

Basic performance data - WAMAK AWK 27 EVI

Heating - EN 14511		
Heating capacity [kW]	A7 / W35	29.0
	A2 / W35	24.7
	A-7 / W34	20.3
Electrical power input [kW]	A7 / W35	6.4
	A2 / W35	6.4
	A-7 / W34	6.3
Heating efficiency faktor [COP]	A7 / W35	4.57
	A2 / W35	3.83
	A-7 / W34	3.22
Seasonal space heating energy efficiency - SCOP EN 14825		
Average Climate / Low Temperature [35 °C]	SCOP	4.37
	η [%]	174.7
	Label	A+++
	Qhe [kWh]	10534.1
	Pdesignh [kW]	23.0
	Tbivalent [°C]	-7
Cooling		
Cooling capacity - [kW]	A35 / W23-18	28.4
	A25 / W23-18	30.0
	A35 / W12-7	20.9
	A25 / W12-7	20.9
Seasonal space cooling energy efficiency - SEER EN 14825		
[W 23 / 18 °C]	SEER	4.61
	Qce [kWh]	12540.0
	η_c [%]	184.3
Sound EN 12102		
Acoustic power - Lw	dB(A)	65.7
Acoustic pressure - Lp	1 m dB(A)	57.7
	5 m dB(A)	43.7
	10 m dB(A)	37.7
Mechanical and operational information		
Compressor type (3~ 400/50)	SCROLL / 1 /	On/Off
Refrigerant	R410A (GWP - 2088)	7.9 kg
Operating limit temperatures heating - (min / max) [°C]		25 / 65
Operating limit temperatures source - (min / max) [°C]		-22 / 40
Weight		510 kg

WAMAK AWK 27 EVI

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

Model	AWK 27 EVI
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	23.0	kW	Seasonal space heating energy efficiency	η_s	174.7	%
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	20.3	kW	Tj = -7 °C	COPd	3.22	-
Tj = +2 °C	Pdh	24.6	kW	Tj = +2 °C	COPd	4.3	-
Tj = +7 °C	Pdh	29.0	kW	Tj = +7 °C	COPd	5.6	-
Tj = +12 °C	Pdh	33.7	kW	Tj = +12 °C	COPd	7.5	-
Tj = bivalent temperature	Pdh	19.7	kW	Tj = bivalent temperature	COPd	3.1	-
Tj = operation limit temperature	Pdh	13.9	kW	Tj = operation limit temperature	COPd	2.2	-
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	0.040	kW	Supplementary heater			
Thermostat-off mode	Pto	0.010	kW	Rated heat output	Psup	10.5	kW
Standby mode	Psb	0.010	kW	Type of energy input	electricity		
Crankcase heater mode	Pck	0.050	kW	For air-to-water heat pumps:			
Other items				Rated air flow rate, outdoors	-	9060	m ³ /h
Capacity control	fixed			For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Sound power level							
indoors	Lwa	---	dB				
outdoors	Lwa	66	dB				
Annual energy consumption	Q _{HE}	10534.1	kWh				

Contact details: WAMAK, s.r.o., Orovnicna 252, 96652, Orovnicna, Slovakia, info@wamak.sk

WAMAK AWK 27 EVI

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

Model	AWK 27 EVI
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	24.0	kW	Seasonal space heating energy efficiency	η_s	133.7	%
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	21.0	kW	Tj = -7 °C	COPd	2.16	-
Tj = +2 °C	Pdh	24.8	kW	Tj = +2 °C	COPd	3.3	-
Tj = +7 °C	Pdh	29.1	kW	Tj = +7 °C	COPd	4.5	-
Tj = +12 °C	Pdh	33.9	kW	Tj = +12 °C	COPd	6.3	-
Tj = bivalent temperature	Pdh	20.6	kW	Tj = bivalent temperature	COPd	2.0	-
Tj = operation limit temperature	Pdh	15.4	kW	Tj = operation limit temperature	COPd	1.5	-
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	0.040	kW	Supplementary heater			
Thermostat-off mode	Pto	0.010	kW	Rated heat output	Psup	10.5	kW
Standby mode	Psb	0.010	kW	Type of energy input	electricity		
Crankcase heater mode	Pck	0.050	kW	For air-to-water heat pumps:			
Other items				Rated air flow rate, outdoors	-	9060	m ³ /h
Capacity control	fixed			For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Sound power level							
indoors	Lwa	---	dB				
outdoors	Lwa	66	dB				
Annual energy consumption	Q _{HE}	14492.2	kWh				

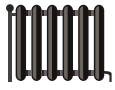
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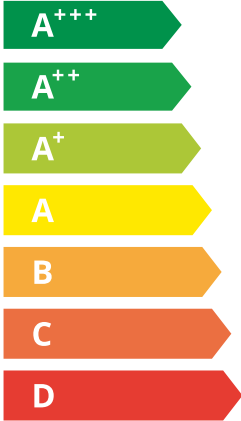
WAMAK

AWK 27 EVI



55 °C

35 °C



Speaker icon: --- dB

Microphone icon: 66 dB

■ 26	■ 24
■ 24	■ 23
■ 24	■ 22
kW	kW

2019

811/2013

AWK 27 EVI

ErP Data

	55 °C	35 °C
Energy class	A++	A+++
η [%]	133.7	174.7
P_{rated} [kW]	24	23
Q_{HE} [kWh/y]	14493	10535
SCOP [-]	3.34	4.37
$T_{bivalent}$ [°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]

ZHI27K1P-TFD_R410A_1_AW

Operating conditions		Qh	P	COP
1	A7 / W30-35	29.0	6.4	4.57
2	A2 / W35	24.7	6.4	3.83
3	A-22 / W35	13.9	6.4	2.19
A	A-7 / W34	20.3	6.3	3.22
B	A2 / W30	24.6	5.7	4.29
C	A7 / W27	29.0	5.2	5.55
D	A12 / W24	33.7	4.5	7.48
E	A-10 / W35	19.7	6.4	3.06
F	A-7 / W34	20.3	6.3	3.22

SCOP DATA EN 14825:2018	
Average Climate / Low Temperature [35°C]	
SCOPon	4.51
SCOPnet	4.55
SCOP	4.37
η [%]	174.74
Label	A+++
Qh [kWh]	10534.09
Pdesignh [kW]	23.0
Tbivalent [°C]	-7.00

Average Climate / Medium Temperature [55°C]

Operating conditions		Qh	P	COP
1	A7 / W47-55	29.3	10.5	2.80
2	A2 / W55	25.2	10.5	2.41
3	A-22 / W55	15.4	9.8	1.46
A	A-7 / W52	21.0	9.7	2.16
B	A2 / W42	24.8	7.6	3.27
C	A7 / W36	29.1	6.5	4.46
D	A12 / W30	33.9	5.4	6.29
E	A-10 / W55	20.6	10.5	1.97
F	A-7 / W55	21.2	10.5	2.02

SCOP DATA EN 14825:2018	
Average Climate / Medium Temperature [55°C]	
SCOPon	3.42
SCOPnet	3.45
SCOP	3.34
η [%]	133.68
Label	A++
Qh [kWh]	14492.20
Pdesignh [kW]	24.0
Tbivalent [°C]	-7.00

Cooling performance data

Low temperature cooling W 12 / 7°C

Operating conditions		Qc	P	EER
A	A35 / W12-7	20.9	7.7	2.70
B	A30 / W12-7	21.7	6.9	3.16
C	A25 / W12-7	22.3	6.1	3.67
D	A20 / W12-7	22.9	5.4	4.24

SEER DATA EN 14825:2018 [W 12 / 7°C]	
SEERon	3.56
SEER	3.46
Qc [kWh]	4427.98
η [%]	138.31

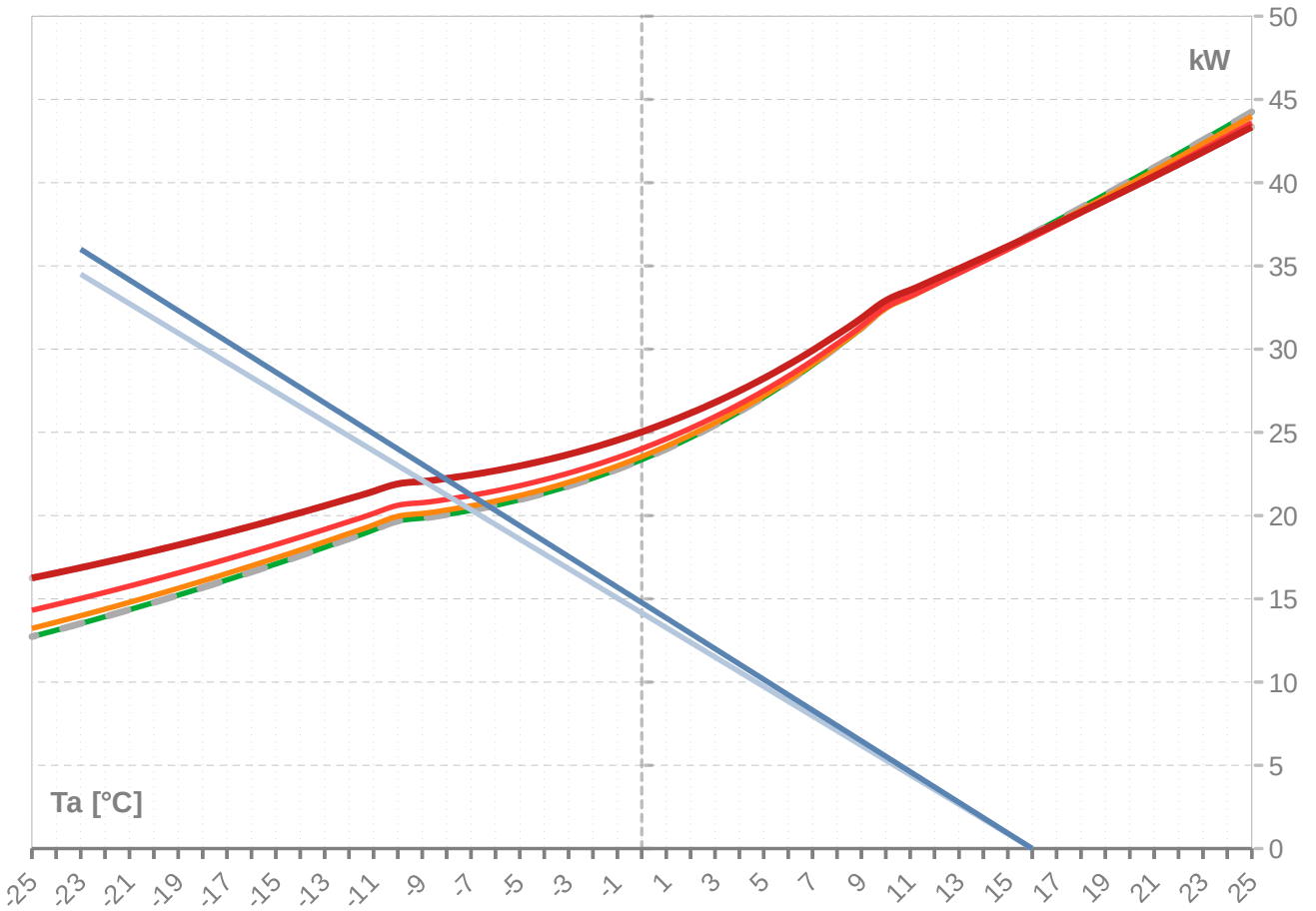
Radiant cooling W 23 / 18°C

Operating conditions		Qc	P	EER
A	A35 / W23-18	28.4	7.7	3.67
B	A30 / W23-18	29.3	6.1	4.26
C	A25 / W23-18	30.0	5.4	4.93
D	A20 / W23-18	30.7	4.6	5.68

SEER DATA EN 14825:2018 [W 23 / 18°C]	
SEERon	4.80
SEER	4.61
Qc [kWh]	3289.22
η [%]	184.29

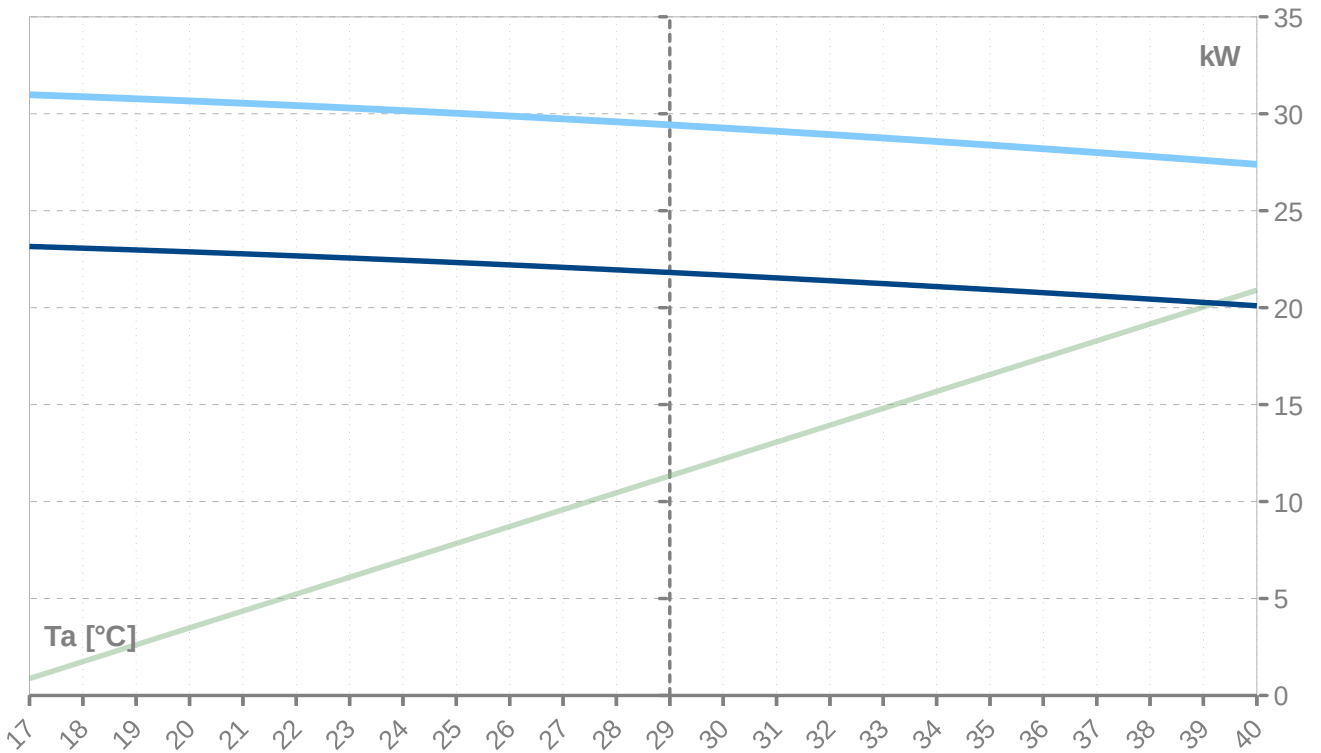
Performance lines - heating

- 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	37.7	37.7		6.0	6.0		6.34	11.9	11.9	
24	37.7	37.7		6.0	6.0		6.34	11.9	11.9	
23	37.7	37.7		6.0	6.0		6.34	11.9	11.9	
22	37.7	37.7		6.0	6.0		6.34	11.9	11.9	
21	37.7	37.7		6.0	6.0		6.34	11.9	11.9	
20	37.7	37.7		6.0	6.0		6.34	11.9	11.9	
19	37.7	37.7		6.0	6.0		6.34	11.9	11.9	
18	37.7	37.7		6.0	6.0		6.34	11.9	11.9	
17	37.7	37.7		6.0	6.0		6.34	11.9	11.9	
16	36.9	36.9	36.9	6.0	6.0	6.0	6.15	12.0	12.0	12.0
15	36.2	36.2	36.2	6.0	6.0	6.0	5.98	12.0	12.0	12.0
14	35.4	35.4	35.4	6.1	6.1	6.1	5.81	12.0	12.0	12.0
13	34.7	34.7	34.7	6.1	6.1	6.1	5.65	12.1	12.1	12.1
12	33.9	33.9	33.9	6.2	6.2	6.2	5.50	12.1	12.1	12.1
11	33.2	33.2	33.2	6.2	6.2	6.2	5.35	12.1	12.1	12.1
10	32.5	32.5	32.5	6.2	6.2	6.2	5.21	12.2	12.2	12.2
9	31.3	31.3	31.3	6.3	6.3	6.3	4.97	12.2	12.2	12.2
8	30.1	30.1	30.1	6.3	6.3	6.3	4.76	12.3	12.3	12.3
7	29.0	29.0	29.0	6.4	6.4	6.4	4.57	12.3	12.3	12.3
6	28.0	28.0	28.0	6.4	6.4	6.4	4.39	12.3	12.3	12.3
5	27.1	27.1	27.1	6.4	6.4	6.4	4.23	12.4	12.4	12.4
4	26.2	26.2	26.2	6.4	6.4	6.4	4.09	12.4	12.4	12.4
3	25.4	25.4	25.4	6.4	6.4	6.4	3.96	12.4	12.4	12.4
2	24.7	24.7	24.7	6.4	6.4	6.4	3.83	12.4	12.4	12.4
1	24.0	24.0	24.0	6.4	6.4	6.4	3.72	12.4	12.4	12.4
0	23.4	23.4	23.4	6.4	6.4	6.4	3.62	12.4	12.4	12.4
-1	22.8	22.8	22.8	6.4	6.4	6.4	3.53	12.5	12.5	12.5
-2	22.2	22.2	22.2	6.4	6.4	6.4	3.45	12.5	12.5	12.5
-3	21.8	21.8	21.8	6.4	6.4	6.4	3.38	12.5	12.5	12.5
-4	21.3	21.3	21.3	6.4	6.4	6.4	3.31	12.5	12.5	12.5
-5	21.0	21.0	21.0	6.4	6.4	6.4	3.25	12.5	12.5	12.5
-6	20.6	20.6	20.6	6.4	6.4	6.4	3.20	12.5	12.5	12.5
-7	20.3	20.3	20.3	6.4	6.4	6.4	3.15	12.5	12.5	12.5
-8	20.1	20.1	20.1	6.4	6.4	6.4	3.11	12.5	12.5	12.5
-9	19.8	19.8	19.8	6.4	6.4	6.4	3.08	12.5	12.5	12.5
-10	19.7	19.7	19.7	6.4	6.4	6.4	3.06	12.5	12.5	12.5
-11	19.1	19.1	19.1	6.4	6.4	6.4	2.97	12.5	12.5	12.5
-12	18.6	18.6	18.6	6.4	6.4	6.4	2.90	12.5	12.5	12.5
-13	18.1	18.1	18.1	6.4	6.4	6.4	2.82	12.5	12.5	12.5
-14	17.6	17.6	17.6	6.4	6.4	6.4	2.74	12.4	12.4	12.4
-15	17.1	17.1	17.1	6.4	6.4	6.4	2.67	12.4	12.4	12.4
-16	16.6	16.6	16.6	6.4	6.4	6.4	2.60	12.4	12.4	12.4
-17	16.1	16.1	16.1	6.4	6.4	6.4	2.52	12.4	12.4	12.4
-18	15.7	15.7	15.7	6.4	6.4	6.4	2.45	12.4	12.4	12.4
-19	15.2	15.2	15.2	6.4	6.4	6.4	2.39	12.4	12.4	12.4
-20	14.8	14.8	14.8	6.4	6.4	6.4	2.32	12.4	12.4	12.4
-21	14.3	14.3	14.3	6.4	6.4	6.4	2.25	12.4	12.4	12.4
-22	13.9	13.9	13.9	6.4	6.4	6.4	2.19	12.3	12.3	12.3
-23	13.5	13.5	13.5	6.4	6.4	6.4	2.13	12.3	12.3	12.3
-24	13.1	13.1	13.1	6.3	6.3	6.3	2.07	12.3	12.3	12.3
-25	12.7	12.7	12.7	6.3	6.3	6.3	2.01	12.3	12.3	12.3

* attention: operating limits not reflected in performance table

ZHI27K1P-TFD_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	44.0	44.0	44.0	7.5	7.5	7.5	5.88	13.5	13.5	13.5
24	43.2	43.2	43.2	7.5	7.5	7.5	5.73	13.5	13.5	13.5
23	42.3	42.3	42.3	7.6	7.6	7.6	5.58	13.6	13.6	13.6
22	41.5	41.5	41.5	7.6	7.6	7.6	5.43	13.6	13.6	13.6
21	40.7	40.7	40.7	7.7	7.7	7.7	5.29	13.7	13.7	13.7
20	39.9	39.9	39.9	7.7	7.7	7.7	5.16	13.7	13.7	13.7
19	39.1	39.1	39.1	7.8	7.8	7.8	5.03	13.8	13.8	13.8
18	38.4	38.4	38.4	7.8	7.8	7.8	4.90	13.8	13.8	13.8
17	37.6	37.6	37.6	7.9	7.9	7.9	4.78	13.9	13.9	13.9
16	36.8	36.8	36.8	7.9	7.9	7.9	4.66	13.9	13.9	13.9
15	36.1	36.1	36.1	7.9	7.9	7.9	4.55	14.0	14.0	14.0
14	35.3	35.3	35.3	8.0	8.0	8.0	4.44	14.0	14.0	14.0
13	34.6	34.6	34.6	8.0	8.0	8.0	4.33	14.0	14.0	14.0
12	33.9	33.9	33.9	8.0	8.0	8.0	4.23	14.1	14.1	14.1
11	33.1	33.1	33.1	8.0	8.0	8.0	4.13	14.1	14.1	14.1
10	32.4	32.4	32.4	8.0	8.0	8.0	4.03	14.1	14.1	14.1
9	31.3	31.3	31.3	8.1	8.1	8.1	3.87	14.2	14.2	14.2
8	30.2	30.2	30.2	8.1	8.1	8.1	3.72	14.2	14.2	14.2
7	29.1	29.1	29.1	8.1	8.1	8.1	3.59	14.2	14.2	14.2
6	28.1	28.1	28.1	8.1	8.1	8.1	3.46	14.3	14.3	14.3
5	27.2	27.2	27.2	8.1	8.1	8.1	3.34	14.3	14.3	14.3
4	26.4	26.4	26.4	8.1	8.1	8.1	3.24	14.3	14.3	14.3
3	25.6	25.6	25.6	8.1	8.1	8.1	3.14	14.3	14.3	14.3
2	24.8	24.8	24.8	8.1	8.1	8.1	3.05	14.3	14.3	14.3
1	24.2	24.2	24.2	8.1	8.1	8.1	2.97	14.3	14.3	14.3
0	23.5	23.5	23.5	8.1	8.1	8.1	2.89	14.3	14.3	14.3
-1	23.0	23.0	23.0	8.1	8.1	8.1	2.82	14.3	14.3	14.3
-2	22.5	22.5	22.5	8.1	8.1	8.1	2.76	14.3	14.3	14.3
-3	22.0	22.0	22.0	8.1	8.1	8.1	2.70	14.3	14.3	14.3
-4	21.6	21.6	21.6	8.1	8.1	8.1	2.65	14.3	14.3	14.3
-5	21.2	21.2	21.2	8.1	8.1	8.1	2.61	14.3	14.3	14.3
-6	20.9	20.9	20.9	8.1	8.1	8.1	2.57	14.3	14.3	14.3
-7	20.6	20.6	20.6	8.1	8.1	8.1	2.53	14.3	14.3	14.3
-8	20.3	20.3	20.3	8.1	8.1	8.1	2.50	14.3	14.3	14.3
-9	20.1	20.1	20.1	8.1	8.1	8.1	2.48	14.3	14.3	14.3
-10	20.0	20.0	20.0	8.1	8.1	8.1	2.46	14.3	14.3	14.3
-11	19.4	19.4	19.4	8.1	8.1	8.1	2.39	14.3	14.3	14.3
-12	18.9	18.9	18.9	8.1	8.1	8.1	2.33	14.3	14.3	14.3
-13	18.4	18.4	18.4	8.1	8.1	8.1	2.27	14.2	14.2	14.2
-14	17.9	17.9	17.9	8.1	8.1	8.1	2.21	14.2	14.2	14.2
-15	17.4	17.4	17.4	8.1	8.1	8.1	2.15	14.2	14.2	14.2
-16	17.0	17.0	17.0	8.1	8.1	8.1	2.10	14.2	14.2	14.2
-17	16.5	16.5	16.5	8.1	8.1	8.1	2.04	14.2	14.2	14.2
-18	16.1	16.1	16.1	8.1	8.1	8.1	1.99	14.1	14.1	14.1
-19	15.6	15.6	15.6	8.1	8.1	8.1	1.93	14.1	14.1	14.1
-20	15.2	15.2	15.2	8.1	8.1	8.1	1.88	14.1	14.1	14.1
-21	14.8	14.8	14.8	8.1	8.1	8.1	1.83	14.1	14.1	14.1
-22	14.4	14.4	14.4	8.1	8.1	8.1	1.78	14.0	14.0	14.0
-23	14.0	14.0	14.0	8.1	8.1	8.1	1.73	14.0	14.0	14.0
-24	13.6	13.6	13.6	8.1	8.1	8.1	1.68	14.0	14.0	14.0
-25	13.2	13.2	13.2	8.1	8.1	8.1	1.63	13.9	13.9	13.9

* attention: operating limits not reflected in performance table

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	43.6	43.6	43.6	10.0	10.0	10.0	4.36	16.3	16.3	16.3
24	42.8	42.8	42.8	10.0	10.0	10.0	4.26	16.4	16.4	16.4
23	42.0	42.0	42.0	10.1	10.1	10.1	4.16	16.4	16.4	16.4
22	41.2	41.2	41.2	10.1	10.1	10.1	4.07	16.5	16.5	16.5
21	40.4	40.4	40.4	10.2	10.2	10.2	3.98	16.5	16.5	16.5
20	39.7	39.7	39.7	10.2	10.2	10.2	3.89	16.6	16.6	16.6
19	38.9	38.9	38.9	10.2	10.2	10.2	3.81	16.6	16.6	16.6
18	38.2	38.2	38.2	10.3	10.3	10.3	3.72	16.7	16.7	16.7
17	37.4	37.4	37.4	10.3	10.3	10.3	3.64	16.7	16.7	16.7
16	36.7	36.7	36.7	10.3	10.3	10.3	3.56	16.8	16.8	16.8
15	36.0	36.0	36.0	10.3	10.3	10.3	3.48	16.8	16.8	16.8
14	35.3	35.3	35.3	10.3	10.3	10.3	3.41	16.8	16.8	16.8
13	34.6	34.6	34.6	10.4	10.4	10.4	3.33	16.9	16.9	16.9
12	33.9	33.9	33.9	10.4	10.4	10.4	3.26	16.9	16.9	16.9
11	33.2	33.2	33.2	10.4	10.4	10.4	3.19	16.9	16.9	16.9
10	32.5	32.5	32.5	10.4	10.4	10.4	3.12	16.9	16.9	16.9
9	31.4	31.4	31.4	10.4	10.4	10.4	3.01	17.0	17.0	17.0
8	30.3	30.3	30.3	10.4	10.4	10.4	2.90	17.0	17.0	17.0
7	29.3	29.3	29.3	10.5	10.5	10.5	2.80	17.0	17.0	17.0
6	28.4	28.4	28.4	10.5	10.5	10.5	2.71	17.0	17.0	17.0
5	27.5	27.5	27.5	10.5	10.5	10.5	2.63	17.0	17.0	17.0
4	26.7	26.7	26.7	10.5	10.5	10.5	2.55	17.0	17.0	17.0
3	25.9	25.9	25.9	10.5	10.5	10.5	2.48	17.0	17.0	17.0
2	25.2	25.2	25.2	10.5	10.5	10.5	2.41	17.0	17.0	17.0
1	24.6	24.6	24.6	10.5	10.5	10.5	2.35	17.0	17.0	17.0
0	24.0	24.0	24.0	10.5	10.5	10.5	2.29	17.0	17.0	17.0
-1	23.5	23.5	23.5	10.5	10.5	10.5	2.24	17.0	17.0	17.0
-2	23.0	23.0	23.0	10.5	10.5	10.5	2.20	17.0	17.0	17.0
-3	22.5	22.5	22.5	10.5	10.5	10.5	2.15	17.0	17.0	17.0
-4	22.1	22.1	22.1	10.5	10.5	10.5	2.12	17.0	17.0	17.0
-5	21.8	21.8	21.8	10.5	10.5	10.5	2.08	17.0	17.0	17.0
-6	21.5	21.5	21.5	10.5	10.5	10.5	2.05	17.0	17.0	17.0
-7	21.2	21.2	21.2	10.5	10.5	10.5	2.02	17.0	17.0	17.0
-8	21.0	21.0	21.0	10.5	10.5	10.5	2.00	16.9	16.9	16.9
-9	20.8	20.8	20.8	10.5	10.5	10.5	1.98	16.9	16.9	16.9
-10	20.6	20.6	20.6	10.5	10.5	10.5	1.97	16.9	16.9	16.9
-11	20.1	20.1	20.1	10.5	10.5	10.5	1.92	16.9	16.9	16.9
-12	19.6	19.6	19.6	10.5	10.5	10.5	1.87	16.9	16.9	16.9
-13	19.2	19.2	19.2	10.5	10.5	10.5	1.83	16.9	16.9	16.9
-14	18.7	18.7	18.7	10.5	10.5	10.5	1.78	16.8	16.8	16.8
-15	18.3	18.3	18.3	10.5	10.5	10.5	1.74	16.8	16.8	16.8
-16	17.8	17.8	17.8	10.5	10.5	10.5	1.70	16.8	16.8	16.8
-17	17.4	17.4	17.4	10.5	10.5	10.5	1.66	16.7	16.7	16.7
-18	17.0	17.0	17.0	10.5	10.5	10.5	1.62	16.7	16.7	16.7
-19	16.6	16.6	16.6	10.5	10.5	10.5	1.57	16.6	16.6	16.6
-20	16.2	16.2	16.2	10.5	10.5	10.5	1.54	16.6	16.6	16.6
-21	15.8	15.8	15.8	10.5	10.5	10.5	1.50	16.5	16.5	16.5
-22	15.4	15.4	15.4	10.5	10.5	10.5	1.46	16.5	16.5	16.5
-23	15.0	15.0	15.0	10.6	10.6	10.6	1.42	16.5	16.5	16.5
-24	14.7	14.7	14.7	10.6	10.6	10.6	1.39	16.4	16.4	16.4
-25	14.3	14.3	14.3	10.6	10.6	10.6	1.35	16.3	16.3	16.3

* attention: operating limits not reflected in performance table

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	43.3	43.3	43.3	13.2	13.2	13.2	3.28	20.2	20.2	20.2
24	42.6	42.6	42.6	13.3	13.3	13.3	3.21	20.3	20.3	20.3
23	41.8	41.8	41.8	13.3	13.3	13.3	3.15	20.4	20.4	20.4
22	41.1	41.1	41.1	13.3	13.3	13.3	3.08	20.4	20.4	20.4
21	40.4	40.4	40.4	13.4	13.4	13.4	3.02	20.4	20.4	20.4
20	39.6	39.6	39.6	13.4	13.4	13.4	2.96	20.5	20.5	20.5
19	38.9	38.9	38.9	13.4	13.4	13.4	2.90	20.5	20.5	20.5
18	38.2	38.2	38.2	13.4	13.4	13.4	2.85	20.6	20.6	20.6
17	37.5	37.5	37.5	13.4	13.4	13.4	2.79	20.6	20.6	20.6
16	36.8	36.8	36.8	13.5	13.5	13.5	2.74	20.6	20.6	20.6
15	36.2	36.2	36.2	13.5	13.5	13.5	2.68	20.7	20.7	20.7
14	35.5	35.5	35.5	13.5	13.5	13.5	2.63	20.7	20.7	20.7
13	34.8	34.8	34.8	13.5	13.5	13.5	2.58	20.7	20.7	20.7
12	34.2	34.2	34.2	13.5	13.5	13.5	2.53	20.7	20.7	20.7
11	33.5	33.5	33.5	13.5	13.5	13.5	2.48	20.8	20.8	20.8
10	32.9	32.9	32.9	13.5	13.5	13.5	2.43	20.8	20.8	20.8
9	31.9	31.9	31.9	13.6	13.6	13.6	2.35	20.8	20.8	20.8
8	30.9	30.9	30.9	13.6	13.6	13.6	2.27	20.8	20.8	20.8
7	29.9	29.9	29.9	13.6	13.6	13.6	2.20	20.8	20.8	20.8
6	29.1	29.1	29.1	13.6	13.6	13.6	2.14	20.8	20.8	20.8
5	28.2	28.2	28.2	13.6	13.6	13.6	2.08	20.8	20.8	20.8
4	27.5	27.5	27.5	13.6	13.6	13.6	2.02	20.8	20.8	20.8
3	26.8	26.8	26.8	13.6	13.6	13.6	1.97	20.8	20.8	20.8
2	26.2	26.2	26.2	13.6	13.6	13.6	1.92	20.8	20.8	20.8
1	25.6	25.6	25.6	13.6	13.6	13.6	1.87	20.8	20.8	20.8
0	25.0	25.0	25.0	13.6	13.6	13.6	1.83	20.7	20.7	20.7
-1	24.5	24.5	24.5	13.7	13.7	13.7	1.80	20.7	20.7	20.7
-2	24.1	24.1	24.1	13.7	13.7	13.7	1.76	20.7	20.7	20.7
-3	23.7	23.7	23.7	13.7	13.7	13.7	1.73	20.7	20.7	20.7
-4	23.3	23.3	23.3	13.7	13.7	13.7	1.70	20.7	20.7	20.7
-5	23.0	23.0	23.0	13.7	13.7	13.7	1.68	20.6	20.6	20.6
-6	22.7	22.7	22.7	13.7	13.7	13.7	1.66	20.6	20.6	20.6
-7	22.4	22.4	22.4	13.7	13.7	13.7	1.64	20.6	20.6	20.6
-8	22.2	22.2	22.2	13.7	13.7	13.7	1.62	20.6	20.6	20.6
-9	22.0	22.0	22.0	13.7	13.7	13.7	1.61	20.6	20.6	20.6
-10	21.9	21.9	21.9	13.7	13.7	13.7	1.60	20.6	20.6	20.6
-11	21.5	21.5	21.5	13.7	13.7	13.7	1.56	20.5	20.5	20.5
-12	21.0	21.0	21.0	13.7	13.7	13.7	1.53	20.5	20.5	20.5
-13	20.6	20.6	20.6	13.7	13.7	13.7	1.50	20.4	20.4	20.4
-14	20.2	20.2	20.2	13.8	13.8	13.8	1.47	20.4	20.4	20.4
-15	19.8	19.8	19.8	13.8	13.8	13.8	1.43	20.4	20.4	20.4
-16										
-17										
-18										
-19										
-20										
-21										
-22										
-23										
-24										
-25										

* attention: operating limits not reflected in performance table

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	20.1	20.1	20.1	8.8	8.8	8.8	2.29	15.0	15.0	15.0
39	20.3	20.3	20.3	8.5	8.5	8.5	2.37	14.7	14.7	14.7
38	20.4	20.4	20.4	8.3	8.3	8.3	2.45	14.5	14.5	14.5
37	20.6	20.6	20.6	8.1	8.1	8.1	2.53	14.3	14.3	14.3
36	20.8	20.8	20.8	7.9	7.9	7.9	2.62	14.0	14.0	14.0
35	20.9	20.9	20.9	7.7	7.7	7.7	2.70	13.8	13.8	13.8
34	21.1	21.1	21.1	7.6	7.6	7.6	2.79	13.6	13.6	13.6
33	21.2	21.2	21.2	7.4	7.4	7.4	2.88	13.4	13.4	13.4
32	21.4	21.4	21.4	7.2	7.2	7.2	2.97	13.2	13.2	13.2
31	21.5	21.5	21.5	7.0	7.0	7.0	3.06	13.0	13.0	13.0
30	21.7	21.7	21.7	6.9	6.9	6.9	3.16	12.8	12.8	12.8
29	21.8	21.8	21.8	6.7	6.7	6.7	3.26	12.7	12.7	12.7
28	21.9	21.9	21.9	6.5	6.5	6.5	3.35	12.5	12.5	12.5
27	22.1	22.1	22.1	6.4	6.4	6.4	3.46	12.4	12.4	12.4
26	22.2	22.2	22.2	6.2	6.2	6.2	3.56	12.2	12.2	12.2
25	22.3	22.3	22.3	6.1	6.1	6.1	3.67	12.1	12.1	12.1
24	22.4	22.4	22.4	5.9	5.9	5.9	3.77	11.9	11.9	11.9
23	22.6	22.6	22.6	5.8	5.8	5.8	3.89	11.8	11.8	11.8
22	22.7	22.7	22.7	5.7	5.7	5.7	4.00	11.7	11.7	11.7
21	22.8	22.8	22.8	5.5	5.5	5.5	4.12	11.5	11.5	11.5
20	22.9	22.9	22.9	5.4	5.4	5.4	4.24	11.4	11.4	11.4
19	23.0	23.0	23.0	5.3	5.3	5.3	4.36	11.3	11.3	11.3
18	23.1	23.1	23.1	5.1	5.1	5.1	4.49	11.2	11.2	11.2
17	23.2	23.2	23.2	5.0	5.0	5.0	4.62	11.1	11.1	11.1

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	27.4	27.4	27.4	8.8	8.8	8.8	3.13	14.8	14.8	14.8
39	27.6	27.6	27.6	8.5	8.5	8.5	3.23	14.5	14.5	14.5
38	27.8	27.8	27.8	8.3	8.3	8.3	3.34	14.2	14.2	14.2
37	28.0	28.0	28.0	8.1	8.1	8.1	3.44	14.0	14.0	14.0
36	28.2	28.2	28.2	7.9	7.9	7.9	3.55	13.8	13.8	13.8
35	28.4	28.4	28.4	7.7	7.7	7.7	3.67	13.6	13.6	13.6
34	28.6	28.6	28.6	7.6	7.6	7.6	3.78	13.3	13.3	13.3
33	28.7	28.7	28.7	7.4	7.4	7.4	3.90	13.1	13.1	13.1
32	28.9	28.9	28.9	7.2	7.2	7.2	4.02	12.9	12.9	12.9
31	29.1	29.1	29.1	7.0	7.0	7.0	4.14	12.7	12.7	12.7
30	29.3	29.3	29.3	6.9	6.9	6.9	4.26	12.6	12.6	12.6
29	29.4	29.4	29.4	6.7	6.7	6.7	4.39	12.4	12.4	12.4
28	29.6	29.6	29.6	6.5	6.5	6.5	4.52	12.2	12.2	12.2
27	29.7	29.7	29.7	6.4	6.4	6.4	4.65	12.1	12.1	12.1
26	29.9	29.9	29.9	6.2	6.2	6.2	4.79	11.9	11.9	11.9
25	30.0	30.0	30.0	6.1	6.1	6.1	4.93	11.7	11.7	11.7
24	30.2	30.2	30.2	5.9	5.9	5.9	5.07	11.6	11.6	11.6
23	30.3	30.3	30.3	5.8	5.8	5.8	5.22	11.5	11.5	11.5
22	30.4	30.4	30.4	5.7	5.7	5.7	5.37	11.3	11.3	11.3
21	30.5	30.5	30.5	5.5	5.5	5.5	5.52	11.2	11.2	11.2
20	30.7	30.7	30.7	5.4	5.4	5.4	5.68	11.1	11.1	11.1
19	30.8	30.8	30.8	5.3	5.3	5.3	5.84	11.0	11.0	11.0
18	30.9	30.9	30.9	5.1	5.1	5.1	6.01	10.9	10.9	10.9
17	31.0	31.0	31.0	5.0	5.0	5.0	6.18	10.8	10.8	10.8

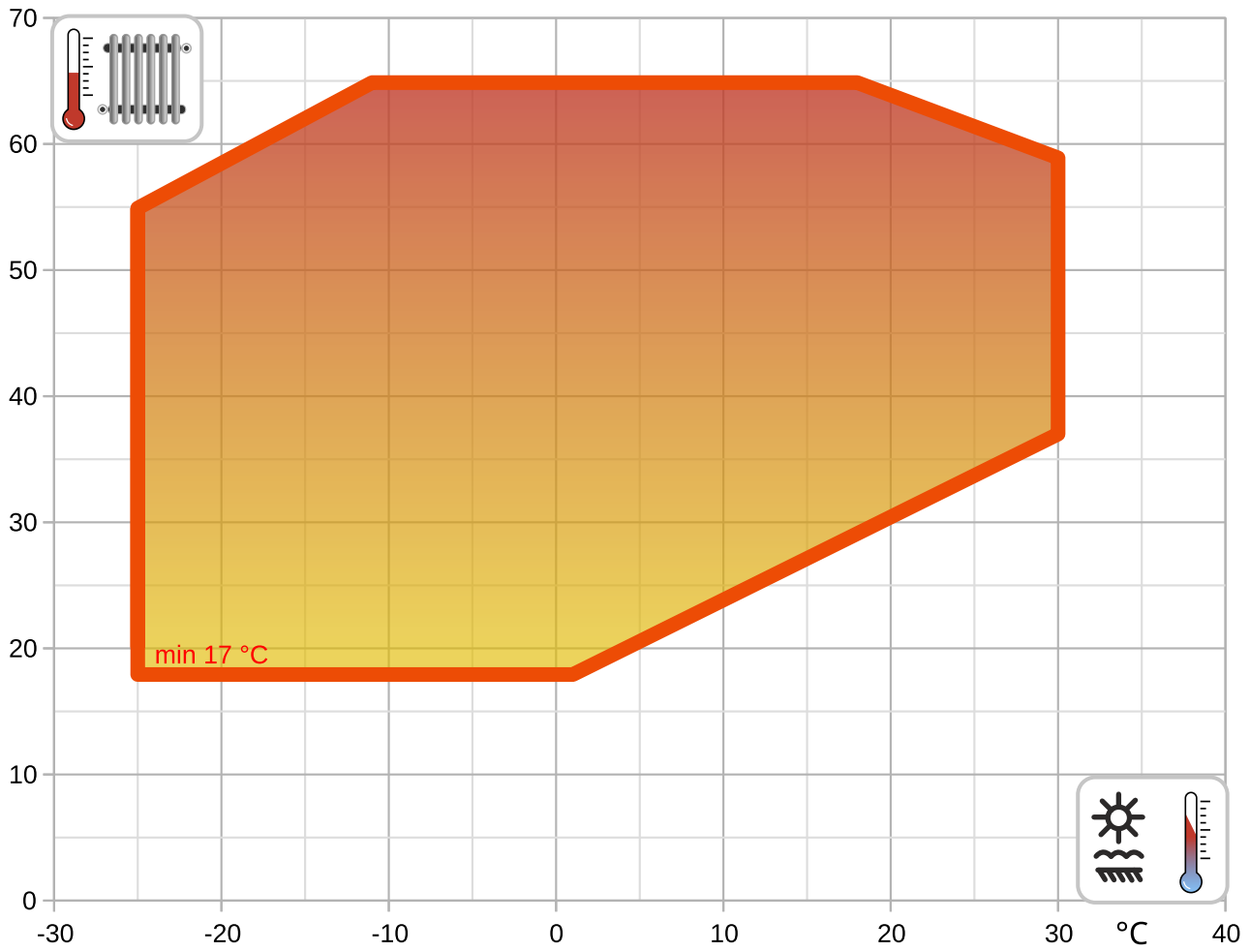
* attention: operating limits not reflected in performance table

LEGENDE:

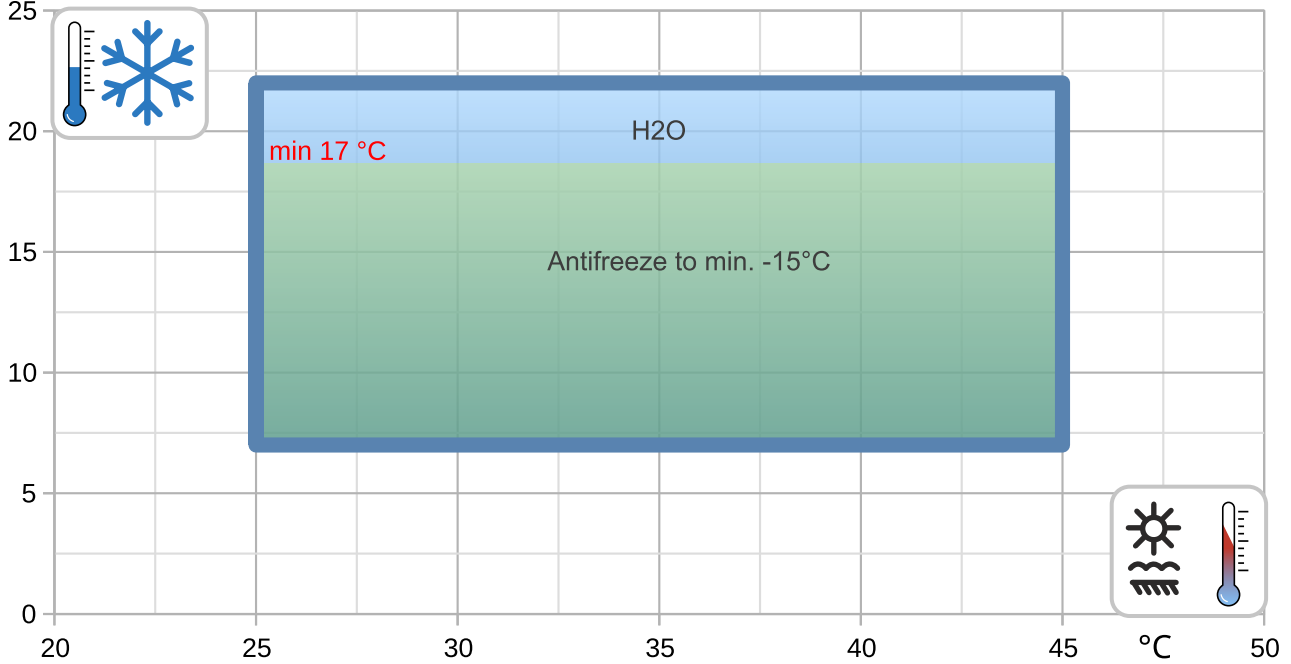
Ts-IN: Temperature renewable source - inlet [°C]
Th-OU: Temperature heating - outlet (flow) [°C]
Tc-OU: Temperature cooling - outlet (flow) [°C]
Qh nom: Heating capacity nominal
Qh min: Heating capacity minimal
Qh max: Heating capacity maximal
Pin nom: Power input at nominal heating capacity
Pin min: 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

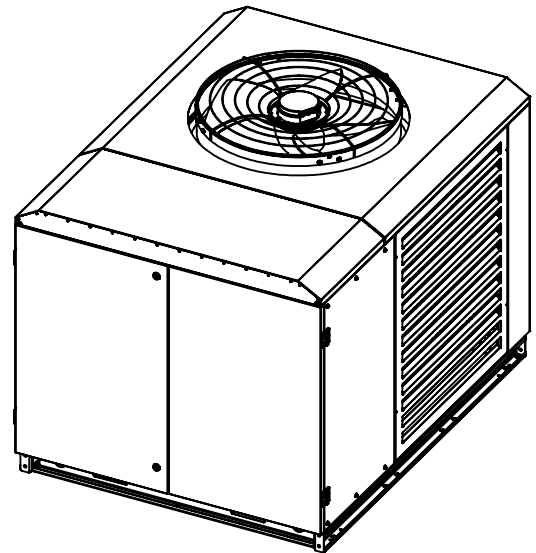
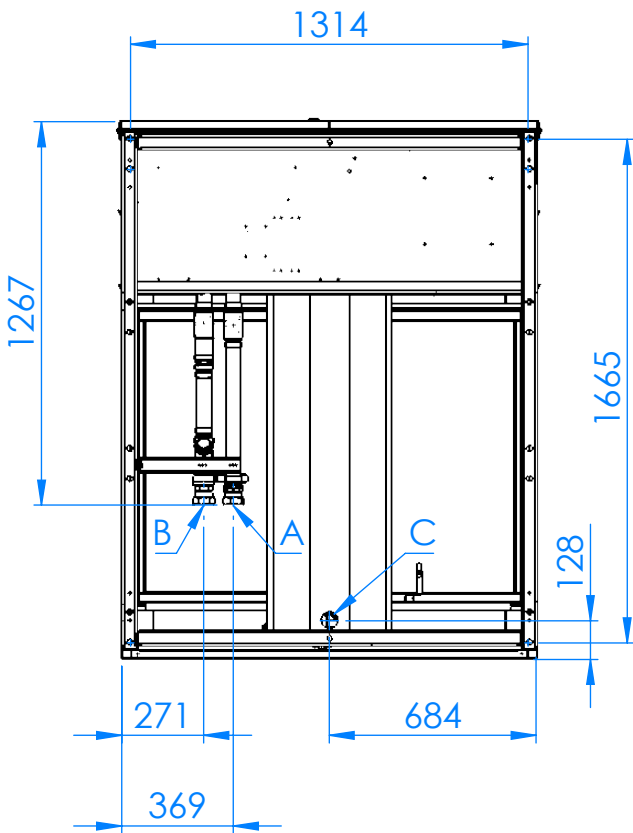
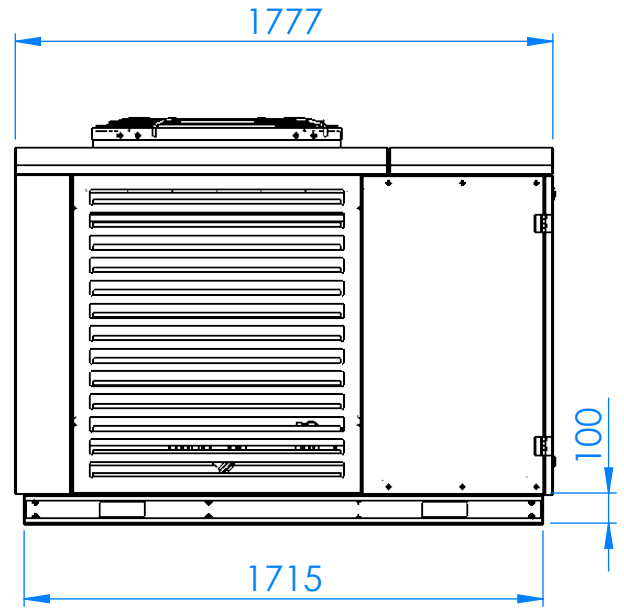
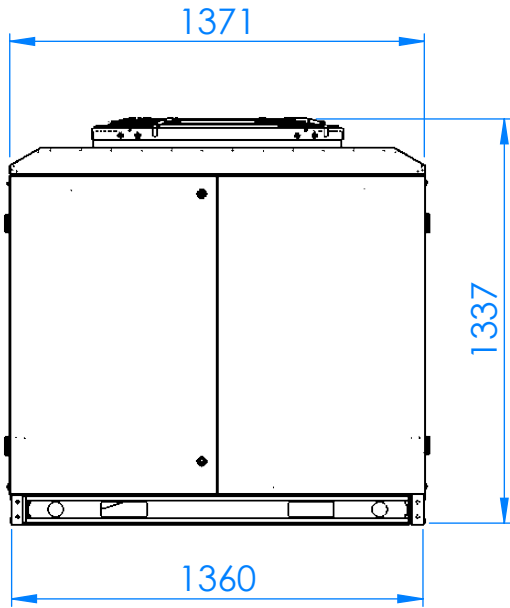
Operating limits





°C

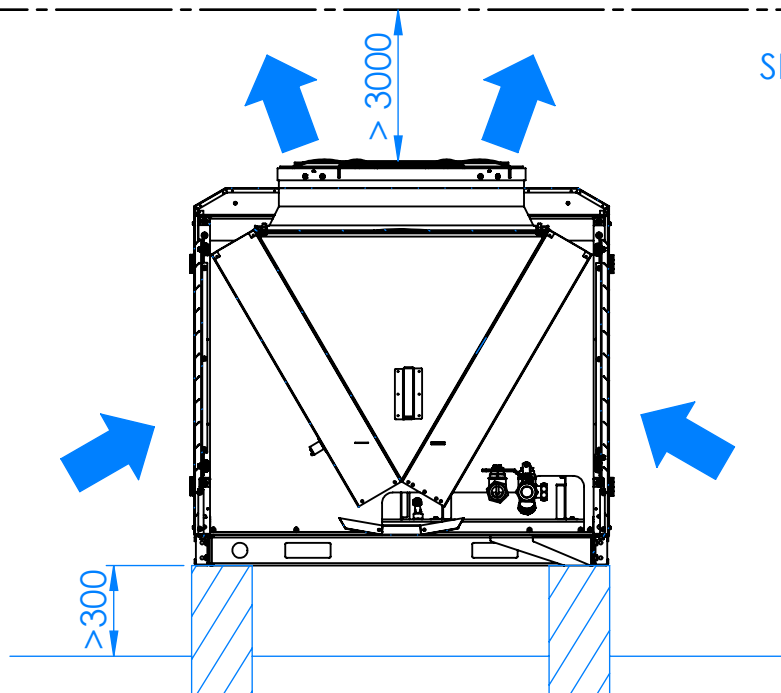
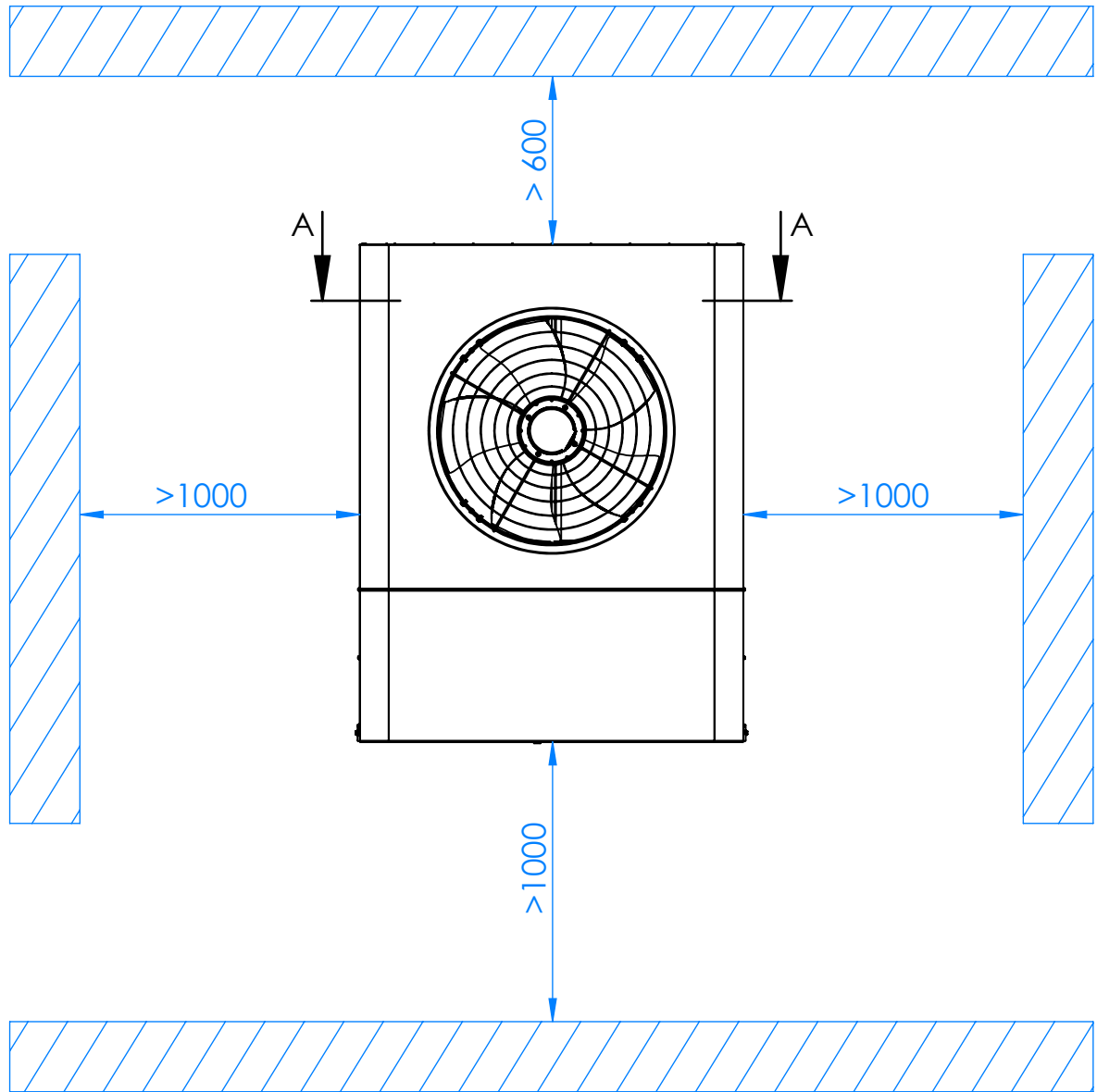


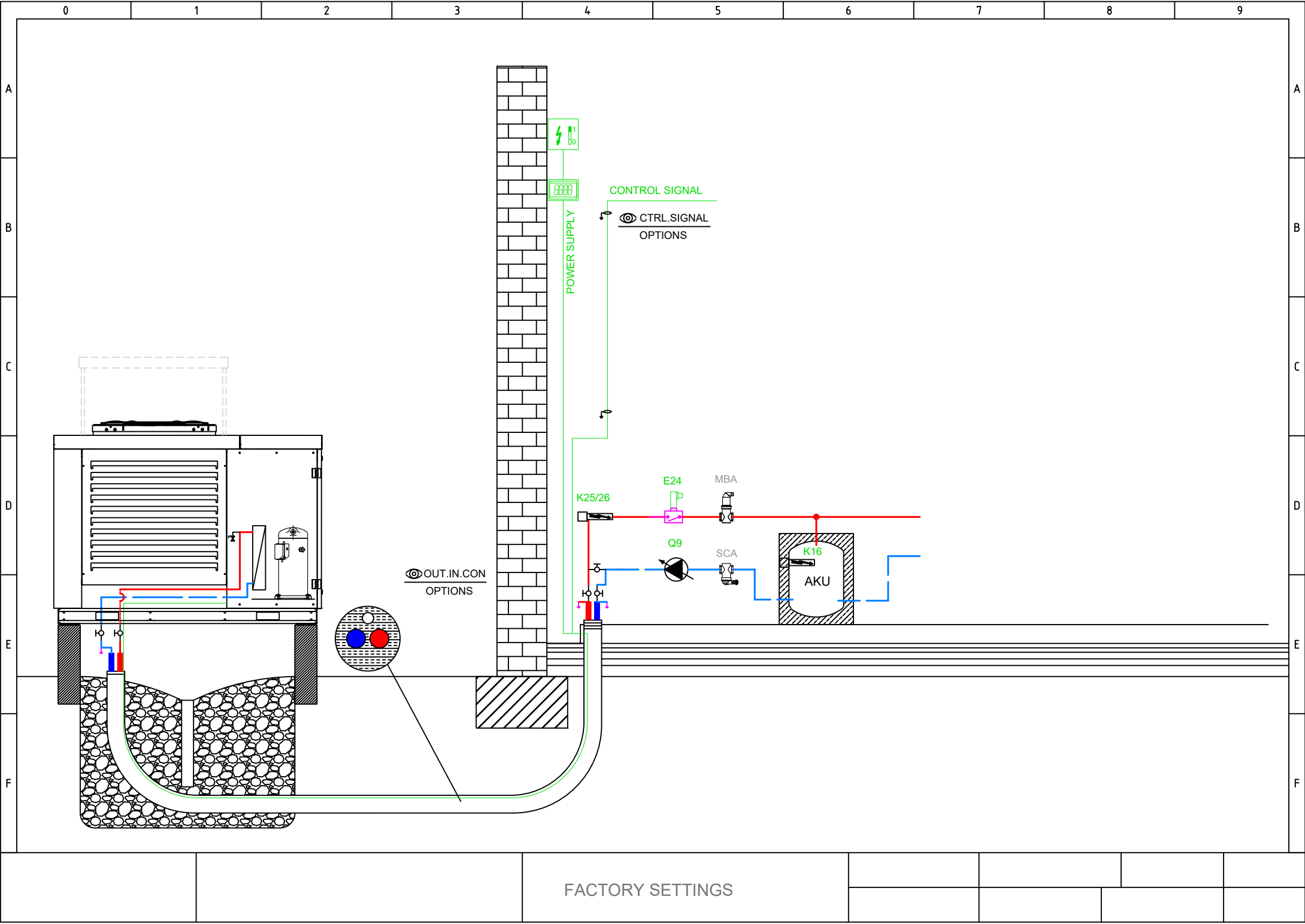
°C



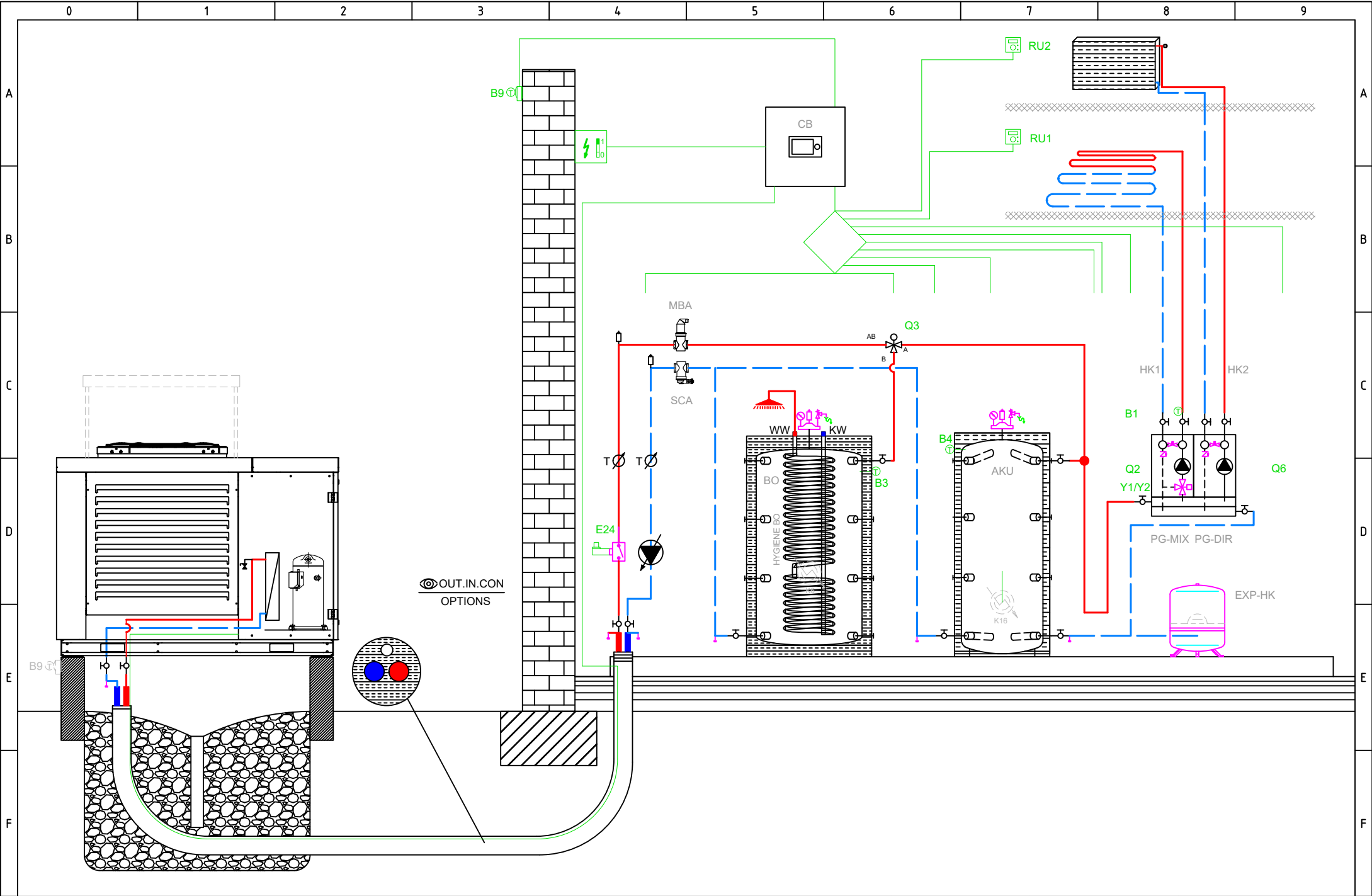


- A -  → 
- B -  ← 
- C - Condens

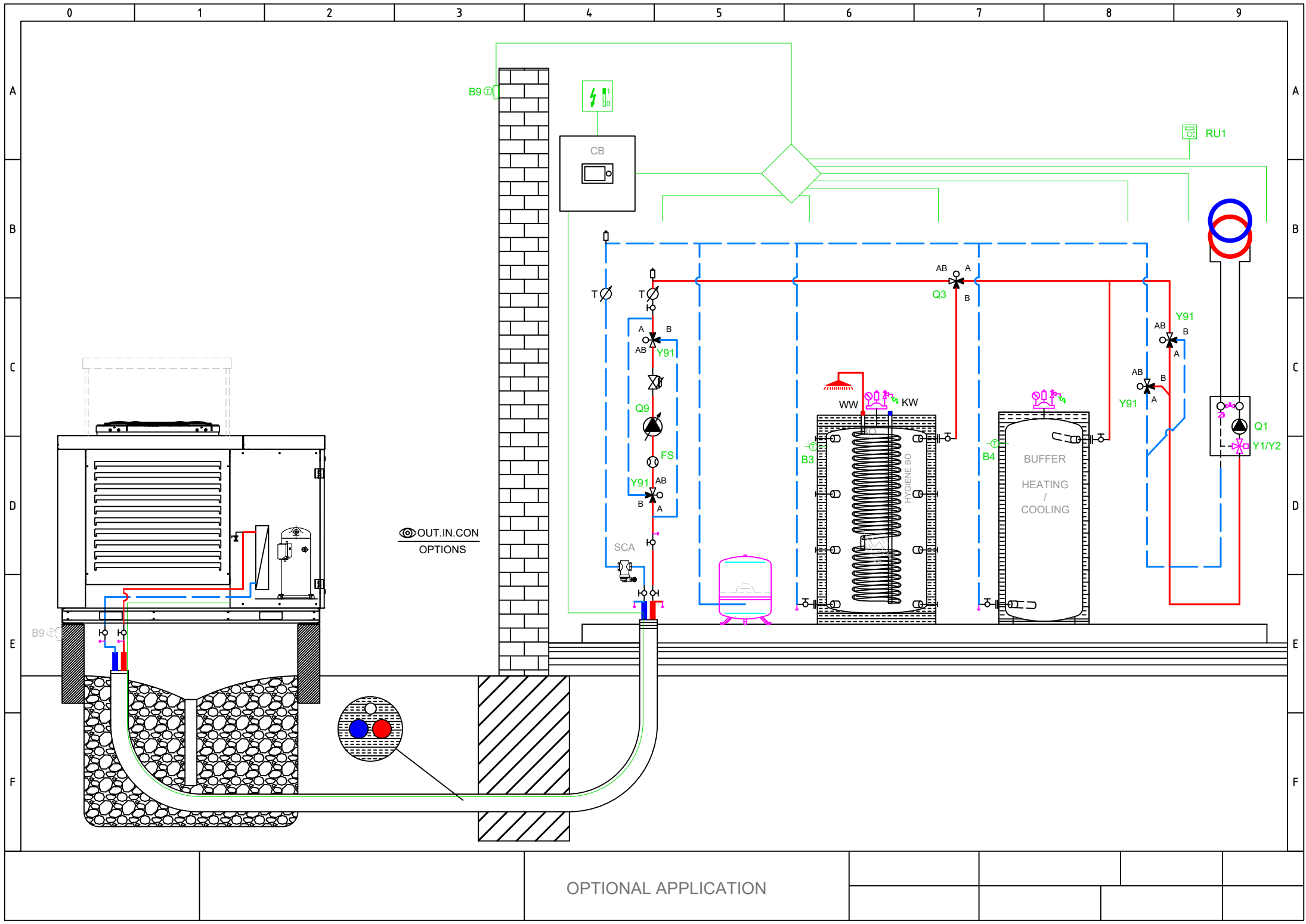




FACTORY SETTINGS



BASIC 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

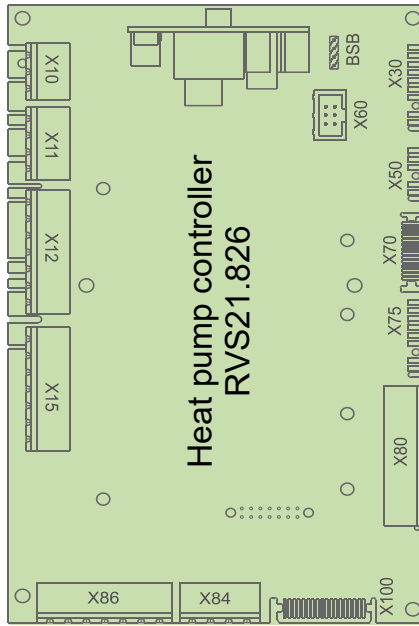
- L Phase 230V
- K1 Compressor stage 1 K1
- Y22 Process revers valve Y22

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

- BSB Connection service tool (OCI700)
- X30 Operating unit (HMI) AVS37.xxx
- X60 Modbus clip-in OCI351.01
- X50 Extension module AVS75.xxx
- X70 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

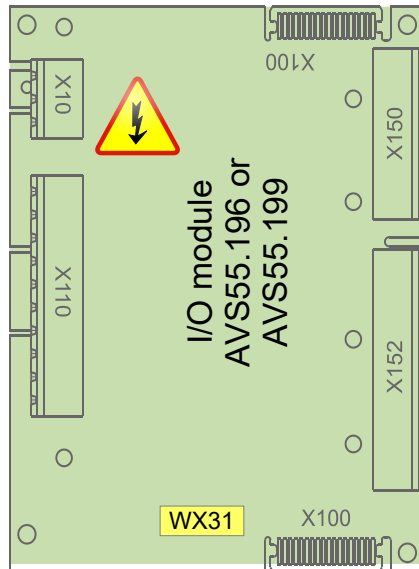
- B71 HP return sensor B71
- B9 Outside sensor B9

Main power supply 230V / 50 Hz
Ground
Neutral conductor

K10 Alarm output K10

V81 EEV evaporator V81

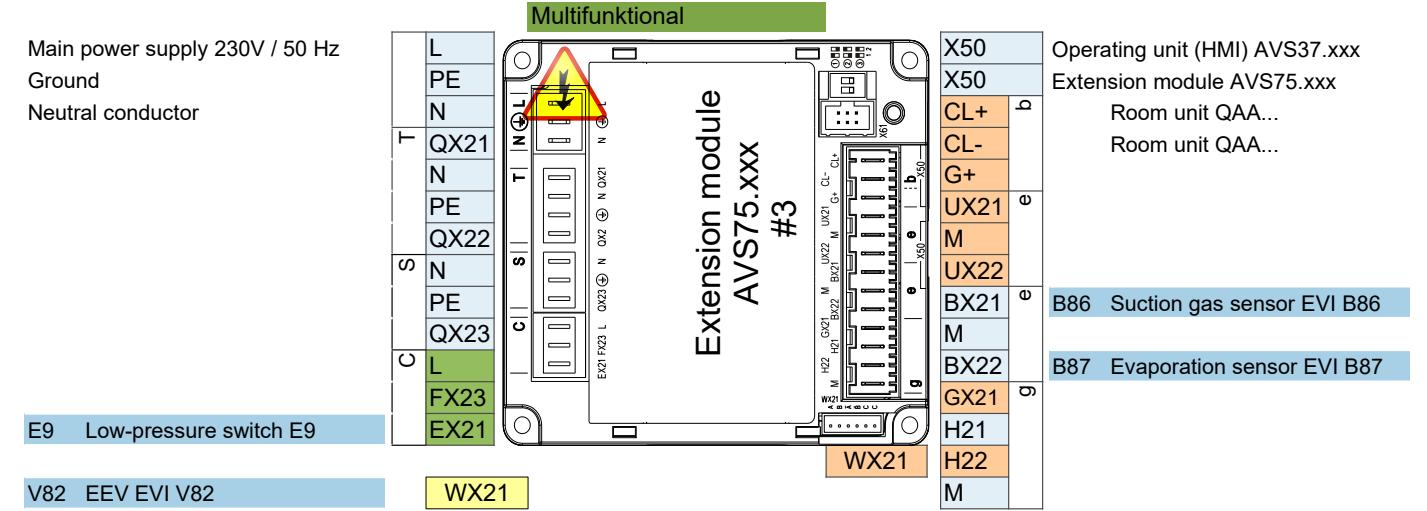
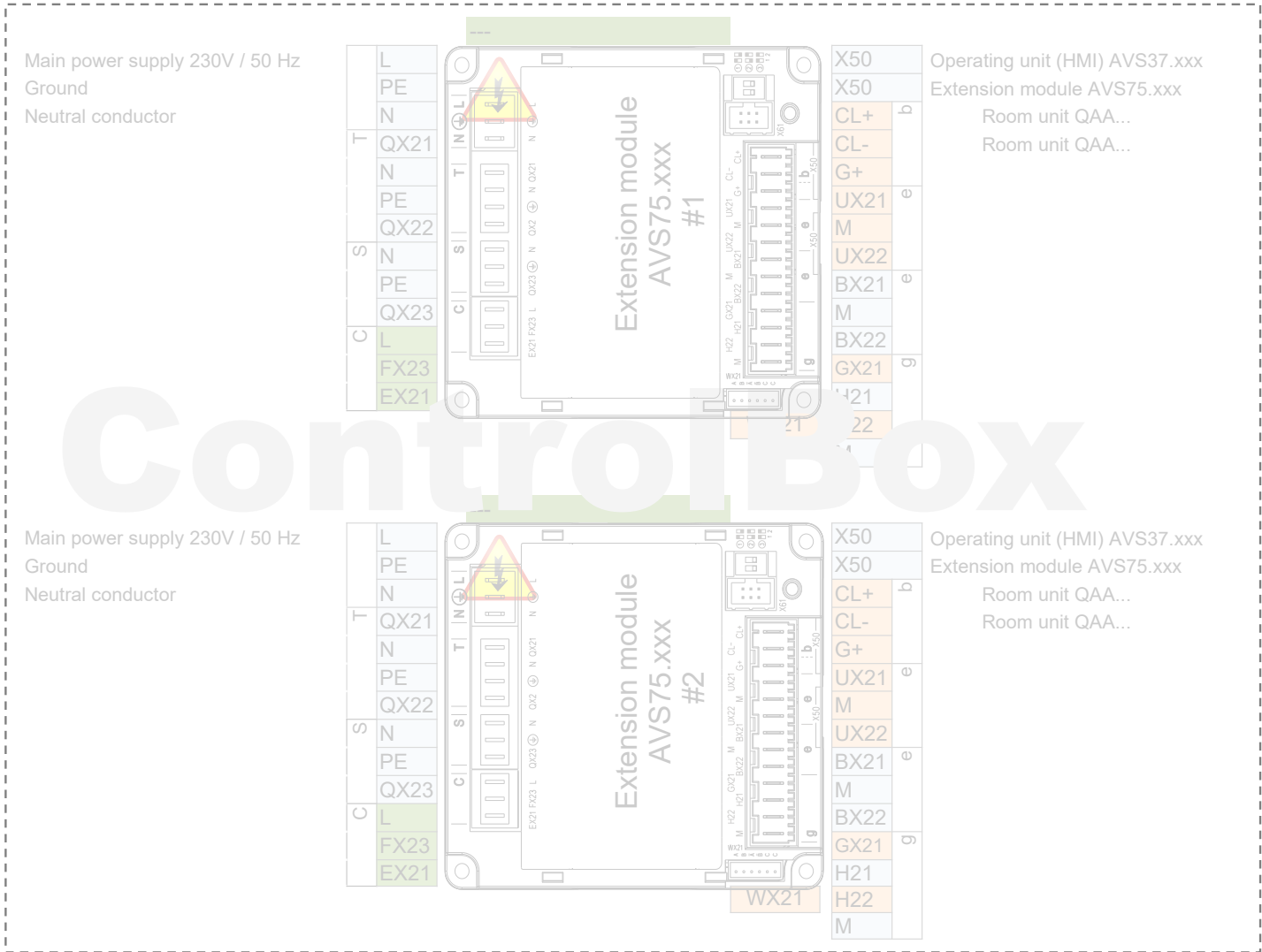
X10	1	L
X10	1	PE
X10	1	N
X110	1	QX31
X110	1	QX32
X110	1	N
X110	1	QX33
X110	1	N
X110	1	ZX34
X110	1	N
X115	1	QX35
X115	1	QX35i
X115	1	N

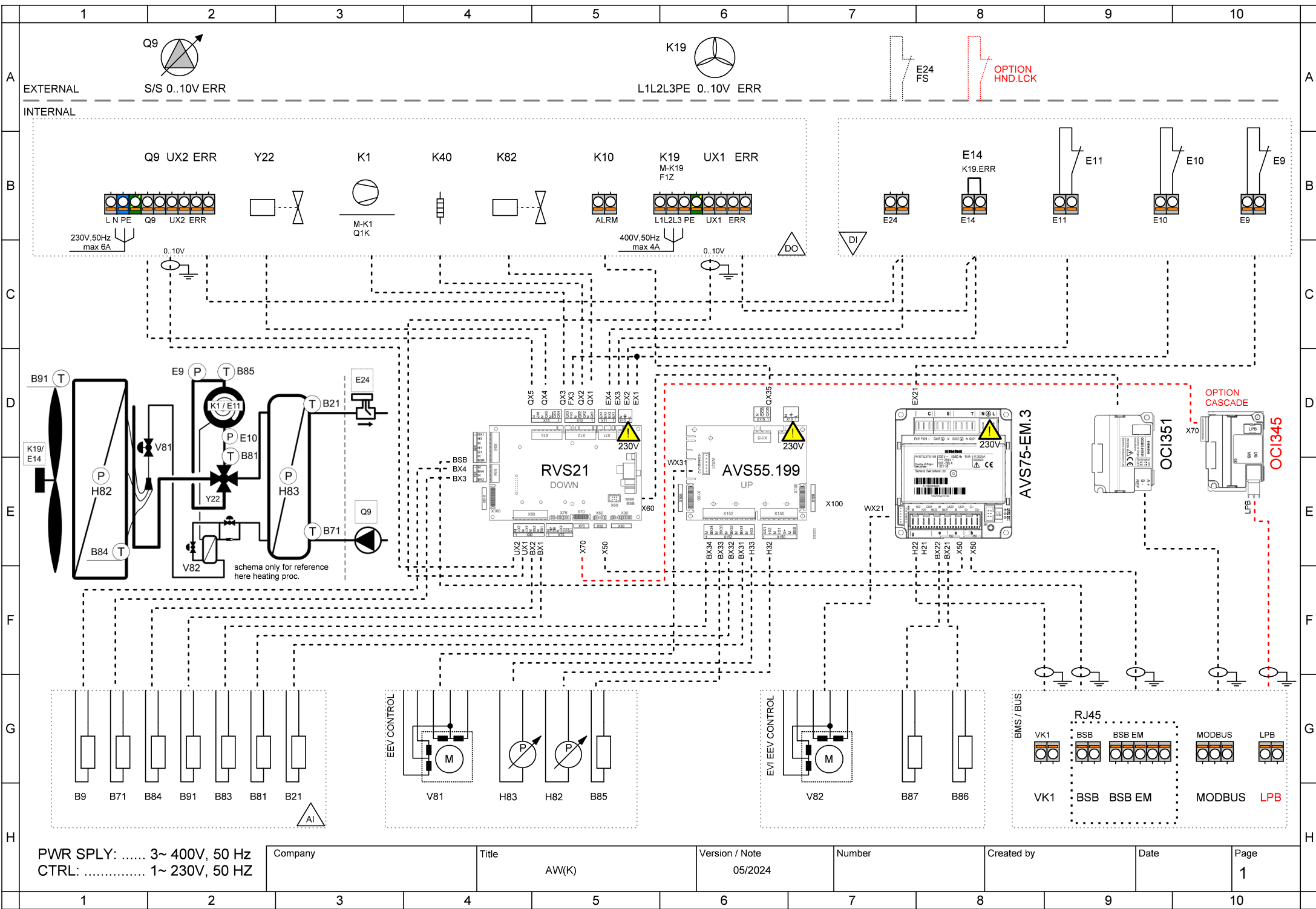


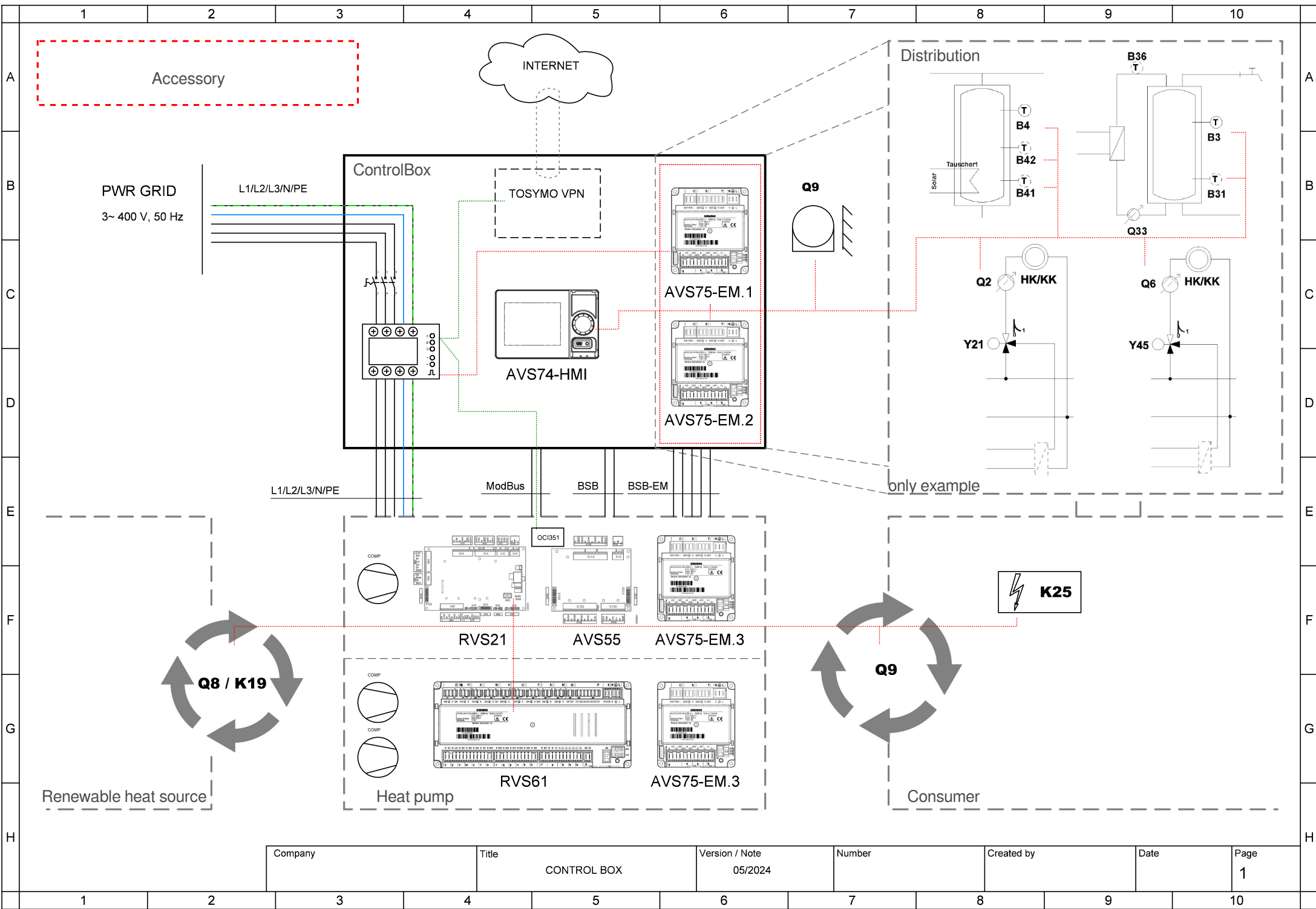
BSB
M
G+
H31
M
H32
GX1
H33
M
BX31
M
BX32
M
BX33
M
BX34
M

- 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

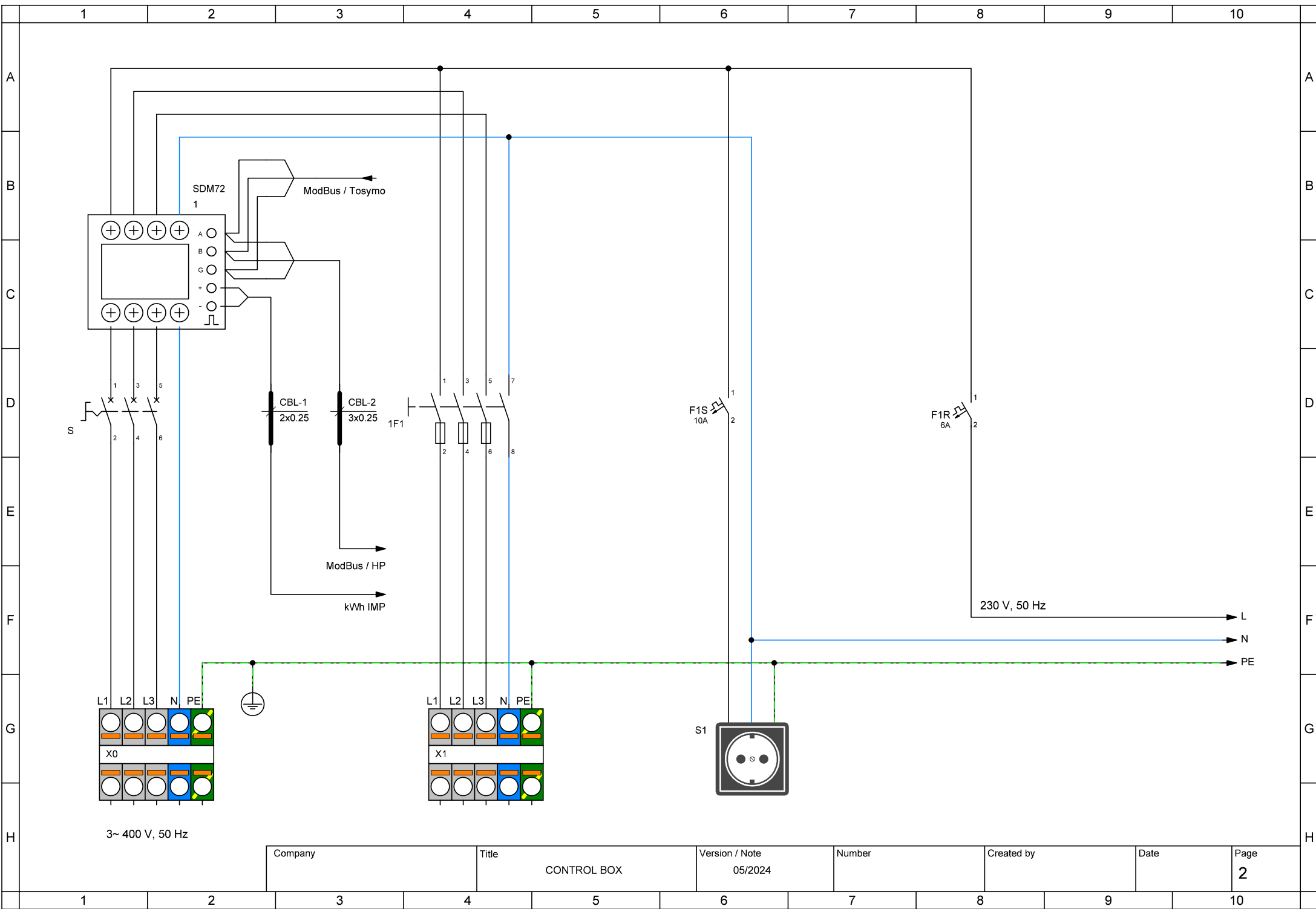
- AVS75.390
- AVS75.391
- AVS75.370



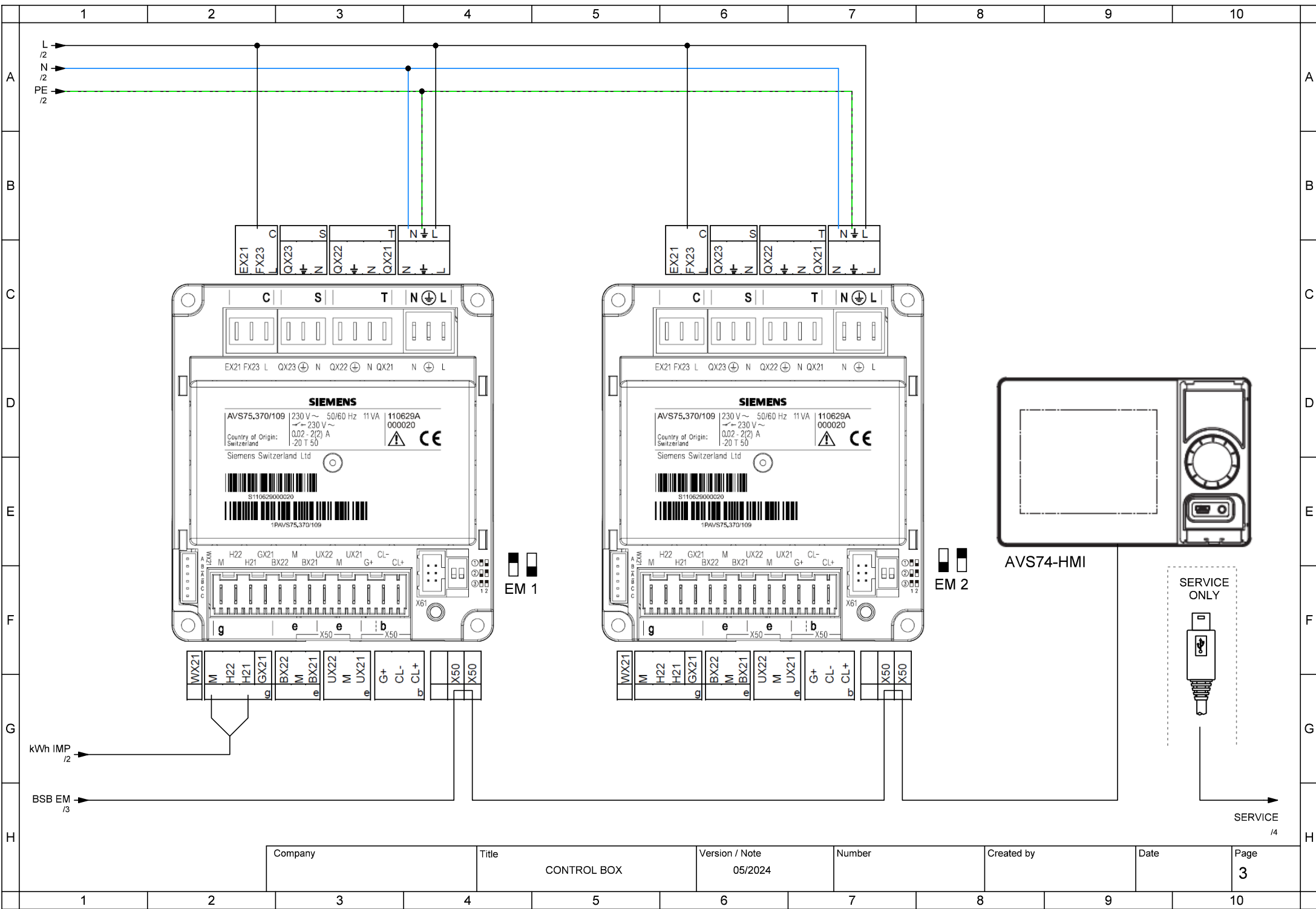




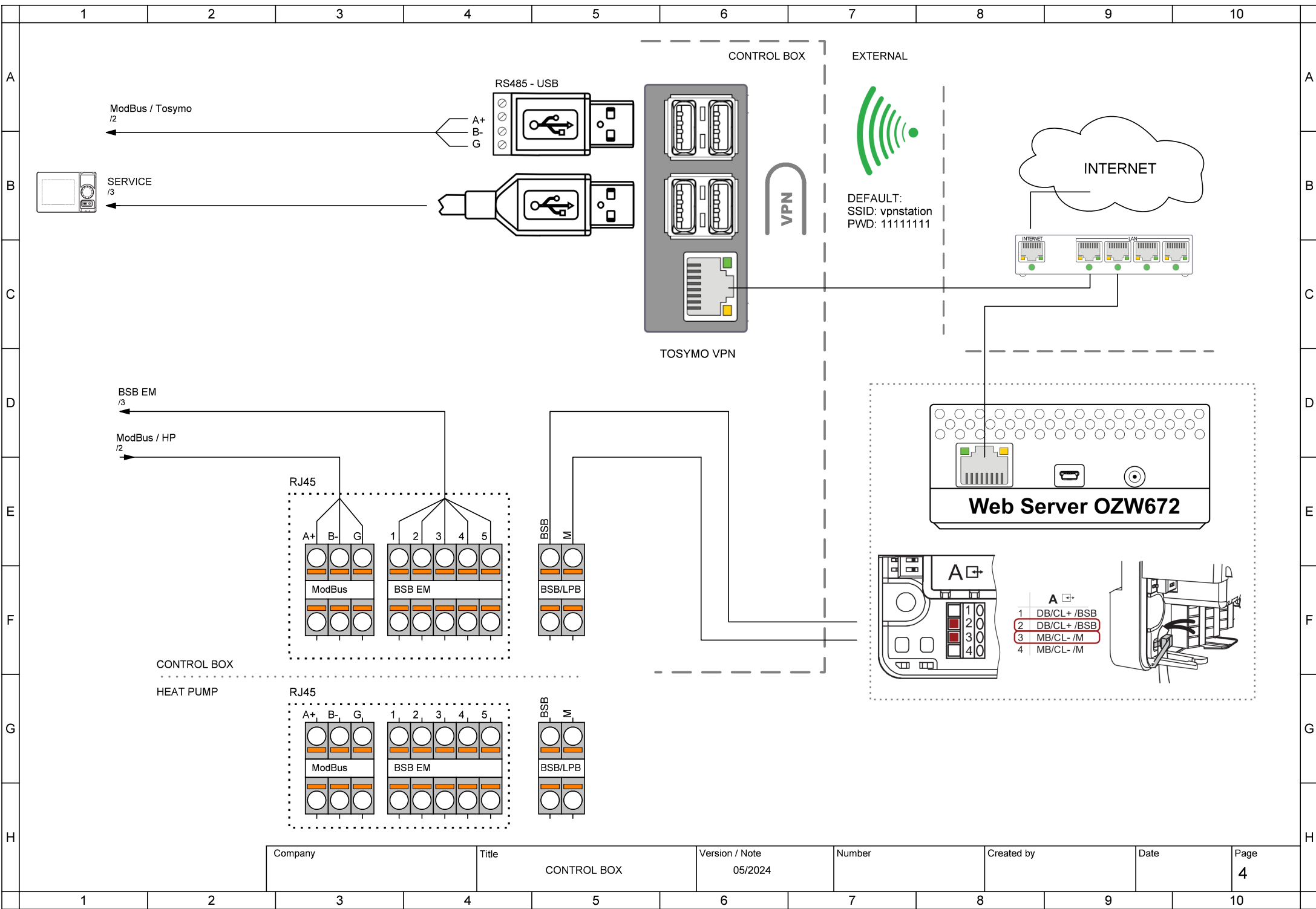
Company	Title	Version / Note	Number	Created by	Date	Page
	CONTROL BOX	05/2024				1



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

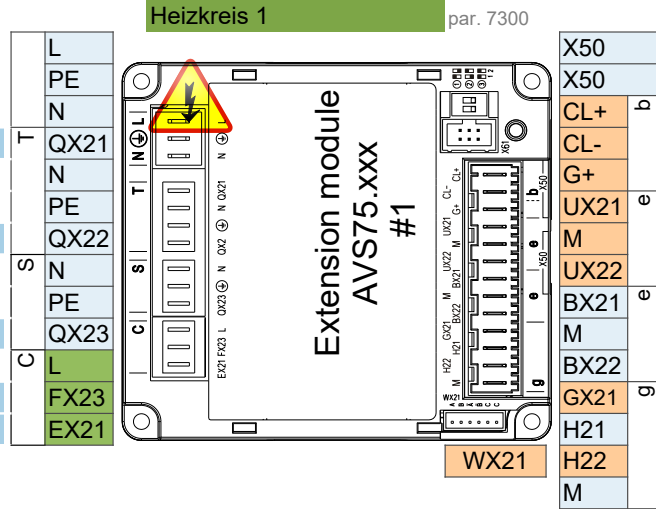
- AVS75.390
- AVS75.391
- AVS75.370

- 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

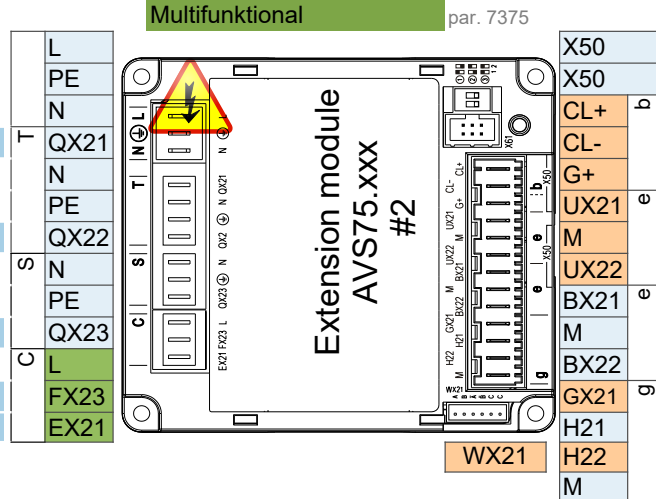
 Pulse count

- 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

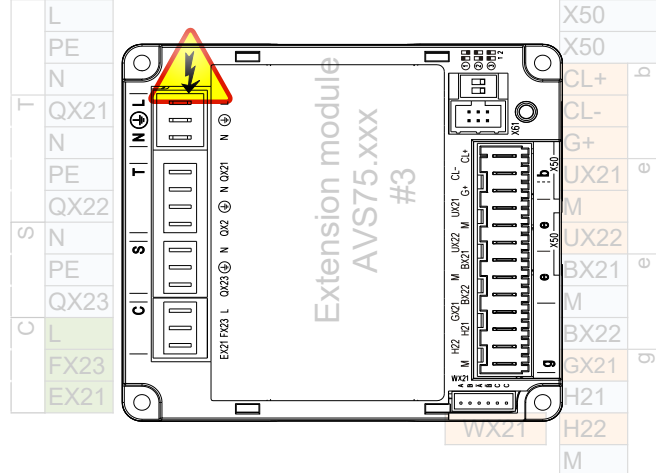


- Operating unit (HMI) AVS37.xxx
 Extension module AVS75.xxx
 Room unit QAA...
 Room unit QAA...

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