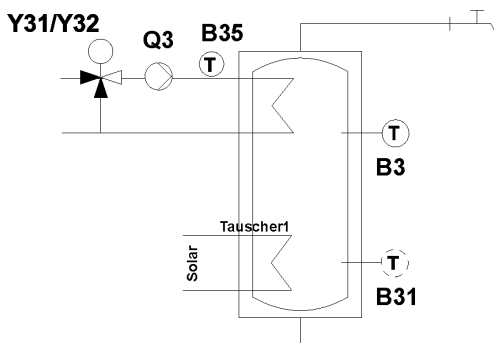
DHW storage tank > With solar integration (5093): No

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

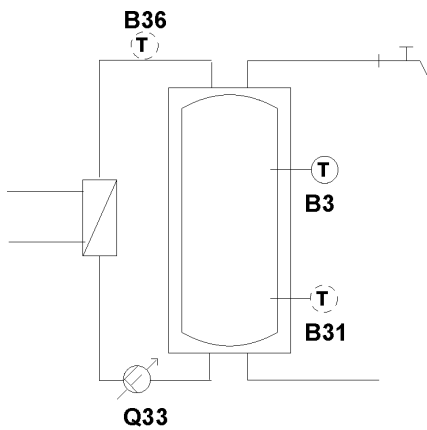
BX: DHW sensor B3

Optional settings:

BX: DHW sensor B31

7.1.5 Intermediate circuit (ext. heat exchanger)

DHWSp19



Required settings:

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

BX: DHW sensor B3

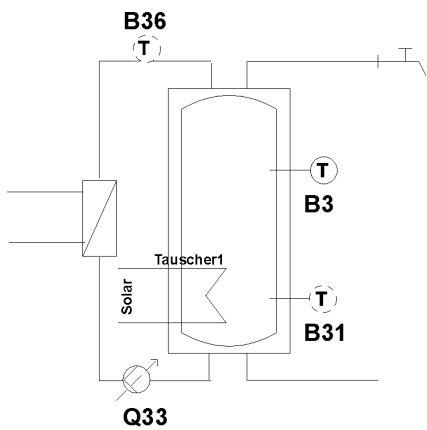
QX: DHW interm circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

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

DHWSp20



Required settings:

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

BX: DHW sensor B3

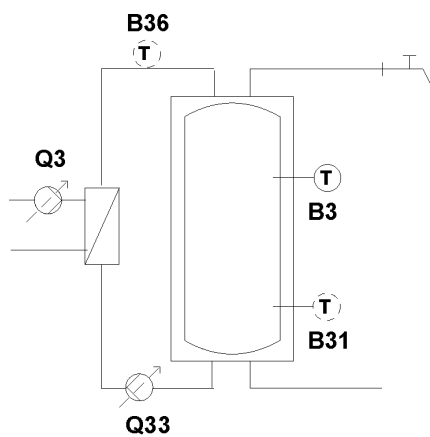
QX: DHW interm circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

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

DHWSp22



Required settings:

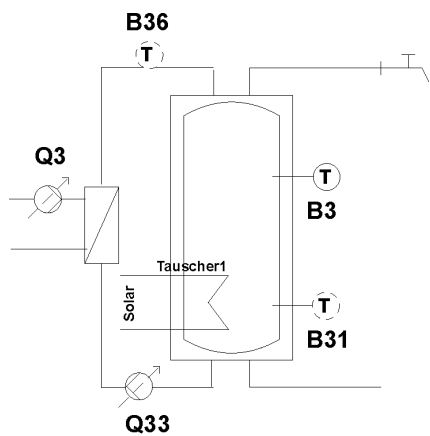
DHW storage tank > With solar integration (5093): No
Configuration > DHW ctrl elem Q3 (5731): Charging pump
BX: DHW sensor B3
QX: DHW ctrl elem Q3*, DHW interm circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

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

DHWSp23



Required settings:

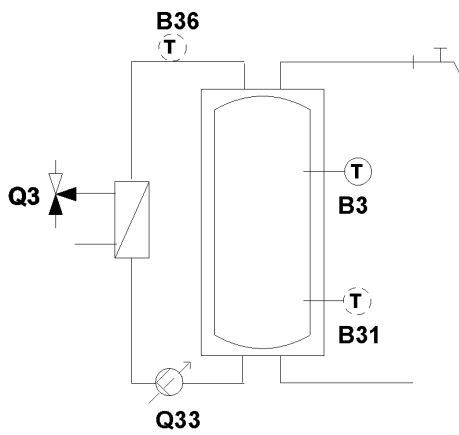
DHW storage tank > With solar integration (5093): Yes
Configuration > DHW ctrl elem Q3 (5731): Charging pump
BX: DHW sensor B3
QX: DHW ctrl elem Q3*, DHW interm circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

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

DHWSp25



Required settings:

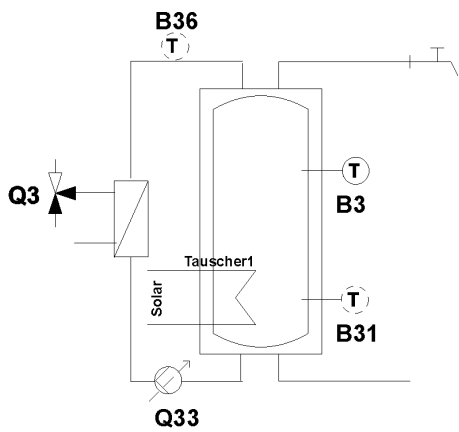
DHW storage tank > With solar integration (5093): No
 Configuration > DHW ctrl elem Q3 (5731): Diverting valve
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3, DHW intern circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

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

DHWSp26



Required settings:

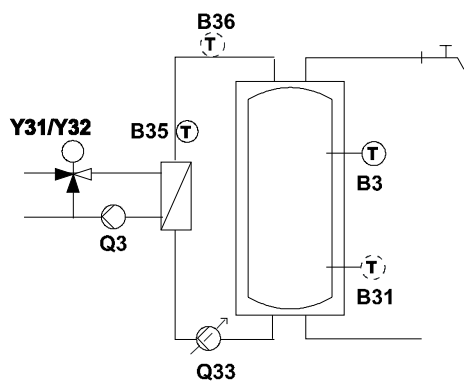
DHW storage tank > With solar integration (5093): Yes
 Configuration > DHW ctrl elem Q3 (5731): Diverting valve
 BX: DHW sensor B3
 QX: DHW ctrl elem Q3, DHW intern circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

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

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

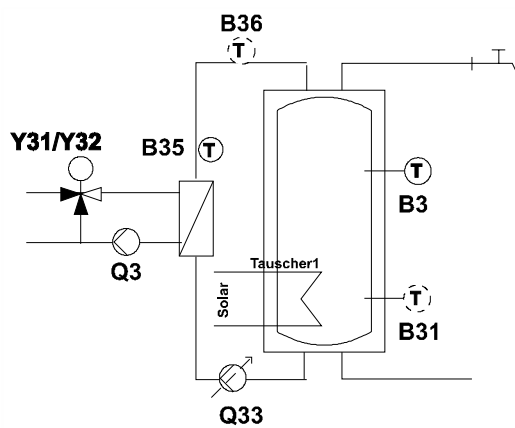
QX: DHW interm circ pump Q33*

Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

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

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*

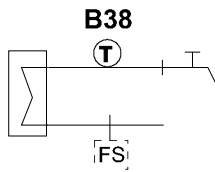
Optional settings:

BX: DHW sensor B31, DHW charging sensor B36

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

7.2 Instantaneous DHW heater

DHWDI2



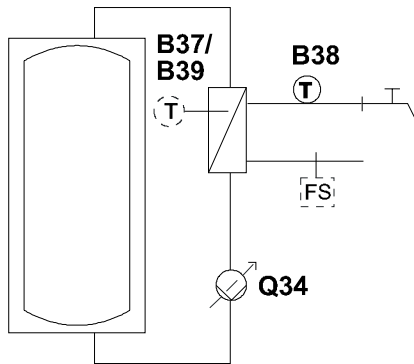
Required settings:

BX: DHW outlet sensor B38

Optional settings:

Function input H1... > DHW flow switch

DHWDI3



Required settings:

Instantaneous water heater > ACS: Instantaneous heater with DHW storage tank (5551): Parallel

Plant variants:

Instantaneous water heater > ACS: Instantaneous DHW heater with buffer (5552): Yes

BX: DHW outlet sensor B38

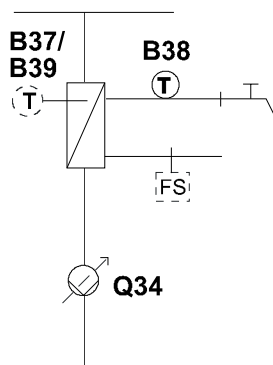
QX: Instant WH ctrl elem Q34*

Optional settings:

BX: DHW circulation sensor B39/Instant WH sensor B37

* Q34: speed-controlled as UX/ZX; additional notes available in "Equipment designation".
Note: Also requires a valid DHW storage tank or buffer storage partial diagram

DHWDI4



Required settings:

Configuration > DHW controlling element (5731): Charging pump

BX: DHW outlet sensor B38

QX: Instant WH ctrl elem Q34*

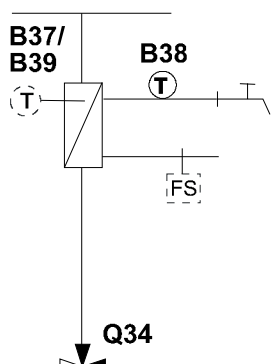
Optional settings:

BX: DHW circulation sensor B39/Instant WH sensor B37

Function input H1... > DHW flow switch

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

DHWDI6



Required settings:

Configuration > DHW controlling element (5731): Diverting valve

BX: DHW outlet sensor B38

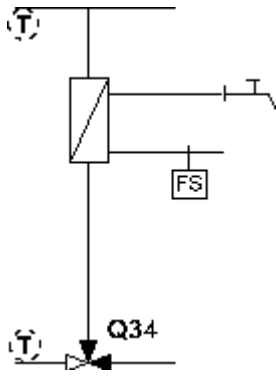
QX: Instant WH ctrl elem Q34

Optional settings:

BX: DHW circulation sensor B39/Instant WH sensor B37

Function input H1... > DHW flow switch

DHWDI7



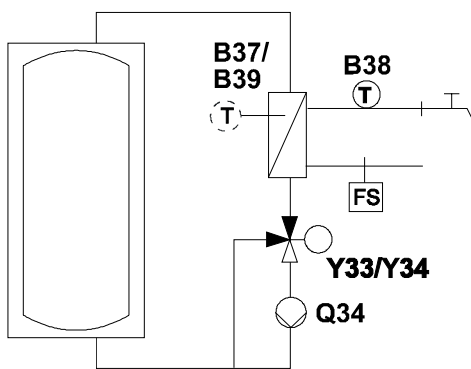
Required settings:

Configuration > DHW controlling element (5731): Diverting valve

QX: Instant WH ctrl elem Q34

Function input H1... > DHW flow switch

DHWDI8



Required settings:

Instantaneous water heater > ACS: Instantaneous heater with DHW storage tank (5551): Parallel

Plant variants:

Instantaneous water heater > ACS: Instantaneous DHW heater with buffer (5552): Yes

Function mixing group 1...: Instantaneous water heater

Configuration variants:

Function extension module 1...: Instantaneous water heater

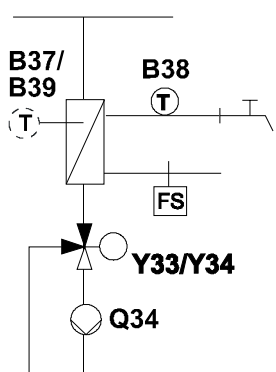
BX: DHW outlet sensor B38

Optional settings:

BX: DHW circulation sensor B39/Instant WH sensor B37

Note: Also requires a valid DHW storage tank or buffer storage partial diagram

DHWDI9



Required settings:

Function mixing group 1...: Instantaneous water heater

Configuration variants:

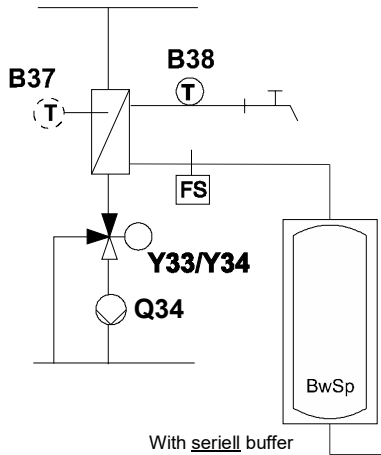
Function extension module 1...: Instantaneous water heater

BX: DHW outlet sensor B38

Optional settings:

BX: DHW circulation sensor B39/Instant WH sensor B37

DHWDI10



Required settings:

Instantaneous water heater > ACS: Instantaneous heater with DHW storage tank (5551): Seriell

Function mixing group 1...: Instantaneous water heater

Configuration variants:

Function extension module 1...: Instantaneous water heater

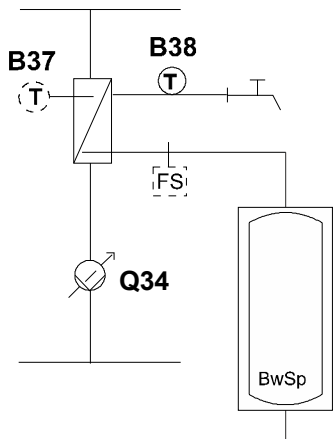
BX: DHW outlet sensor B38

Optional settings:

BX: Instant WH sensor B37

Note: Also requires a valid DHW storage tank partial diagram

DHWDI11



Required settings:

Instantaneous water heater > ACS: Instantaneous heater with DHW storage tank (5551): Seriell

Configuration > DHW controlling element (5731): Charging pump

BX: DHW outlet sensor B38

QX: Instant WH ctrl elem Q34*

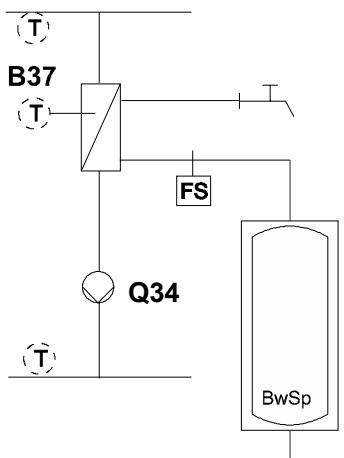
Optional settings:

BX: Instant WH sensor B37

Note: Also requires a valid DHW storage tank partial diagram

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

DHWDI12



Required settings:

Instantaneous water heater > ACS: Instantaneous heater with DHW storage tank (5551): Seriell

HX: DHW flow switch

QX: Instant WH ctrl elem Q34

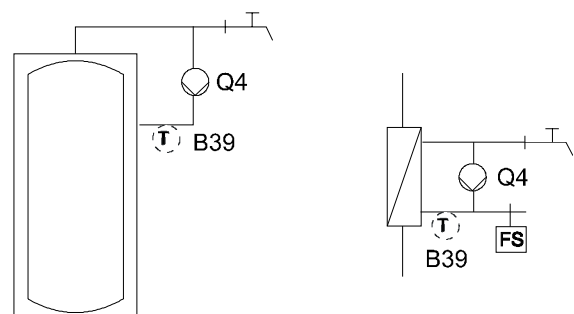
Optional settings:

BX: Instant WH sensor B37

Note: Also requires a valid DHW storage tank partial diagram

7.3 Auxiliary functions DHW

DHW circulating pump



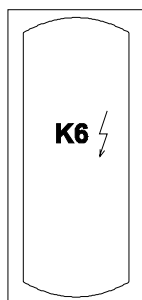
Required settings:

QX: Circulating pump Q4

Optional settings:

BX: DHW circulation sensor B39

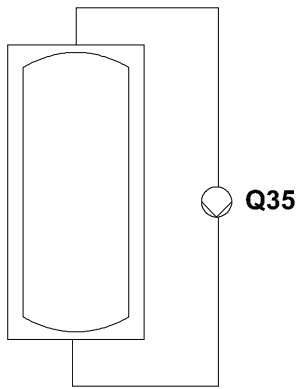
Electric immersion heater
for DHW electric
immersion heater



Required settings:

QX: El imm heater DHW K6

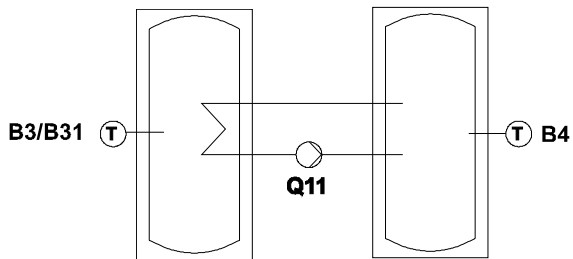
DHW mixing pump



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:

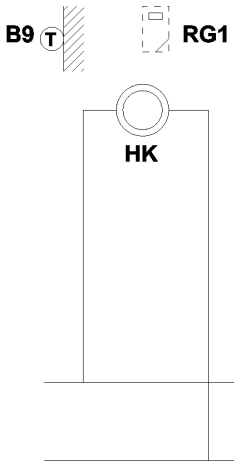
BX: DHW sensor B31

8 Distribution

8.1 Control circuit room 1...3

8.1.1 Heating circuit

Rh1/1

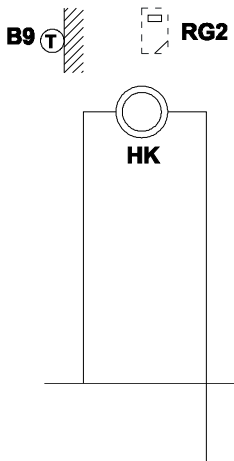


Required settings:

Configuration > Heating circuit 1 (5710): On

Optional heat request of the heating circuit via Modbus register 42073.
Note: Room controller heating circuit 1 (5713) must be set to "External".

Rh1/2

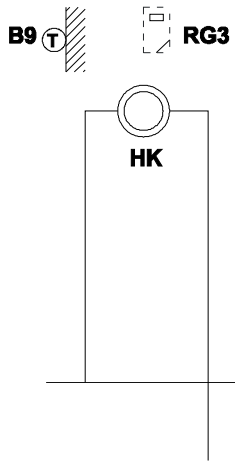


Required settings:

Configuration > Heating circuit 2 (5715): On

Optional heat request of the heating circuit via Modbus register 42075.
Note: Room controller heating circuit 2 (5718) must be set to "External".

Rh1/3



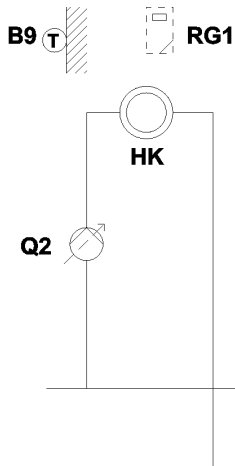
Required settings:

Configuration > Heating circuit 3 (5721): On

Optional heat request of the heating circuit via Modbus register 42077.

Note: Room controller heating circuit 3 (5724) must be set to "External".

Rh2/1



Required settings:

Configuration > Heating circuit 1 (5710): On

QX: Heat circuit pump HC1 Q2*

Optional settings:

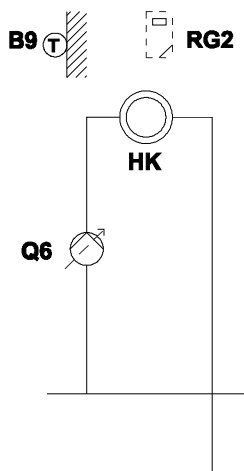
QX: 2nd pump speed HC1 Q21

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

Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Rh2/2



Required settings:

Configuration > Heating circuit 2 (5715): On

QX: Heat circuit pump HC2 Q6*

Optional settings:

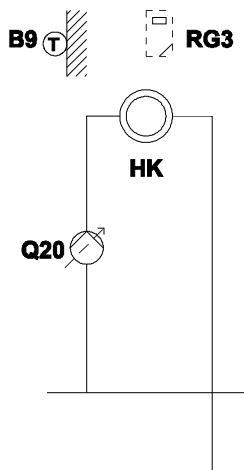
QX: 2nd pump speed HC2 Q22

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

Optional heat request of the heating circuit via Modbus register 42075.

Note: Room controller heating circuit 2 (5718) must be set to "External".

Rh2/3



Required settings:

Configuration > Heating circuit 3 (5721): On

QX: Heat circuit pump HC3 Q20*

Optional settings:

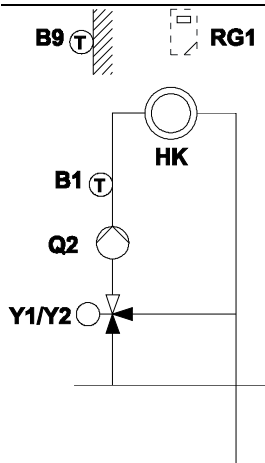
QX: 2nd pump speed HC3 Q23

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

Optional heat request of the heating circuit via Modbus register 42077.

Note: Room controller heating circuit 3 (5724) must be set to "External".

Rh3/1



Required settings:

Function mixing group 1...: Heating circuit 1

Configuration variants:

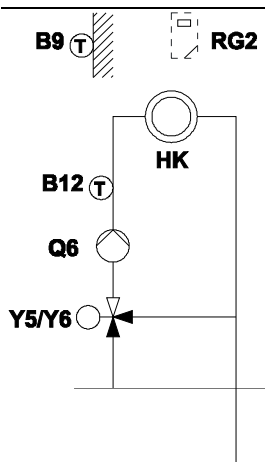
Function extension module 1...: Heating circuit 1

Configuration > Heating circuit 1 (5710): On

Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Rh3/2



Required settings:

Function mixing group 1...: Heating circuit 2

Configuration variants:

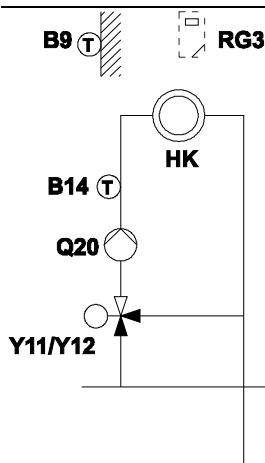
Function extension module 1...: Heating circuit 2

Configuration > Heating circuit 2 (5715): On

Optional heat request of the heating circuit via Modbus register 42075.

Note: Room controller heating circuit 2 (5718) must be set to "External".

Rh3/3



Required settings:

Function mixing group 1...: Heating circuit 3

Configuration variants:

Function extension module 1...: Heating circuit 3

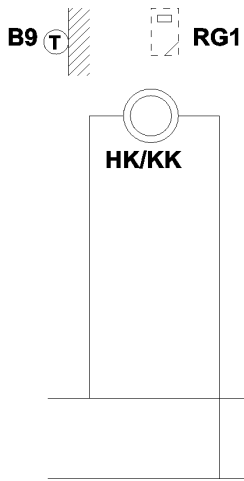
Configuration > Heating circuit 3 (5721): On

Optional heat request of the heating circuit via Modbus register 42077.

Note: Room controller heating circuit 3 (5724) must be set to "External".

8.1.2 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

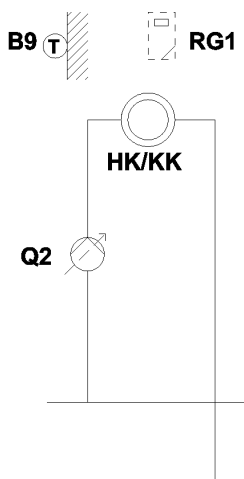
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

Rh6/1



Required settings:

Configuration > Heating circuit 1 (5710): On

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

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

QX: Heat circuit pump HC1 Q2*

Optional settings:

QX: 2nd pump speed HC1 Q21

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

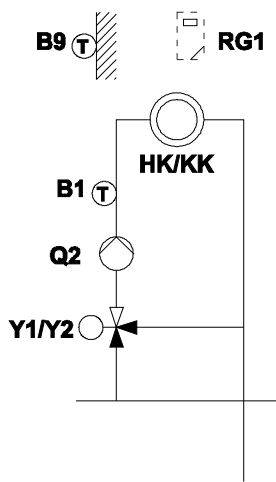
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

Optional heat request via Modbus register 42073.

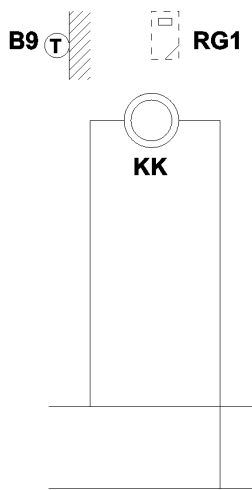
Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

8.1.3 Cooling circuit in 2-pipe system

Rh8/1



Required settings:

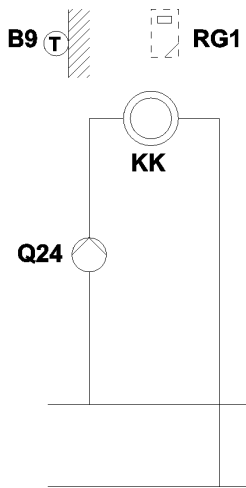
Configuration > Heating circuit 1 (5710): Off

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

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

Rh9/1



Required settings:

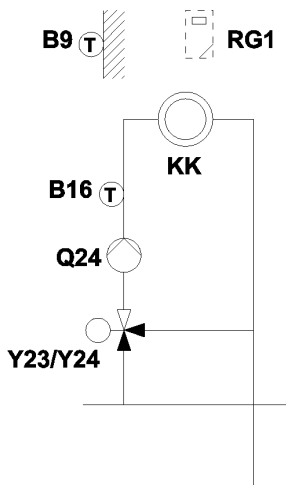
Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

QX: Cooling circ pump CC1 Q24

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

Rh10/1



Required settings:

Function mixing group 1...: Cooling circuit 1

Configuration variants:

Function extension module 1...: Cooling circuit 1

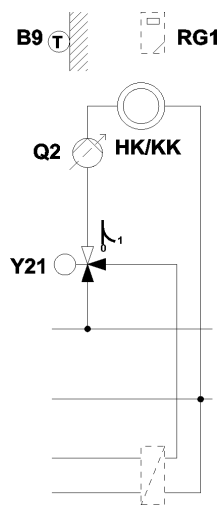
Configuration > Cooling circuit 1 (5711): 2-pipe system cooling

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

8.1.4 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: Diverting valve cooling Y21, Heat circuit pump HC1 Q2*

Optional settings:

QX: 2nd pump speed HC1 Q21

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

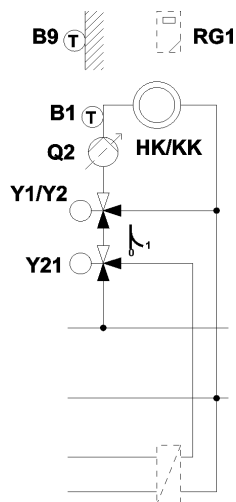
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

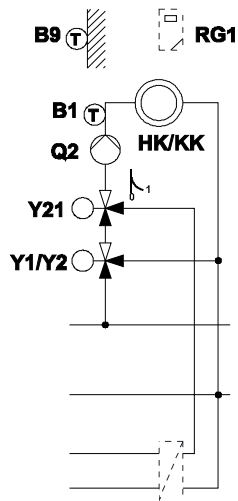
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

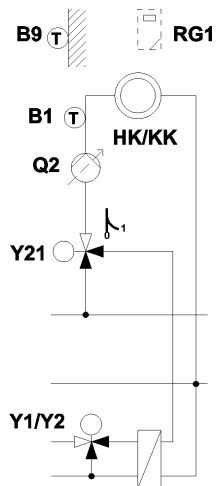
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

Optional heat request via Modbus register 42073.

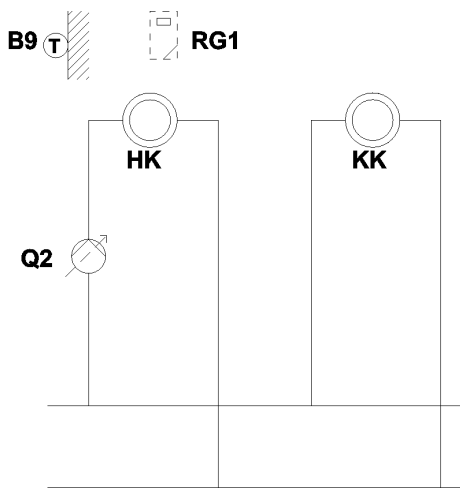
Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

8.1.5 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/PX/ZX; additional notes available in "Equipment designation"

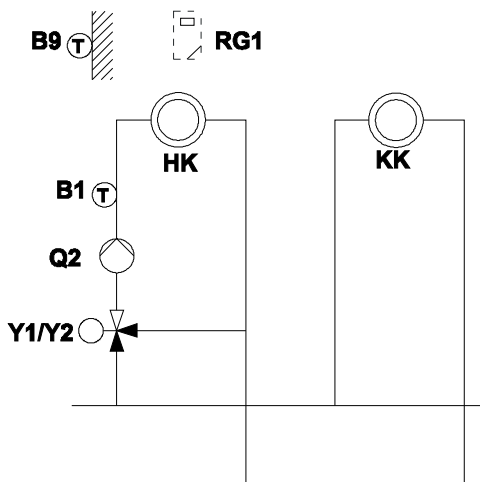
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

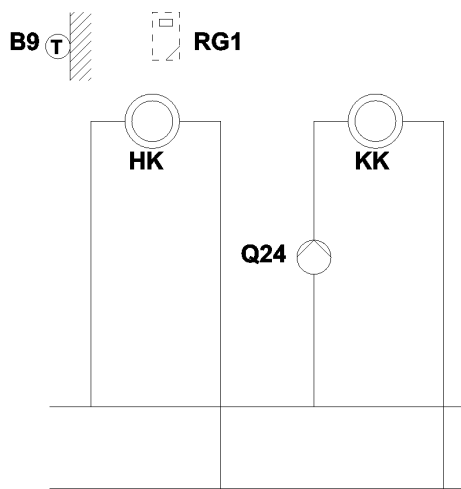
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

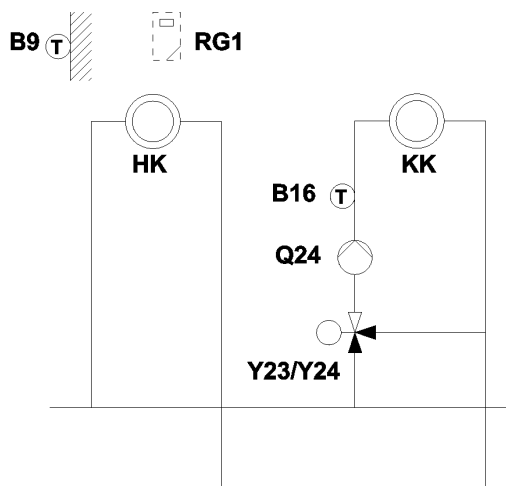
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

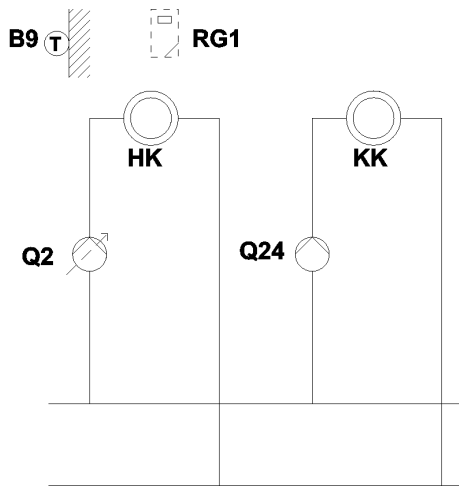
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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/PX/ZX; additional notes available in "Equipment designation"

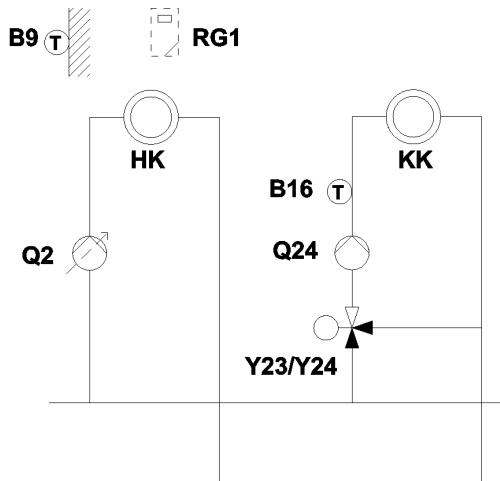
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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/PX/ZX; additional notes available in "Equipment designation"

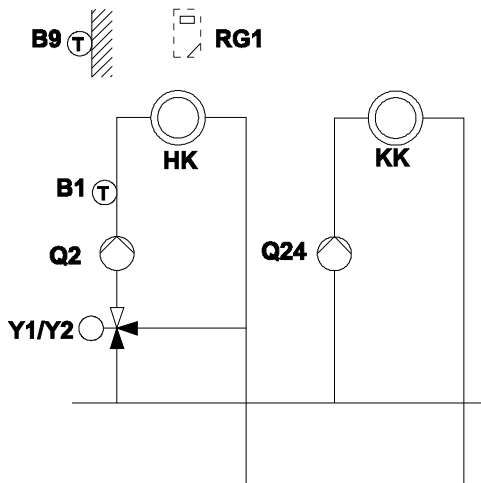
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

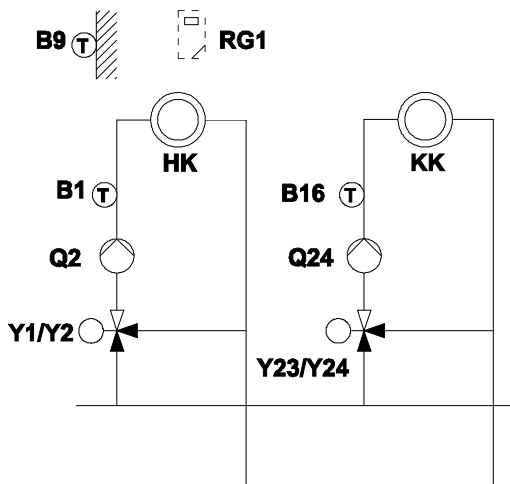
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

Optional heat request via Modbus register 42073.

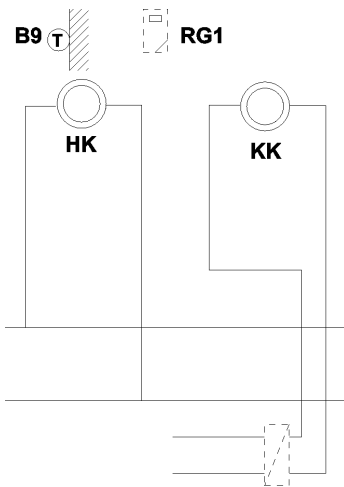
Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

8.1.6 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

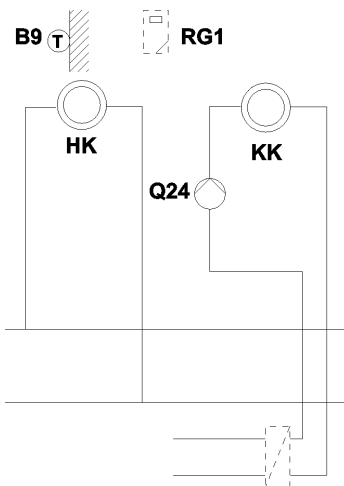
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

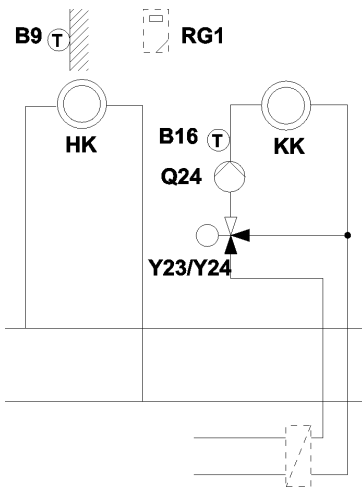
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

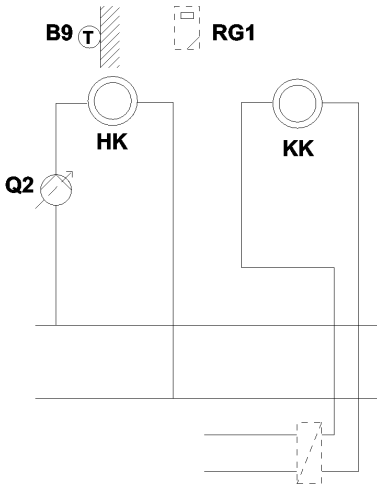
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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/PX/ZX; additional notes available in "Equipment designation"

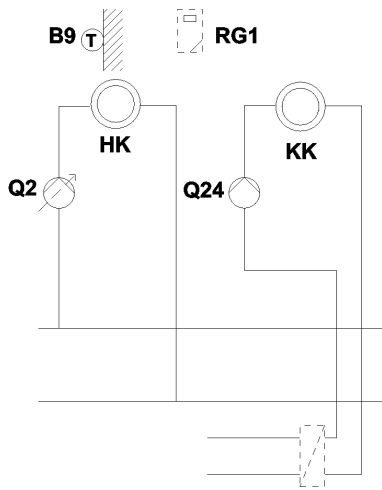
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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/PX/ZX; additional notes available in "Equipment designation"

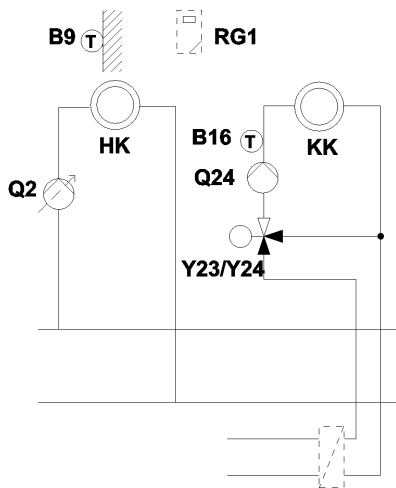
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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/PX/ZX; additional notes available in "Equipment designation"

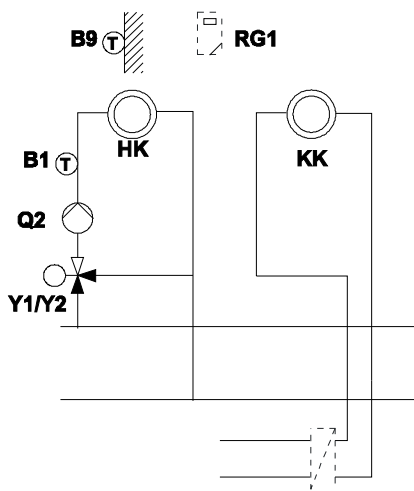
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

Rh36/1



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): 4-pipe system cooling

Optional settings:

QX: 2nd pump speed HC1 Q21

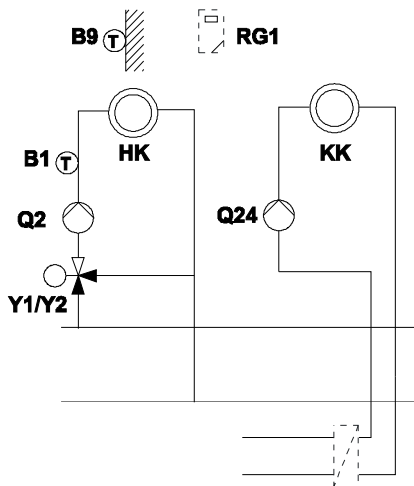
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

Rh37/1



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): 4-pipe system cooling

QX: Cooling circ pump CC1 Q24

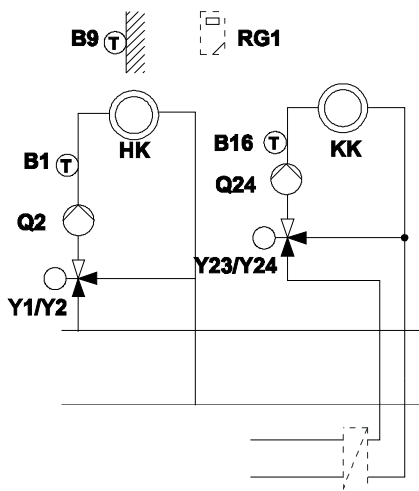
Optional heat request via Modbus register 42073.

Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

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

Optional heat request via Modbus register 42073.

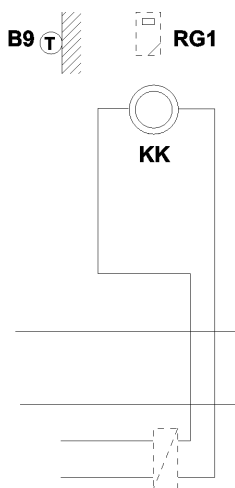
Note: Room controller heating circuit 1 (5713) must be set to "External".

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

8.1.7 Cooling circuit in 4-pipe system

Rh40/1



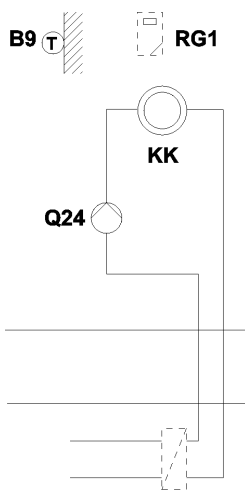
Required settings:

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

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

Rh41/1



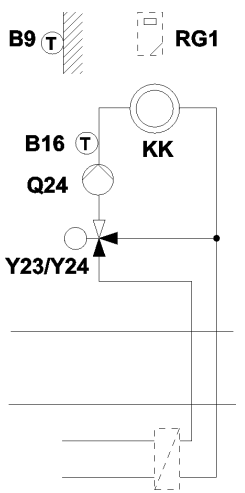
Required settings:

Configuration > Cooling circuit 1 (5711): 4-pipe system cooling
QX: Cooling circ pump CC1 Q24

Optional cooling request via Modbus register 42079.

Note: Room controller cooling circuit 1 (5714) must be set to "External".

Rh42/1



Required settings:

Function mixing group 1...: Cooling circuit 1

Configuration variants:

Function extension module 1...: Cooling circuit 1

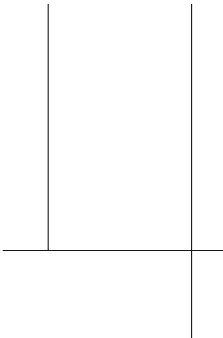
Configuration > Cooling circuit 1 (5711): 4-pipe system cooling

Optional cooling request via Modbus register 42079.

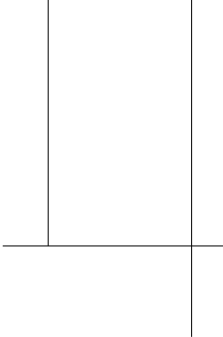
Note: Room controller cooling circuit 1 (5714) must be set to "External".

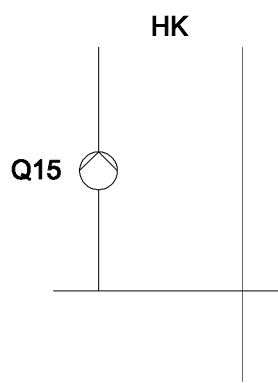
8.2 Consumer circuit 1...2

Le1/1

<p style="text-align: center;">HK</p> 	<p>Required settings: Configuration > Function input H1...: Consumer request VK1 or Consumer request VK1 10V Configuration > Consumer circuit 1 (5750): Heating</p>
---	--

Le1/2

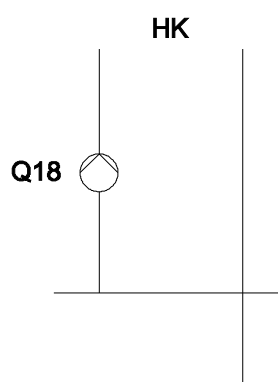
<p style="text-align: center;">HK</p> 	<p>Required settings: Configuration > Function input H1...: Consumer request VK2 or Consumer request VK2 10V Configuration > Consumer circuit 2 (5751): Heating</p>
--	--

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

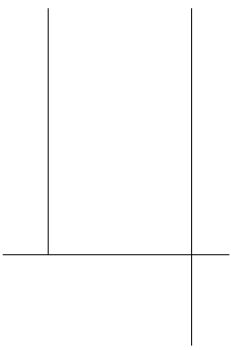
Le2/2**Required settings:**

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

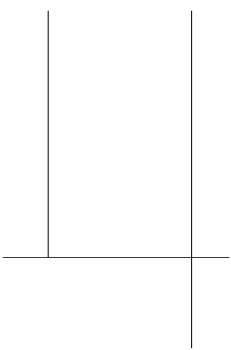
Configuration > Consumer circuit 2 (5751): Heating

QX: Cons circuit pump VK2 Q18

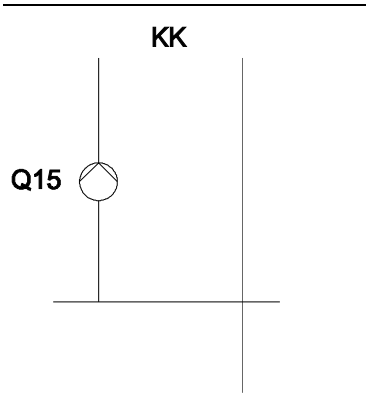
Le4/1

<p style="text-align: center;">KK</p> 	<p>Required settings:</p> <p>Configuration > Function input H1...: Consumer request VK1 or Consumer request VK1 10V</p> <p>Configuration > Consumer circuit 1 (5750): 2-pipe system cooling</p>
---	--

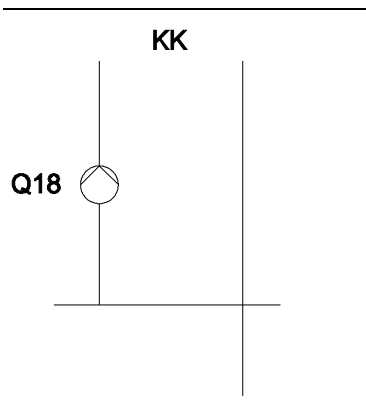
Le4/2

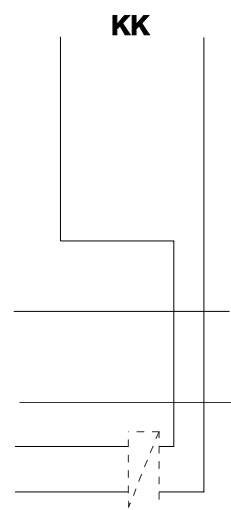
<p style="text-align: center;">KK</p> 	<p>Required settings:</p> <p>Configuration > Function input H1...: Consumer request VK2 or Consumer request VK2 10V</p> <p>Configuration > Consumer circuit 2 (5751): 2-pipe system cooling</p>
--	--

Le5/1

	<p>Required settings: Configuration > Function input H1...: Consumer request VK1 or Consumer request VK1 10V Configuration > Consumer circuit 1 (5750): 2-pipe system cooling</p> <hr/> <p>QX: Cons circuit pump VK1 Q15</p>
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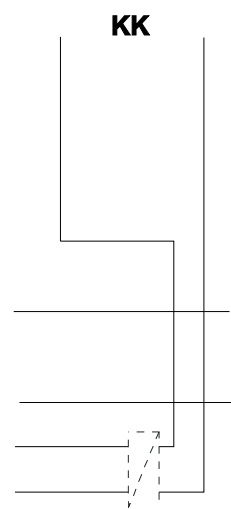
Le5/2

	<p>Required settings: Configuration > Function input H1...: Consumer request VK2 or Consumer request VK2 10V Configuration > Consumer circuit 2 (5751): 2-pipe system cooling</p> <hr/> <p>QX: Cons circuit pump VK2 Q18</p>
--	---

Le7/1**Required settings:**

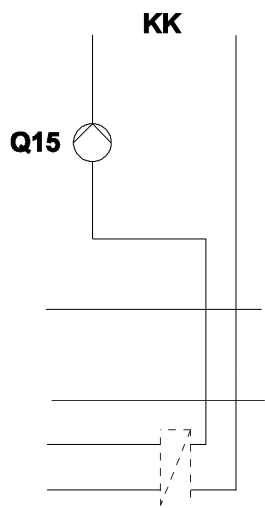
Configuration > Function input H1...: Consumer request VK1 or Consumer request VK1 10V

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

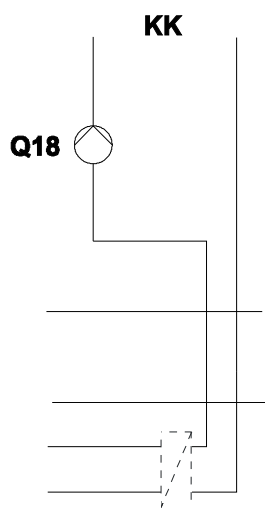
Configuration > Consumer circuit 2: (5751): 4-pipe system cooling

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:**

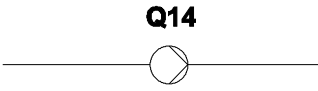
Configuration > Function input H1...: Consumer request VK2 or Consumer request VK2 10V

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

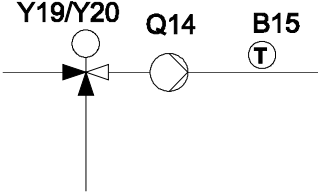
QX: Cons circuit pump VK2 Q18

8.3 Primary controller / system pump (heat converter)

Uf1

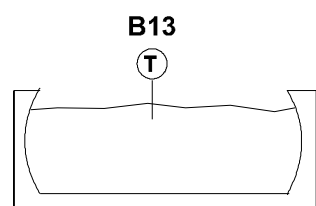
 <p style="text-align: center;">Q14</p>	<p>Required settings: QX: System pump Q14</p>
---	---

Uf2

 <p>Y19/Y20 Q14 B15</p>	<p>Required settings: Function mixing group 1...: Primary contr/system pump</p> <hr/> <p>Configuration variants: Function extension module 1...: Primary contr/system pump</p>
---	--

8.4 Swimming pool

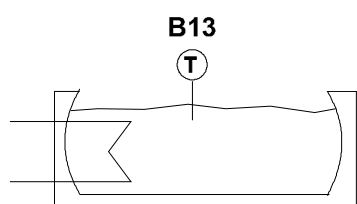
Sb1



Required settings:

BX: Swimming pool sensor B13

Sb2

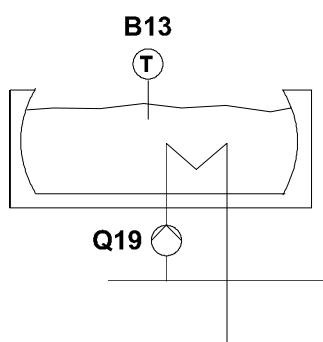


Required settings:

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

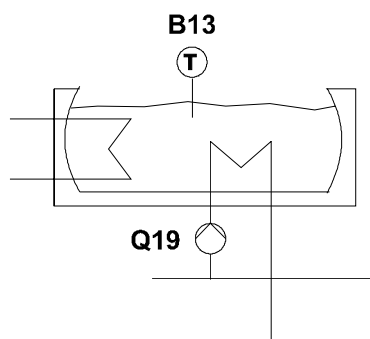
QX: Swimming pool pump Q19

Old devices:

Configuration > Function input H1...: Release swimming pool

QX: H1 pump Q15 or H2 pump Q18 or H3 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

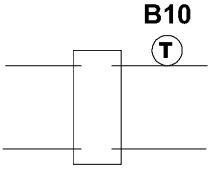
Old devices:

Configuration > Function input H1...: Release swimming pool

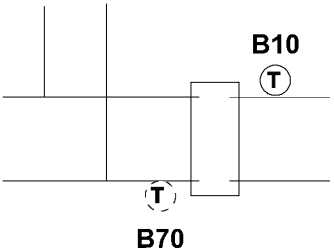
QX: H1 pump Q15 or H2 pump Q18 or H3 pump Q19

8.5 Pressureless header

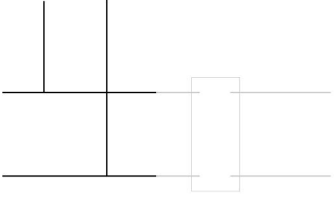
HWe1

	<p>Required settings: LPB system > Device address (6600): 0 or 1 BX: Common flow sensor B10</p>
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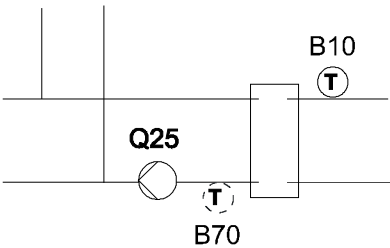
HWe2

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

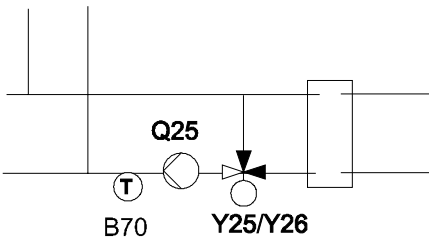
HWe3

	<p>Required settings: LPB system > Device address (6600): 2... 16 (cascade slave)</p>
--	--

HWe4

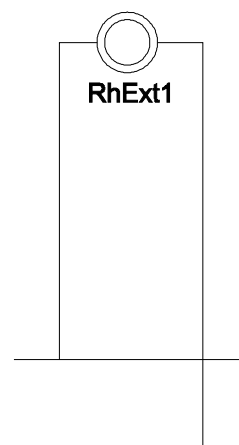
	<p>Required settings: LPB system > Device address (6600): 1 (cascade master) QX: Cascade pump Q25 BX: Common flow sensor B10</p> <p>Optional settings: BX: Cascade return sensor B70</p>
---	---

HWe6

	<p>Required settings: Function mixing group 1...: Return controller cascade</p> <p>Configuration variants: Function extension module 1...: Return controller cascade LPB system > Device address (6600): 1 (cascade master)</p>
---	---

8.6 External heat request

RhExt1



RhExt1 integrates an external consumer via Modbus in the LPB system.

Required settings:

- Controller is a Modbus slave: Modbus > Slave address (6651): 1...247.
- Heat request is written to Modbus register 42016.

Note: LPB address 16 cannot be used on the same segment.