

Basic performance data - WAMAK AiWa 14 EVI H Out

Heating - EN 14511		
Heating capacity [kW]	A7 / W35	15.4
	A2 / W35	13.1
	A-7 / W34	10.9
Electrical power input [kW]	A7 / W35	3.3
	A2 / W35	3.3
	A-7 / W34	3.2
Heating efficiency faktor [COP]	A7 / W35	4.73
	A2 / W35	3.96
	A-7 / W34	3.39
Seasonal space heating energy efficiency - SCOP EN 14825		
Average Climate / Low Temperature [35 °C]	SCOP	4.61
	η [%]	184.3
	Label	A+++
	Qhe [kWh]	5445.0
	Pdesignh [kW]	12.4
	Tbivalent [°C]	-7
Cooling		
Cooling capacity - [kW]	A35 / W23-18	14.8
	A25 / W23-18	15.8
	A35 / W12-7	11.0
	A25 / W12-7	11.0
Seasonal space cooling energy efficiency - SEER EN 14825		
[W 23 / 18 °C]	SEER	4.75
	Qce [kWh]	6600.0
	η_c [%]	190.0
Sound EN 12102		
Acoustic power - Lw	dB(A)	59.2
Acoustic pressure - Lp	1 m dB(A)	51.2
	5 m dB(A)	37.2
	10 m dB(A)	31.2
Mechanical and operational information		
Compressor type (3~ 400/50)	SCROLL / 1 /	On/Off
Refrigerant	R410A (GWP - 2088)	5.4 kg
Operating limit temperatures heating - (min / max) [°C]		25 / 65
Operating limit temperatures source - (min / max) [°C]		-22 / 40
Weight		280 kg

Main technical data - WAMAK AiWa 14 EVI H Out

Enclosure type		AiWa-O		Heat energy rejection side data			
Basic dimensions	Height [mm]	1760		Operating limit temperatures heating	MAX [°C]	65	
	Width [mm]	920			MIN [°C]	25	
	Length [mm]	660		for more see operating limits diagram			
Weight [kg]	280		Condenser	Port size	1.1/4 "		
Colour	Gray			Type	BPHE		
Enclosure IP Class	IP44			Count	1		
				Material	AISI 316		
Refrigeration cycle							
Compressor	Type	Scroll		Maximal operating pressure - refrigerant [bar]		45	
	Number of stages	1		Maximal operating pressure - Water [bar]		6	
	On/Off			Testing pressure [bar]		70	
	Power factor Cosφ	0.77		Heat transfer medium		Water	
	Winding resistance	2.33 Ohm		Volume flow @ dT 5K (nom) - Water [m3/h]		2.67	
Refrigerant		R410A		Internal pressure drop - Water [kPa]		12	
	Volme	5.4 kg		ECM speed circulator - condenser		UPM3 25-75	
	GWP	2088		Flow sensor consumer - analogue		0..10V	
	Safety class	A1		Temperature difference	@ 35°C (nom)	5 K	
Refrigeration oil type	POE RL32-3MAF		@ 55°C		8 K		
	Oil volume	1.24 L			@ 65°C	10 K	
Maximal pressure - refrigerant [bar]	45		Renewable energy extraction side data				
	PED class	1		Operating limit temperatures source	MIN [°C]	-22	
EVI - vapour injection with economizer					MAX [°C]	40	
APS System of liquid subcooling			for more see operating limits diagram				
Reversible operation (cooling)			Evaporator	Type	Cu-coil /Al-fin		
Reverse defrosting with hot gas				Count	1		
				Material	Cu/Al		
Electrical connection data							
Line voltage [#~ V/Hz]		3~ 400/50		Maximal operating pressure - refrigerant [bar]		28	
Current	nominal [A]	5.58		Heat transfer medium		Air	
	maximal [A]	10.90		Volume flow - Air [m3/h]		4860	
	starting [A]	15.06		Internal pressure drop - Air [kPa]		0.027	
Softstart	MCI 12		Temperature difference - Air		7 K		
Main safety	C25		Number of fans		1		
Control System							
Main controller	SIEMENS RVS 21 AVS 55.199		Fan diameter [mm]				630
Extension module	AVS75.3xx	AVS75.3xx	AVS75.372				
Bus Clip-In	LPB OCI346		Modbus OCI352				
Online connection	Web server OZW672		ToSyMo				
Superheat controller	1 - EEV H/C						

*** with accessory

WAMAK AiWa 14 EVI H Out

ErP (EU) No 811/2013: Technical parameters for heat pump space heaters

Model	AiWa 14 EVI H Out
Air-to-water heat pump	yes
Brine-to-water heat pump	no
Water-to-water heat pump	no
Low-temperature heat pump	no
Equipped with a supplementary heater	no
Heat pump combination heater	no
Temperature application	low (35°C - 30°C)
Climate conditions	average

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output at Tdesignh	Prated	12.4	kW	Seasonal space heating energy efficiency	η_s	184.3	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	10.9	kW	Tj = -7 °C	COPd	3.39	-
Tj = +2 °C	Pdh	13.0	kW	Tj = +2 °C	COPd	4.5	-
Tj = +7 °C	Pdh	15.3	kW	Tj = +7 °C	COPd	5.8	-
Tj = +12 °C	Pdh	18.2	kW	Tj = +12 °C	COPd	7.7	-
Tj = bivalent temperature	Pdh	10.7	kW	Tj = bivalent temperature	COPd	3.3	-
Tj = operation limit temperature	Pdh	7.8	kW	Tj = operation limit temperature	COPd	2.5	-
Bivalent temperature	Tbiv	-7	°C	Tj = operation limit temperature	TOL	-22	°C
Power consumption in modes other than active mode				Heating water operating limit temperature	WTOL	65	°C
Off mode	Poff	0.010	kW	Supplementary heater			
Thermostat-off mode	Pto	0.010	kW	Rated heat output	Psup	5.5	kW
Standby mode	Psb	0.010	kW	Type of energy input	electricity		
Crankcase heater mode	Pck	0.020	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors	-	4860	m ³ /h
Capacity control	fixed			For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	---	m ³ /h
Sound power level							
indoors	Lwa	---	dB				
outdoors	Lwa	59	dB				
Annual energy consumption	Q _{HE}	5445.0	kWh				

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ErP (EU) No 811/2013: Technical parameters for heat pump space heaters

Model	AiWa 14 EVI H Out
Air-to-water heat pump	yes
Brine-to-water heat pump	no
Water-to-water heat pump	no
Low-temperature heat pump	no
Equipped with a supplementary heater	no
Heat pump combination heater	no
Temperature application	middle (55°C - 47°C)
Climate conditions	average

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output at Tdesignh	Prated	13.2	kW	Seasonal space heating energy efficiency	η_s	141.7	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	11.5	kW	Tj = -7 °C	COPd	2.35	-
Tj = +2 °C	Pdh	13.2	kW	Tj = +2 °C	COPd	3.4	-
Tj = +7 °C	Pdh	15.4	kW	Tj = +7 °C	COPd	4.6	-
Tj = +12 °C	Pdh	18.2	kW	Tj = +12 °C	COPd	6.5	-
Tj = bivalent temperature	Pdh	11.4	kW	Tj = bivalent temperature	COPd	2.2	-
Tj = operation limit temperature	Pdh	8.6	kW	Tj = operation limit temperature	COPd	1.8	-
Bivalent temperature	Tbiv	-7	°C	Tj = operation limit temperature	TOL	-22	°C
Power consumption in modes other than active mode				Heating water operating limit temperature	WTOL	65	°C
Off mode	Poff	0.010	kW	Supplementary heater			
Thermostat-off mode	Pto	0.010	kW	Rated heat output	Psup	5.5	kW
Standby mode	Psb	0.010	kW	Type of energy input	electricity		
Crankcase heater mode	Pck	0.020	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors	-	4860	m ³ /h
Capacity control	fixed			For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	---	m ³ /h
Sound power level							
indoors	Lwa	---	dB				
outdoors	Lwa	59	dB				
Annual energy consumption	Q _{HE}	7581.3	kWh				

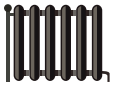
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AiWa 14 EVI H Out



55 °C

35 °C



Speaker icon
--- dB

Microphone icon
59 dB

■ 14	■ 13
■ 14	■ 13
■ 13	■ 12

kW kW

2019

811/2013

AiWa 14 EVI H Out

ErP Data

	55 °C	35 °C
Energy class	A++	A+++
η [%]	141.7	184.3
P_{rated} [kW]	14	13
Q_{HE} [kWh/y]	7582	5445
SCOP [-]	3.54	4.61
$T_{bivalent}$ [°C]	-7	-7

CONTROLLER



+ QAA55/75 class VII 3.5% ↓
 - QAA55/75 class III 1.5% ↓

Heating performance data

Version: v2024.010-AW

Average Climate / Low Temperature [35°C]

ZHI14K1P-TFM_R410A_1_AW

Operating conditions		Qh	P	COP
1	A7 / W30-35	15.4	3.3	4.73
2	A2 / W35	13.1	3.3	3.96
3	A-22 / W35	7.8	3.1	2.50
A	A-7 / W34	10.9	3.2	3.39
B	A2 / W30	13.0	2.9	4.46
C	A7 / W27	15.3	2.6	5.81
D	A12 / W24	18.2	2.4	7.73
E	A-10 / W35	10.7	3.3	3.25
F	A-7 / W34	10.9	3.2	3.39

SCOP DATA EN 14825:2018	
Average Climate / Low Temperature [35°C]	
SCOPon	4.70
SCOPnet	4.75
SCOP	4.61
η [%]	184.25
Label	A+++
Qh [kWh]	5444.98
Pdesignh [kW]	12.4
Tbivalent [°C]	-7.00

Average Climate / Medium Temperature [55°C]

Operating conditions		Qh	P	COP
1	A7 / W47-55	15.7	5.4	2.90
2	A2 / W55	13.6	5.4	2.53
3	A-22 / W55	8.6	4.5	1.78
A	A-7 / W52	11.5	4.9	2.35
B	A2 / W42	13.2	3.9	3.37
C	A7 / W36	15.4	3.3	4.61
D	A12 / W30	18.2	2.8	6.55
E	A-10 / W55	11.4	5.2	2.18
F	A-7 / W55	11.7	5.3	2.22

SCOP DATA EN 14825:2018	
Average Climate / Medium Temperature [55°C]	
SCOPon	3.60
SCOPnet	3.63
SCOP	3.54
η [%]	141.70
Label	A++
Qh [kWh]	7581.26
Pdesignh [kW]	13.2
Tbivalent [°C]	-7.00

Cooling performance data

Low temperature cooling W 12 / 7°C

Operating conditions		Qc	P	EER
A	A35 / W12-7	11.0	4.0	2.74
B	A30 / W12-7	11.4	3.5	3.21
C	A25 / W12-7	11.7	3.1	3.74
D	A20 / W12-7	11.9	2.7	4.36

SEER DATA EN 14825:2018 [W 12 / 7°C]	
SEERon	3.64
SEER	3.55
Qc [kWh]	2282.53
η [%]	141.87

Radiant cooling W 23 / 18°C

Operating conditions		Qc	P	EER
A	A35 / W23-18	14.8	4.0	3.69
B	A30 / W23-18	15.3	3.2	4.33
C	A25 / W23-18	15.8	2.8	5.06
D	A20 / W23-18	16.1	2.4	5.90

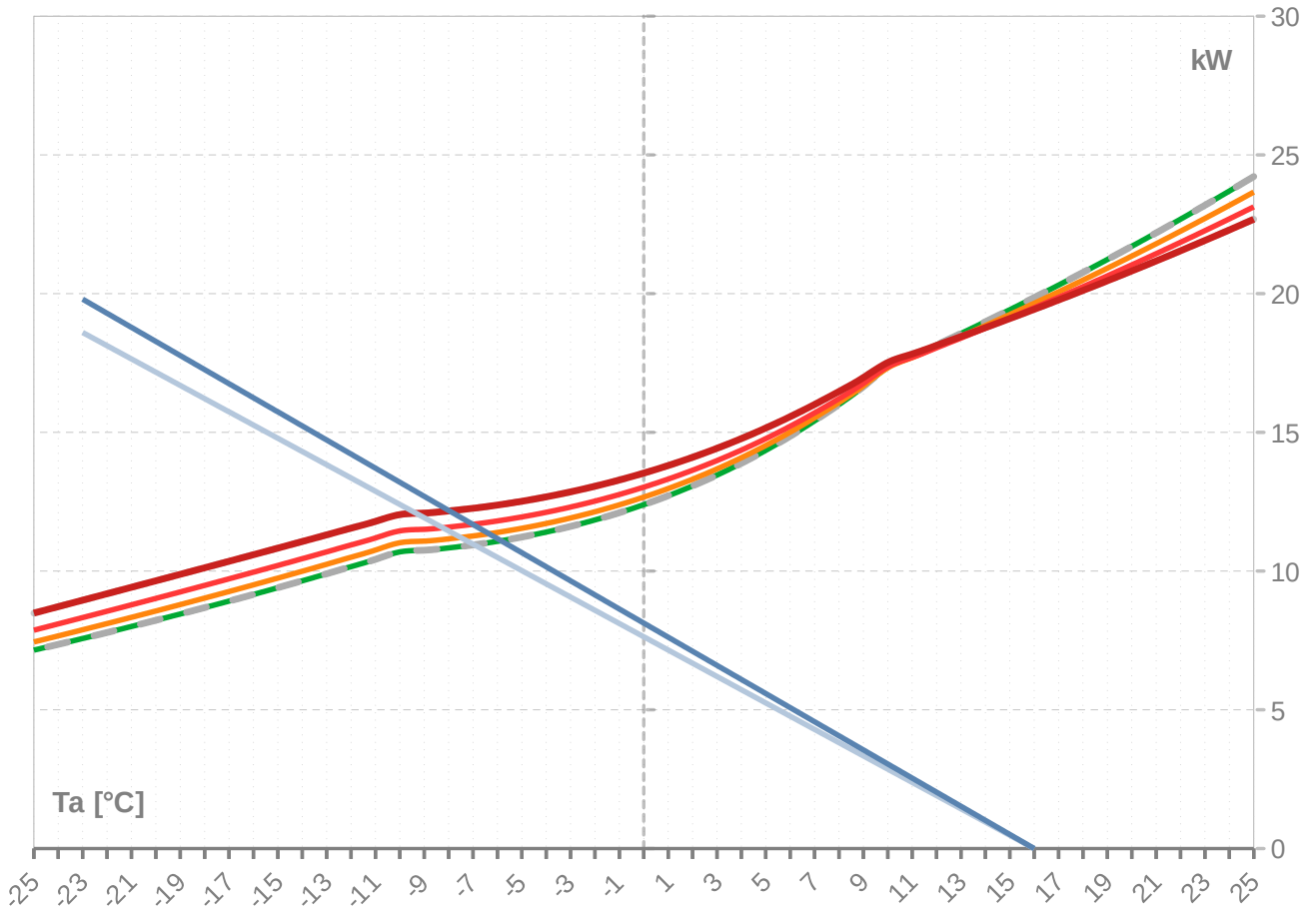
SEER DATA EN 14825:2018 [W 23 / 18°C]	
SEERon	4.92
SEER	4.75
Qc [kWh]	1689.69
η [%]	189.95

WAMAK AiWa 14 EVI H Out

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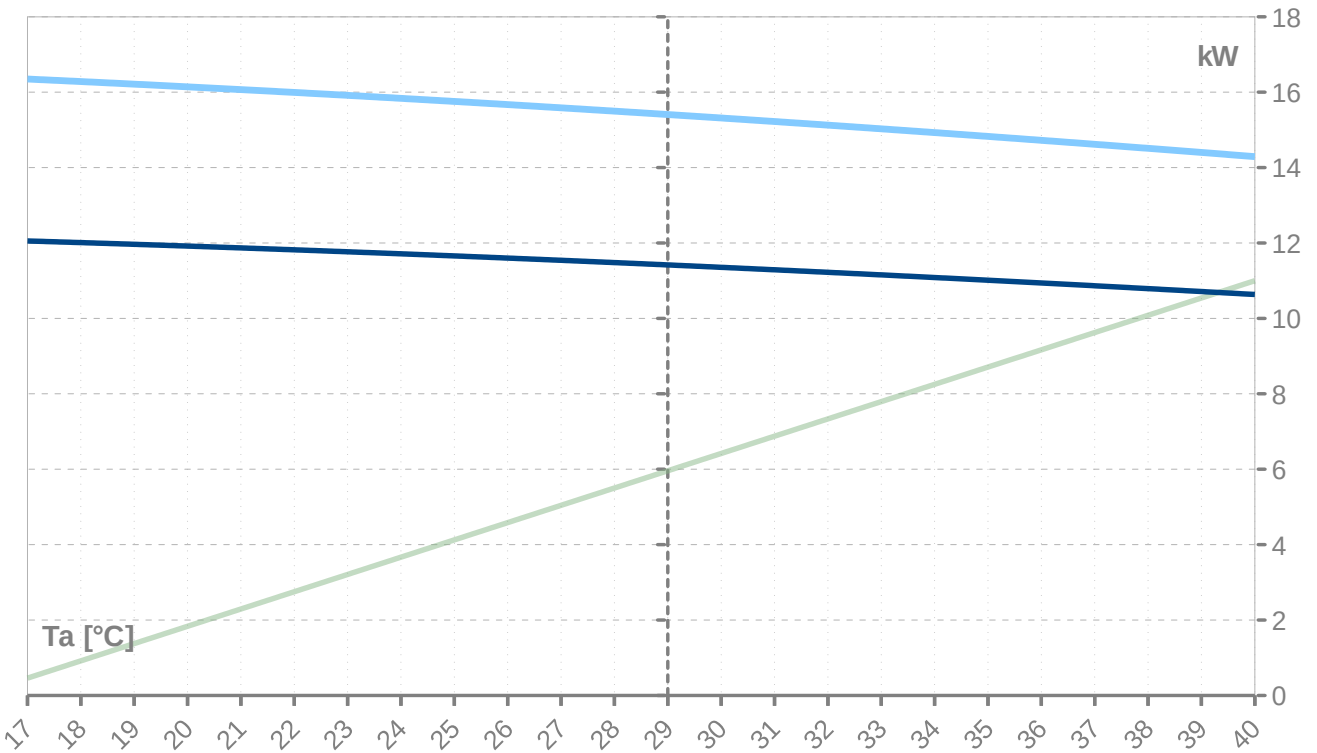
Performance lines - heating

- Qh-nom-35 — Qh-min-35 - - - Qh-max-65 — Qh-nom-45 — Qh-nom-55
- Qh-nom-65 — Pratedh-35 — Pratedh-55



Performance lines - cooling

- Pratedc — Qc-12/7 — Qc-23/18



Th [°C]		35 °C								
Ta [°C]	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin-min [kW]	Pin-max [kW]	COP kW / kW	I nom [A]	I min [A]	I max [A]
25	20.3	20.3		3.1	3.1		6.52	5.5	5.5	
24	20.3	20.3		3.1	3.1		6.52	5.5	5.5	
23	20.3	20.3		3.1	3.1		6.52	5.5	5.5	
22	20.3	20.3		3.1	3.1		6.52	5.5	5.5	
21	20.3	20.3		3.1	3.1		6.52	5.5	5.5	
20	20.3	20.3		3.1	3.1		6.52	5.5	5.5	
19	20.3	20.3		3.1	3.1		6.52	5.5	5.5	
18	20.3	20.3		3.1	3.1		6.52	5.5	5.5	
17	20.3	20.3		3.1	3.1		6.52	5.5	5.5	
16	19.9	19.9	19.9	3.1	3.1	3.1	6.35	5.5	5.5	5.5
15	19.4	19.4	19.4	3.1	3.1	3.1	6.18	5.5	5.5	5.5
14	19.0	19.0	19.0	3.2	3.2	3.2	6.02	5.5	5.5	5.5
13	18.6	18.6	18.6	3.2	3.2	3.2	5.86	5.5	5.5	5.5
12	18.2	18.2	18.2	3.2	3.2	3.2	5.71	5.5	5.5	5.5
11	17.7	17.7	17.7	3.2	3.2	3.2	5.56	5.6	5.6	5.6
10	17.3	17.3	17.3	3.2	3.2	3.2	5.41	5.6	5.6	5.6
9	16.6	16.6	16.6	3.2	3.2	3.2	5.16	5.6	5.6	5.6
8	16.0	16.0	16.0	3.2	3.2	3.2	4.94	5.6	5.6	5.6
7	15.4	15.4	15.4	3.3	3.3	3.3	4.73	5.6	5.6	5.6
6	14.9	14.9	14.9	3.3	3.3	3.3	4.55	5.6	5.6	5.6
5	14.4	14.4	14.4	3.3	3.3	3.3	4.38	5.7	5.7	5.7
4	13.9	13.9	13.9	3.3	3.3	3.3	4.22	5.7	5.7	5.7
3	13.5	13.5	13.5	3.3	3.3	3.3	4.09	5.7	5.7	5.7
2	13.1	13.1	13.1	3.3	3.3	3.3	3.96	5.7	5.7	5.7
1	12.7	12.7	12.7	3.3	3.3	3.3	3.85	5.7	5.7	5.7
0	12.4	12.4	12.4	3.3	3.3	3.3	3.75	5.7	5.7	5.7
-1	12.1	12.1	12.1	3.3	3.3	3.3	3.66	5.7	5.7	5.7
-2	11.8	11.8	11.8	3.3	3.3	3.3	3.59	5.7	5.7	5.7
-3	11.6	11.6	11.6	3.3	3.3	3.3	3.52	5.7	5.7	5.7
-4	11.4	11.4	11.4	3.3	3.3	3.3	3.46	5.7	5.7	5.7
-5	11.2	11.2	11.2	3.3	3.3	3.3	3.40	5.7	5.7	5.7
-6	11.1	11.1	11.1	3.3	3.3	3.3	3.36	5.7	5.7	5.7
-7	10.9	10.9	10.9	3.3	3.3	3.3	3.32	5.7	5.7	5.7
-8	10.8	10.8	10.8	3.3	3.3	3.3	3.29	5.7	5.7	5.7
-9	10.8	10.8	10.8	3.3	3.3	3.3	3.27	5.7	5.7	5.7
-10	10.7	10.7	10.7	3.3	3.3	3.3	3.25	5.7	5.7	5.7
-11	10.4	10.4	10.4	3.3	3.3	3.3	3.18	5.7	5.7	5.7
-12	10.2	10.2	10.2	3.3	3.3	3.3	3.10	5.7	5.7	5.7
-13	9.9	9.9	9.9	3.3	3.3	3.3	3.03	5.7	5.7	5.7
-14	9.6	9.6	9.6	3.3	3.3	3.3	2.96	5.6	5.6	5.6
-15	9.4	9.4	9.4	3.2	3.2	3.2	2.90	5.6	5.6	5.6
-16	9.2	9.2	9.2	3.2	3.2	3.2	2.83	5.6	5.6	5.6
-17	8.9	8.9	8.9	3.2	3.2	3.2	2.77	5.6	5.6	5.6
-18	8.7	8.7	8.7	3.2	3.2	3.2	2.71	5.6	5.6	5.6
-19	8.5	8.5	8.5	3.2	3.2	3.2	2.66	5.6	5.6	5.6
-20	8.2	8.2	8.2	3.2	3.2	3.2	2.60	5.5	5.5	5.5
-21	8.0	8.0	8.0	3.1	3.1	3.1	2.55	5.5	5.5	5.5
-22	7.8	7.8	7.8	3.1	3.1	3.1	2.50	5.5	5.5	5.5
-23	7.6	7.6	7.6	3.1	3.1	3.1	2.45	5.5	5.5	5.5
-24	7.4	7.4	7.4	3.1	3.1	3.1	2.40	5.4	5.4	5.4
-25	7.1	7.1	7.1	3.0	3.0	3.0	2.35	5.4	5.4	5.4

* attention: operating limits not reflected in performance table

ZHI14K1P-TFM_R410A_1_AW

Th [°C]		45 °C								
Ta [°C]	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin-min [kW]	Pin-max [kW]	COP kW / kW	I nom [A]	I min [A]	I max [A]
25	23.7	23.7	23.7	4.0	4.0	4.0	5.96	6.4	6.4	6.4
24	23.2	23.2	23.2	4.0	4.0	4.0	5.81	6.5	6.5	6.5
23	22.7	22.7	22.7	4.0	4.0	4.0	5.67	6.5	6.5	6.5
22	22.3	22.3	22.3	4.0	4.0	4.0	5.53	6.5	6.5	6.5
21	21.8	21.8	21.8	4.0	4.0	4.0	5.40	6.5	6.5	6.5
20	21.4	21.4	21.4	4.1	4.1	4.1	5.27	6.5	6.5	6.5
19	20.9	20.9	20.9	4.1	4.1	4.1	5.14	6.6	6.6	6.6
18	20.5	20.5	20.5	4.1	4.1	4.1	5.02	6.6	6.6	6.6
17	20.1	20.1	20.1	4.1	4.1	4.1	4.90	6.6	6.6	6.6
16	19.7	19.7	19.7	4.1	4.1	4.1	4.78	6.6	6.6	6.6
15	19.2	19.2	19.2	4.1	4.1	4.1	4.67	6.6	6.6	6.6
14	18.8	18.8	18.8	4.1	4.1	4.1	4.56	6.7	6.7	6.7
13	18.5	18.5	18.5	4.1	4.1	4.1	4.45	6.7	6.7	6.7
12	18.1	18.1	18.1	4.2	4.2	4.2	4.35	6.7	6.7	6.7
11	17.7	17.7	17.7	4.2	4.2	4.2	4.25	6.7	6.7	6.7
10	17.3	17.3	17.3	4.2	4.2	4.2	4.15	6.7	6.7	6.7
9	16.7	16.7	16.7	4.2	4.2	4.2	3.98	6.7	6.7	6.7
8	16.1	16.1	16.1	4.2	4.2	4.2	3.82	6.7	6.7	6.7
7	15.5	15.5	15.5	4.2	4.2	4.2	3.68	6.8	6.8	6.8
6	15.0	15.0	15.0	4.2	4.2	4.2	3.55	6.8	6.8	6.8
5	14.5	14.5	14.5	4.2	4.2	4.2	3.44	6.8	6.8	6.8
4	14.1	14.1	14.1	4.2	4.2	4.2	3.33	6.8	6.8	6.8
3	13.7	13.7	13.7	4.2	4.2	4.2	3.24	6.8	6.8	6.8
2	13.3	13.3	13.3	4.2	4.2	4.2	3.15	6.8	6.8	6.8
1	13.0	13.0	13.0	4.2	4.2	4.2	3.07	6.8	6.8	6.8
0	12.7	12.7	12.7	4.2	4.2	4.2	3.01	6.8	6.8	6.8
-1	12.4	12.4	12.4	4.2	4.2	4.2	2.94	6.8	6.8	6.8
-2	12.1	12.1	12.1	4.2	4.2	4.2	2.89	6.7	6.7	6.7
-3	11.9	11.9	11.9	4.2	4.2	4.2	2.84	6.7	6.7	6.7
-4	11.7	11.7	11.7	4.2	4.2	4.2	2.80	6.7	6.7	6.7
-5	11.5	11.5	11.5	4.2	4.2	4.2	2.76	6.7	6.7	6.7
-6	11.4	11.4	11.4	4.2	4.2	4.2	2.73	6.7	6.7	6.7
-7	11.3	11.3	11.3	4.2	4.2	4.2	2.70	6.7	6.7	6.7
-8	11.2	11.2	11.2	4.2	4.2	4.2	2.68	6.7	6.7	6.7
-9	11.1	11.1	11.1	4.2	4.2	4.2	2.66	6.7	6.7	6.7
-10	11.0	11.0	11.0	4.2	4.2	4.2	2.65	6.7	6.7	6.7
-11	10.8	10.8	10.8	4.1	4.1	4.1	2.60	6.7	6.7	6.7
-12	10.5	10.5	10.5	4.1	4.1	4.1	2.54	6.7	6.7	6.7
-13	10.2	10.2	10.2	4.1	4.1	4.1	2.49	6.6	6.6	6.6
-14	10.0	10.0	10.0	4.1	4.1	4.1	2.44	6.6	6.6	6.6
-15	9.7	9.7	9.7	4.1	4.1	4.1	2.40	6.6	6.6	6.6
-16	9.5	9.5	9.5	4.0	4.0	4.0	2.35	6.6	6.6	6.6
-17	9.3	9.3	9.3	4.0	4.0	4.0	2.30	6.5	6.5	6.5
-18	9.0	9.0	9.0	4.0	4.0	4.0	2.26	6.5	6.5	6.5
-19	8.8	8.8	8.8	4.0	4.0	4.0	2.22	6.5	6.5	6.5
-20	8.6	8.6	8.6	3.9	3.9	3.9	2.18	6.4	6.4	6.4
-21	8.3	8.3	8.3	3.9	3.9	3.9	2.14	6.4	6.4	6.4
-22	8.1	8.1	8.1	3.9	3.9	3.9	2.10	6.3	6.3	6.3
-23	7.9	7.9	7.9	3.8	3.8	3.8	2.06	6.3	6.3	6.3
-24	7.7	7.7	7.7	3.8	3.8	3.8	2.02	6.2	6.2	6.2
-25	7.4	7.4	7.4	3.8	3.8	3.8	1.98	6.2	6.2	6.2

* attention: operating limits not reflected in performance table

WAMAK AiWa 14 EVI H Out

Th [°C]		55 °C								
Ta [°C]	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin-min [kW]	Pin-max [kW]	COP kW / kW	I nom [A]	I min [A]	I max [A]
25	23.1	23.1	23.1	5.2	5.2	5.2	4.42	8.0	8.0	8.0
24	22.7	22.7	22.7	5.3	5.3	5.3	4.32	8.0	8.0	8.0
23	22.3	22.3	22.3	5.3	5.3	5.3	4.23	8.1	8.1	8.1
22	21.9	21.9	21.9	5.3	5.3	5.3	4.14	8.1	8.1	8.1
21	21.4	21.4	21.4	5.3	5.3	5.3	4.05	8.1	8.1	8.1
20	21.0	21.0	21.0	5.3	5.3	5.3	3.96	8.1	8.1	8.1
19	20.6	20.6	20.6	5.3	5.3	5.3	3.87	8.1	8.1	8.1
18	20.2	20.2	20.2	5.3	5.3	5.3	3.79	8.2	8.2	8.2
17	19.9	19.9	19.9	5.4	5.4	5.4	3.71	8.2	8.2	8.2
16	19.5	19.5	19.5	5.4	5.4	5.4	3.63	8.2	8.2	8.2
15	19.1	19.1	19.1	5.4	5.4	5.4	3.56	8.2	8.2	8.2
14	18.8	18.8	18.8	5.4	5.4	5.4	3.49	8.2	8.2	8.2
13	18.4	18.4	18.4	5.4	5.4	5.4	3.41	8.2	8.2	8.2
12	18.0	18.0	18.0	5.4	5.4	5.4	3.34	8.2	8.2	8.2
11	17.7	17.7	17.7	5.4	5.4	5.4	3.28	8.2	8.2	8.2
10	17.4	17.4	17.4	5.4	5.4	5.4	3.21	8.3	8.3	8.3
9	16.8	16.8	16.8	5.4	5.4	5.4	3.09	8.3	8.3	8.3
8	16.2	16.2	16.2	5.4	5.4	5.4	2.99	8.3	8.3	8.3
7	15.7	15.7	15.7	5.4	5.4	5.4	2.90	8.3	8.3	8.3
6	15.2	15.2	15.2	5.4	5.4	5.4	2.81	8.3	8.3	8.3
5	14.8	14.8	14.8	5.4	5.4	5.4	2.73	8.3	8.3	8.3
4	14.4	14.4	14.4	5.4	5.4	5.4	2.66	8.2	8.2	8.2
3	14.0	14.0	14.0	5.4	5.4	5.4	2.59	8.2	8.2	8.2
2	13.6	13.6	13.6	5.4	5.4	5.4	2.53	8.2	8.2	8.2
1	13.3	13.3	13.3	5.4	5.4	5.4	2.48	8.2	8.2	8.2
0	13.0	13.0	13.0	5.4	5.4	5.4	2.43	8.2	8.2	8.2
-1	12.8	12.8	12.8	5.3	5.3	5.3	2.39	8.2	8.2	8.2
-2	12.5	12.5	12.5	5.3	5.3	5.3	2.35	8.2	8.2	8.2
-3	12.3	12.3	12.3	5.3	5.3	5.3	2.32	8.1	8.1	8.1
-4	12.1	12.1	12.1	5.3	5.3	5.3	2.29	8.1	8.1	8.1
-5	11.9	11.9	11.9	5.3	5.3	5.3	2.26	8.1	8.1	8.1
-6	11.8	11.8	11.8	5.3	5.3	5.3	2.24	8.1	8.1	8.1
-7	11.7	11.7	11.7	5.3	5.3	5.3	2.22	8.1	8.1	8.1
-8	11.6	11.6	11.6	5.3	5.3	5.3	2.20	8.1	8.1	8.1
-9	11.5	11.5	11.5	5.2	5.2	5.2	2.19	8.1	8.1	8.1
-10	11.4	11.4	11.4	5.2	5.2	5.2	2.18	8.0	8.0	8.0
-11	11.2	11.2	11.2	5.2	5.2	5.2	2.14	8.0	8.0	8.0
-12	10.9	10.9	10.9	5.2	5.2	5.2	2.11	8.0	8.0	8.0
-13	10.7	10.7	10.7	5.2	5.2	5.2	2.07	7.9	7.9	7.9
-14	10.4	10.4	10.4	5.1	5.1	5.1	2.04	7.9	7.9	7.9
-15	10.2	10.2	10.2	5.1	5.1	5.1	2.00	7.9	7.9	7.9
-16	10.0	10.0	10.0	5.1	5.1	5.1	1.97	7.8	7.8	7.8
-17	9.7	9.7	9.7	5.0	5.0	5.0	1.93	7.8	7.8	7.8
-18	9.5	9.5	9.5	5.0	5.0	5.0	1.90	7.7	7.7	7.7
-19	9.2	9.2	9.2	4.9	4.9	4.9	1.87	7.7	7.7	7.7
-20	9.0	9.0	9.0	4.9	4.9	4.9	1.84	7.6	7.6	7.6
-21	8.8	8.8	8.8	4.9	4.9	4.9	1.81	7.5	7.5	7.5
-22	8.6	8.6	8.6	4.8	4.8	4.8	1.78	7.5	7.5	7.5
-23	8.3	8.3	8.3	4.8	4.8	4.8	1.75	7.4	7.4	7.4
-24	8.1	8.1	8.1	4.7	4.7	4.7	1.72	7.3	7.3	7.3
-25	7.9	7.9	7.9	4.6	4.6	4.6	1.69	7.3	7.3	7.3

* attention: operating limits not reflected in performance table

WAMAK AiWa 14 EVI H Out

Th [°C]		T-Max @ 65 °C								
Ta [°C]	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin-min [kW]	Pin-max [kW]	COP kW / kW	I nom [A]	I min [A]	I max [A]
25	22.7	22.7	22.7	6.8	6.8	6.8	3.32	10.1	10.1	10.1
24	22.3	22.3	22.3	6.9	6.9	6.9	3.25	10.2	10.2	10.2
23	21.9	21.9	21.9	6.9	6.9	6.9	3.19	10.2	10.2	10.2
22	21.5	21.5	21.5	6.9	6.9	6.9	3.13	10.2	10.2	10.2
21	21.2	21.2	21.2	6.9	6.9	6.9	3.07	10.2	10.2	10.2
20	20.8	20.8	20.8	6.9	6.9	6.9	3.02	10.2	10.2	10.2
19	20.5	20.5	20.5	6.9	6.9	6.9	2.96	10.2	10.2	10.2
18	20.1	20.1	20.1	6.9	6.9	6.9	2.91	10.3	10.3	10.3
17	19.8	19.8	19.8	6.9	6.9	6.9	2.85	10.3	10.3	10.3
16	19.4	19.4	19.4	6.9	6.9	6.9	2.80	10.3	10.3	10.3
15	19.1	19.1	19.1	6.9	6.9	6.9	2.75	10.3	10.3	10.3
14	18.8	18.8	18.8	6.9	6.9	6.9	2.70	10.3	10.3	10.3
13	18.5	18.5	18.5	6.9	6.9	6.9	2.66	10.3	10.3	10.3
12	18.1	18.1	18.1	7.0	7.0	7.0	2.61	10.3	10.3	10.3
11	17.8	17.8	17.8	7.0	7.0	7.0	2.56	10.3	10.3	10.3
10	17.5	17.5	17.5	7.0	7.0	7.0	2.52	10.3	10.3	10.3
9	17.0	17.0	17.0	6.9	6.9	6.9	2.44	10.3	10.3	10.3
8	16.5	16.5	16.5	6.9	6.9	6.9	2.37	10.3	10.3	10.3
7	16.0	16.0	16.0	6.9	6.9	6.9	2.31	10.3	10.3	10.3
6	15.6	15.6	15.6	6.9	6.9	6.9	2.25	10.2	10.2	10.2
5	15.2	15.2	15.2	6.9	6.9	6.9	2.20	10.2	10.2	10.2
4	14.8	14.8	14.8	6.9	6.9	6.9	2.15	10.2	10.2	10.2
3	14.4	14.4	14.4	6.8	6.8	6.8	2.11	10.2	10.2	10.2
2	14.1	14.1	14.1	6.8	6.8	6.8	2.07	10.1	10.1	10.1
1	13.8	13.8	13.8	6.8	6.8	6.8	2.03	10.1	10.1	10.1
0	13.5	13.5	13.5	6.8	6.8	6.8	2.00	10.1	10.1	10.1
-1	13.3	13.3	13.3	6.8	6.8	6.8	1.97	10.0	10.0	10.0
-2	13.1	13.1	13.1	6.7	6.7	6.7	1.94	10.0	10.0	10.0
-3	12.9	12.9	12.9	6.7	6.7	6.7	1.92	10.0	10.0	10.0
-4	12.7	12.7	12.7	6.7	6.7	6.7	1.90	9.9	9.9	9.9
-5	12.5	12.5	12.5	6.7	6.7	6.7	1.88	9.9	9.9	9.9
-6	12.4	12.4	12.4	6.6	6.6	6.6	1.86	9.9	9.9	9.9
-7	12.3	12.3	12.3	6.6	6.6	6.6	1.85	9.9	9.9	9.9
-8	12.2	12.2	12.2	6.6	6.6	6.6	1.84	9.9	9.9	9.9
-9	12.1	12.1	12.1	6.6	6.6	6.6	1.83	9.8	9.8	9.8
-10	12.0	12.0	12.0	6.6	6.6	6.6	1.82	9.8	9.8	9.8
-11	11.8	11.8	11.8	6.6	6.6	6.6	1.80	9.8	9.8	9.8
-12	11.5	11.5	11.5	6.5	6.5	6.5	1.77	9.7	9.7	9.7
-13	11.3	11.3	11.3	6.5	6.5	6.5	1.75	9.7	9.7	9.7
-14	11.1	11.1	11.1	6.4	6.4	6.4	1.72	9.6	9.6	9.6
-15	10.8	10.8	10.8	6.4	6.4	6.4	1.70	9.5	9.5	9.5
-16										
-17										
-18										
-19										
-20										
-21										
-22										
-23										
-24										
-25										

* attention: operating limits not reflected in performance table

WAMAK AiWa 14 EVI H Out

Tc [°C]		W 12 / 7 °C								
Ta [°C]	Qc nom [kW]	Qc min [kW]	Qc max [kW]	Pin [kW]	Pin min [kW]	Pin max [kW]	EER kW / kW	I nom [A]	I min [A]	I max [A]
40	10.6	10.6	10.6	4.6	4.6	4.6	2.34	7.2	7.2	7.2
39	10.7	10.7	10.7	4.4	4.4	4.4	2.41	7.0	7.0	7.0
38	10.8	10.8	10.8	4.3	4.3	4.3	2.49	6.9	6.9	6.9
37	10.9	10.9	10.9	4.2	4.2	4.2	2.57	6.8	6.8	6.8
36	10.9	10.9	10.9	4.1	4.1	4.1	2.66	6.6	6.6	6.6
35	11.0	11.0	11.0	4.0	4.0	4.0	2.74	6.5	6.5	6.5
34	11.1	11.1	11.1	3.9	3.9	3.9	2.83	6.4	6.4	6.4
33	11.2	11.2	11.2	3.8	3.8	3.8	2.92	6.3	6.3	6.3
32	11.2	11.2	11.2	3.7	3.7	3.7	3.01	6.2	6.2	6.2
31	11.3	11.3	11.3	3.6	3.6	3.6	3.11	6.1	6.1	6.1
30	11.4	11.4	11.4	3.5	3.5	3.5	3.21	6.0	6.0	6.0
29	11.4	11.4	11.4	3.4	3.4	3.4	3.31	5.9	5.9	5.9
28	11.5	11.5	11.5	3.4	3.4	3.4	3.41	5.8	5.8	5.8
27	11.5	11.5	11.5	3.3	3.3	3.3	3.52	5.7	5.7	5.7
26	11.6	11.6	11.6	3.2	3.2	3.2	3.63	5.6	5.6	5.6
25	11.7	11.7	11.7	3.1	3.1	3.1	3.74	5.5	5.5	5.5
24	11.7	11.7	11.7	3.0	3.0	3.0	3.86	5.4	5.4	5.4
23	11.8	11.8	11.8	3.0	3.0	3.0	3.98	5.3	5.3	5.3
22	11.8	11.8	11.8	2.9	2.9	2.9	4.10	5.2	5.2	5.2
21	11.9	11.9	11.9	2.8	2.8	2.8	4.23	5.1	5.1	5.1
20	11.9	11.9	11.9	2.7	2.7	2.7	4.36	5.1	5.1	5.1
19	12.0	12.0	12.0	2.7	2.7	2.7	4.49	5.0	5.0	5.0
18	12.0	12.0	12.0	2.6	2.6	2.6	4.63	4.9	4.9	4.9
17	12.1	12.1	12.1	2.5	2.5	2.5	4.77	4.9	4.9	4.9

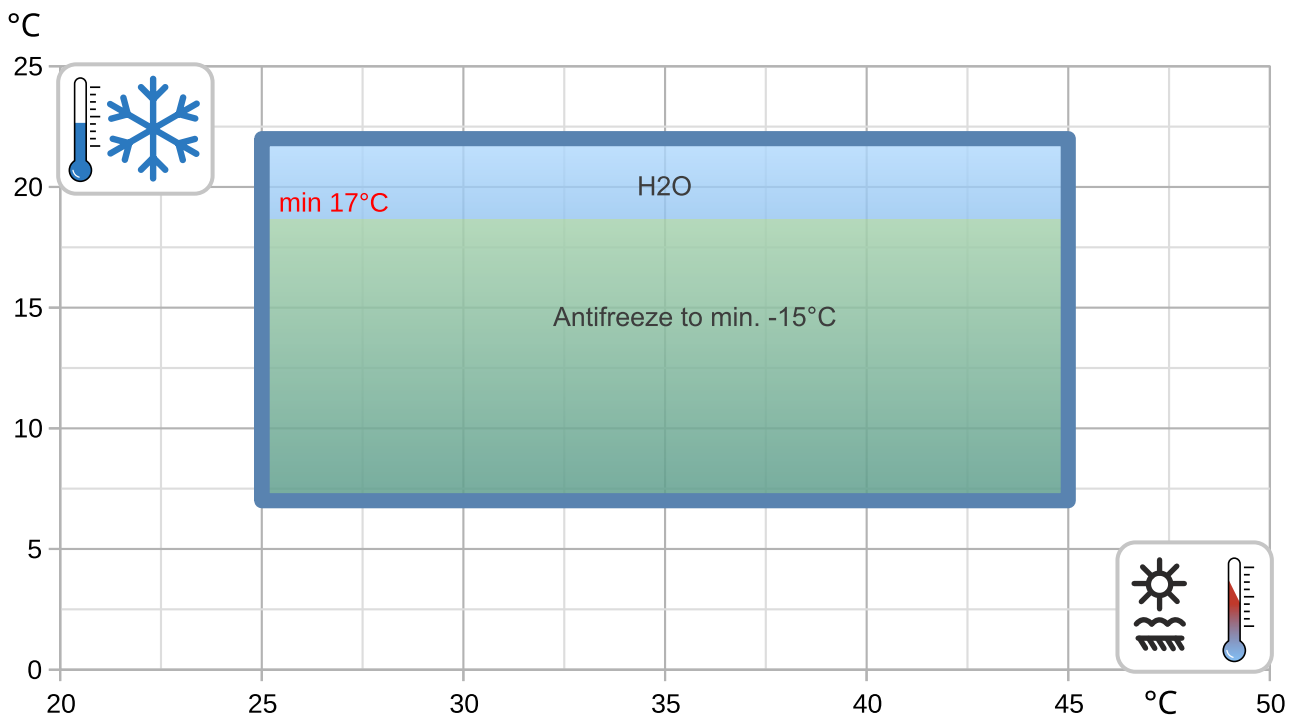
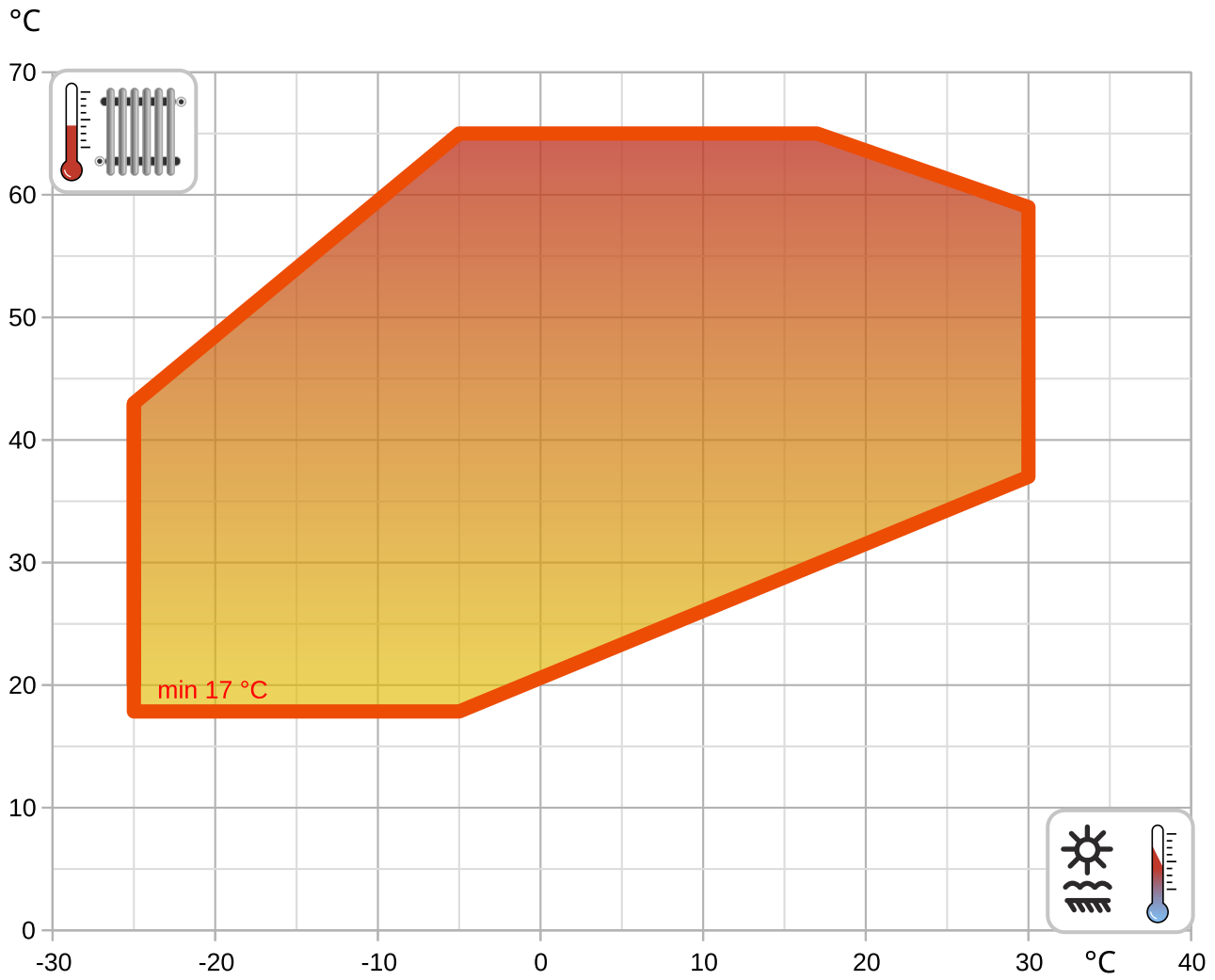
Tc [°C]		W 23 / 18 °C								
Ta [°C]	Qc [kW]	Qh-min [kW]	Qh-max [kW]	Pin [kW]	Pin-min [kW]	Pin-max [kW]	EER kW / kW	I [A]	I-min [A]	I-max [A]
40	14.3	14.3	14.3	4.6	4.6	4.6	3.14	7.1	7.1	7.1
39	14.4	14.4	14.4	4.4	4.4	4.4	3.24	6.9	6.9	6.9
38	14.5	14.5	14.5	4.3	4.3	4.3	3.35	6.8	6.8	6.8
37	14.6	14.6	14.6	4.2	4.2	4.2	3.46	6.7	6.7	6.7
36	14.7	14.7	14.7	4.1	4.1	4.1	3.57	6.5	6.5	6.5
35	14.8	14.8	14.8	4.0	4.0	4.0	3.69	6.4	6.4	6.4
34	14.9	14.9	14.9	3.9	3.9	3.9	3.81	6.3	6.3	6.3
33	15.0	15.0	15.0	3.8	3.8	3.8	3.94	6.2	6.2	6.2
32	15.1	15.1	15.1	3.7	3.7	3.7	4.06	6.1	6.1	6.1
31	15.2	15.2	15.2	3.6	3.6	3.6	4.19	5.9	5.9	5.9
30	15.3	15.3	15.3	3.5	3.5	3.5	4.33	5.8	5.8	5.8
29	15.4	15.4	15.4	3.4	3.4	3.4	4.47	5.7	5.7	5.7
28	15.5	15.5	15.5	3.4	3.4	3.4	4.61	5.6	5.6	5.6
27	15.6	15.6	15.6	3.3	3.3	3.3	4.76	5.5	5.5	5.5
26	15.7	15.7	15.7	3.2	3.2	3.2	4.91	5.4	5.4	5.4
25	15.8	15.8	15.8	3.1	3.1	3.1	5.06	5.4	5.4	5.4
24	15.8	15.8	15.8	3.0	3.0	3.0	5.22	5.3	5.3	5.3
23	15.9	15.9	15.9	3.0	3.0	3.0	5.38	5.2	5.2	5.2
22	16.0	16.0	16.0	2.9	2.9	2.9	5.55	5.1	5.1	5.1
21	16.1	16.1	16.1	2.8	2.8	2.8	5.73	5.0	5.0	5.0
20	16.1	16.1	16.1	2.7	2.7	2.7	5.90	5.0	5.0	5.0
19	16.2	16.2	16.2	2.7	2.7	2.7	6.09	4.9	4.9	4.9
18	16.3	16.3	16.3	2.6	2.6	2.6	6.28	4.8	4.8	4.8
17	16.3	16.3	16.3	2.5	2.5	2.5	6.47	4.7	4.7	4.7

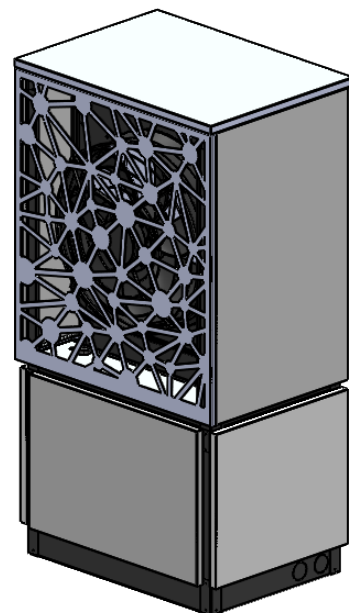
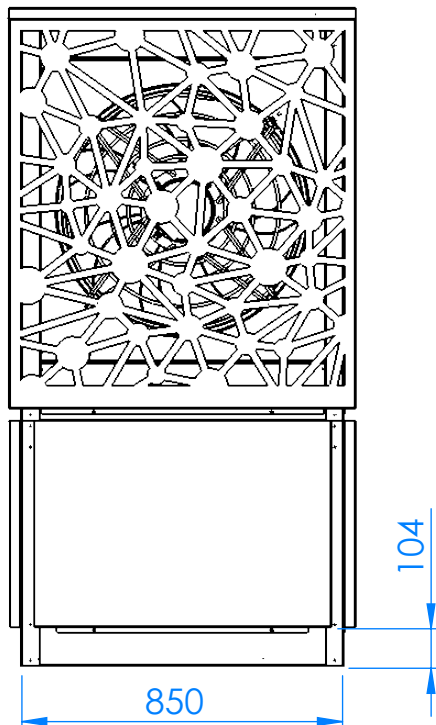
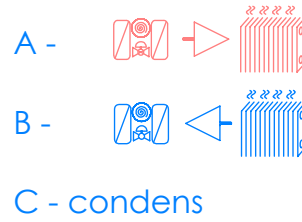
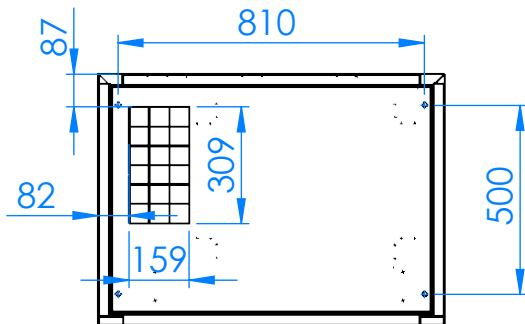
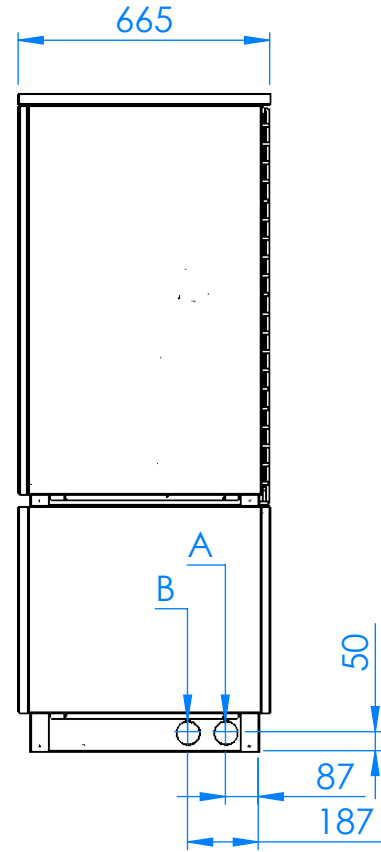
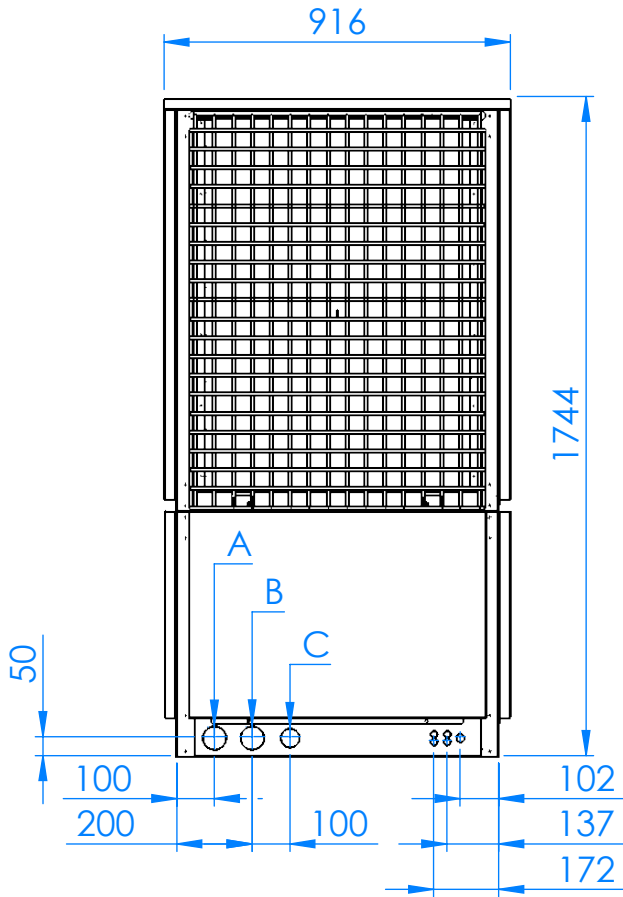
* attention: operating limits not reflected in performance table

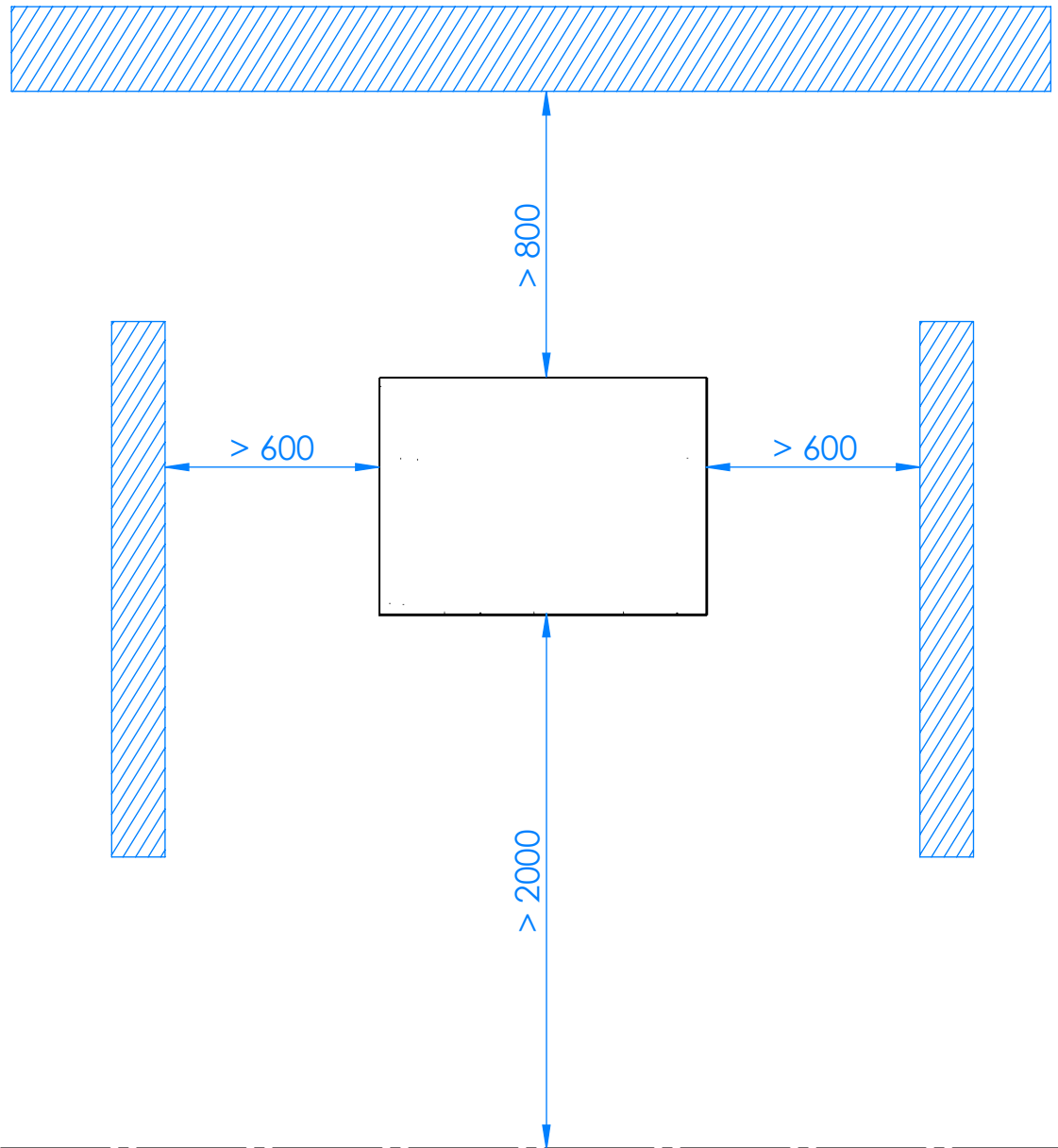
LEGENDE:

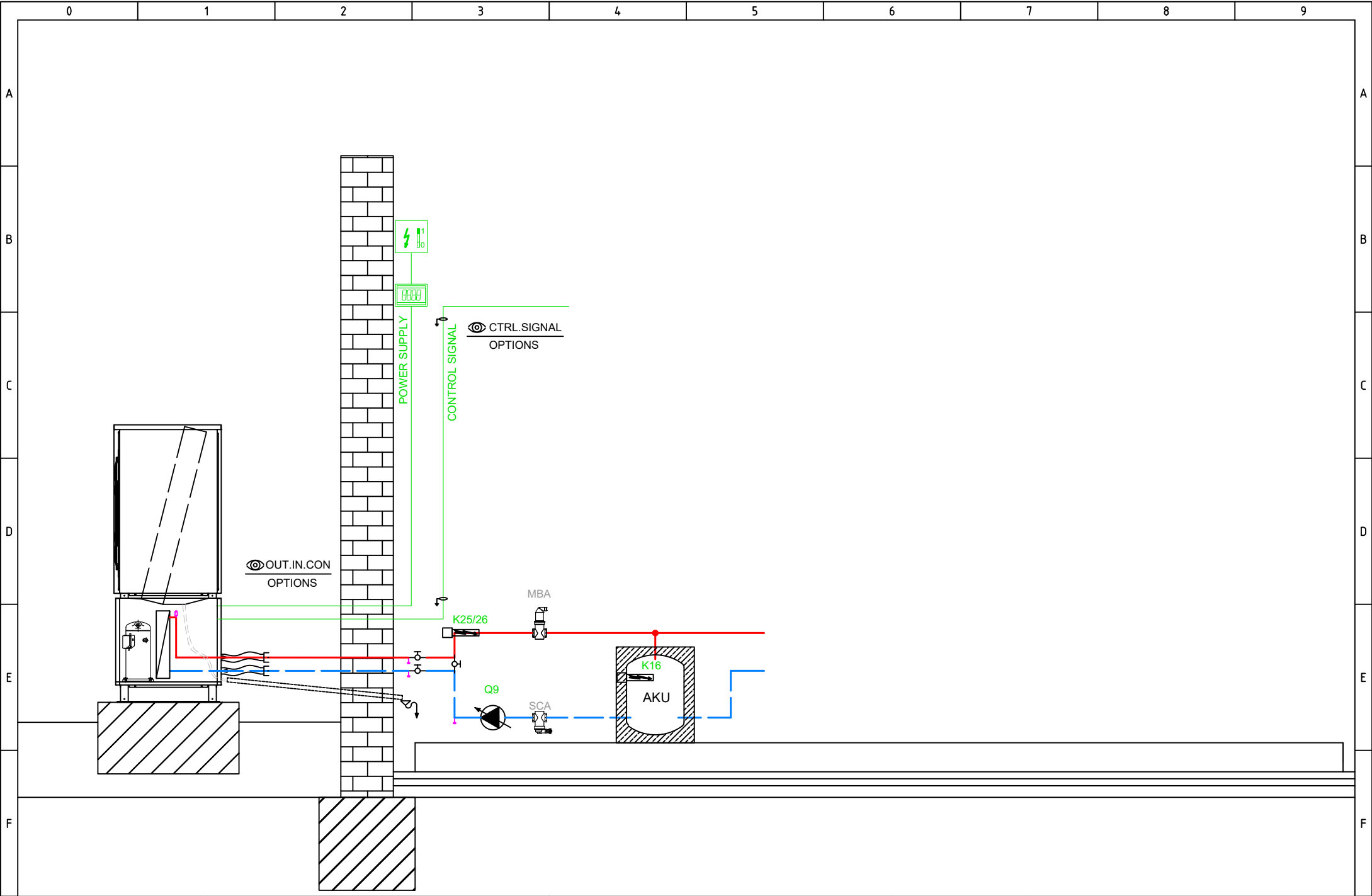
Ts-IN: Temperature renewable source - inlet [°C]
Th-OU: Temperature heating - outlet (flow) [°C]
Tc-OU: Temperature cooling - outlet (flow) [°C]
Qh nom: Heating capacity nominal
Qh min: Heating capacity minimal
Qh max: Heating capacity maximal
Pin nom: Power input at nominal heating capacity
Pin min: Power input at minimal heating capacity
Pin max: Power input at maximal heating capacity
COP nom: coefficient of performance at nominal heating capacity
Qc nom: cooling / heat extraction capacity at nominal heating capacity
Qc min: cooling / heat extraction at minimal heating capacity
Qc max: cooling / heat extraction at maximal heating capacity
I nom: Current at nominal heating capacity
EER: energy efficiency ratio at nominal cooling capacity

Operating limits









OUT.IN.CON
OPTIONS

CTRL.SIGNAL
OPTIONS

POWER SUPPLY

CONTROL SIGNAL

MBA

K25/26

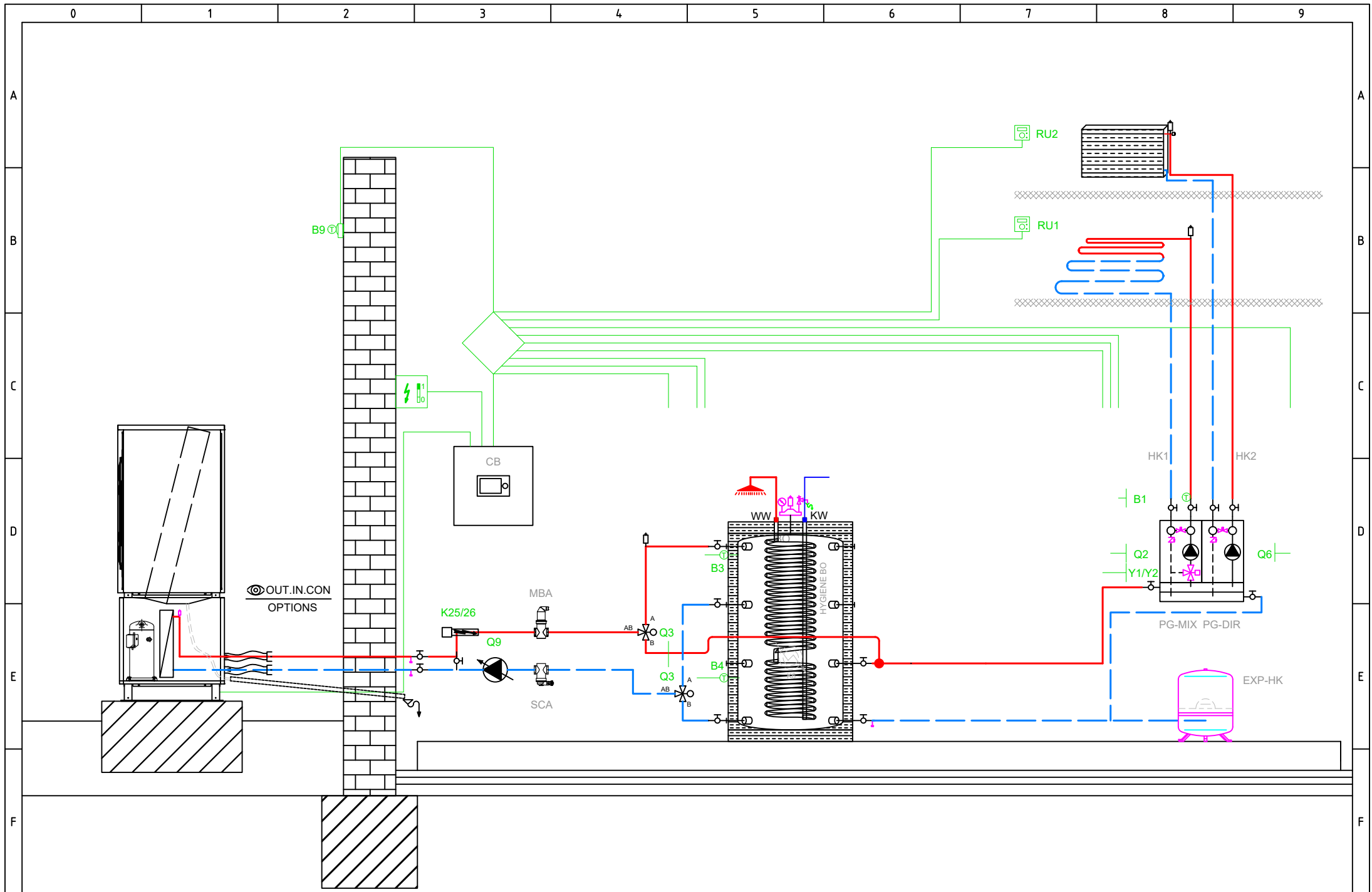
Q9

SCA

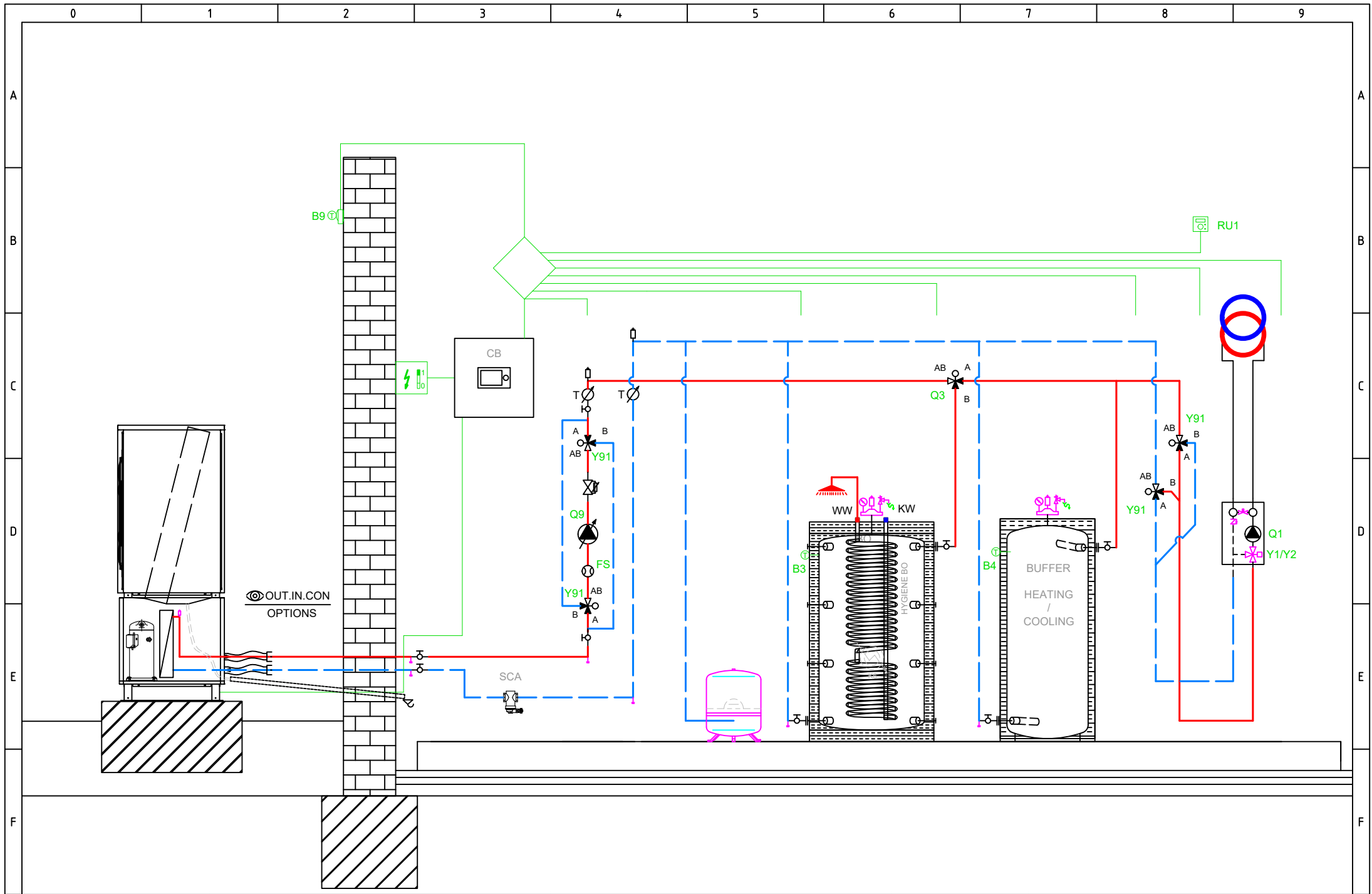
K16

AKU

FACTORY SETTINGS



BASIC APPLICATION



OPTIONAL APPLICATION

Main power supply 230V / 50 Hz
Ground
Neutral conductor

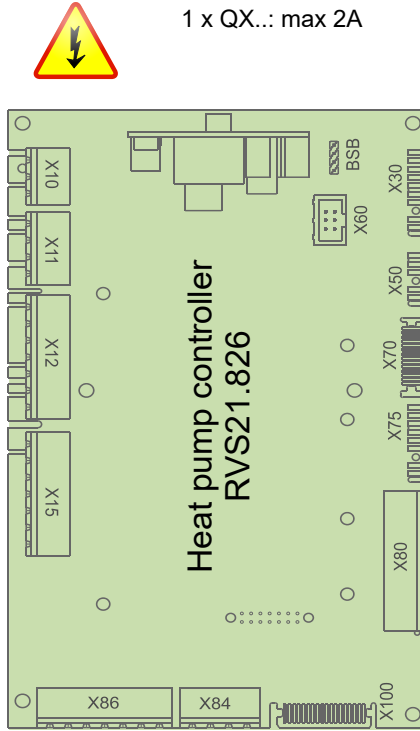
- E10 High-pressure switch E10
- E11 Overload compressor 1 E11
- E14 Overload source E14
- E24 Flow switch consumers E24
- K82 Valve EVI K82

K40 Crankcase heater K40

- L Phase 230V
- K1 Compressor stage 1 K1
- Y22 Process revers valve Y22

Q9 Condenser pump Q9

X10	1	L
X10	1	PE
X10	1	N
X11	1	EX1
X11	1	EX2
X11	1	EX3
X11	1	EX4
X12	1	QX1
X12	1	N
X12	1	QX2
X12	1	QX2i
X12	1	N
X12	1	FX3
X12	1	QX3
X15	1	QX4
X15	1	QX4i
X15	1	N
X15	1	QX5
X15	1	N
X15	1	ZX6
X15	1	N
X86	1	GX1
X86	1	H3
X86	1	M
X86	1	H1
X86	1	G+
X86	1	M
X86	1	BSB



Total: max 6A
1 x QX...: max 2A

BSB
X30
X60
X50
X70

- Connection service tool (OCI700)
- Operating unit (HMI) AVS37.xxx
- Modbus clip-in OCI351.01
- Extension module AVS75.xxx
- LPB clip-in

D1
D2
D3
UX3
M
DI6
DI7
M

- D1 Digital output 1 Heating
- D2 Digital output 2 Cooling
- D3 Digital output 3 HP On/Off

- DI6 Digital input 6 Defrosting
- DI7 Digital input 7 Alarm

BX1
M
BX2
M
UX1
M
UX2
M

- B91 Source inlet sensor B91
- B84 Source outl sens B92/B84
- K19 Fan K19
- 0..10 V Signal
- Q9 Condenser pump Q9
- PWM Signal

BX3
M
BX4
M

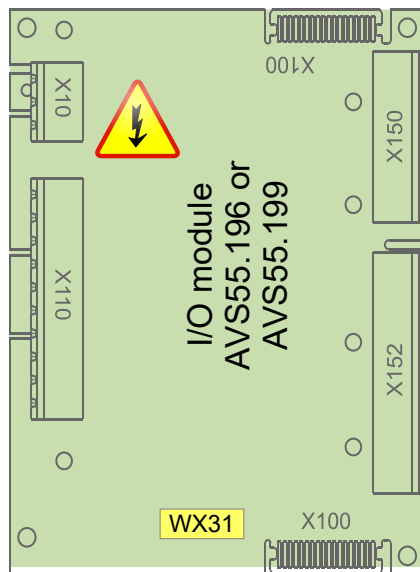
- B71 HP return sensor B71
- B9 Outside sensor B9

Main power supply 230V / 50 Hz
Ground
Neutral conductor

K10 Alarm output K10

V81 EEV evaporator V81

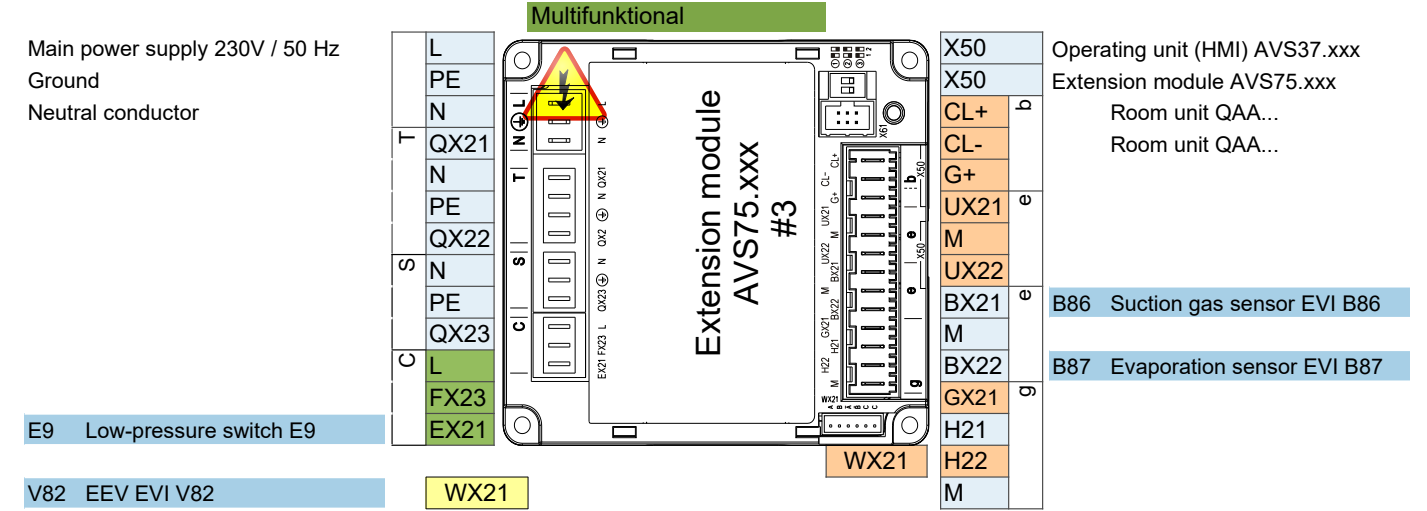
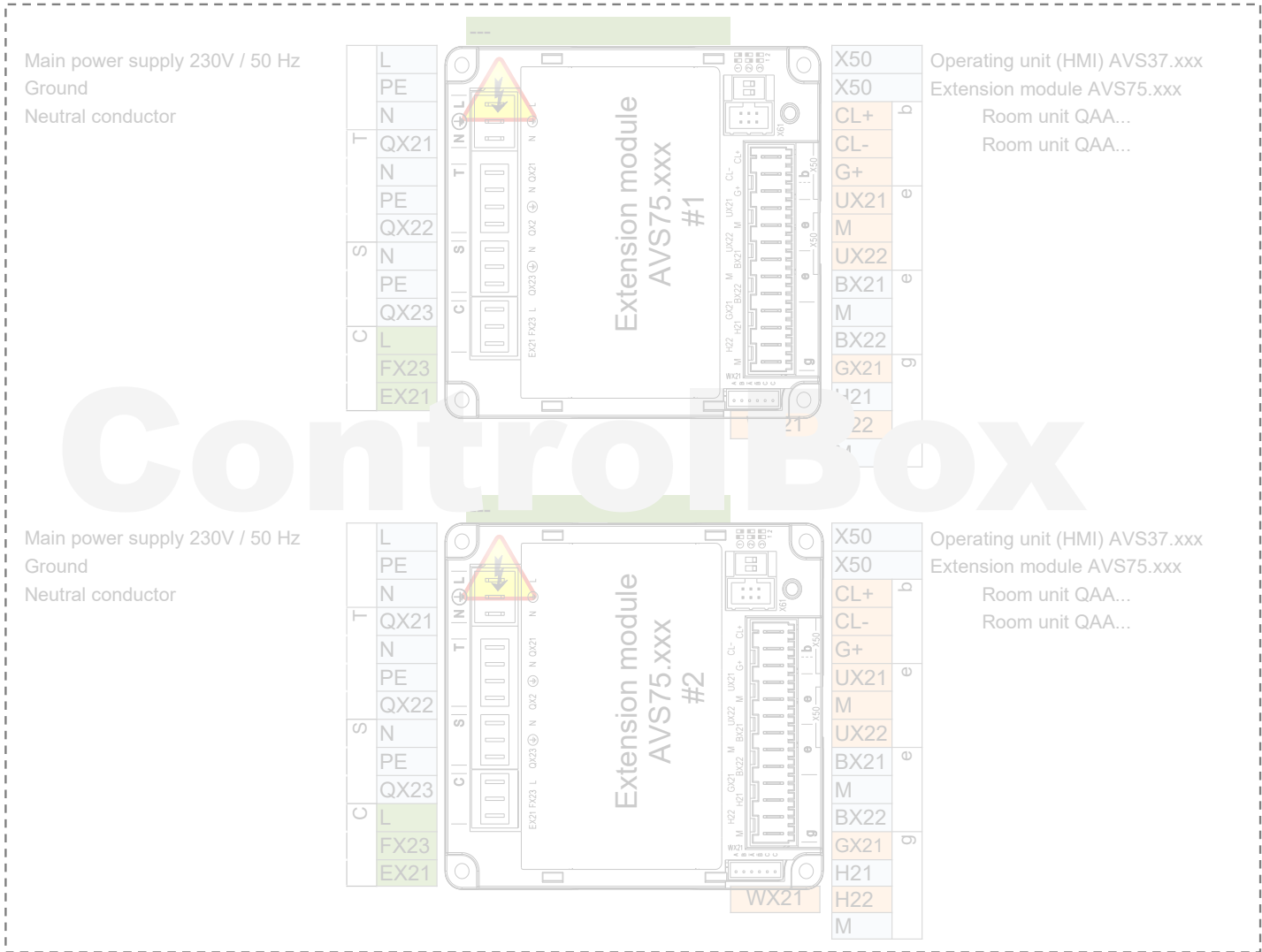
X10	1	L
X10	1	PE
X10	1	N
X110	1	QX31
X110	1	QX32
X110	1	N
X110	1	QX33
X110	1	N
X110	1	ZX34
X110	1	N
X115	1	QX35
X115	1	QX35i
X115	1	N

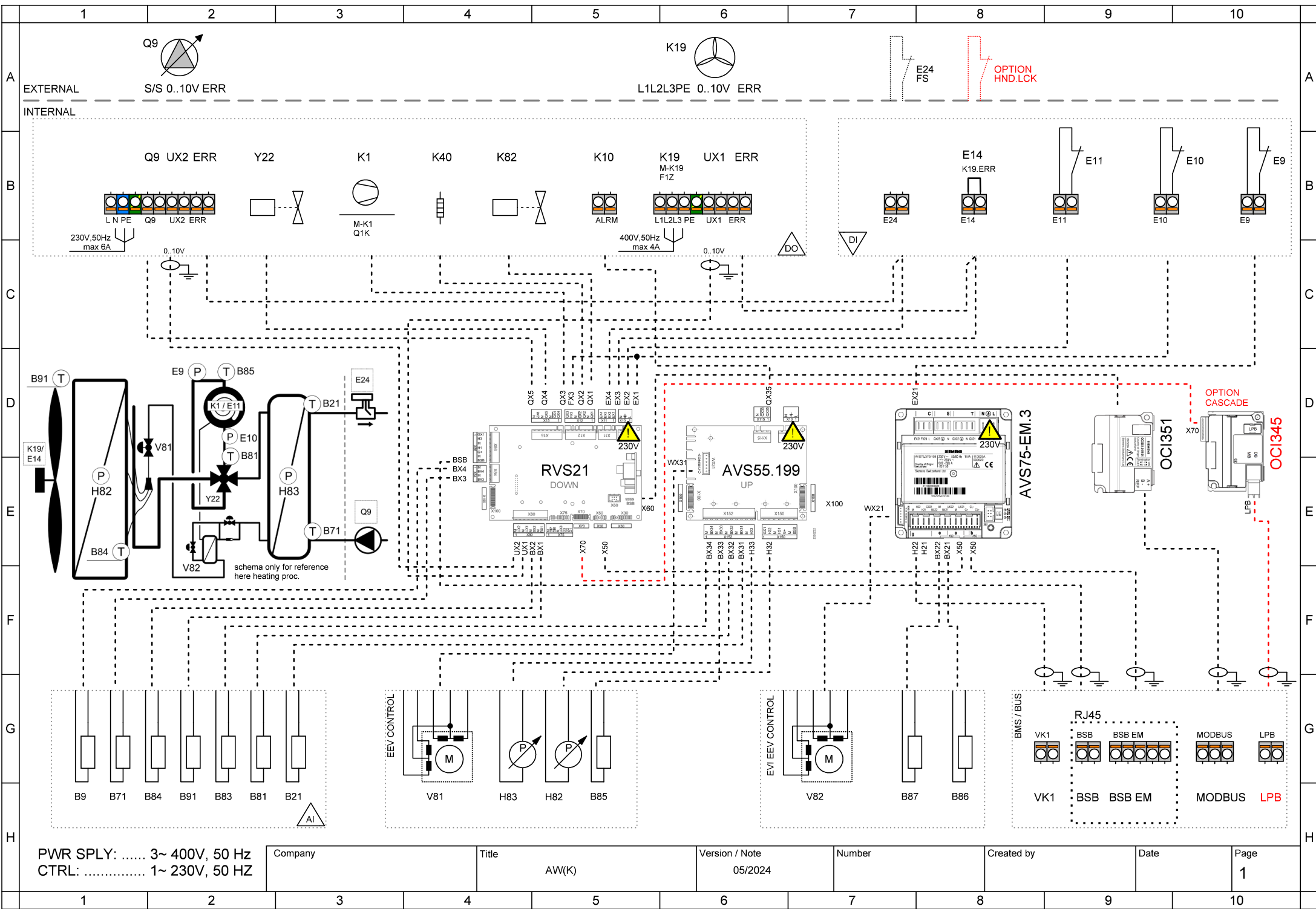


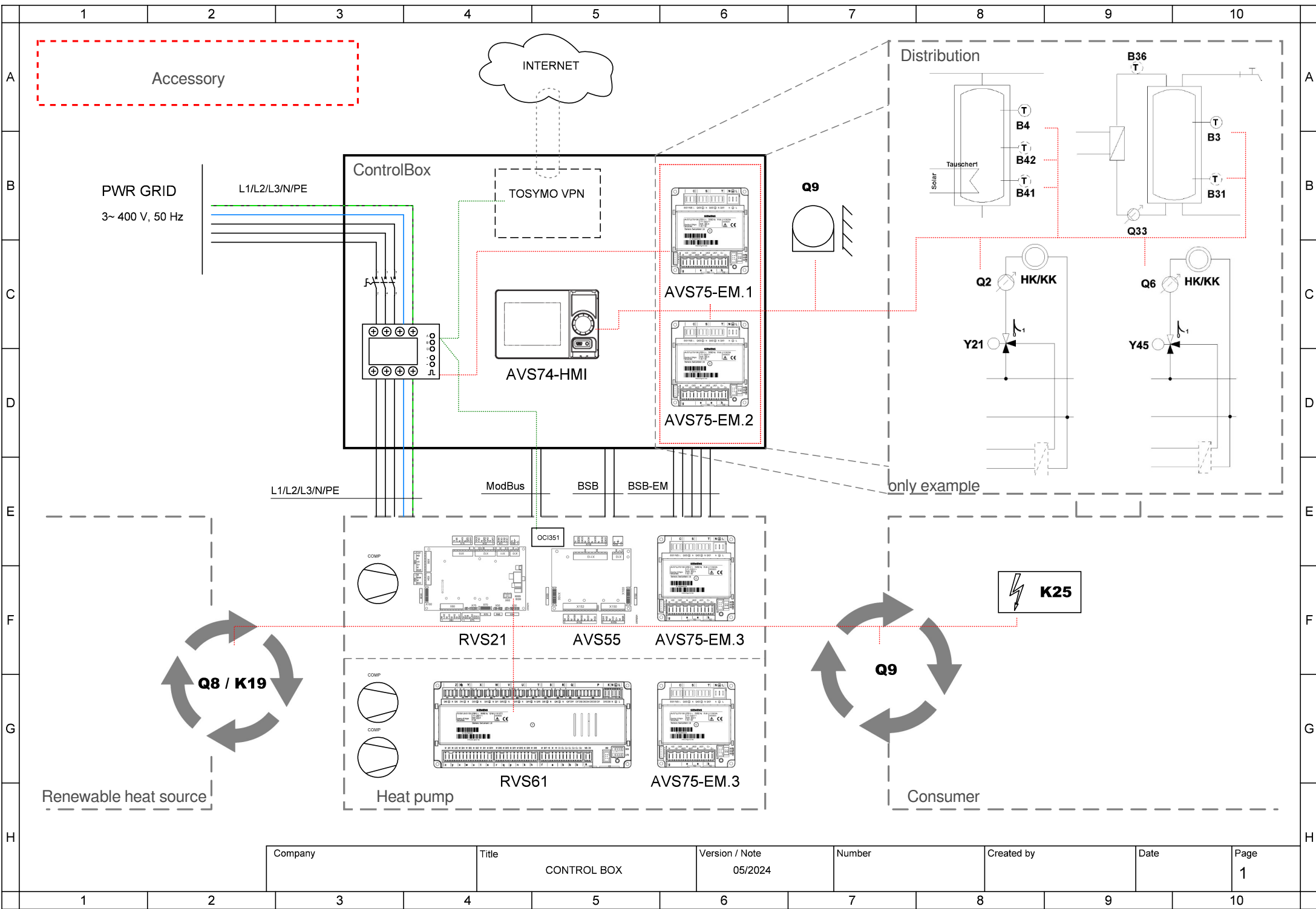
BSB
M
G+
H31
M
H32
GX1
H33
M
BX31
M
BX32
M
BX33
M
BX34
M

- 5 V/12 V for active sensors
- Flow measurement 10V
- Low pressure 0..10V
- 5 V/12 V for active sensors
- High pressure 0..10V
- B21 HP flow sensor B21
- B81 Hot-gas sensor B81
- B85 Suction gas sensor B85
- B83 Refrig sensor liquid B83

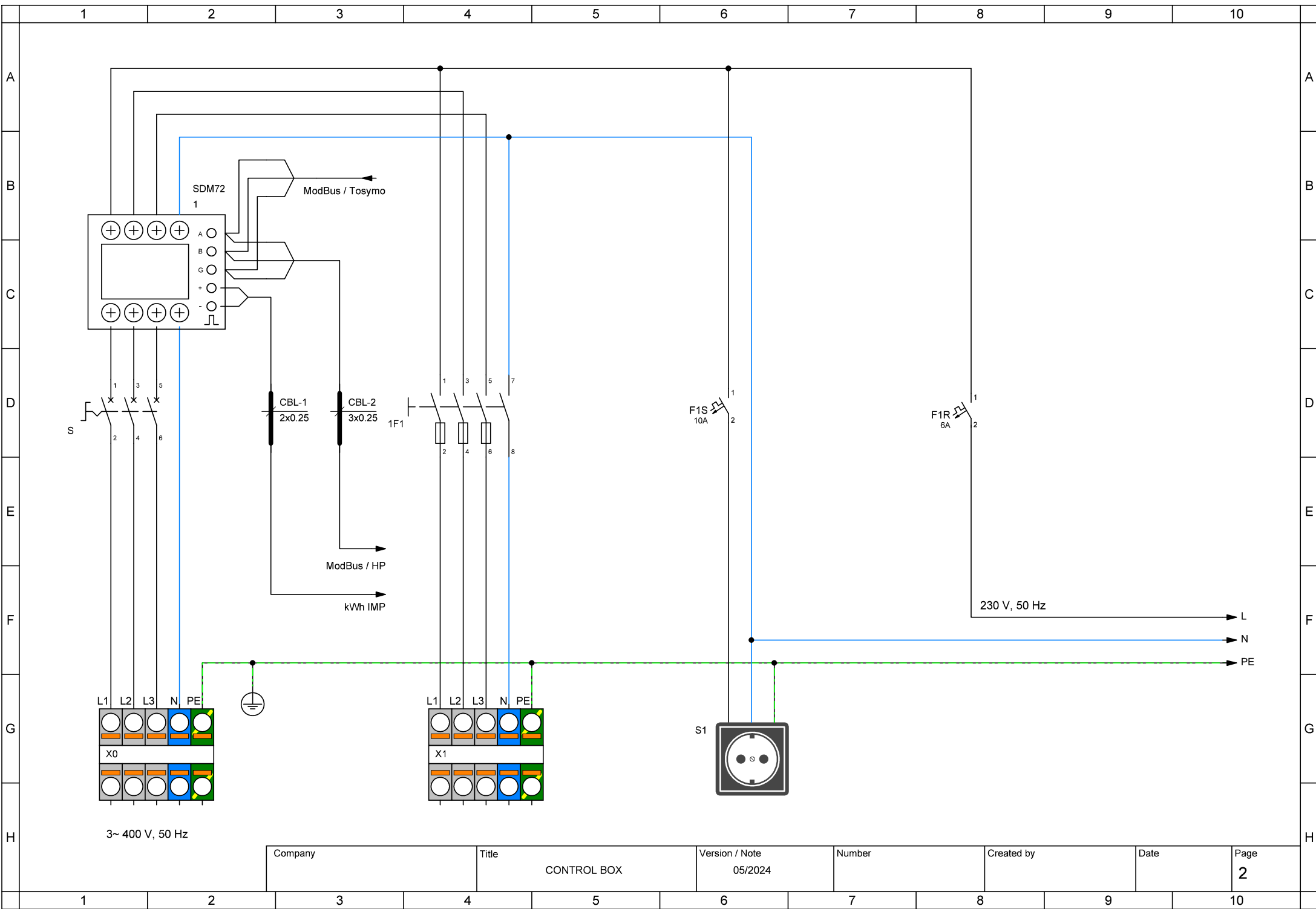
- AVS75.390
- AVS75.391
- AVS75.370



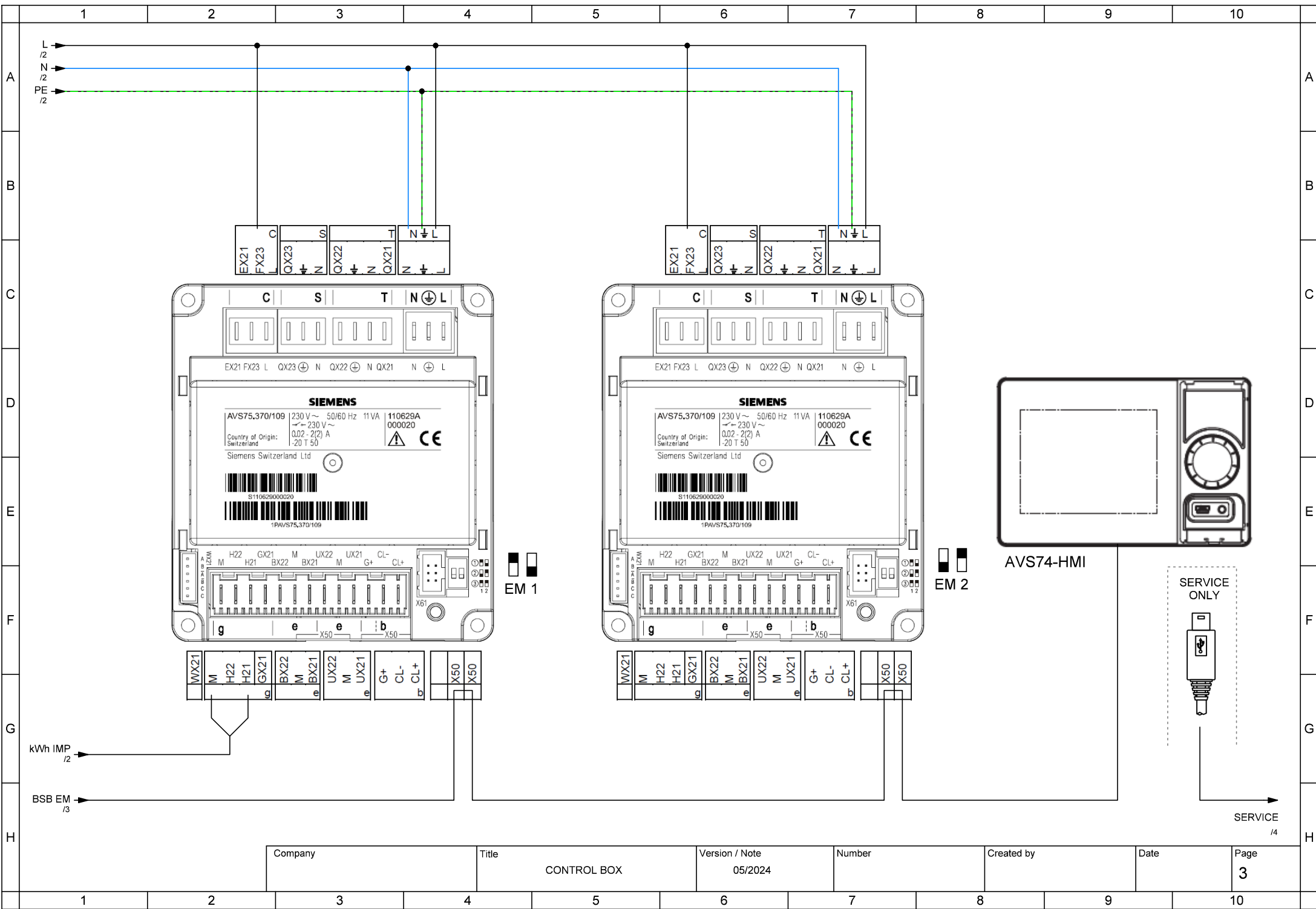




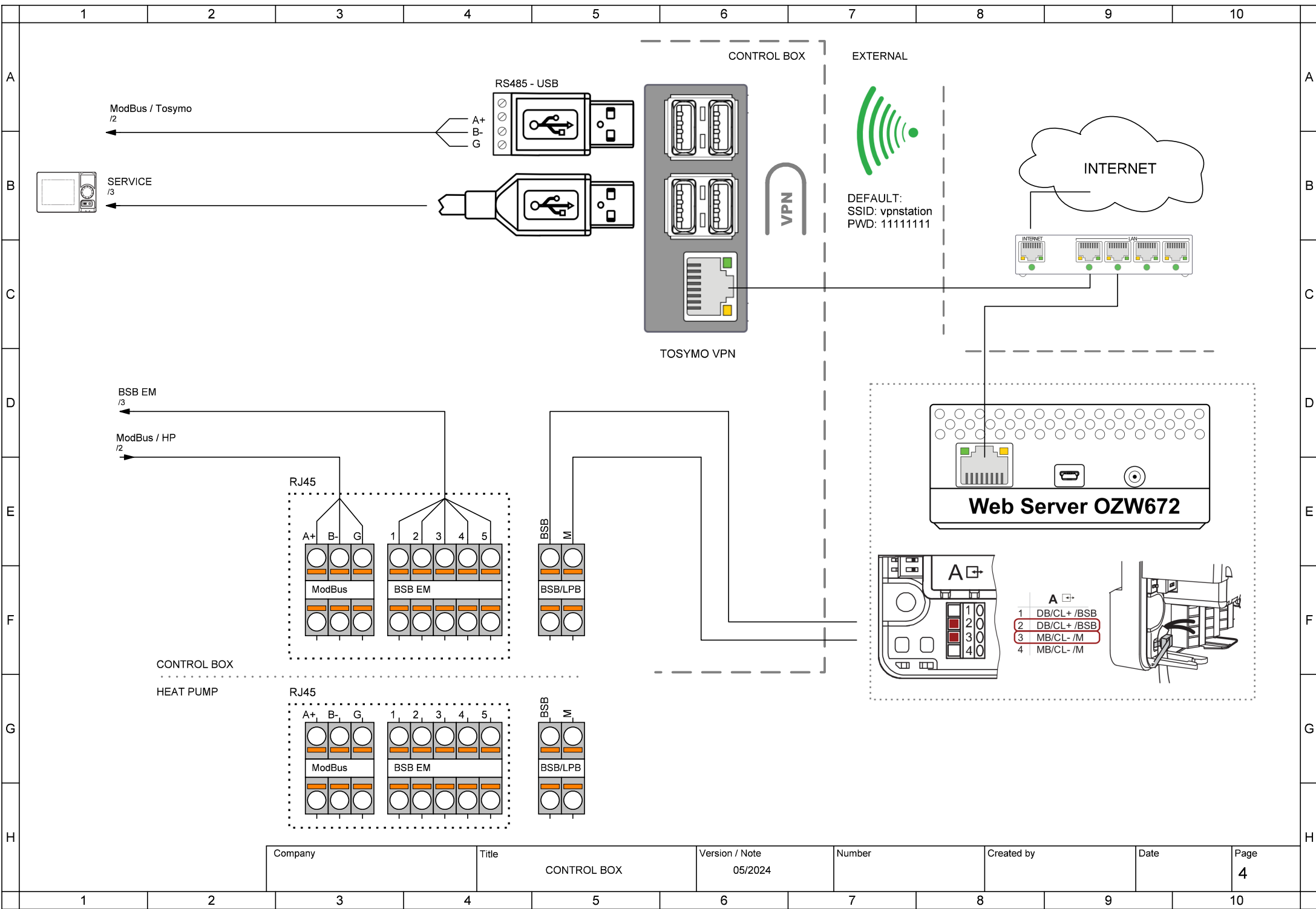
Company	Title	Version / Note	Number	Created by	Date	Page
	CONTROL BOX	05/2024				1



Company	Title	Version / Note	Number	Created by	Date	Page
	CONTROL BOX	05/2024				2



Company	Title	Version / Note	Number	Created by	Date	Page
	CONTROL BOX	05/2024				3



Company	Title	Version / Note	Number	Created by	Date	Page
	CONTROL BOX	05/2024				4

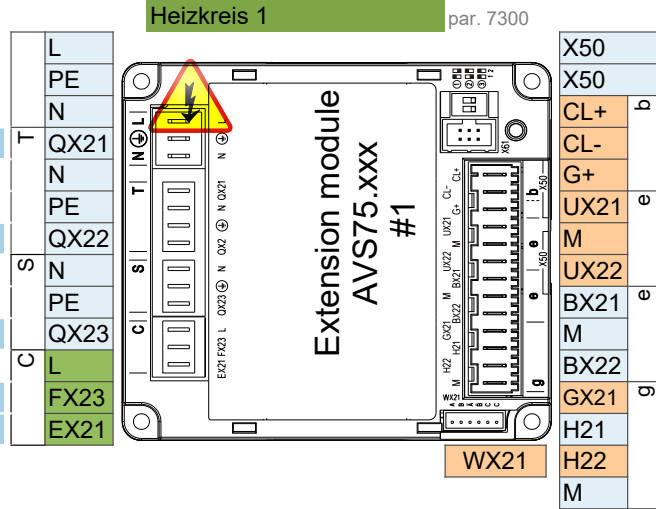
- AVS75.390
- AVS75.391
- AVS75.370

- AVS75.370**
 Main power supply 230V / 50 Hz
 Ground
 Neutral conductor
Y1 Mixing valve Open

Y2 Mixing valve Close

Q2 Heat circuit pump HC1 Q2

L Phase 230V
E61 Smart grid E61



- Extension module AVS75.xxx
 Room unit QAA...
 Room unit QAA...

B1 Flow sensor 1

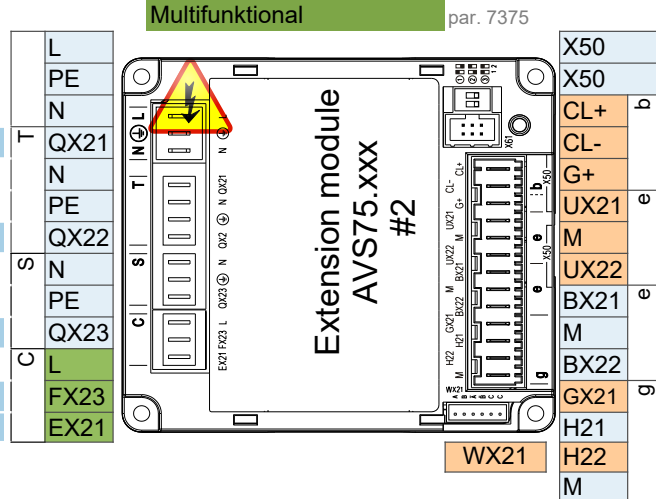
 Pulse count

- AVS75.370**
 Main power supply 230V / 50 Hz
 Ground
 Neutral conductor
Q3 DHW ctrl elem Q3

K6 El imm heater DHW K6

Q6 Heat circuit pump HC2 Q6

L Phase 230V
E62 Smart grid E62

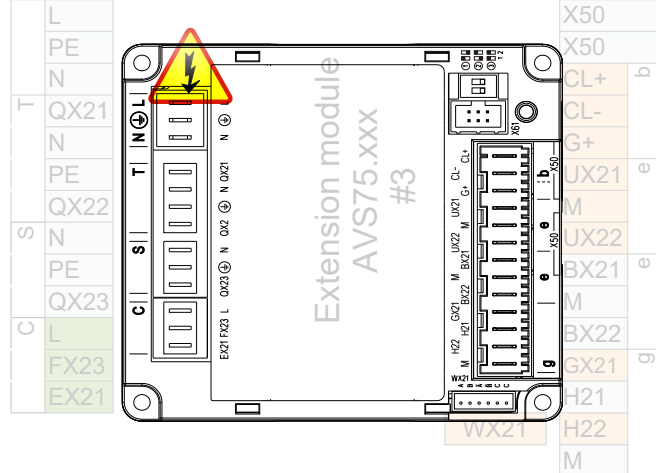


- Operating unit (HMI) AVS37.xxx
 Extension module AVS75.xxx
 Room unit QAA...
 Room unit QAA...

B3 DHW sensor B3

B4 Buffer sensor B4

- Main power supply 230V / 50 Hz
 Ground
 Neutral conductor



- Operating unit (HMI) AVS37.xxx
 Extension module AVS75.xxx
 Room unit QAA...
 Room unit QAA...

Attention: Extension module 3 is inside the heat pump

Control connection options

1 ControlBox

ControlBox, with two built-in extension modules, enables numerous options for application control on the consumer side behind the heat pump. For more, see the ControlBox schematic and the application diagrams sheet.

2 Fix flow temperature setpoint - On / Off dry (potential free) contact

2 wire shielded cable 2 x 0.5 mm² - Setpoint = 45°C (editable by param. 1859)

Connection terminal - see wiring diagram

3 Analog 0..10V flow temperature setpoint control

2 wire shielded cable 2 x 0.5 mm² - Setpoint: 0V = 16°C ~ 10V = 60°C (editable in parameter set)

Connection terminal - see wiring diagram

4 ModBus RTU communication command

3 wire shielded cable min. 3 x 0.25mm²

For ModBus mapping table contact technical support

5 MQTT IoT communication protocol

For more information contact technical support