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
	ηc [%]	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

Main technical data - WAMAK AWK 27 EVI

Enclosure type		AWK-VOV900
Basic dimensions	Height [mm]	1250
	Width [mm]	1380
	Length [mm]	1780
Weight [kg]		510
Colour		Inox
Enclousure IP Class		IP44
Refrigeration cycle		
Compressor	Type	Scroll
	Number of stages	1
	On/Off	
	Power factor Cosϕ	0.69
	Winding resistance	1.24 Ohm
Refrigerant		R410A
	Volme	7.9 kg
	GWP	2088
	Safety class	A1
Refrigeration oil type	POE RL32-3MAF	
	Oil volume	3.38 L
Maximal pressure - refrigerant [bar]		50
	PED class	2
EVI - vapour injection with economizer		
APS System of liquid subcooling		
Reversible operation (cooling)		
Reverse defrosting with hot gas		
Plate exchanger protection HG-BYPASS		
Electrical connection data		
Line voltage [#~ V/Hz]		3~ 400/50
Current	nominal [A]	12.30
	maximal [A]	21.00
	starting [A]	32.12
Softstart		-
Main safety		C32

Control System

Main controller	SIEMENS	RVS 21 AVS 55.199	
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

Heat energy rejection side data		
Operating limit temperatures heating	MAX [°C]	65
	MIN [°C]	25
for more see operating limits diagram		
Condenser	Port size	2 "
	Type	BPHE
	Count	1
	Material	AISI 316
Maximal operating pressure - refrigerant [bar]		50
Maximal operating pressure - Water [bar]		6
Testing pressure [bar]		70
Heat transfer medium		Water
Volume flow @ dT 5K (nom) - Water [m3/h]		5.00
Internal pressure drop - Water [kPa]		12
Temperature difference	@ 35°C (nom)	5 K
	@ 55°C	8 K
	@ 65°C	10 K
Renewable energy extraction side data		
Operating limit temperatures source	MIN [°C]	-22
	MAX [°C]	40
for more see operating limits diagram		
Evaporator	Type	Cu-coil /Al-fin
	Count	1
	Material	Cu/Al
Maximal operating pressure - refrigerant [bar]		29
Heat transfer medium		Air
Volume flow - Air [m3/h]		9060
Internal pressure drop - Air [kPa]		0.023
Temperature difference - Air		7 K
Number of fans		1
Fan diameter [mm]		800

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
Rated heat output at Tdesignh	Prated	23.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	20.3	kW
Tj = +2 °C	Pdh	24.6	kW
Tj = +7 °C	Pdh	29.0	kW
Tj = +12 °C	Pdh	33.7	kW
Tj = bivalent temperature	Pdh	19.7	kW
Tj = operation limit temperature	Pdh	13.9	kW
Bivalent temperature	Tbiv	-7	°C
Power consumption in modes other than active mode			
Off mode	Poff	0.040	kW
Thermostat-off mode	Pto	0.010	kW
Standby mode	Psb	0.010	kW
Crankcase heater mode	Pck	0.050	kW
Other items			
Capacity control		fixed	
Sound power level			
indoors	Lwa	---	dB
outdoors	Lwa	66	dB
Annual energy consumption	Q_{HE}	10534.1	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	174.7	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	COPd	3.22	-
Tj = +2 °C	COPd	4.3	-
Tj = +7 °C	COPd	5.6	-
Tj = +12 °C	COPd	7.5	-
Tj = bivalent temperature	COPd	3.1	-
Tj = operation limit temperature	COPd	2.2	-
Tj = operation limit temperature	TOL	-22	°C
Heating water operating limit temperature	WTOL	65	°C
Supplementary heater			
Rated heat output	Psup	10.5	kW
Type of energy input		electricity	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	9060	m3/h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	---	m3/h

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

WAMAK AWK 27 EVI

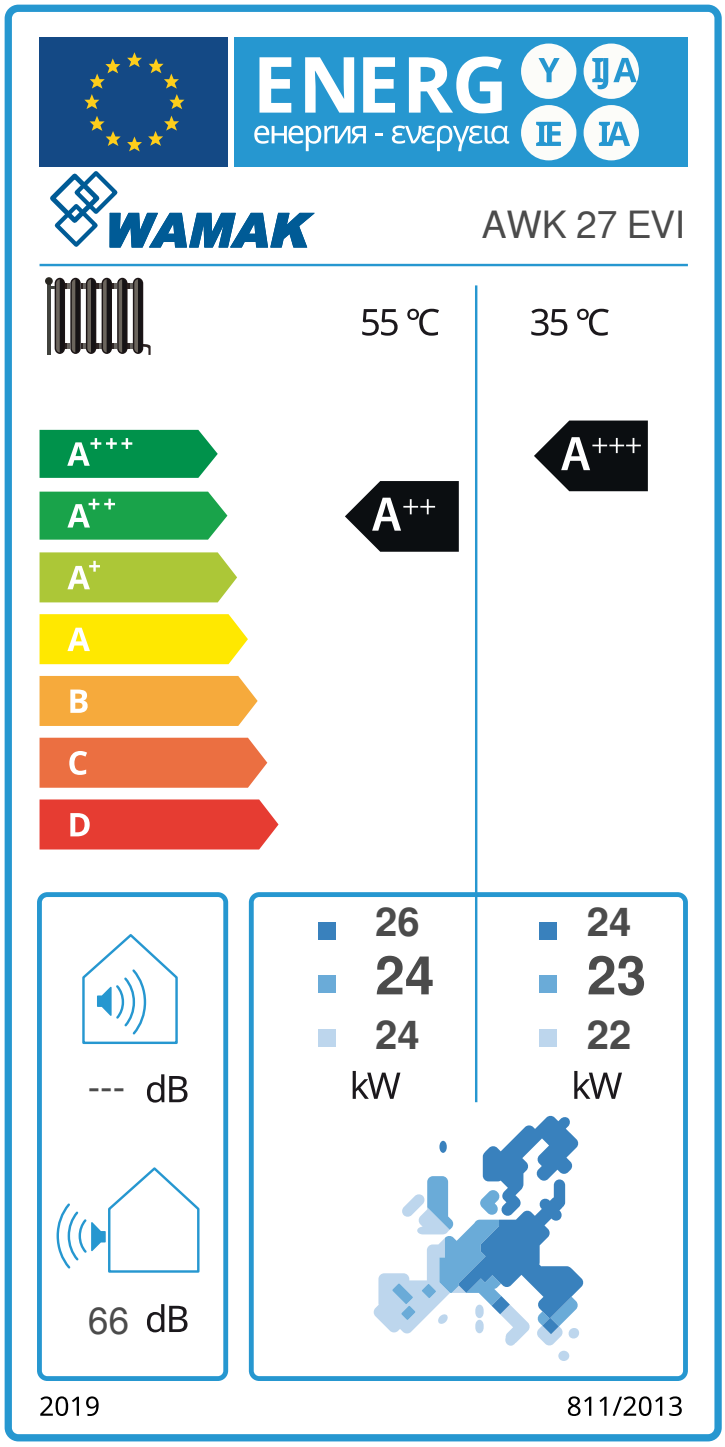
ErP (EU) No 811/2013: Technical parameters for heat pump space heaters

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
Rated heat output at Tdesignh	Prated	24.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	21.0	kW
Tj = +2 °C	Pdh	24.8	kW
Tj = +7 °C	Pdh	29.1	kW
Tj = +12 °C	Pdh	33.9	kW
Tj = bivalent temperature	Pdh	20.6	kW
Tj = operation limit temperature	Pdh	15.4	kW
Bivalent temperature	Tbiv	-7	°C
Power consumption in modes other than active mode			
Off mode	Poff	0.040	kW
Thermostat-off mode	Pto	0.010	kW
Standby mode	Psb	0.010	kW
Crankcase heater mode	Pck	0.050	kW
Other items			
Capacity control		fixed	
Sound power level			
indoors	Lwa	---	dB
outdoors	Lwa	66	dB
Annual energy consumption	Q_{HE}	14492.2	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	133.7	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	COPd	2.16	-
Tj = +2 °C	COPd	3.3	-
Tj = +7 °C	COPd	4.5	-
Tj = +12 °C	COPd	6.3	-
Tj = bivalent temperature	COPd	2.0	-
Tj = operation limit temperature	COPd	1.5	-
Tj = operation limit temperature	TOL	-22	°C
Heating water operating limit temperature	WTOL	65	°C
Supplementary heater			
Rated heat output	Psup	10.5	kW
Type of energy input		electricity	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	9060	m3/h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	---	m3/h

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



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

CONTROLER

+ 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

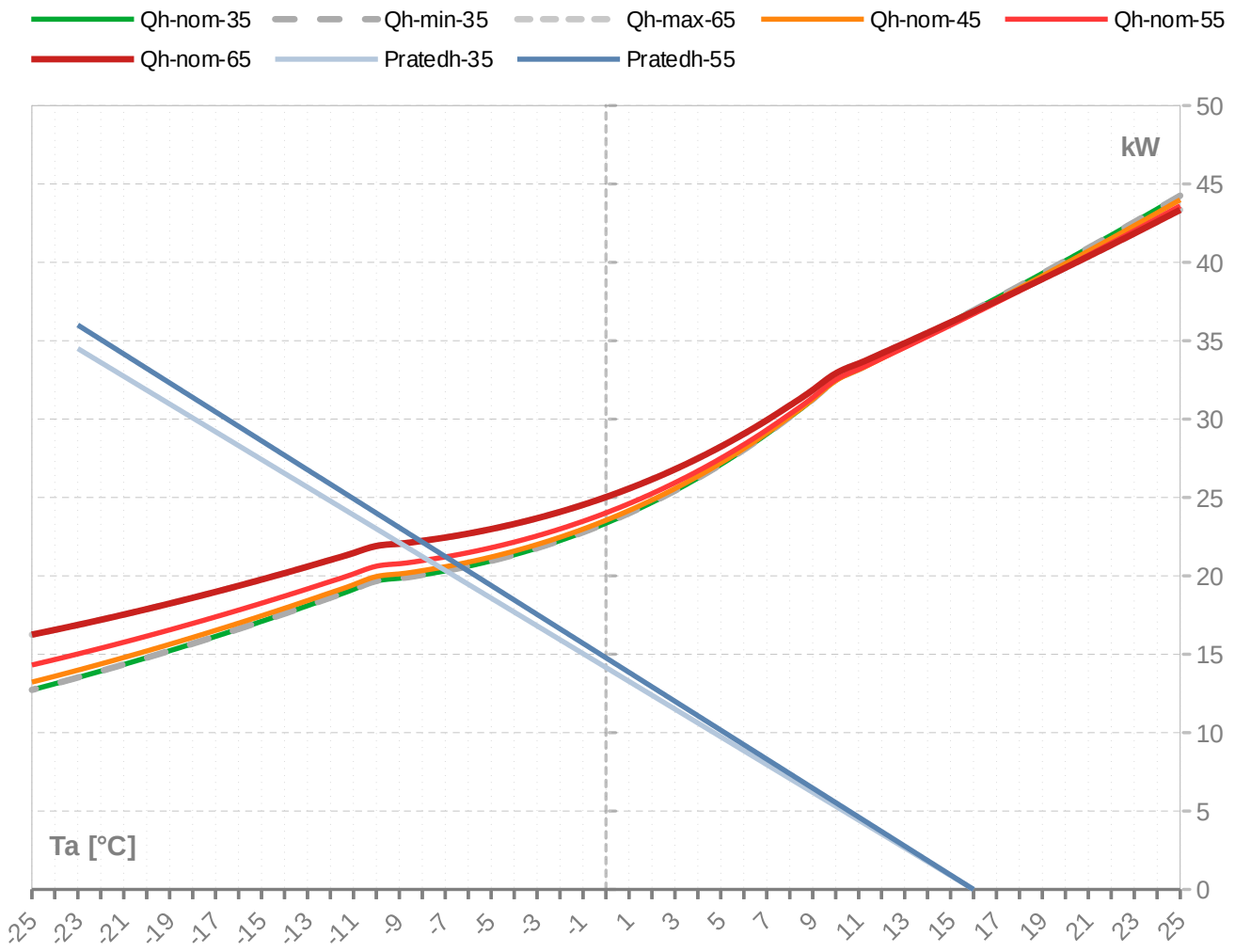
Radiant cooling W 23 / 18°C

	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

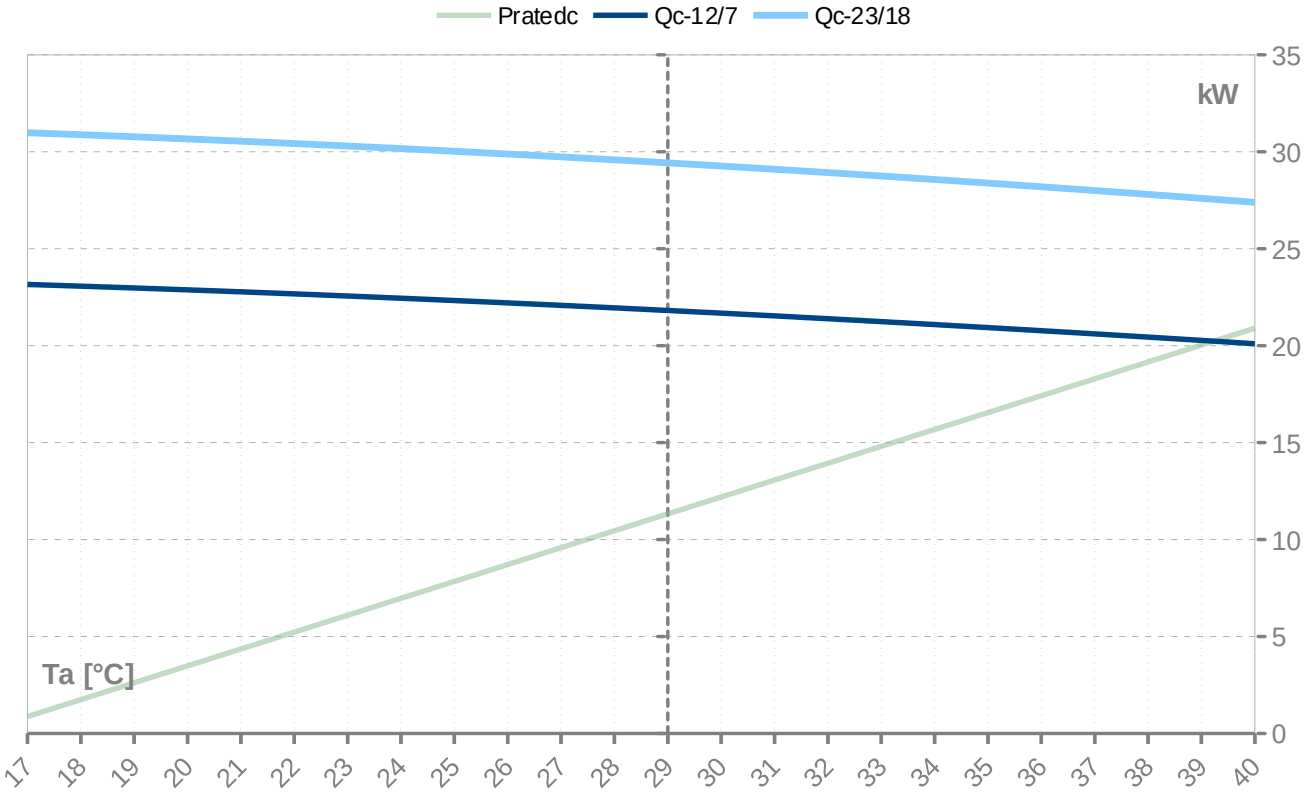
SEER DATA EN 14825:2018 [W 23 / 18°C]	
SEERon	4.80
SEER	4.61
Qc [kWh]	3289.22
η [%]	184.29

Performance lines - heating

ZHI27K1P-TFD_R410A_1_AW



Performance lines - cooling



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**									
	Qh nom	**Qh min**	**Qh max**	**Pin nom**	**Pin-min**	**Pin-max**	**COP**	**I nom**	**I min**	**I max**
Ta [°C]	**[kW]**	[kW]	[kW]	**[kW]**	[kW]	[kW]	**kW / kW**	[A]	[A]	[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**									
	Qh nom	**Qh min**	**Qh max**	**Pin nom**	**Pin-min**	**Pin-max**	**COP**	**I nom**	**I min**	**I max**
Ta [°C]	**[kW]**	[kW]	[kW]	**[kW]**	[kW]	[kW]	**kW / kW**	[A]	[A]	[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									
	Qc nom	**Qc min**	**Qc max**	**Pin**	**Pin min**	**Pin max**	**EER**	**I nom**	**I min**	**I max**
Ta [°C]	**[kW]**	[kW]	[kW]	**[kW]**	[kW]	[kW]	**kW / kW**	[A]	[A]	[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

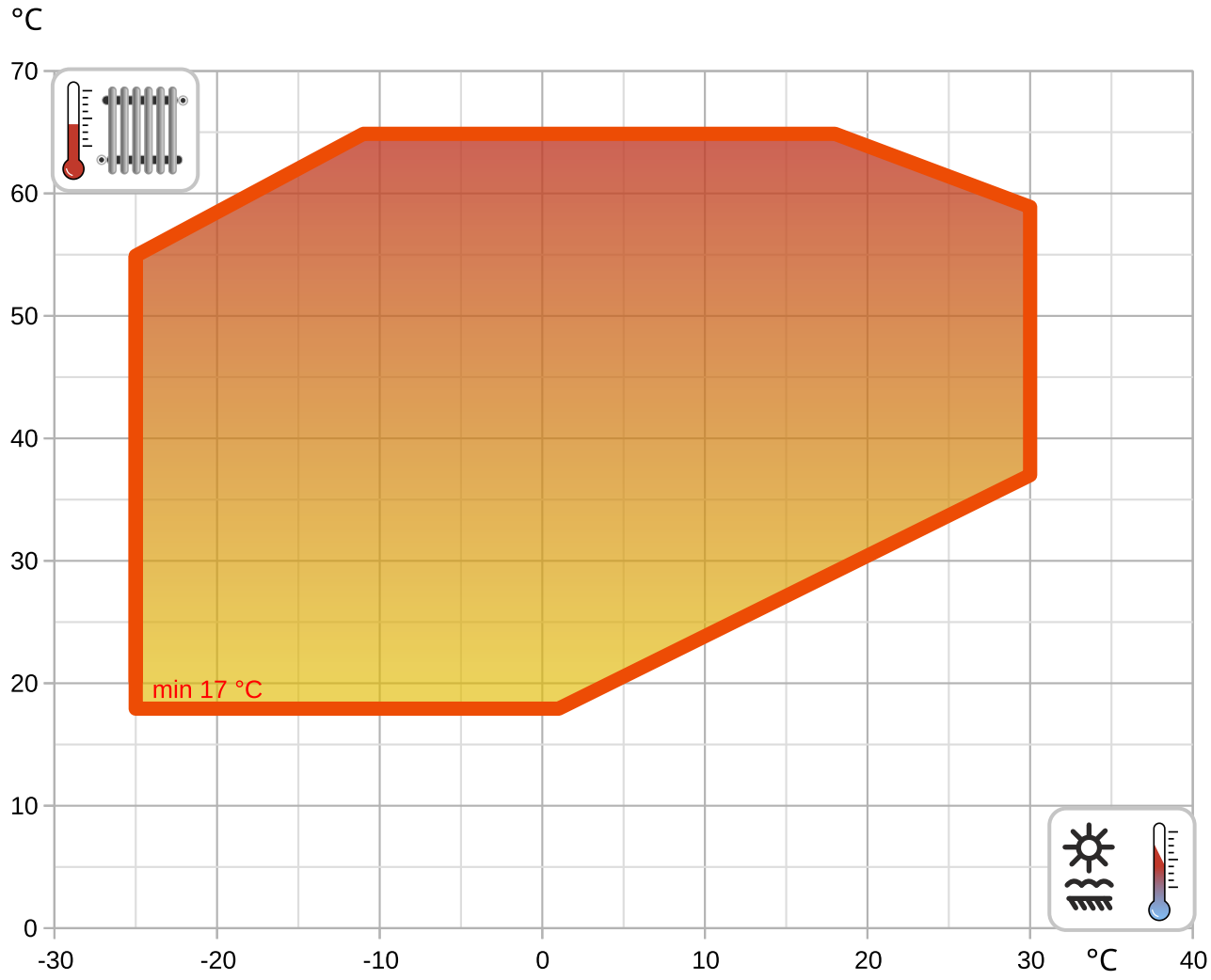
Tc [°C]	W 23 / 18 °C									
	Qc	**Qh-min**	**Qh-max**	**Pin**	**Pin-min**	**Pin-max**	**EER**	**I**	**I-min**	**I-max**
Ta [°C]	**[kW]**	[kW]	[kW]	**[kW]**	[kW]	[kW]	**kW / kW**	[A]	[A]	[A]
40	**27.4**	27.4	27.4	**8.8**	8.8	8.8	**3.13**	14.8	14.8	14.8
39	**27.6**	27.6	27.6	**8.5**	8.5	8.5	**3.23**	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

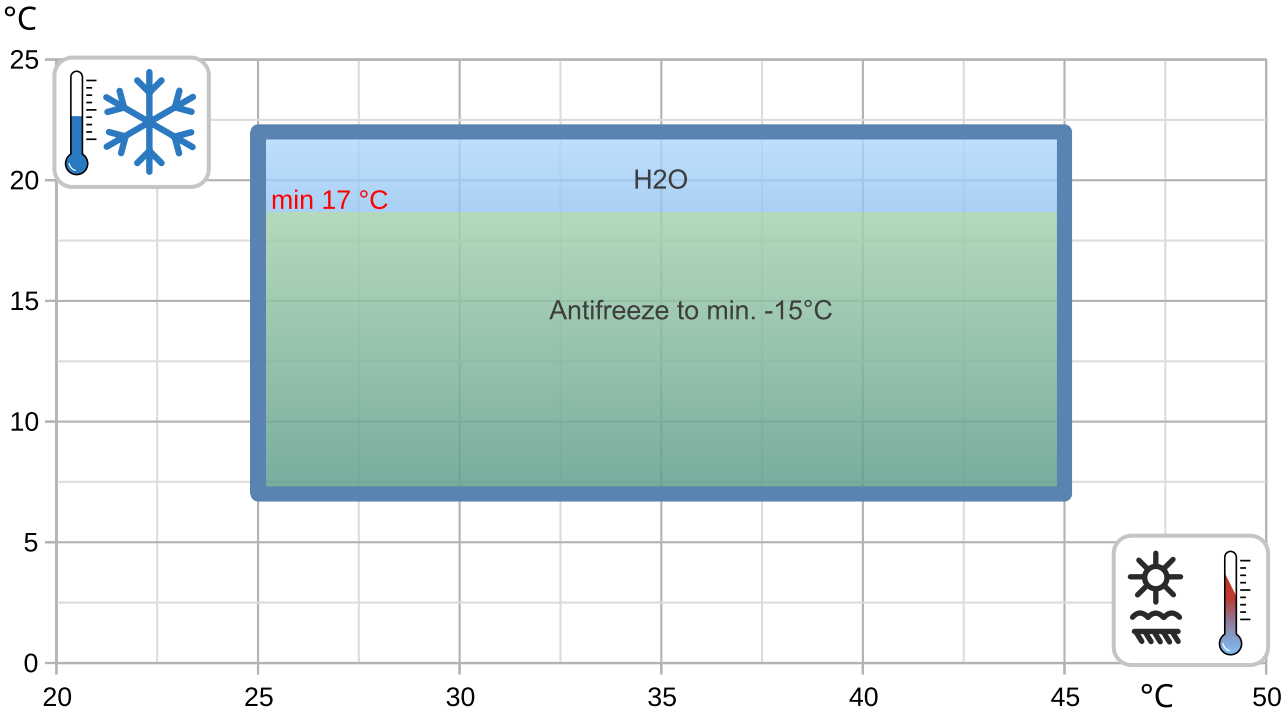
* attention: operating limits not reflected in performance table

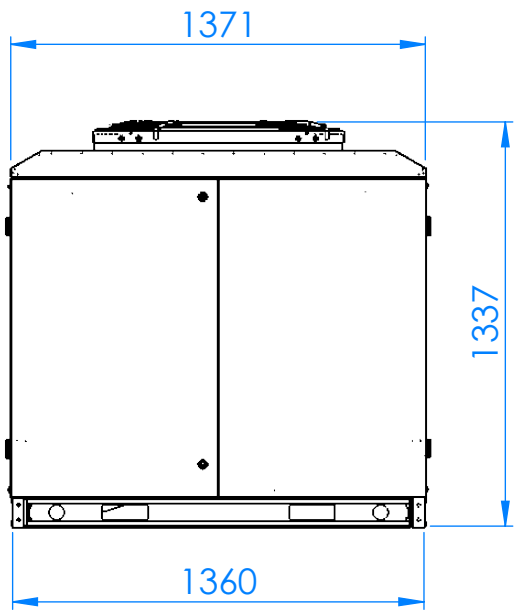
LEGENDE:

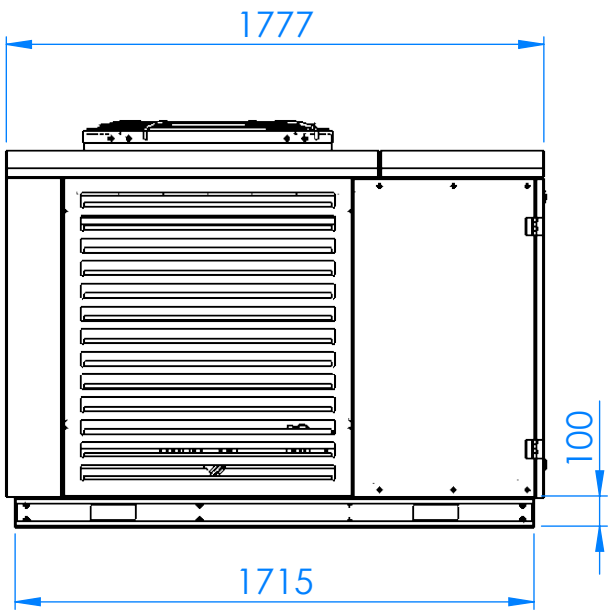
Ts-IN: Temperature renewable source - inlet [°C]
Th-OU: Temperature heating - outlet (flow) [°C]
Tc-OU: Temperature cooling - outlet (flow) [°C]
Qh nom: Heating capacity nominal
Qh min: Heating capacity minimal
Qh max: Heating capacity maximal
Pin nom: Power input at nominal heating capacity
Pin min: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






1371
1337
1360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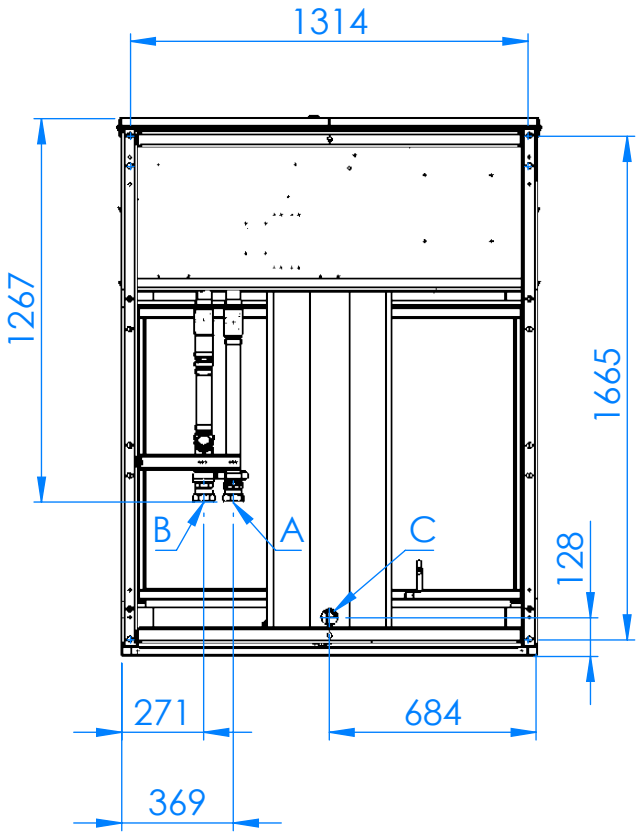
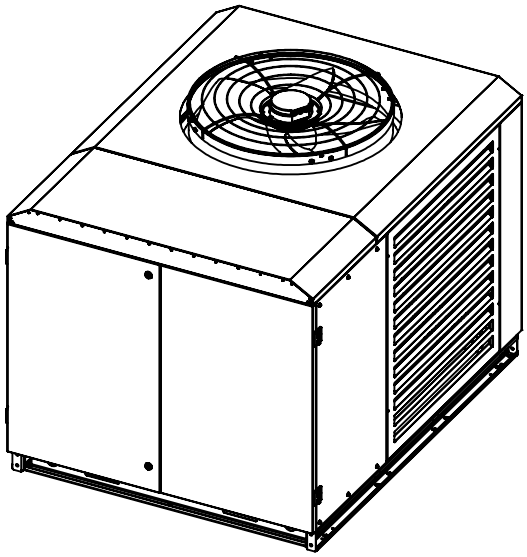
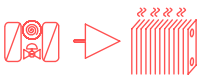
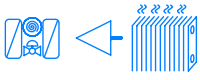
1715

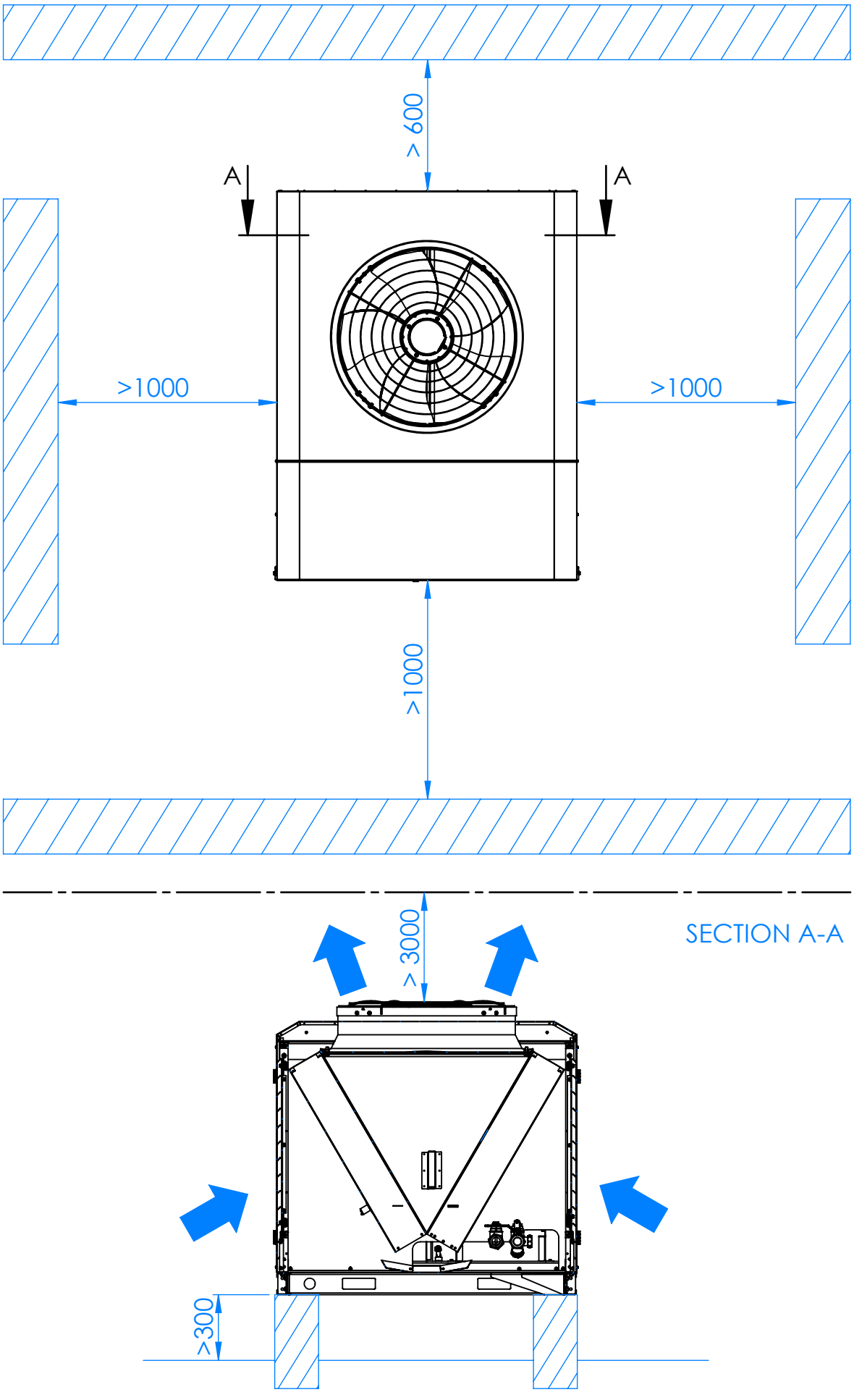

1314
1267
1665
B
A
C
128
271
684
369

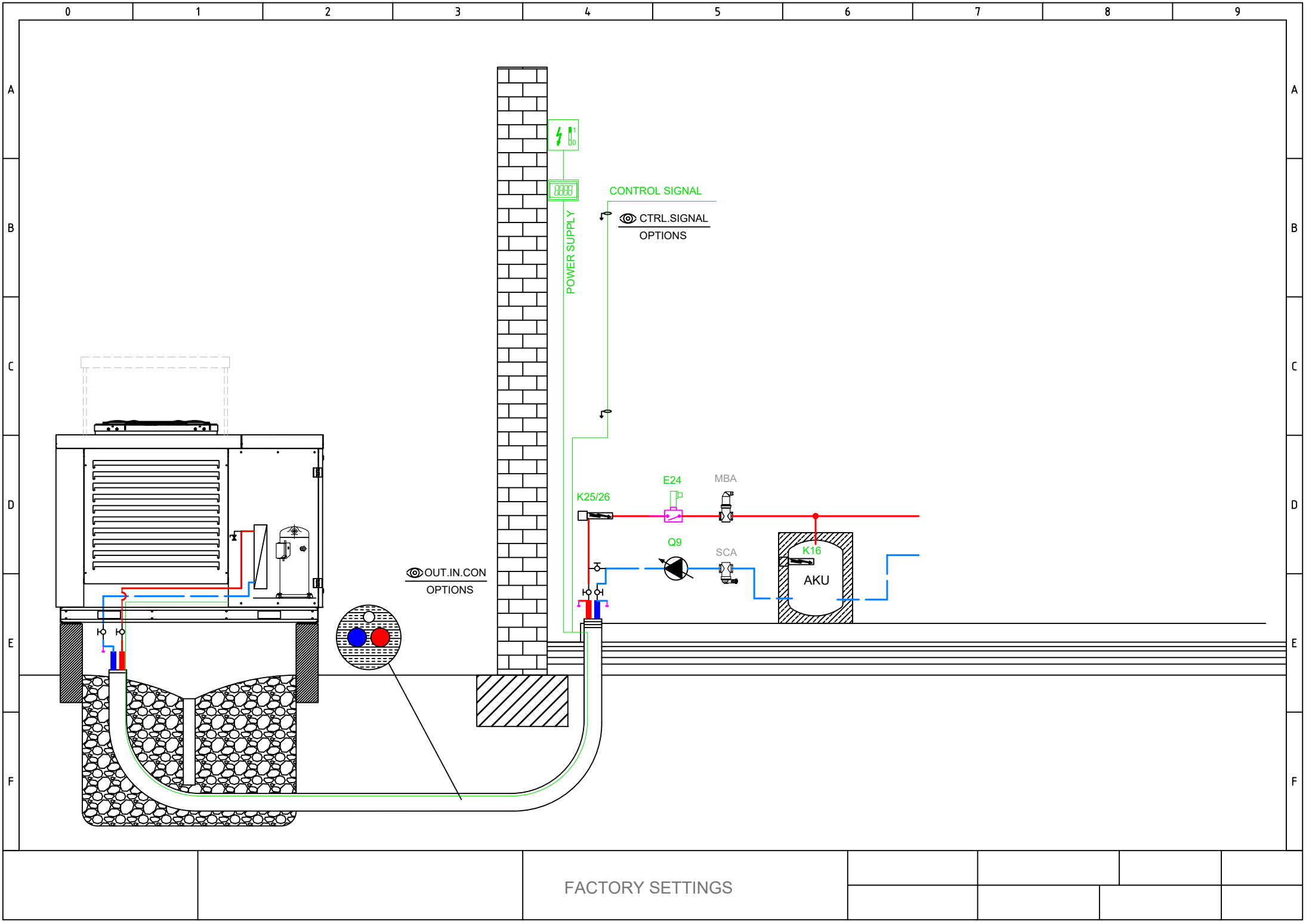


A - 

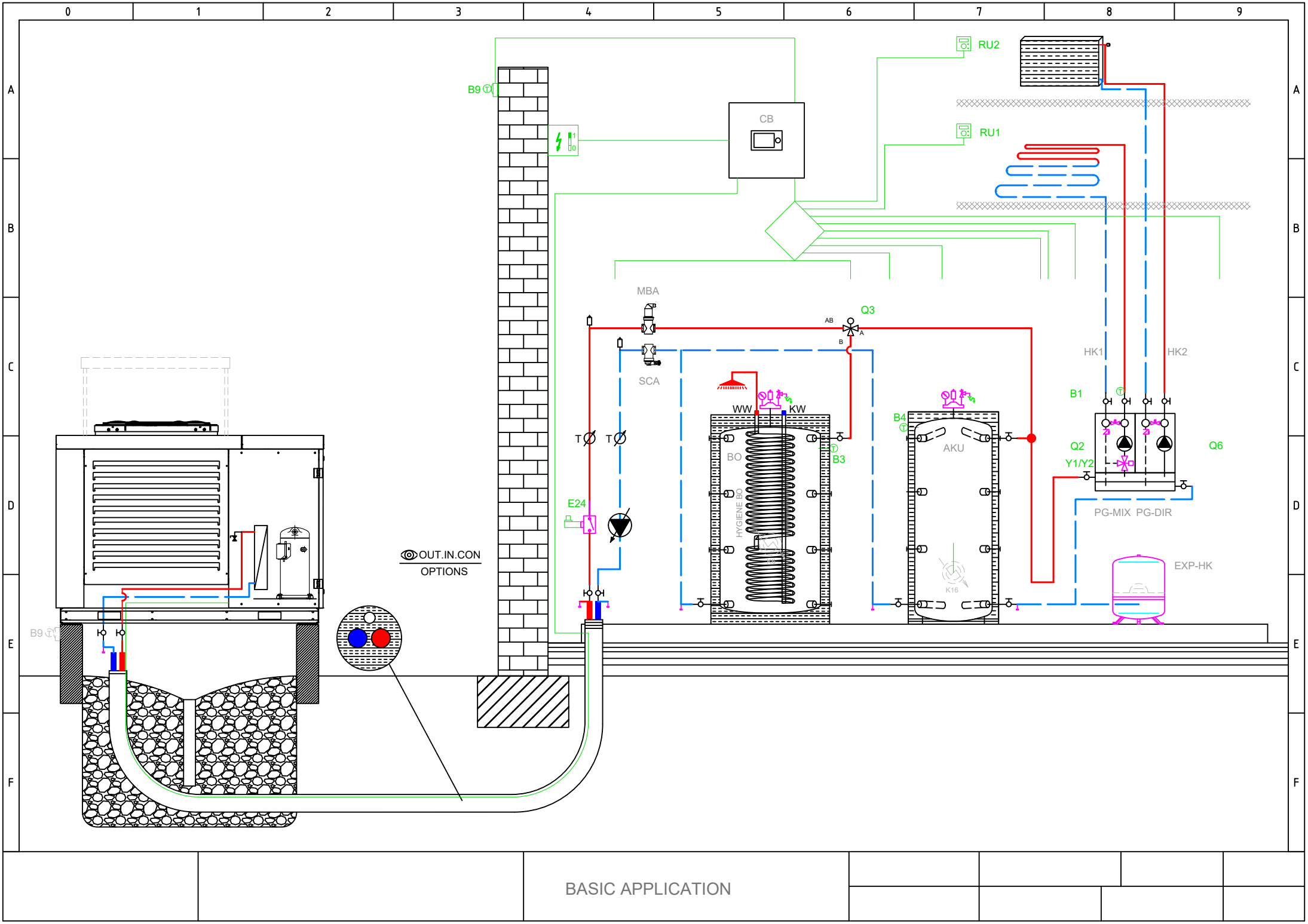
B - 

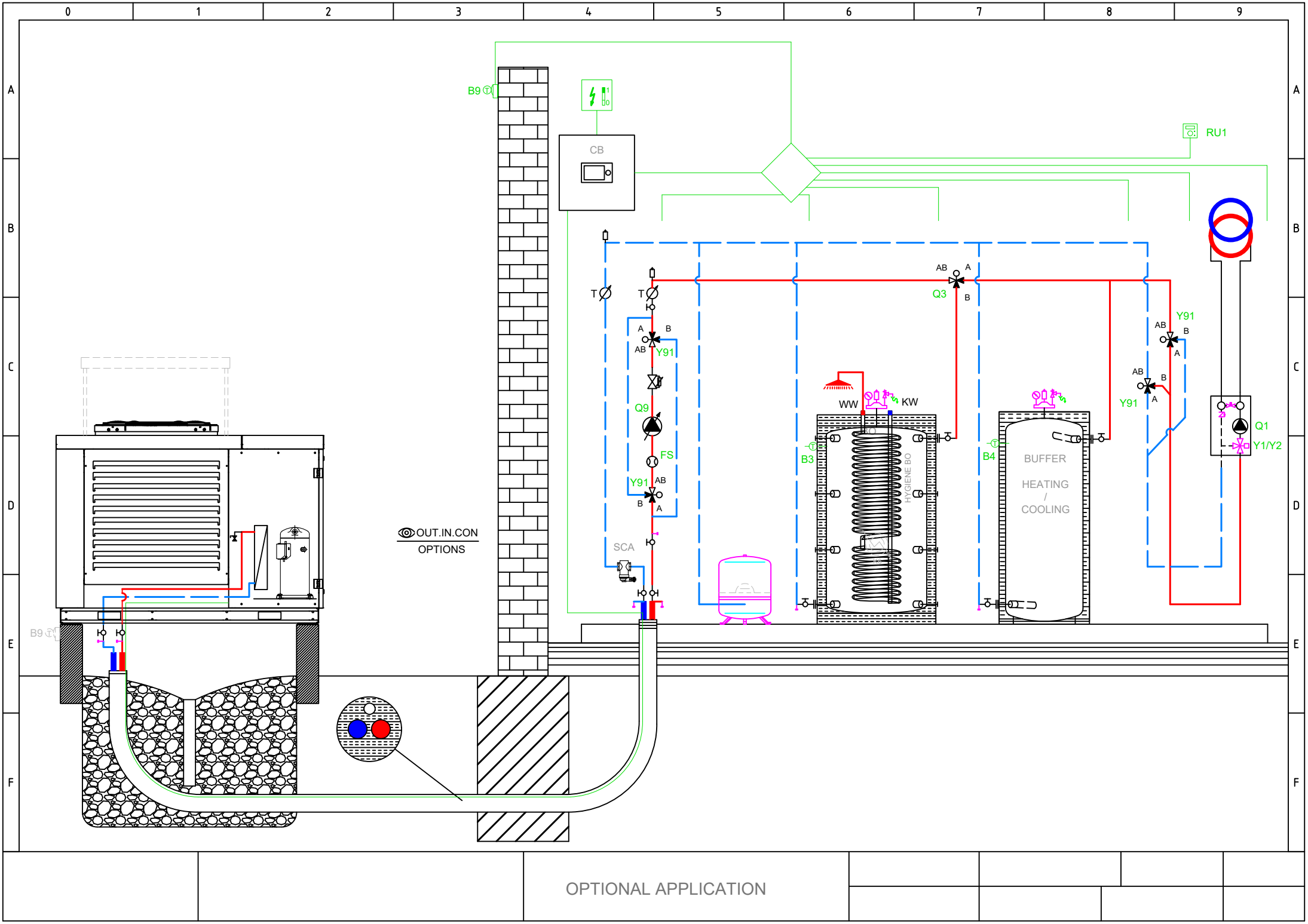
C - Condens


> 600
A
A
>1000
>1000
>1000
SECTION A-A
> 3000
>300



FACTORY SETTINGS


RU2
RU1
CB
B9
MBA
SCA
Q3
AB
A
B
HK1
HK2
B1
Q2
Y1/Y2
Q6
PG-MIX
PG-DIR
EXP-HK
WW
KW
BO
HYGIENE BO
B3
B4
AKU
K16
T
T
E24
OUT.IN.CON
OPTIONS
B9
BASIC APPLICATION


B9
CB
RU1
T
T
A
B
AB
Y91
Q9
FS
Y91
AB
B
A
SCA
AB
A
Q3
B
Y91
AB
B
A
AB
B
A
Y91
WW
KW
B3
HYGIENE BO
B4
BUFFER
HEATING
/
COOLING
Q1
Y1/Y2
B9
OUT.IN.CON
OPTIONS
OPTIONAL APPLICATION

AiWa - AWK v052024 Config FactorySet v24.9.1

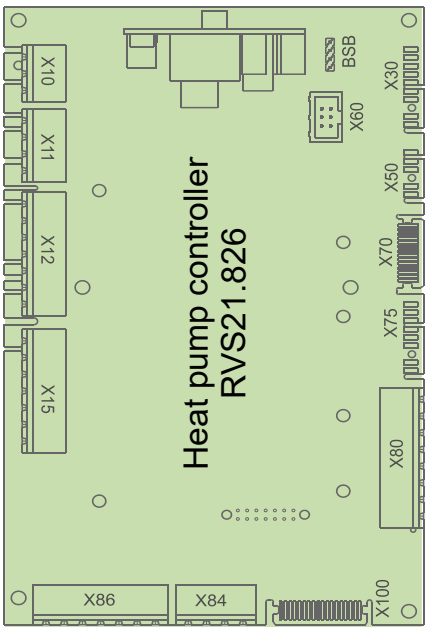
Heat pump controller preconfiguration and standard wiring of inputs and outputs

EN

Main power supply 230V / 50 Hz
Ground
Neutral conductor

	X10	1	L
			PE
			N
E10	X11	1	EX1
E11			EX2
E14			EX3
E24			EX4
K82	X12	1	QX1
			N
K40			QX2
			QX2i
			N
L			FX3
K1			QX3
Y22	X15	1	QX4
			QX4i
			N
Q9			QX5
			N
			ZX6
			N
	X86	1	GX1
			H3
			M
			H1
			G+
			M
			BSB

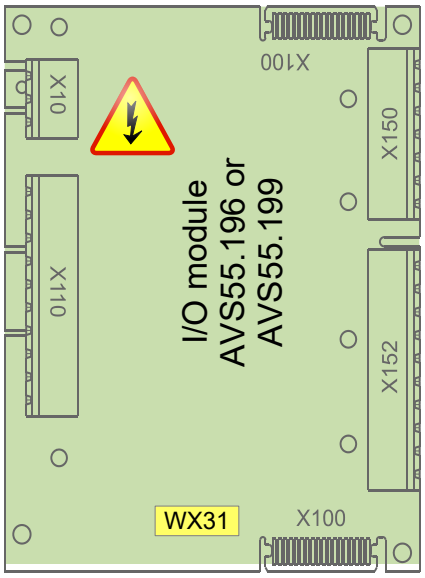
Total: max 6A
1 x QX..: max 2A



	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		D1 Digital output 1 Heating
	D2		D2 Digital output 2 Cooling
	D3		D3 Digital output 3 HP On/Off
	UX3		
	M	X75	
	DI6		DI6 Digital input 6 Defrosting
	DI7		DI7 Digital input 7 Alarm
	M	1	
	BX1		B91 Source inlet sensor B91
	M		
	BX2		B84 Source outl sens B92/B84
	M		
	UX1	X80	K19 Fan K19
	M		0..10 V Signal
	UX2		Q9 Condenser pump Q9
	M	1	PWM Signal
	BX3		B71 HP return sensor B71
	M		
	BX4	X84	B9 Outside sensor B9
	M	1	

Main power supply 230V / 50 Hz
Ground
Neutral conductor

	X10	1	L
			PE
			N
	X110	1	QX31
			QX32
			N
			QX33
			N
			ZX34
			N
K10	X115	1	QX35
			QX35i
			N
V81	WX31		



	BSB		
	M		
	G+	X150	5 V/12 V for active sensors
	H31		Flow measurement 10V
	M		
	H32		Low pressure 0..10V
	GX1	1	5 V/12 V for active sensors
	H33		High pressure 0..10V
	M		
	BX31		B21 HP flow sensor B21
	M		
	BX32	X152	B81 Hot-gas sensor B81
	M		
	BX33		B85 Suction gas sensor B85
	M		
	BX34		B83 Refrig sensor liquid B83
	M	1	

AiWa - AWK v052024 Config FactorySet v24.9.1

Heat pump controller preconfiguration and standard wiring of inputs and outputs

EN

AVS75.390
AVS75.391
AVS75.370

Main power supply 230V / 50 Hz
Ground
Neutral conductor

L
PE
N
T QX21
N
PE
QX22
S N
PE
QX23
C L
FX23
EX21

X50
X50
CL+ b
CL-
G+
UX21 e
M
UX22
BX21 e
M
BX22
GX21 g
H21
H22
M

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

Main power supply 230V / 50 Hz
Ground
Neutral conductor

L
PE
N
T QX21
N
PE
QX22
S N
PE
QX23
C L
FX23
EX21

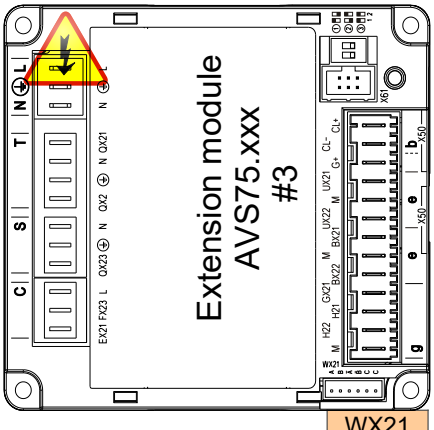
X50
X50
CL+ b
CL-
G+
UX21 e
M
UX22
BX21 e
M
BX22
GX21 g
H21
WX21
H22
M

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

Multifunktional

Main power supply 230V / 50 Hz
Ground
Neutral conductor

L
PE
N
T QX21
N
PE
QX22
S N
PE
QX23
C L
FX23
EX21



X50
X50
CL+ b
CL-
G+
UX21 e
M
UX22
BX21 e
M
BX22
GX21 g
H21
H22
M

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

B86 Suction gas sensor EVI B86

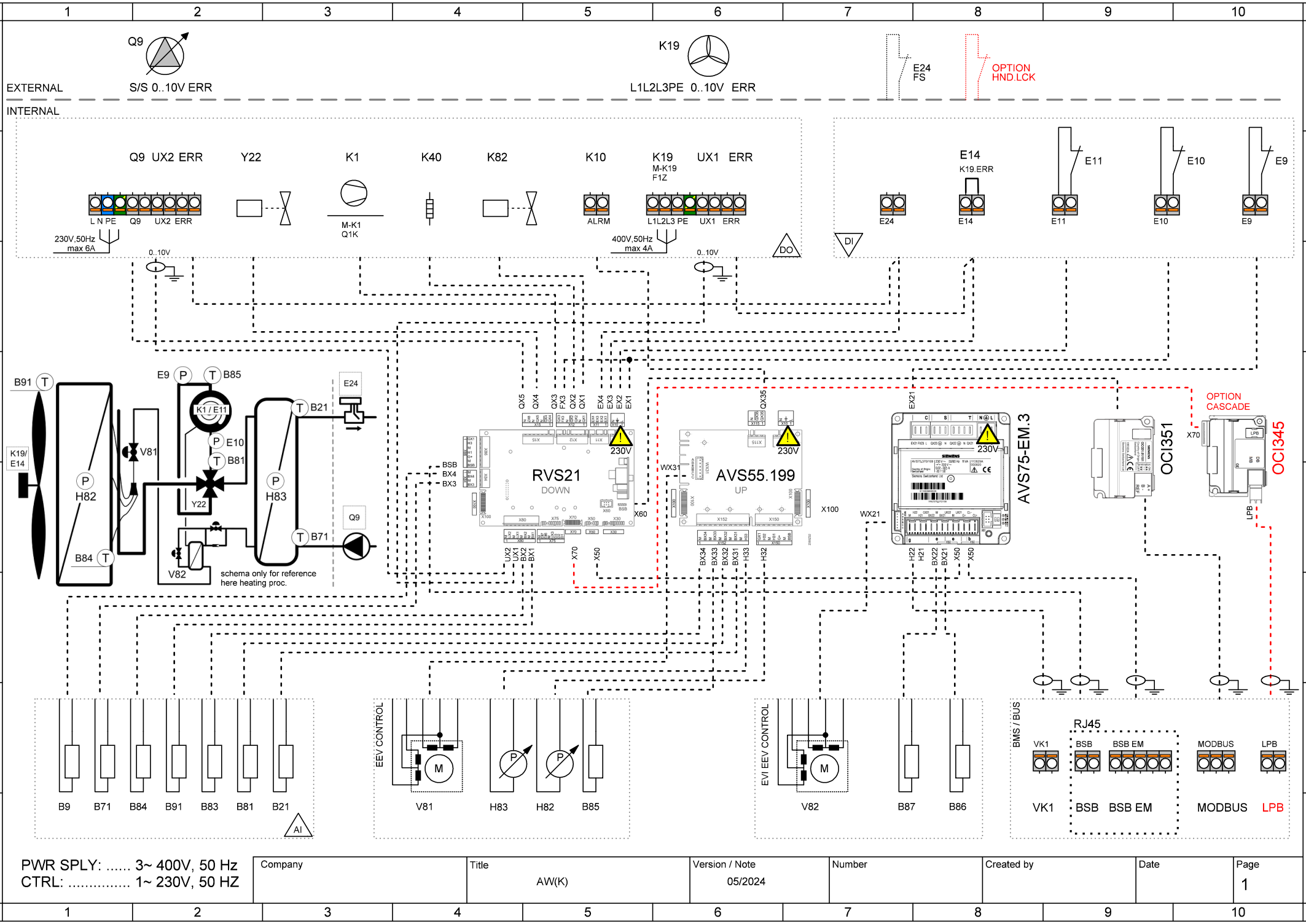
B87 Evaporation sensor EVI B87

E9 Low-pressure switch E9

V82 EEV EVI V82

WX21

WX21



PWR SPLY: ..... 3~ 400V, 50 Hz
CTRL: ..... 1~ 230V, 50 HZ

Company	Title	Version / Note	Number	Created by	Date	Page
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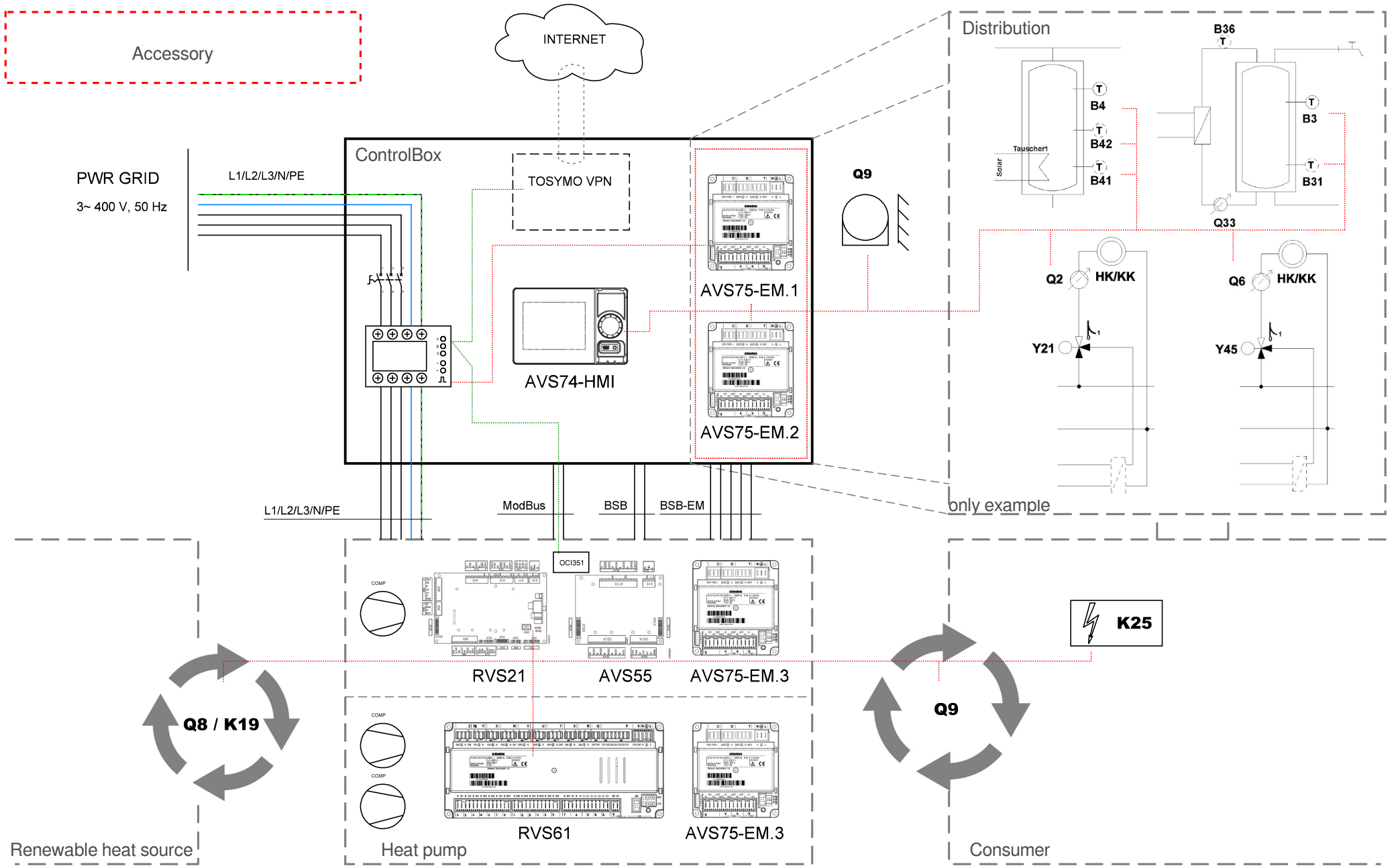

Company	Title	Version / Note	Number	Created by	Date	Page
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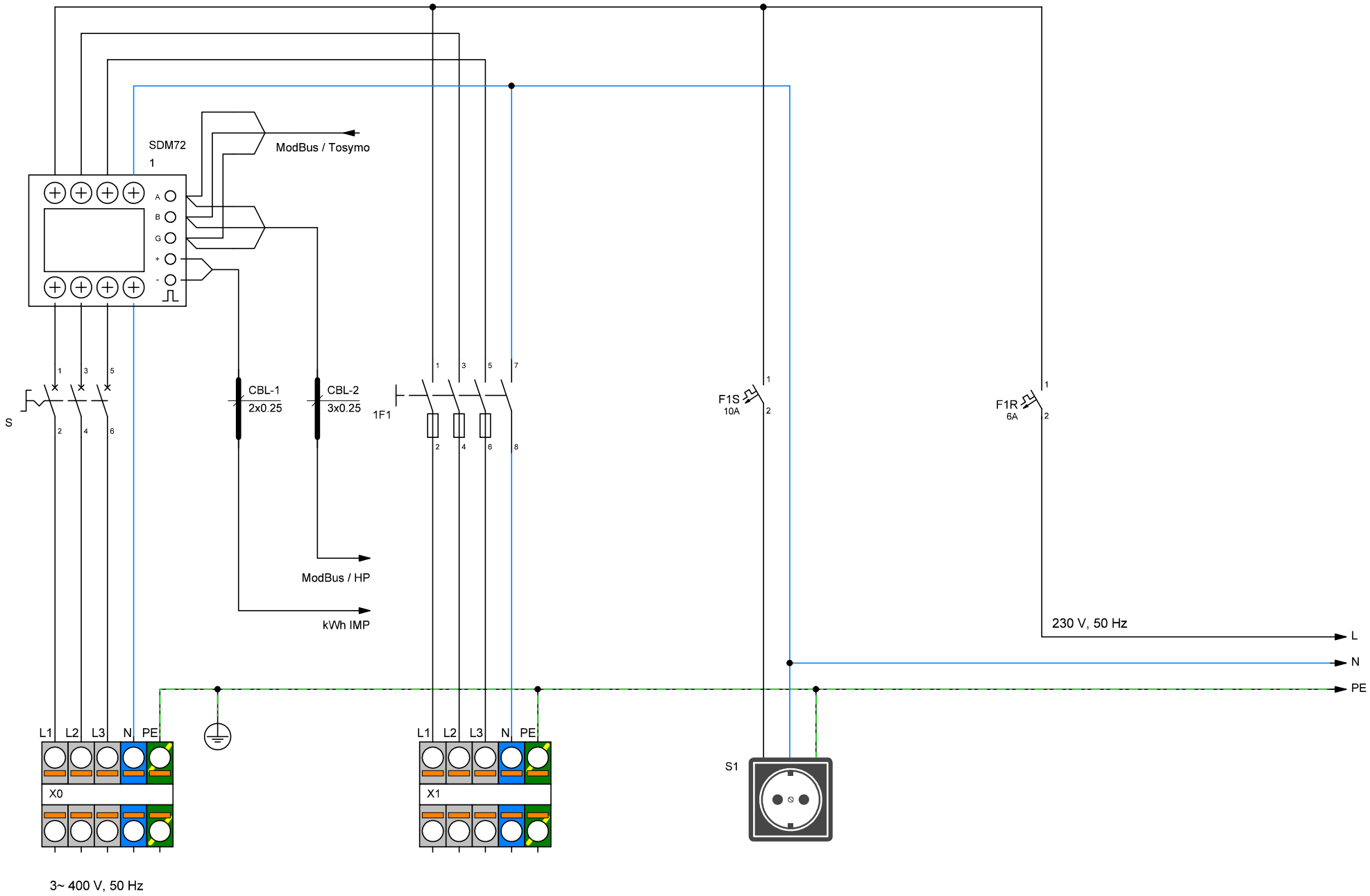

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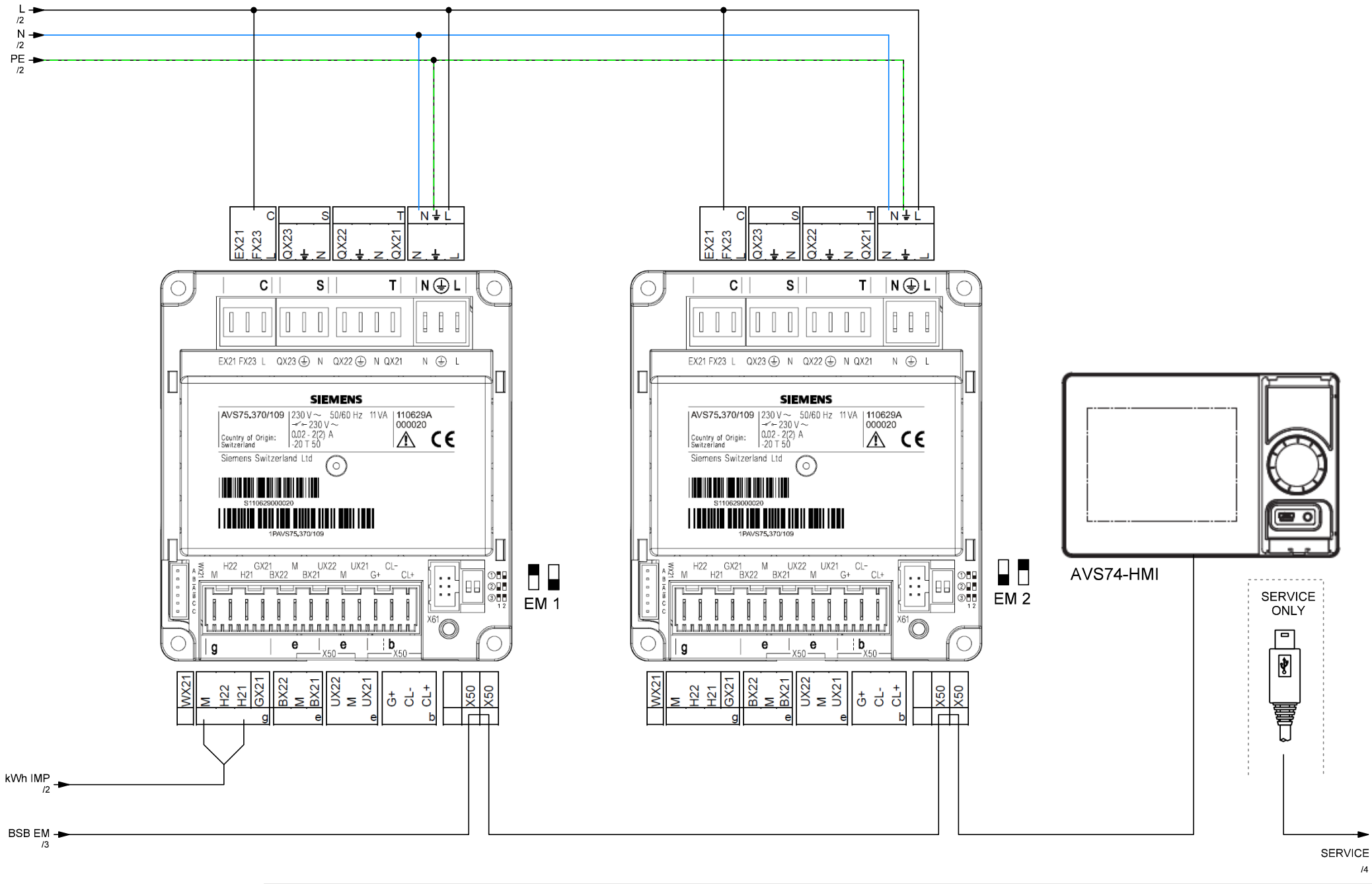

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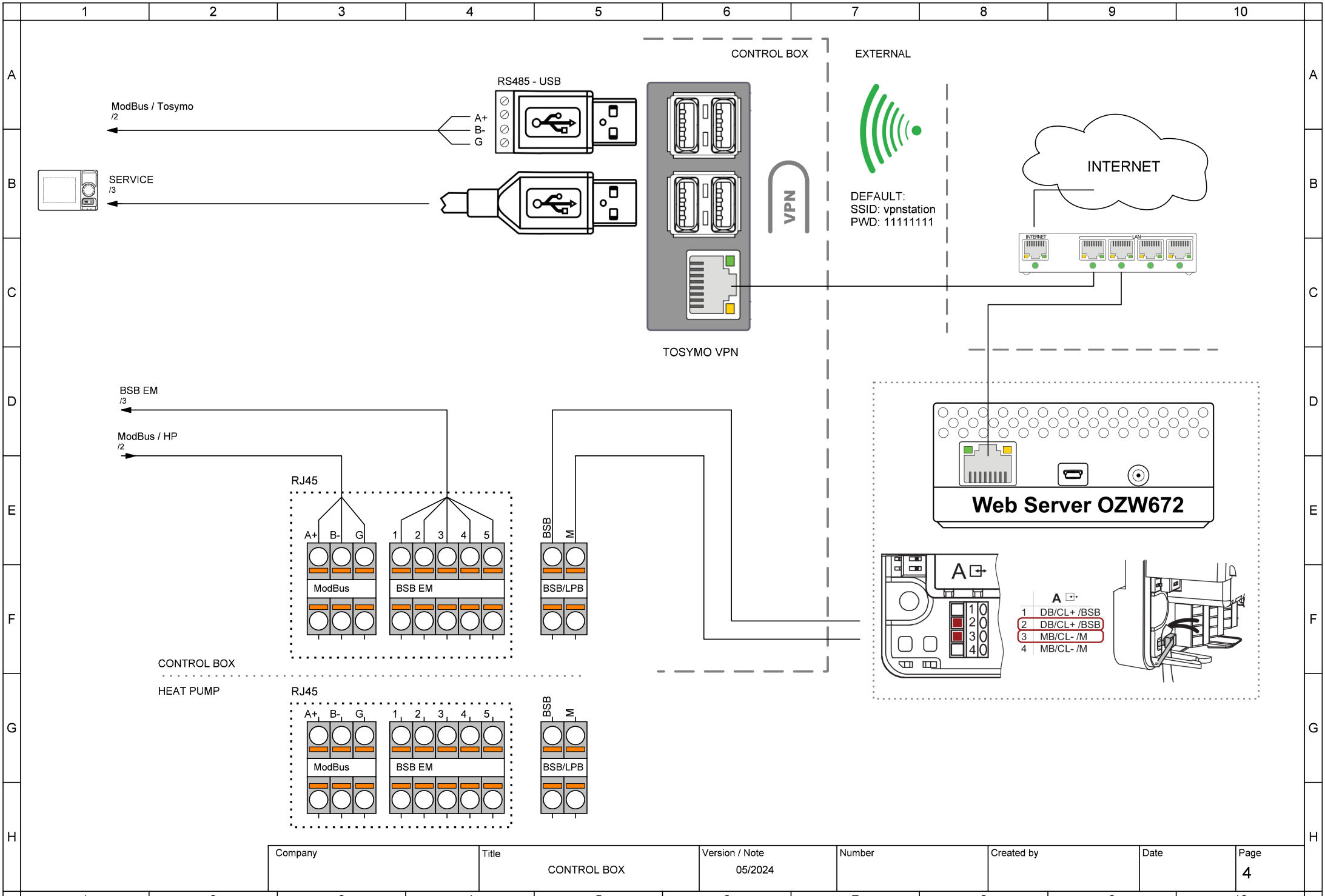


Company	Title	Version / Note	Number	Created by	Date	Page
	CONTROL BOX	05/2024				4

ControlBox v052024

Extension modules preconfiguration and standard wiring of inputs and outputs

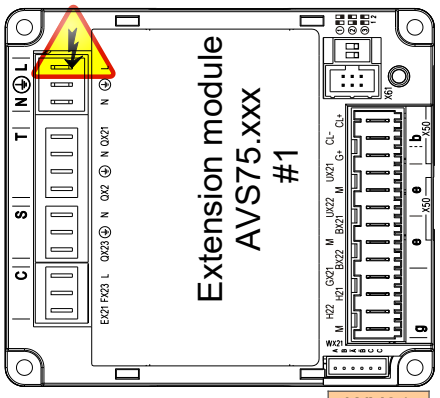
EN

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

Heizkreis 1 par. 7300

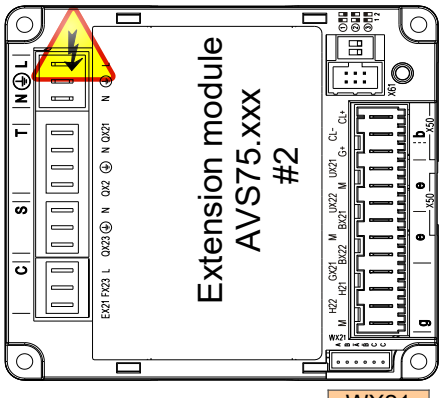


Extension module AVS75.xxx
Room unit QAA...
Room unit QAA...
B1 Flow sensor 1
Pulse count

AVS75.370

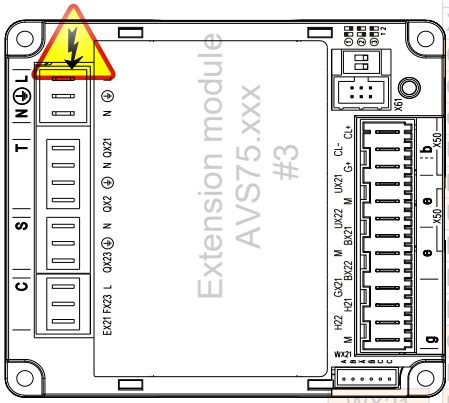
Main power supply 230V / 50 Hz
Ground
Neutral conductor
Q3 DHW ctrl elem Q3
K6 El imm heater DHW K6
Q6 Heat circuit pump HC2 Q6
L Phase 230V
E62 Smart grid E62

Multifunktional par. 7375



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 conntact technical support

5 MQTT IoT communication protocol

For more information contact technical support