Basic performance data - WAMAK AWK 47 EVI

Heating - EN 14511		
Heating capacity [kW]	A7 / W35	49.1
	A2 / W35	41.7
	A-7 / W34	35.0
Electrical power input [kW]	A7 / W35	11.4
	A2 / W35	11.4
	A-7 / W34	11.0
Heating efficiency faktor [COP]	A7 / W35	4.31
	A2 / W35	3.67
	A-7 / W34	3.17
Seasonal space heating energy efficiency - SCOP EN 14825		
Average Climate / Low Temperature [35°C]	SCOP	4.17
	η [%]	166.9
	Label	A+++
	Qhe [kWh]	19312.6
	Pdesignh [kW]	39.7
	Tbivalent [°C]	-7
Cooling		
Cooling capacity - [kW]	A35 / W23-18	48.4
	A25 / W23-18	50.9
	A35 / W12-7	36.4
	A25 / W12-7	36.4
Seasonal space cooling energy efficiency - SEER EN 14825		
[W 23 / 18°C]	SEER	4.46
	Qce [kWh]	21840.0
	ηc [%]	178.6
Sound EN 12102		
Acoustic power - Lw	dB(A)	65.3
Acoustic pressure - Lp	**1 m** dB(A)	57.3
	5 m dB(A)	43.3
	10 m dB(A)	37.3
Mechanical and operational information		
Compressor type (3~ 400/50)	SCROLL / 1 /	On/Off
Refrigerant	R410A (GWP - 2088)	8.9 kg
Operating limit temperatures heating - (min / max) [°C]		25 / **65**
Operating limit temperatures source - (min / max) [°C]		**-22** / 40
Weight		590 kg

Main technical data - WAMAK AWK 47 EVI

Enclosure type		AWK-VOV900
Basic dimensions	Height [mm]	1250
	Width [mm]	1380
	Length [mm]	1780
Weight [kg]		590
Colour		Inox
Enclousure IP Class		IP44
Refrigeration cycle		
Compressor	Type	Scroll
	Number of stages	1
	On/Off	
	Power factor Cosϕ	0.64
	Winding resistance	0.76 Ohm
Refrigerant		R410A
	Volme	8.9 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]	23.53
	maximal [A]	37.40
	starting [A]	57.2
Softstart		-
Main safety		C40

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]		8.45
Internal pressure drop - Water [kPa]		14
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]		14980
Internal pressure drop - Air [kPa]		0.032
Temperature difference - Air		7 K
Number of fans		1
Fan diameter [mm]		800

WAMAK AWK 47 EVI

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

Model	**AWK 47 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	39.7	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	35.0	kW
Tj = +2 °C	Pdh	41.2	kW
Tj = +7 °C	Pdh	48.6	kW
Tj = +12 °C	Pdh	57.4	kW
Tj = bivalent temperature	Pdh	34.4	kW
Tj = operation limit temperature	Pdh	25.1	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	65	dB
Annual energy consumption	Q_{HE}	19312.6	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	166.9	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	COPd	3.17	-
Tj = +2 °C	COPd	4.1	-
Tj = +7 °C	COPd	5.1	-
Tj = +12 °C	COPd	6.4	-
Tj = bivalent temperature	COPd	3.1	-
Tj = operation limit temperature	COPd	2.3	-
Tj = operation limit temperature	TOL	-22	°C
Heating water operating limit temperature	WTOL	65	°C
Supplementary heater			
Rated heat output	Psup	17.6	kW
Type of energy input		electricity	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	14980	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 47 EVI

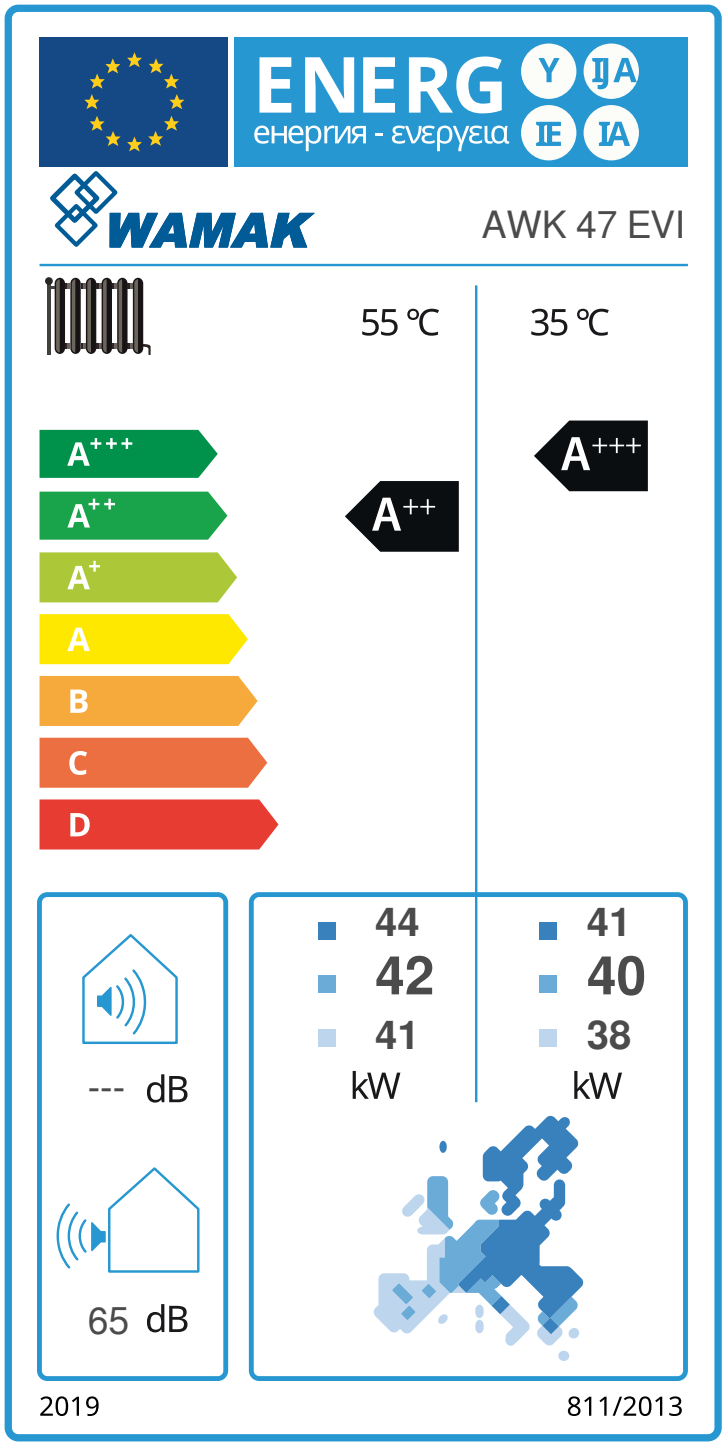
ErP (EU) No 811/2013: Technical parameters for heat pump space heaters

Model	**AWK 47 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	41.6	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	36.6	kW
Tj = +2 °C	Pdh	42.3	kW
Tj = +7 °C	Pdh	49.1	kW
Tj = +12 °C	Pdh	57.6	kW
Tj = bivalent temperature	Pdh	36.1	kW
Tj = operation limit temperature	Pdh	26.4	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	65	dB
Annual energy consumption	Q_{HE}	25884.1	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	131.1	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	COPd	2.24	-
Tj = +2 °C	COPd	3.2	-
Tj = +7 °C	COPd	4.2	-
Tj = +12 °C	COPd	5.6	-
Tj = bivalent temperature	COPd	2.1	-
Tj = operation limit temperature	COPd	1.6	-
Tj = operation limit temperature	TOL	-22	°C
Heating water operating limit temperature	WTOL	65	°C
Supplementary heater			
Rated heat output	Psup	17.6	kW
Type of energy input		electricity	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	14980	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 47 EVI **ErP Data**

		55 °C	35 °C
Energy class		A++	A+++
η	[%]	131.1	166.9
P_{rated}	[kW]	42	40
Q_{HE}	[kWh/y]	25885	19313
SCOP	[-]	3.28	4.17
$T_{bivalent}$	[°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] ZHI46K1P-TWD_R410A_1_AW

	Operating conditions	Qh	P	COP
1	A7 / W30-35	49.1	11.4	4.31
2	A2 / W35	41.7	11.4	3.67
3	A-22 / W35	25.1	10.8	2.31
A	A-7 / W34	35.0	11.0	3.17
B	A2 / W30	41.2	10.2	4.06
C	A7 / W27	48.6	9.5	5.11
D	A12 / W24	57.4	9.0	6.41
E	A-10 / W35	34.4	11.3	3.05
F	A-7 / W34	35.0	11.0	3.17

SCOP DATA EN 14825:2018	
Average Climate / Low Temperature [35°C]	
SCOPon	4.25
SCOPnet	4.29
SCOP	4.17
η [%]	166.90
Label	A+++
Qh [kWh]	19312.60
Pdesignh [kW]	39.7
Tbivalent [°C]	-7.00

Average Climate / Medium Temperature [55°C]

	Operating conditions	Qh	P	COP
1	A7 / W47-55	50.1	17.8	2.81
2	A2 / W55	43.2	17.7	2.44
3	A-22 / W55	26.4	15.2	1.62
A	A-7 / W52	36.6	16.3	2.24
B	A2 / W42	42.3	13.3	3.18
C	A7 / W36	49.1	11.6	4.22
D	A12 / W30	57.6	10.2	5.64
E	A-10 / W55	36.1	17.4	2.08
F	A-7 / W55	36.8	17.4	2.11

SCOP DATA EN 14825:2018	
Average Climate / Medium Temperature [55°C]	
SCOPon	3.32
SCOPnet	3.34
SCOP	3.28
η [%]	131.06
Label	A++
Qh [kWh]	25884.15
Pdesignh [kW]	41.6
Tbivalent [°C]	-7.00

Cooling performance data

Low temperature cooling W 12 / 7°C

	Operating conditions	Qc	P	EER
A	A35 / W12-7	36.4	13.6	2.68
B	A30 / W12-7	37.4	12.2	3.07
C	A25 / W12-7	38.2	10.9	3.51
D	A20 / W12-7	38.9	9.7	4.00

SEER DATA EN 14825:2018 [W 12 / 7°C]	
SEERon	3.43
SEER	3.37
Qc [kWh]	8017.15
η [%]	134.85

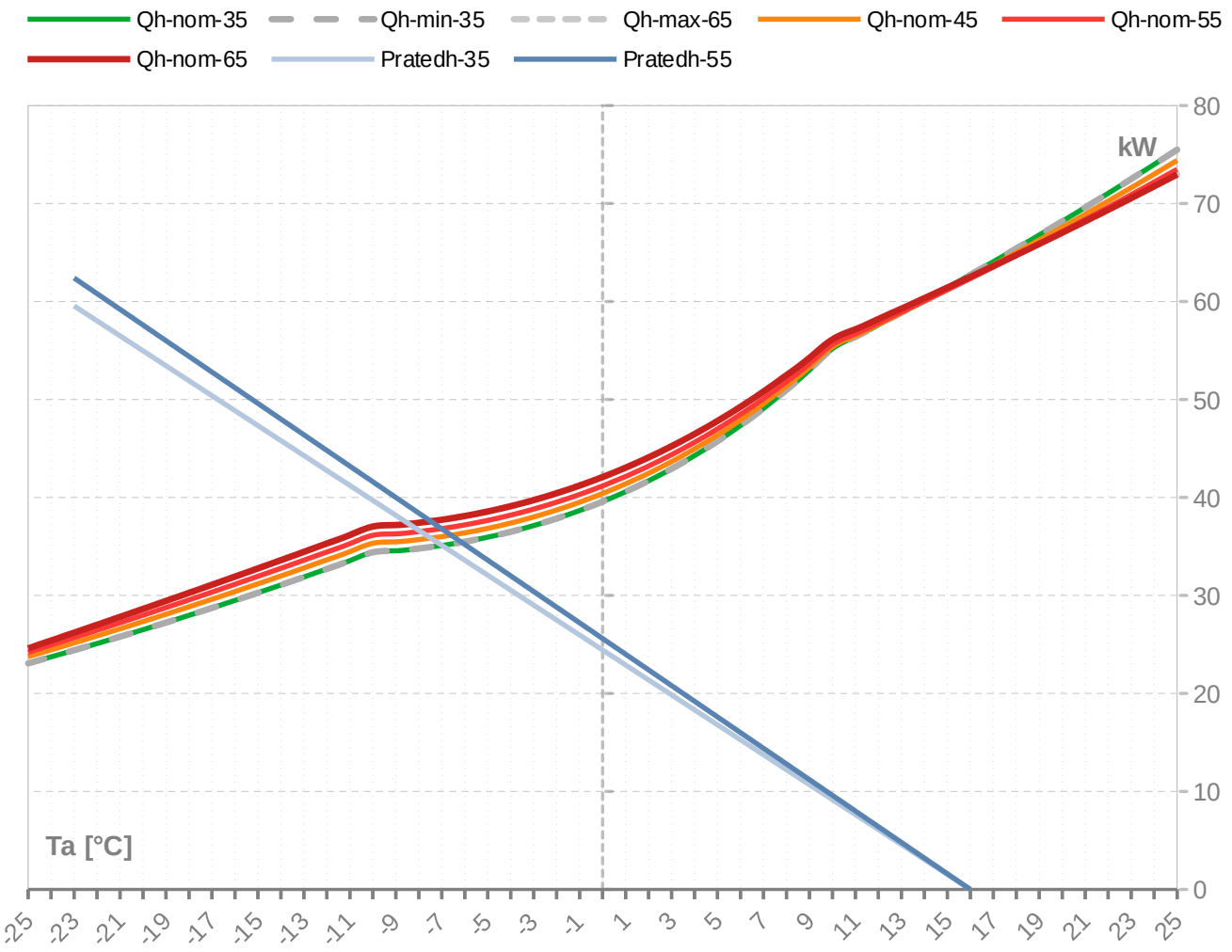
Radiant cooling W 23 / 18°C

	Operating conditions	Qc	P	EER
A	A35 / W23-18	48.4	13.6	3.56
B	A30 / W23-18	49.7	11.3	4.09
C	A25 / W23-18	50.9	10.1	4.67
D	A20 / W23-18	51.9	9.1	5.34

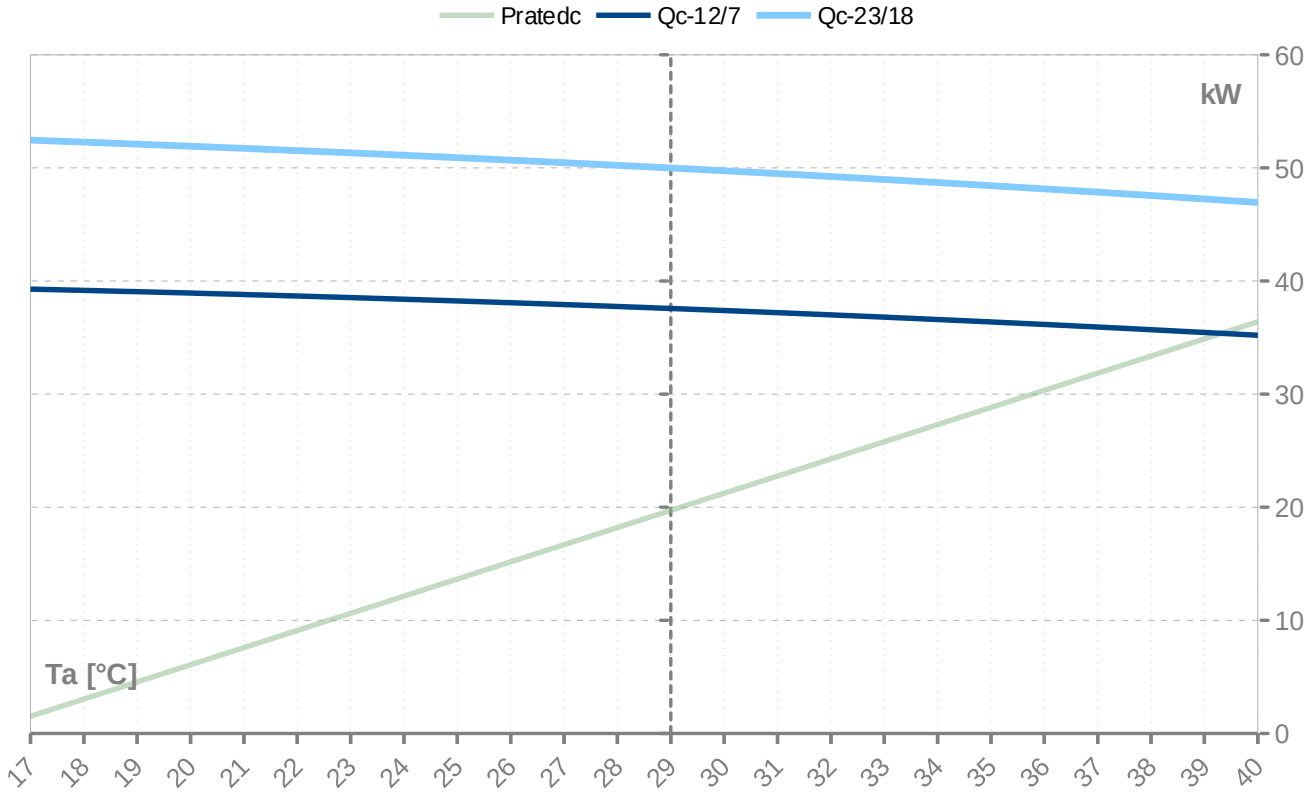
SEER DATA EN 14825:2018 [W 23 / 18°C]	
SEERon	4.57
SEER	4.46
Qc [kWh]	6021.13
η [%]	178.56

Performance lines - heating

ZHI46K1P-TWD_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	**64.1**	64.1		**11.4**	11.4		**5.62**	23.3	23.3	
24	**64.1**	64.1		**11.4**	11.4		**5.62**	23.3	23.3	
23	**64.1**	64.1		**11.4**	11.4		**5.62**	23.3	23.3	
22	**64.1**	64.1		**11.4**	11.4		**5.62**	23.3	23.3	
21	**64.1**	64.1		**11.4**	11.4		**5.62**	23.3	23.3	
20	**64.1**	64.1		**11.4**	11.4		**5.62**	23.3	23.3	
19	**64.1**	64.1		**11.4**	11.4		**5.62**	23.3	23.3	
18	**64.1**	64.1		**11.4**	11.4		**5.62**	23.3	23.3	
17	**64.1**	64.1		**11.4**	11.4		**5.62**	23.3	23.3	
16	**62.7**	62.7	62.7	**11.4**	11.4	11.4	**5.51**	23.3	23.3	23.3
15	**61.4**	61.4	61.4	**11.4**	11.4	11.4	**5.40**	23.3	23.3	23.3
14	**60.1**	60.1	60.1	**11.4**	11.4	11.4	**5.28**	23.3	23.3	23.3
13	**58.9**	58.9	58.9	**11.4**	11.4	11.4	**5.17**	23.4	23.4	23.4
12	**57.6**	57.6	57.6	**11.4**	11.4	11.4	**5.06**	23.4	23.4	23.4
11	**56.4**	56.4	56.4	**11.4**	11.4	11.4	**4.96**	23.4	23.4	23.4
10	**55.2**	55.2	55.2	**11.4**	11.4	11.4	**4.85**	23.4	23.4	23.4
9	**53.0**	53.0	53.0	**11.4**	11.4	11.4	**4.66**	23.5	23.5	23.5
8	**51.0**	51.0	51.0	**11.4**	11.4	11.4	**4.48**	23.5	23.5	23.5
7	**49.1**	49.1	49.1	**11.4**	11.4	11.4	**4.31**	23.6	23.6	23.6
6	**47.3**	47.3	47.3	**11.4**	11.4	11.4	**4.16**	23.6	23.6	23.6
5	**45.7**	45.7	45.7	**11.4**	11.4	11.4	**4.02**	23.7	23.7	23.7
4	**44.3**	44.3	44.3	**11.4**	11.4	11.4	**3.89**	23.7	23.7	23.7
3	**42.9**	42.9	42.9	**11.4**	11.4	11.4	**3.77**	23.7	23.7	23.7
2	**41.7**	41.7	41.7	**11.4**	11.4	11.4	**3.67**	23.7	23.7	23.7
1	**40.6**	40.6	40.6	**11.4**	11.4	11.4	**3.57**	23.7	23.7	23.7
0	**39.6**	39.6	39.6	**11.4**	11.4	11.4	**3.49**	23.7	23.7	23.7
-1	**38.7**	38.7	38.7	**11.3**	11.3	11.3	**3.41**	23.7	23.7	23.7
-2	**37.9**	37.9	37.9	**11.3**	11.3	11.3	**3.34**	23.7	23.7	23.7
-3	**37.1**	37.1	37.1	**11.3**	11.3	11.3	**3.28**	23.7	23.7	23.7
-4	**36.5**	36.5	36.5	**11.3**	11.3	11.3	**3.22**	23.7	23.7	23.7
-5	**35.9**	35.9	35.9	**11.3**	11.3	11.3	**3.18**	23.7	23.7	23.7
-6	**35.5**	35.5	35.5	**11.3**	11.3	11.3	**3.14**	23.7	23.7	23.7
-7	**35.1**	35.1	35.1	**11.3**	11.3	11.3	**3.11**	23.7	23.7	23.7
-8	**34.8**	34.8	34.8	**11.3**	11.3	11.3	**3.08**	23.7	23.7	23.7
-9	**34.6**	34.6	34.6	**11.3**	11.3	11.3	**3.06**	23.7	23.7	23.7
-10	**34.4**	34.4	34.4	**11.3**	11.3	11.3	**3.05**	23.7	23.7	23.7
-11	**33.5**	33.5	33.5	**11.3**	11.3	11.3	**2.98**	23.7	23.7	23.7
-12	**32.7**	32.7	32.7	**11.2**	11.2	11.2	**2.91**	23.7	23.7	23.7
-13	**31.9**	31.9	31.9	**11.2**	11.2	11.2	**2.84**	23.6	23.6	23.6
-14	**31.1**	31.1	31.1	**11.2**	11.2	11.2	**2.78**	23.6	23.6	23.6
-15	**30.3**	30.3	30.3	**11.1**	11.1	11.1	**2.72**	23.5	23.5	23.5
-16	**29.5**	29.5	29.5	**11.1**	11.1	11.1	**2.65**	23.5	23.5	23.5
-17	**28.7**	28.7	28.7	**11.1**	11.1	11.1	**2.59**	23.4	23.4	23.4
-18	**28.0**	28.0	28.0	**11.0**	11.0	11.0	**2.53**	23.3	23.3	23.3
-19	**27.2**	27.2	27.2	**11.0**	11.0	11.0	**2.48**	23.3	23.3	23.3
-20	**26.5**	26.5	26.5	**10.9**	10.9	10.9	**2.42**	23.2	23.2	23.2
-21	**25.8**	25.8	25.8	**10.9**	10.9	10.9	**2.37**	23.1	23.1	23.1
-22	**25.1**	25.1	25.1	**10.8**	10.8	10.8	**2.31**	23.0	23.0	23.0
-23	**24.4**	24.4	24.4	**10.8**	10.8	10.8	**2.26**	22.9	22.9	22.9
-24	**23.7**	23.7	23.7	**10.7**	10.7	10.7	**2.21**	22.8	22.8	22.8
-25	**23.1**	23.1	23.1	**10.7**	10.7	10.7	**2.17**	22.6	22.6	22.6

* attention: operating limits not reflected in performance table

ZHI46K1P-TWD_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	**74.4**	74.4	74.4	**14.1**	14.1	14.1	**5.27**	26.5	26.5	26.5
24	**73.0**	73.0	73.0	**14.1**	14.1	14.1	**5.17**	26.5	26.5	26.5
23	**71.6**	71.6	71.6	**14.1**	14.1	14.1	**5.07**	26.5	26.5	26.5
22	**70.2**	70.2	70.2	**14.1**	14.1	14.1	**4.98**	26.5	26.5	26.5
21	**68.9**	68.9	68.9	**14.1**	14.1	14.1	**4.88**	26.5	26.5	26.5
20	**67.6**	67.6	67.6	**14.1**	14.1	14.1	**4.78**	26.5	26.5	26.5
19	**66.3**	66.3	66.3	**14.1**	14.1	14.1	**4.69**	26.5	26.5	26.5
18	**65.0**	65.0	65.0	**14.1**	14.1	14.1	**4.60**	26.5	26.5	26.5
17	**63.7**	63.7	63.7	**14.1**	14.1	14.1	**4.50**	26.6	26.6	26.6
16	**62.5**	62.5	62.5	**14.2**	14.2	14.2	**4.41**	26.6	26.6	26.6
15	**61.2**	61.2	61.2	**14.2**	14.2	14.2	**4.32**	26.6	26.6	26.6
14	**60.0**	60.0	60.0	**14.2**	14.2	14.2	**4.24**	26.6	26.6	26.6
13	**58.8**	58.8	58.8	**14.2**	14.2	14.2	**4.15**	26.6	26.6	26.6
12	**57.7**	57.7	57.7	**14.2**	14.2	14.2	**4.07**	26.6	26.6	26.6
11	**56.5**	56.5	56.5	**14.2**	14.2	14.2	**3.98**	26.6	26.6	26.6
10	**55.4**	55.4	55.4	**14.2**	14.2	14.2	**3.90**	26.6	26.6	26.6
9	**53.3**	53.3	53.3	**14.2**	14.2	14.2	**3.75**	26.6	26.6	26.6
8	**51.4**	51.4	51.4	**14.2**	14.2	14.2	**3.62**	26.7	26.7	26.7
7	**49.6**	49.6	49.6	**14.2**	14.2	14.2	**3.49**	26.7	26.7	26.7
6	**47.9**	47.9	47.9	**14.2**	14.2	14.2	**3.37**	26.7	26.7	26.7
5	**46.4**	46.4	46.4	**14.2**	14.2	14.2	**3.26**	26.6	26.6	26.6
4	**45.0**	45.0	45.0	**14.2**	14.2	14.2	**3.17**	26.6	26.6	26.6
3	**43.7**	43.7	43.7	**14.2**	14.2	14.2	**3.08**	26.6	26.6	26.6
2	**42.5**	42.5	42.5	**14.2**	14.2	14.2	**3.00**	26.6	26.6	26.6
1	**41.4**	41.4	41.4	**14.2**	14.2	14.2	**2.92**	26.5	26.5	26.5
0	**40.4**	40.4	40.4	**14.1**	14.1	14.1	**2.86**	26.5	26.5	26.5
-1	**39.5**	39.5	39.5	**14.1**	14.1	14.1	**2.80**	26.5	26.5	26.5
-2	**38.7**	38.7	38.7	**14.1**	14.1	14.1	**2.74**	26.4	26.4	26.4
-3	**38.0**	38.0	38.0	**14.1**	14.1	14.1	**2.70**	26.4	26.4	26.4
-4	**37.4**	37.4	37.4	**14.1**	14.1	14.1	**2.66**	26.4	26.4	26.4
-5	**36.8**	36.8	36.8	**14.1**	14.1	14.1	**2.62**	26.3	26.3	26.3
-6	**36.4**	36.4	36.4	**14.0**	14.0	14.0	**2.59**	26.3	26.3	26.3
-7	**36.0**	36.0	36.0	**14.0**	14.0	14.0	**2.57**	26.3	26.3	26.3
-8	**35.7**	35.7	35.7	**14.0**	14.0	14.0	**2.55**	26.2	26.2	26.2
-9	**35.5**	35.5	35.5	**14.0**	14.0	14.0	**2.53**	26.2	26.2	26.2
-10	**35.3**	35.3	35.3	**14.0**	14.0	14.0	**2.52**	26.2	26.2	26.2
-11	**34.5**	34.5	34.5	**14.0**	14.0	14.0	**2.47**	26.1	26.1	26.1
-12	**33.6**	33.6	33.6	**13.9**	13.9	13.9	**2.42**	26.0	26.0	26.0
-13	**32.8**	32.8	32.8	**13.9**	13.9	13.9	**2.36**	25.9	25.9	25.9
-14	**32.0**	32.0	32.0	**13.8**	13.8	13.8	**2.31**	25.8	25.8	25.8
-15	**31.2**	31.2	31.2	**13.8**	13.8	13.8	**2.26**	25.7	25.7	25.7
-16	**30.4**	30.4	30.4	**13.7**	13.7	13.7	**2.21**	25.6	25.6	25.6
-17	**29.6**	29.6	29.6	**13.7**	13.7	13.7	**2.17**	25.5	25.5	25.5
-18	**28.8**	28.8	28.8	**13.6**	13.6	13.6	**2.12**	25.4	25.4	25.4
-19	**28.1**	28.1	28.1	**13.5**	13.5	13.5	**2.07**	25.2	25.2	25.2
-20	**27.3**	27.3	27.3	**13.5**	13.5	13.5	**2.03**	25.1	25.1	25.1
-21	**26.6**	26.6	26.6	**13.4**	13.4	13.4	**1.99**	24.9	24.9	24.9
-22	**25.9**	25.9	25.9	**13.3**	13.3	13.3	**1.94**	24.7	24.7	24.7
-23	**25.2**	25.2	25.2	**13.2**	13.2	13.2	**1.90**	24.5	24.5	24.5
-24	**24.4**	24.4	24.4	**13.1**	13.1	13.1	**1.86**	24.3	24.3	24.3
-25	**23.7**	23.7	23.7	**13.0**	13.0	13.0	**1.82**	24.1	24.1	24.1

* 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	**73.5**	73.5	73.5	**17.7**	17.7	17.7	**4.15**	30.7	30.7	30.7
24	**72.2**	72.2	72.2	**17.7**	17.7	17.7	**4.07**	30.7	30.7	30.7
23	**70.9**	70.9	70.9	**17.7**	17.7	17.7	**3.99**	30.7	30.7	30.7
22	**69.6**	69.6	69.6	**17.8**	17.8	17.8	**3.92**	30.7	30.7	30.7
21	**68.4**	68.4	68.4	**17.8**	17.8	17.8	**3.85**	30.7	30.7	30.7
20	**67.1**	67.1	67.1	**17.8**	17.8	17.8	**3.77**	30.7	30.7	30.7
19	**65.9**	65.9	65.9	**17.8**	17.8	17.8	**3.70**	30.7	30.7	30.7
18	**64.7**	64.7	64.7	**17.8**	17.8	17.8	**3.63**	30.7	30.7	30.7
17	**63.5**	63.5	63.5	**17.8**	17.8	17.8	**3.56**	30.7	30.7	30.7
16	**62.3**	62.3	62.3	**17.8**	17.8	17.8	**3.50**	30.7	30.7	30.7
15	**61.2**	61.2	61.2	**17.8**	17.8	17.8	**3.43**	30.8	30.8	30.8
14	**60.0**	60.0	60.0	**17.8**	17.8	17.8	**3.36**	30.8	30.8	30.8
13	**58.9**	58.9	58.9	**17.9**	17.9	17.9	**3.30**	30.8	30.8	30.8
12	**57.8**	57.8	57.8	**17.9**	17.9	17.9	**3.24**	30.8	30.8	30.8
11	**56.7**	56.7	56.7	**17.9**	17.9	17.9	**3.17**	30.8	30.8	30.8
10	**55.6**	55.6	55.6	**17.9**	17.9	17.9	**3.11**	30.8	30.8	30.8
9	**53.7**	53.7	53.7	**17.9**	17.9	17.9	**3.00**	30.8	30.8	30.8
8	**51.8**	51.8	51.8	**17.9**	17.9	17.9	**2.90**	30.7	30.7	30.7
7	**50.1**	50.1	50.1	**17.8**	17.8	17.8	**2.81**	30.7	30.7	30.7
6	**48.5**	48.5	48.5	**17.8**	17.8	17.8	**2.72**	30.7	30.7	30.7
5	**47.0**	47.0	47.0	**17.8**	17.8	17.8	**2.64**	30.6	30.6	30.6
4	**45.6**	45.6	45.6	**17.8**	17.8	17.8	**2.57**	30.6	30.6	30.6
3	**44.4**	44.4	44.4	**17.8**	17.8	17.8	**2.50**	30.5	30.5	30.5
2	**43.2**	43.2	43.2	**17.7**	17.7	17.7	**2.44**	30.5	30.5	30.5
1	**42.1**	42.1	42.1	**17.7**	17.7	17.7	**2.38**	30.4	30.4	30.4
0	**41.2**	41.2	41.2	**17.7**	17.7	17.7	**2.33**	30.3	30.3	30.3
-1	**40.3**	40.3	40.3	**17.6**	17.6	17.6	**2.29**	30.2	30.2	30.2
-2	**39.5**	39.5	39.5	**17.6**	17.6	17.6	**2.25**	30.2	30.2	30.2
-3	**38.8**	38.8	38.8	**17.6**	17.6	17.6	**2.21**	30.1	30.1	30.1
-4	**38.2**	38.2	38.2	**17.5**	17.5	17.5	**2.18**	30.0	30.0	30.0
-5	**37.7**	37.7	37.7	**17.5**	17.5	17.5	**2.15**	30.0	30.0	30.0
-6	**37.2**	37.2	37.2	**17.5**	17.5	17.5	**2.13**	29.9	29.9	29.9
-7	**36.8**	36.8	36.8	**17.4**	17.4	17.4	**2.11**	29.9	29.9	29.9
-8	**36.5**	36.5	36.5	**17.4**	17.4	17.4	**2.10**	29.8	29.8	29.8
-9	**36.3**	36.3	36.3	**17.4**	17.4	17.4	**2.09**	29.8	29.8	29.8
-10	**36.1**	36.1	36.1	**17.4**	17.4	17.4	**2.08**	29.8	29.8	29.8
-11	**35.3**	35.3	35.3	**17.3**	17.3	17.3	**2.04**	29.7	29.7	29.7
-12	**34.4**	34.4	34.4	**17.3**	17.3	17.3	**1.99**	29.5	29.5	29.5
-13	**33.6**	33.6	33.6	**17.2**	17.2	17.2	**1.95**	29.4	29.4	29.4
-14	**32.8**	32.8	32.8	**17.1**	17.1	17.1	**1.91**	29.2	29.2	29.2
-15	**31.9**	31.9	31.9	**17.0**	17.0	17.0	**1.87**	29.1	29.1	29.1
-16	**31.1**	31.1	31.1	**17.0**	17.0	17.0	**1.84**	28.9	28.9	28.9
-17	**30.3**	30.3	30.3	**16.9**	16.9	16.9	**1.80**	28.7	28.7	28.7
-18	**29.5**	29.5	29.5	**16.8**	16.8	16.8	**1.76**	28.5	28.5	28.5
-19	**28.8**	28.8	28.8	**16.7**	16.7	16.7	**1.72**	28.3	28.3	28.3
-20	**28.0**	28.0	28.0	**16.6**	16.6	16.6	**1.69**	28.1	28.1	28.1
-21	**27.2**	27.2	27.2	**16.5**	16.5	16.5	**1.65**	27.9	27.9	27.9
-22	**26.4**	26.4	26.4	**16.3**	16.3	16.3	**1.62**	27.6	27.6	27.6
-23	**25.7**	25.7	25.7	**16.2**	16.2	16.2	**1.58**	27.4	27.4	27.4
-24	**24.9**	24.9	24.9	**16.1**	16.1	16.1	**1.55**	27.1	27.1	27.1
-25	**24.2**	24.2	24.2	**16.0**	16.0	16.0	**1.52**	26.8	26.8	26.8

* 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	**73.0**	73.0	73.0	**22.6**	22.6	22.6	**3.23**	36.1	36.1	36.1
24	**71.8**	71.8	71.8	**22.6**	22.6	22.6	**3.17**	36.2	36.2	36.2
23	**70.5**	70.5	70.5	**22.6**	22.6	22.6	**3.12**	36.2	36.2	36.2
22	**69.4**	69.4	69.4	**22.6**	22.6	22.6	**3.06**	36.2	36.2	36.2
21	**68.2**	68.2	68.2	**22.6**	22.6	22.6	**3.01**	36.2	36.2	36.2
20	**67.0**	67.0	67.0	**22.7**	22.7	22.7	**2.96**	36.3	36.3	36.3
19	**65.9**	65.9	65.9	**22.7**	22.7	22.7	**2.91**	36.3	36.3	36.3
18	**64.7**	64.7	64.7	**22.7**	22.7	22.7	**2.86**	36.3	36.3	36.3
17	**63.6**	63.6	63.6	**22.7**	22.7	22.7	**2.81**	36.3	36.3	36.3
16	**62.5**	62.5	62.5	**22.7**	22.7	22.7	**2.76**	36.3	36.3	36.3
15	**61.4**	61.4	61.4	**22.7**	22.7	22.7	**2.71**	36.4	36.4	36.4
14	**60.3**	60.3	60.3	**22.7**	22.7	22.7	**2.66**	36.4	36.4	36.4
13	**59.3**	59.3	59.3	**22.7**	22.7	22.7	**2.61**	36.4	36.4	36.4
12	**58.2**	58.2	58.2	**22.7**	22.7	22.7	**2.57**	36.4	36.4	36.4
11	**57.2**	57.2	57.2	**22.7**	22.7	22.7	**2.52**	36.4	36.4	36.4
10	**56.1**	56.1	56.1	**22.7**	22.7	22.7	**2.48**	36.4	36.4	36.4
9	**54.2**	54.2	54.2	**22.6**	22.6	22.6	**2.40**	36.4	36.4	36.4
8	**52.5**	52.5	52.5	**22.6**	22.6	22.6	**2.32**	36.3	36.3	36.3
7	**50.8**	50.8	50.8	**22.6**	22.6	22.6	**2.25**	36.3	36.3	36.3
6	**49.3**	49.3	49.3	**22.5**	22.5	22.5	**2.19**	36.2	36.2	36.2
5	**47.8**	47.8	47.8	**22.5**	22.5	22.5	**2.13**	36.2	36.2	36.2
4	**46.5**	46.5	46.5	**22.4**	22.4	22.4	**2.07**	36.1	36.1	36.1
3	**45.2**	45.2	45.2	**22.4**	22.4	22.4	**2.02**	36.0	36.0	36.0
2	**44.1**	44.1	44.1	**22.3**	22.3	22.3	**1.98**	35.9	35.9	35.9
1	**43.0**	43.0	43.0	**22.2**	22.2	22.2	**1.94**	35.8	35.8	35.8
0	**42.1**	42.1	42.1	**22.2**	22.2	22.2	**1.90**	35.7	35.7	35.7
-1	**41.2**	41.2	41.2	**22.1**	22.1	22.1	**1.86**	35.6	35.6	35.6
-2	**40.4**	40.4	40.4	**22.1**	22.1	22.1	**1.83**	35.5	35.5	35.5
-3	**39.7**	39.7	39.7	**22.0**	22.0	22.0	**1.81**	35.4	35.4	35.4
-4	**39.1**	39.1	39.1	**21.9**	21.9	21.9	**1.78**	35.3	35.3	35.3
-5	**38.6**	38.6	38.6	**21.9**	21.9	21.9	**1.76**	35.2	35.2	35.2
-6	**38.1**	38.1	38.1	**21.9**	21.9	21.9	**1.74**	35.1	35.1	35.1
-7	**37.7**	37.7	37.7	**21.8**	21.8	21.8	**1.73**	35.1	35.1	35.1
-8	**37.4**	37.4	37.4	**21.8**	21.8	21.8	**1.72**	35.0	35.0	35.0
-9	**37.2**	37.2	37.2	**21.8**	21.8	21.8	**1.71**	35.0	35.0	35.0
-10	**37.0**	37.0	37.0	**21.8**	21.8	21.8	**1.70**	35.0	35.0	35.0
-11	**36.2**	36.2	36.2	**21.7**	21.7	21.7	**1.67**	34.8	34.8	34.8
-12	**35.3**	35.3	35.3	**21.6**	21.6	21.6	**1.64**	34.6	34.6	34.6
-13	**34.4**	34.4	34.4	**21.5**	21.5	21.5	**1.61**	34.4	34.4	34.4
-14	**33.6**	33.6	33.6	**21.3**	21.3	21.3	**1.57**	34.2	34.2	34.2
-15	**32.8**	32.8	32.8	**21.2**	21.2	21.2	**1.54**	34.0	34.0	34.0
-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	**35.2**	35.2	35.2	**15.2**	15.2	15.2	**2.32**	27.7	27.7	27.7
39	**35.5**	35.5	35.5	**14.9**	14.9	14.9	**2.38**	27.4	27.4	27.4
38	**35.7**	35.7	35.7	**14.5**	14.5	14.5	**2.46**	27.0	27.0	27.0
37	**35.9**	35.9	35.9	**14.2**	14.2	14.2	**2.53**	26.7	26.7	26.7
36	**36.2**	36.2	36.2	**13.9**	13.9	13.9	**2.60**	26.3	26.3	26.3
35	**36.4**	36.4	36.4	**13.6**	13.6	13.6	**2.68**	26.0	26.0	26.0
34	**36.6**	36.6	36.6	**13.3**	13.3	13.3	**2.75**	25.7	25.7	25.7
33	**36.8**	36.8	36.8	**13.0**	13.0	13.0	**2.83**	25.3	25.3	25.3
32	**37.0**	37.0	37.0	**12.7**	12.7	12.7	**2.91**	25.0	25.0	25.0
31	**37.2**	37.2	37.2	**12.4**	12.4	12.4	**2.99**	24.7	24.7	24.7
30	**37.4**	37.4	37.4	**12.2**	12.2	12.2	**3.07**	24.4	24.4	24.4
29	**37.6**	37.6	37.6	**11.9**	11.9	11.9	**3.16**	24.2	24.2	24.2
28	**37.7**	37.7	37.7	**11.6**	11.6	11.6	**3.24**	23.9	23.9	23.9
27	**37.9**	37.9	37.9	**11.4**	11.4	11.4	**3.33**	23.6	23.6	23.6
26	**38.1**	38.1	38.1	**11.1**	11.1	11.1	**3.42**	23.3	23.3	23.3
25	**38.2**	38.2	38.2	**10.9**	10.9	10.9	**3.51**	23.1	23.1	23.1
24	**38.4**	38.4	38.4	**10.6**	10.6	10.6	**3.60**	22.8	22.8	22.8
23	**38.5**	38.5	38.5	**10.4**	10.4	10.4	**3.70**	22.5	22.5	22.5
22	**38.7**	38.7	38.7	**10.2**	10.2	10.2	**3.80**	22.3	22.3	22.3
21	**38.8**	38.8	38.8	**10.0**	10.0	10.0	**3.90**	22.0	22.0	22.0
20	**38.9**	38.9	38.9	**9.7**	9.7	9.7	**4.00**	21.8	21.8	21.8
19	**39.1**	39.1	39.1	**9.5**	9.5	9.5	**4.11**	21.5	21.5	21.5
18	**39.2**	39.2	39.2	**9.3**	9.3	9.3	**4.22**	21.3	21.3	21.3
17	**39.3**	39.3	39.3	**9.1**	9.1	9.1	**4.33**	21.0	21.0	21.0

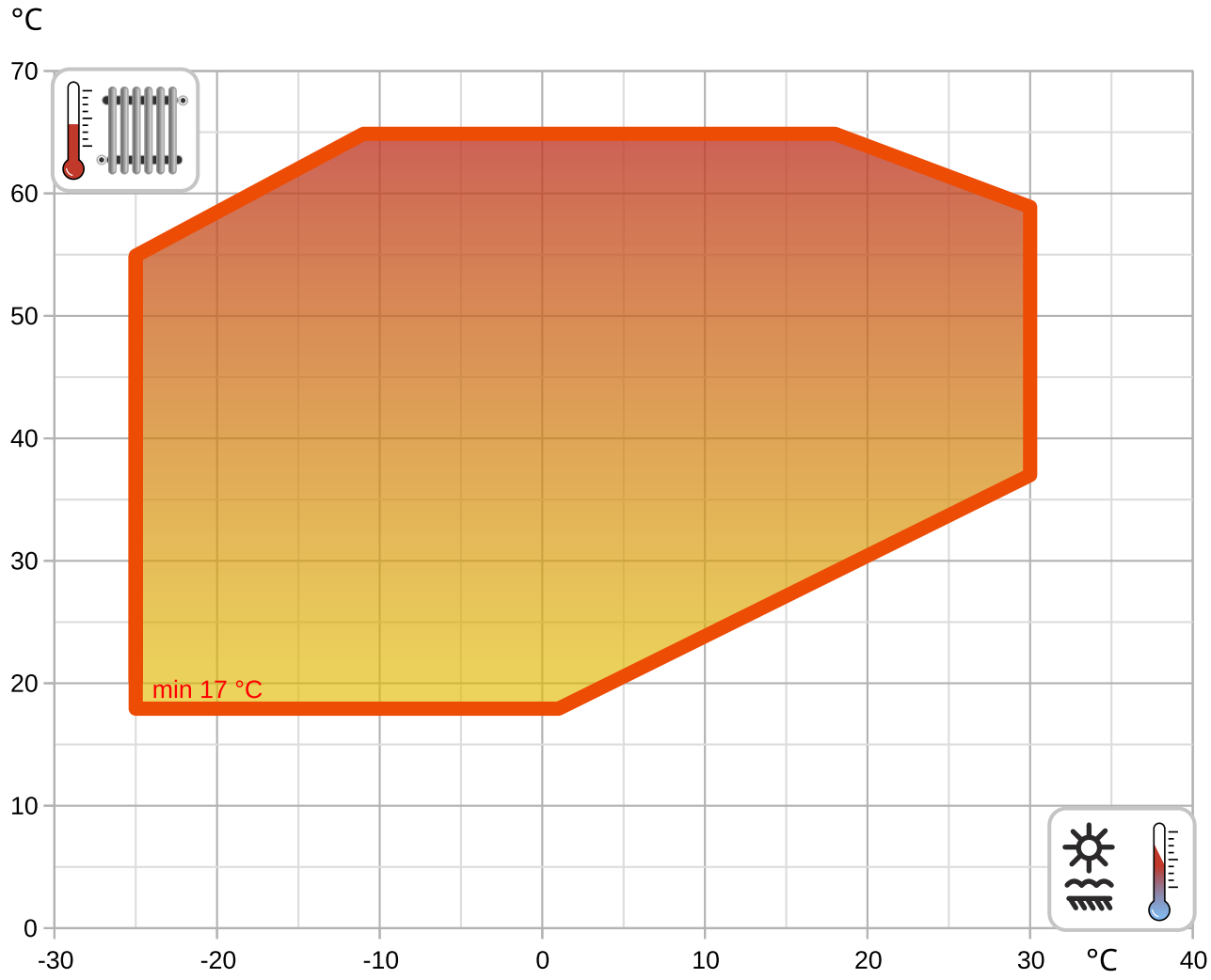
Tc [°C]	W 23 / 18 °C									
	Qc	Qh-min	Qh-max	Pin	Pin-min	Pin-max	EER	I	I-min	I-max
Ta [°C]	**[kW]**	[kW]	[kW]	**[kW]**	[kW]	[kW]	**kW / kW**	[A]	[A]	[A]
40	**46.9**	46.9	46.9	**15.2**	15.2	15.2	**3.09**	27.7	27.7	27.7
39	**47.3**	47.3	47.3	**14.9**	14.9	14.9	**3.18**	27.3	27.3	27.3
38	**47.6**	47.6	47.6	**14.5**	14.5	14.5	**3.27**	26.9	26.9	26.9
37	**47.9**	47.9	47.9	**14.2**	14.2	14.2	**3.37**	26.6	26.6	26.6
36	**48.1**	48.1	48.1	**13.9**	13.9	13.9	**3.46**	26.2	26.2	26.2
35	**48.4**	48.4	48.4	**13.6**	13.6	13.6	**3.56**	25.9	25.9	25.9
34	**48.7**	48.7	48.7	**13.3**	13.3	13.3	**3.66**	25.5	25.5	25.5
33	**49.0**	49.0	49.0	**13.0**	13.0	13.0	**3.77**	25.2	25.2	25.2
32	**49.2**	49.2	49.2	**12.7**	12.7	12.7	**3.87**	24.9	24.9	24.9
31	**49.5**	49.5	49.5	**12.4**	12.4	12.4	**3.98**	24.5	24.5	24.5
30	**49.7**	49.7	49.7	**12.2**	12.2	12.2	**4.09**	24.2	24.2	24.2
29	**50.0**	50.0	50.0	**11.9**	11.9	11.9	**4.20**	23.9	23.9	23.9
28	**50.2**	50.2	50.2	**11.6**	11.6	11.6	**4.32**	23.6	23.6	23.6
27	**50.5**	50.5	50.5	**11.4**	11.4	11.4	**4.43**	23.3	23.3	23.3
26	**50.7**	50.7	50.7	**11.1**	11.1	11.1	**4.55**	23.0	23.0	23.0
25	**50.9**	50.9	50.9	**10.9**	10.9	10.9	**4.67**	22.7	22.7	22.7
24	**51.1**	51.1	51.1	**10.6**	10.6	10.6	**4.80**	22.4	22.4	22.4
23	**51.3**	51.3	51.3	**10.4**	10.4	10.4	**4.93**	22.2	22.2	22.2
22	**51.5**	51.5	51.5	**10.2**	10.2	10.2	**5.06**	21.9	21.9	21.9
21	**51.7**	51.7	51.7	**10.0**	10.0	10.0	**5.20**	21.6	21.6	21.6
20	**51.9**	51.9	51.9	**9.7**	9.7	9.7	**5.34**	21.3	21.3	21.3
19	**52.1**	52.1	52.1	**9.5**	9.5	9.5	**5.48**	21.0	21.0	21.0
18	**52.3**	52.3	52.3	**9.3**	9.3	9.3	**5.63**	20.8	20.8	20.8
17	**52.5**	52.5	52.5	**9.1**	9.1	9.1	**5.78**	20.5	20.5	20.5

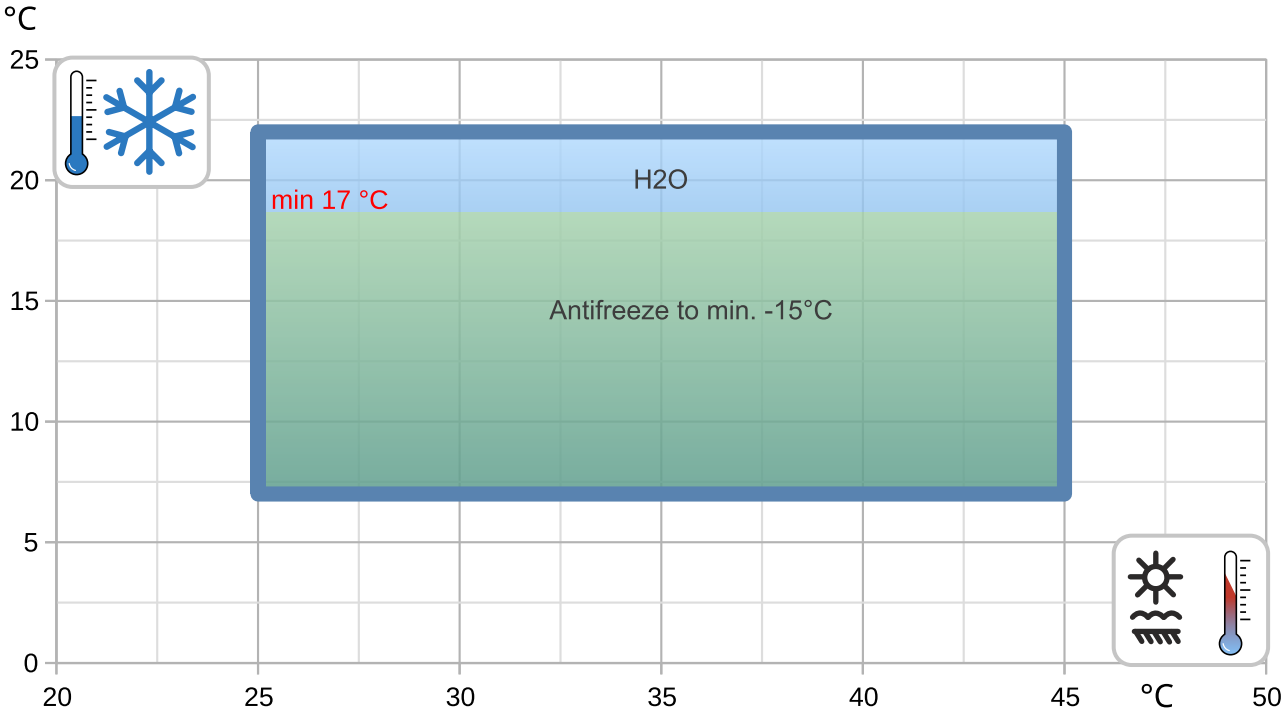
* attention: operating limits not reflected in performance table

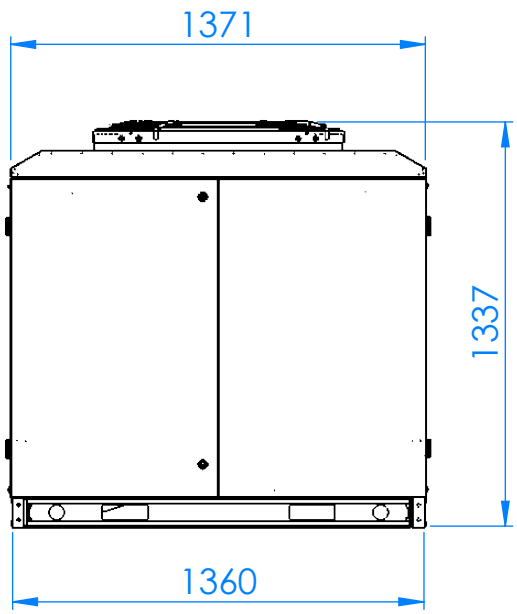
LEGENDE:

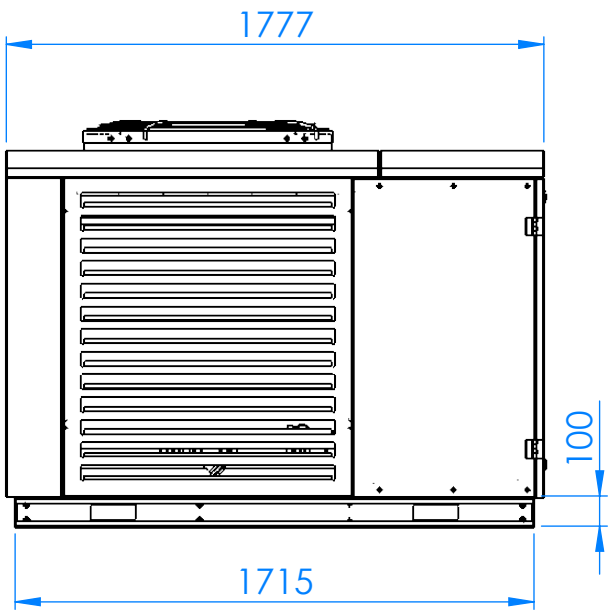
Ts-IN: Temperature renewable source - inlet [°C]
Th-OU: Temperature heating - outlet (flow) [°C]
Tc-OU: Temperature cooling - outlet (flow) [°C]
Qh nom: Heating capacity nominal
Qh min: Heating capacity minimal
Qh max: Heating capacity maximal
Pin nom: Power input at nominal heating capacity
Pin min: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

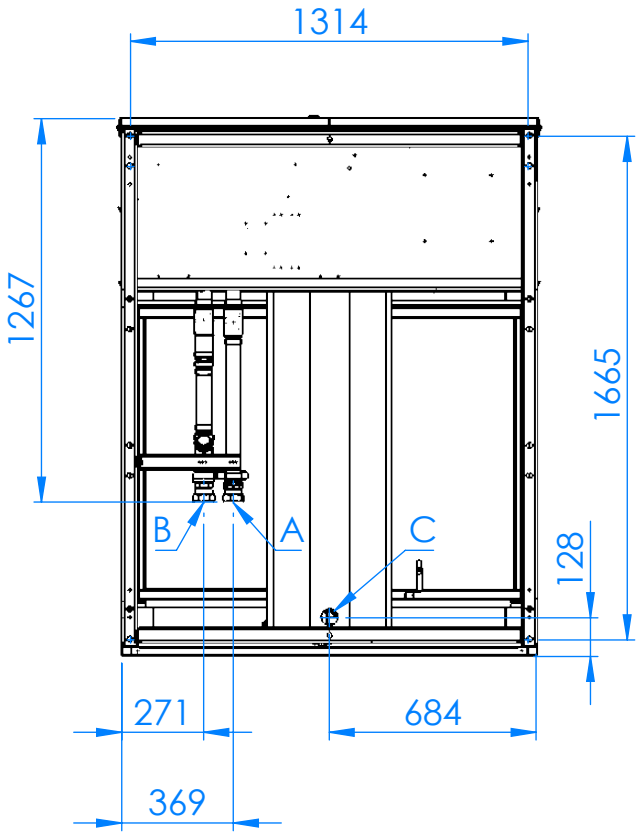
Operating limits

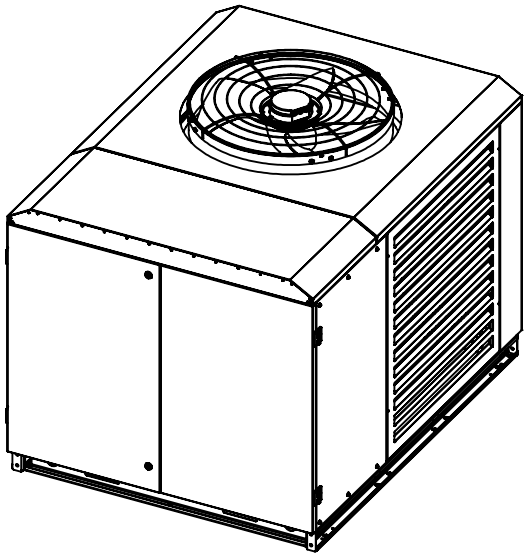





1371
1337
1360


1777
100
1715

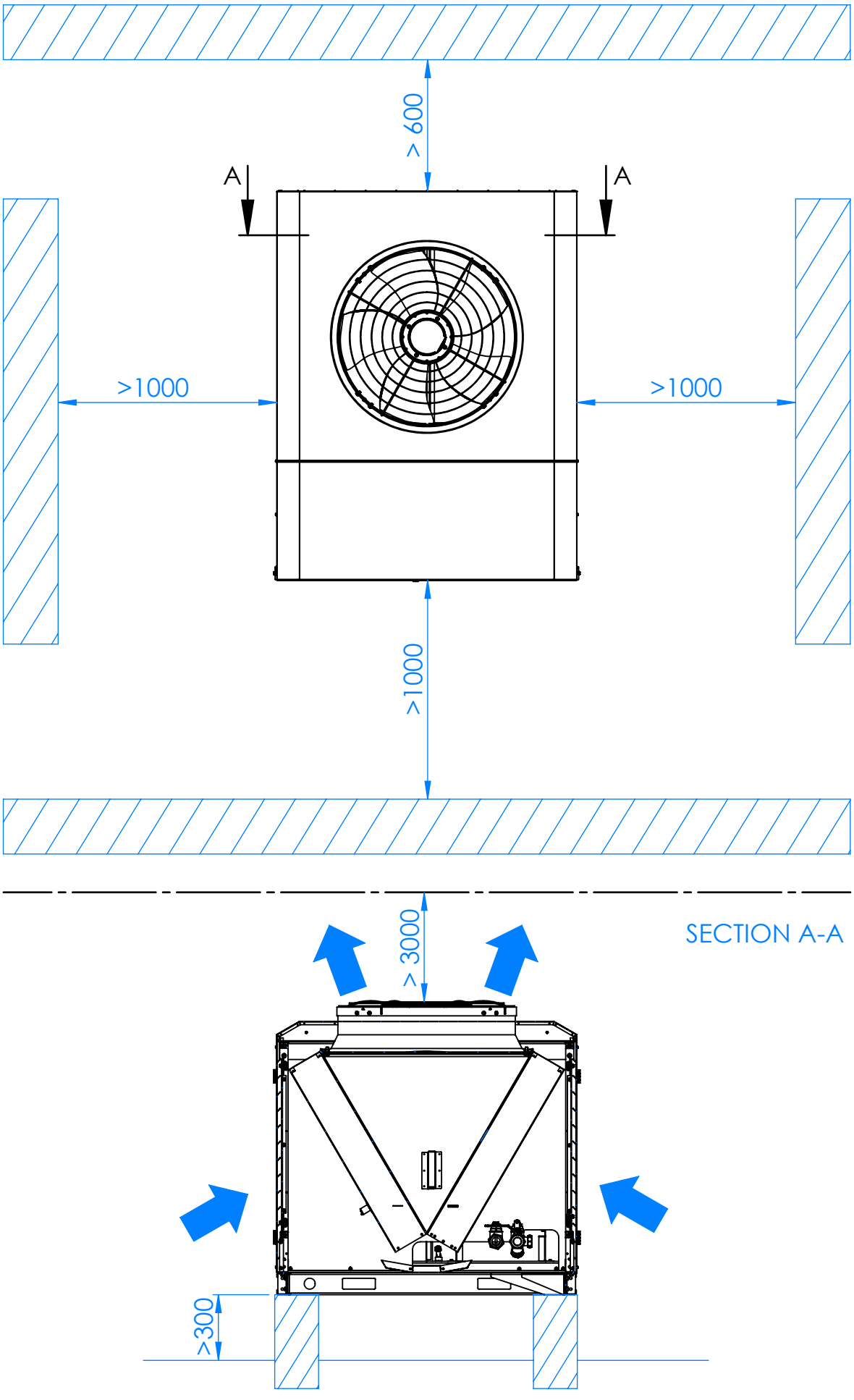

1314
1267
1665
B
A
C
128
271
684
369

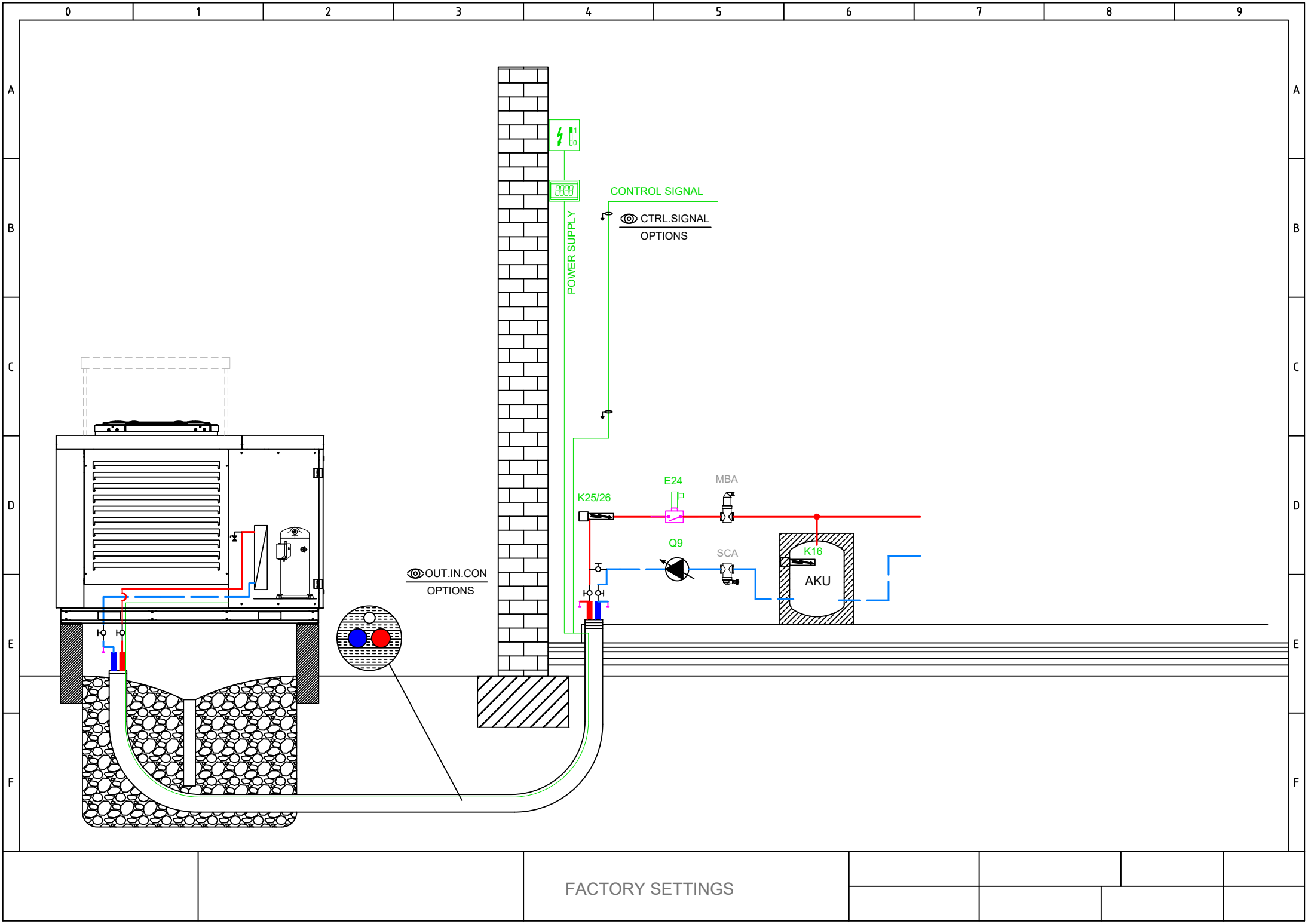


A -

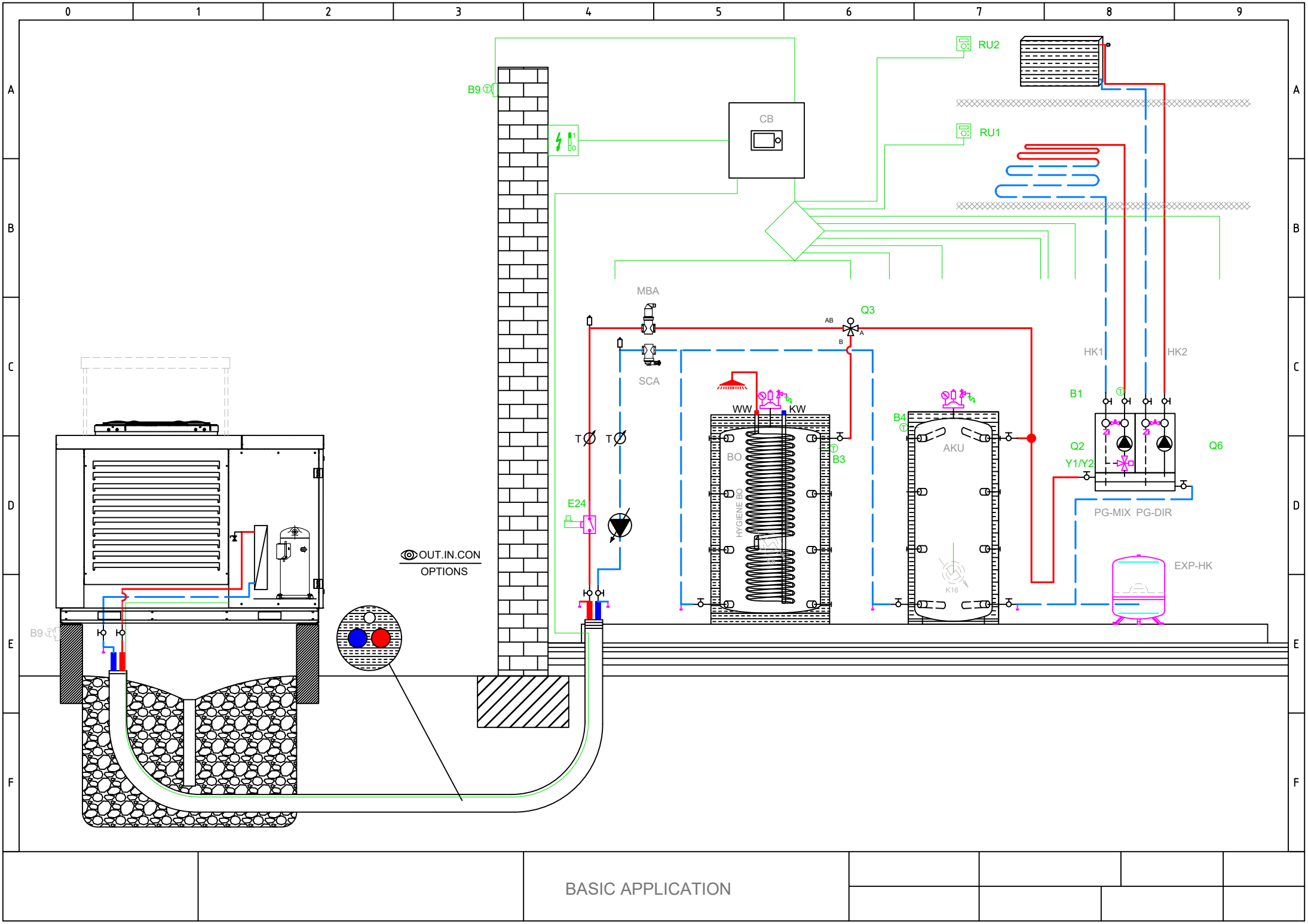
B -

C - Condens

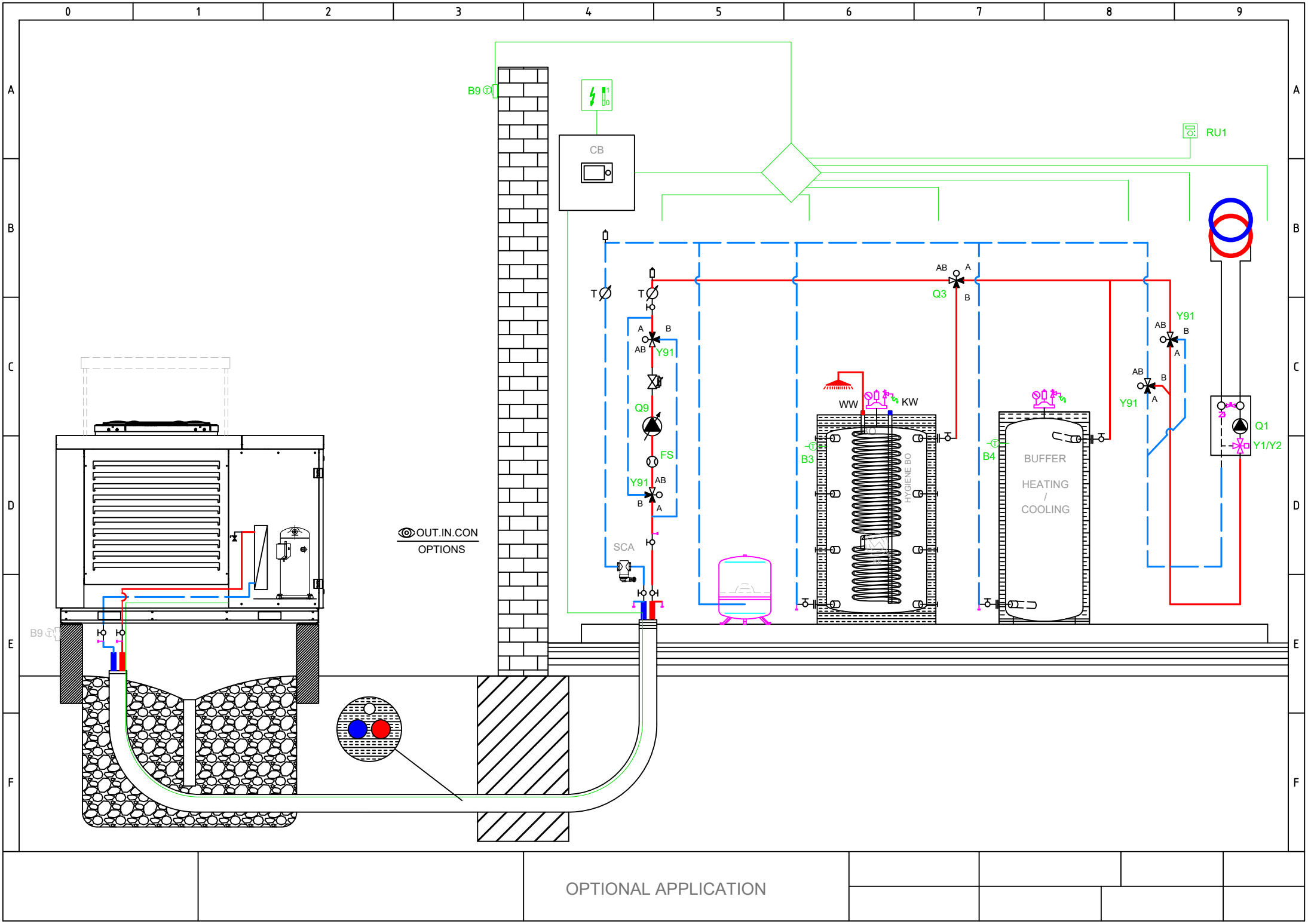

> 600
A
A
>1000
>1000
>1000
SECTION A-A
> 3000
>300



FACTORY SETTINGS



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

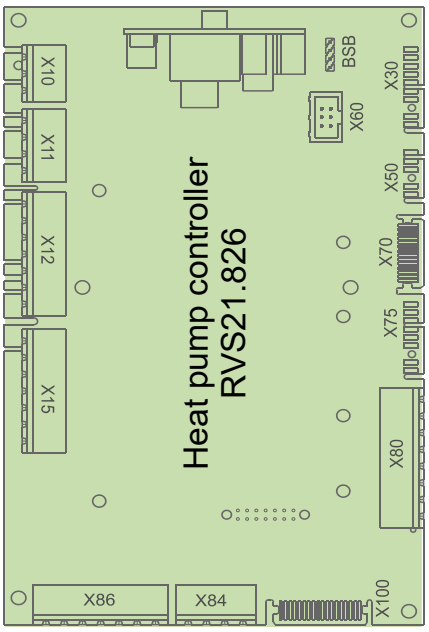
Heat pump controller preconfiguration and standard wiring of inputs and outputs

EN

Main power supply 230V / 50 Hz
Ground
Neutral conductor

E10	High-pressure switch E10	X10 1	L
E11	Overload compressor 1 E11		PE
E14	Overload source E14		N
E24	Flow switch consumers E24	X11 1	EX1
K82	Valve EVI K82		EX2
			EX3
K40	Crankcase heater K40		EX4
		X12 1	QX1
L	Phase 230V		N
K1	Compressor stage 1 K1		QX2
Y22	Process revers valve Y22		QX2i
			N
			FX3
Q9	Condenser pump Q9		QX3
		X15 1	QX4
			QX4i
			N
			QX5
			N
			ZX6
			N
		X86 1	GX1
			H3
			M
			H1
			G+
			M
			BSB

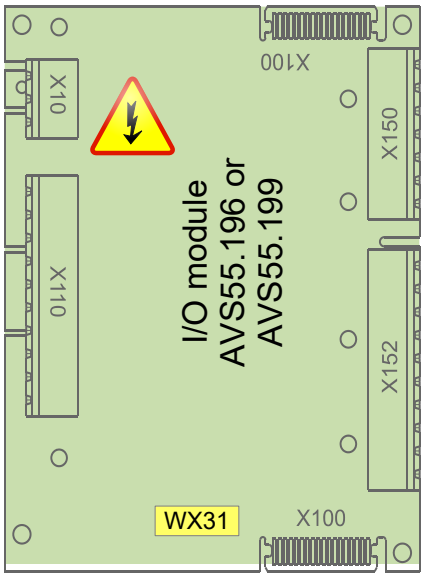
Total: max 6A
1 x QX..: max 2A



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	Alarm output K10	X115 1	QX35
			QX35i
			N
V81	EEV evaporator 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

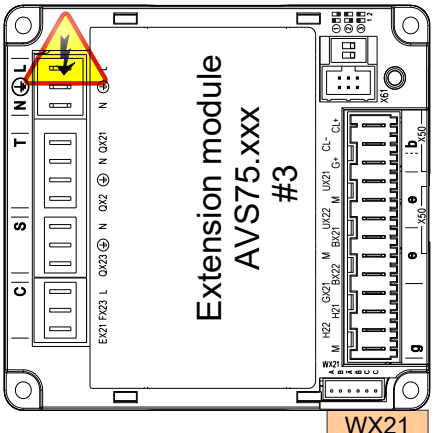
X50
X50
CL+ b
CL-
G+
UX21 e
M
UX22
BX21 e
M
BX22
GX21 g
H21
H22
M

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

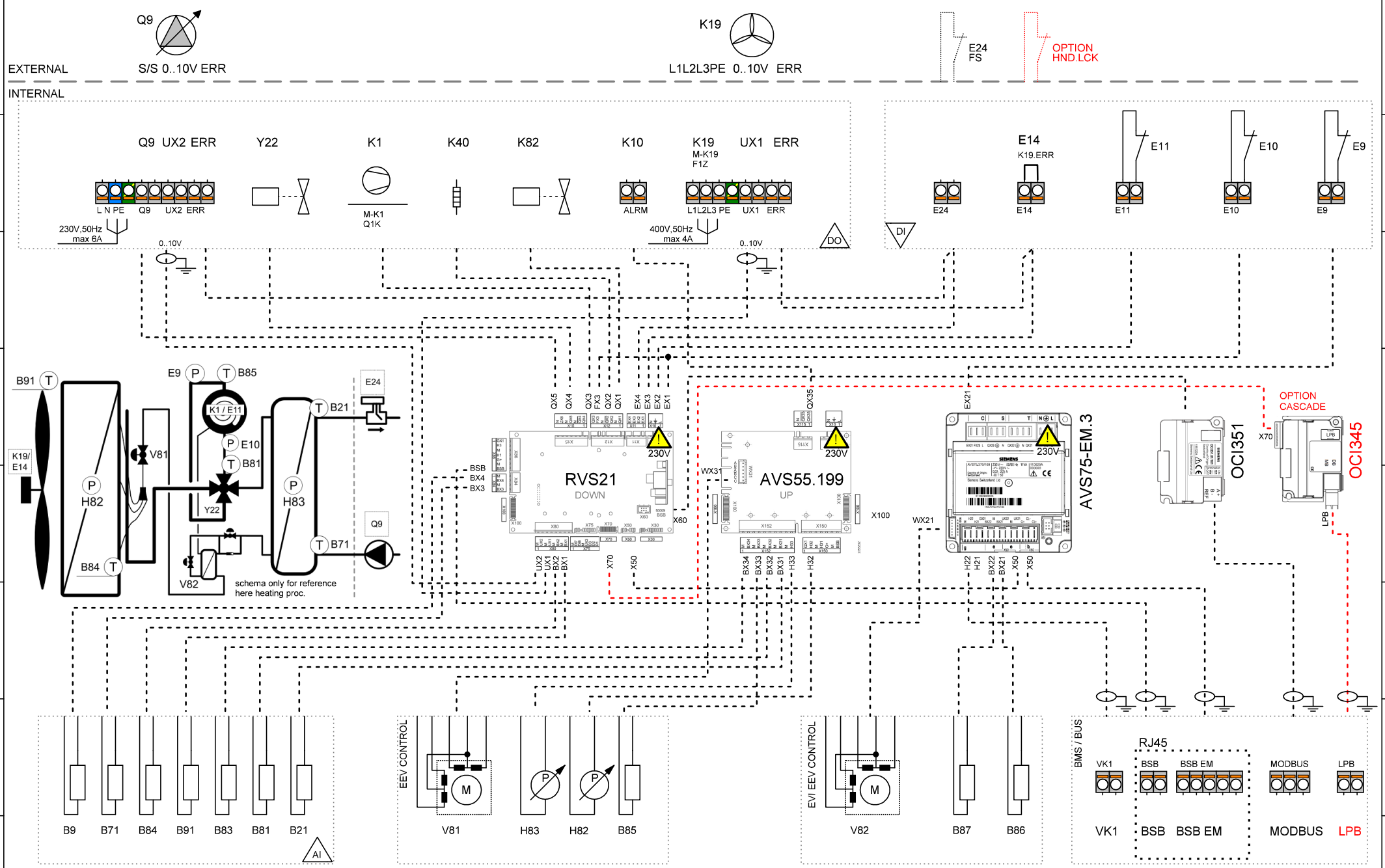
B87 Evaporation sensor EVI B87

E9 Low-pressure switch E9

V82 EEV EVI V82

WX21

WX21


Q9
S/S 0..10V ERR
K19
L1L2L3PE 0..10V ERR
E24
FS
OPTION
HND.LCK
EXTERNAL
INTERNAL
Q9 UX2 ERR
Y22
K1
K40
K82
K10
K19 UX1 ERR
M-K19
F1Z
L N PE Q9 UX2 ERR
230V,50Hz
max 6A
M-K1
Q1K
ALRM
L1L2L3 PE UX1 ERR
400V,50Hz
max 4A
0..10V
DO
DI
E14
K19.ERR
E24
E14
E11
E10
E9
B91
E9
B85
E24
K1 / E11
B21
K19/
E14
V81
P
H82
E10
B81
Y22
P
H83
Q9
B84
B71
V82
schema only for reference
here heating proc.
QX5
QX4
QX3
FX3
QX2
QX1
EX4
EX3
EX2
EX1
230V
RVS21
DOWN
BSB
BX4
BX3
X60
X100
WX31
AVS55.199
UP
QX35
EX21
AVS75-EM.3
WX21
OCI351
OPTION
CASCADE
OCI345
X70
LPB
UX2
UX1
BX2
BX1
X70
X50
BX34
BX33
BX32
BX31
H33
H32
H22
H21
BX22
BX21
X50
X50
B9
B71
B84
B91
B83
B81
B21
AI
EEV CONTROL
V81
H83
H82
B85
EVI EEV CONTROL
V82
B87
B86
BMS / BUS
RJ45
VK1
BSB
BSB EM
MODBUS
LPB
VK1
BSB
BSB EM
MODBUS
LPB
PWR SPLY: ..... 3~ 400V, 50 Hz
CTRL: ..... 1~ 230V, 50 HZ
Company
Title
AW(K)
Version / Note
05/2024
Number
Created by
Date
Page
1

Accessory

INTERNET

PWR GRID

3~ 400 V, 50 Hz

L1/L2/L3/N/PE

ControlBox

TOSYMO VPN

AVS74-HMI

AVS75-EM.1

AVS75-EM.2

Q9

Distribution

B36

B4

B42

B41

B3

B31

Q33

Tauscher1

Solar

Q2 HK/KK

Y21

Q6 HK/KK

Y45

only example

L1/L2/L3/N/PE

ModBus

BSB

BSB-EM

OCI351

RVS21

AVS55

AVS75-EM.3

K25

Q8 / K19

Q9

RVS61

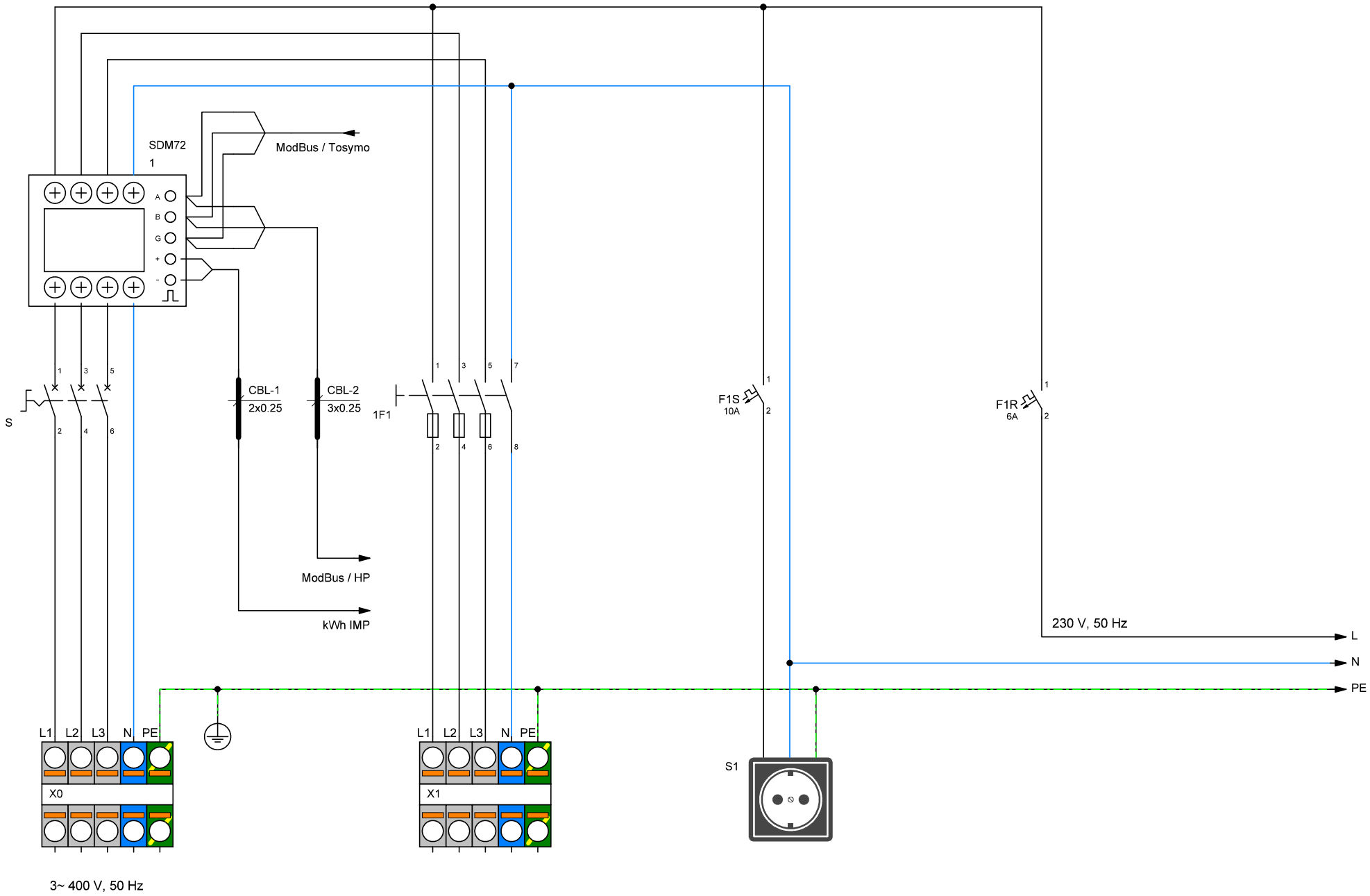
AVS75-EM.3

Renewable heat source

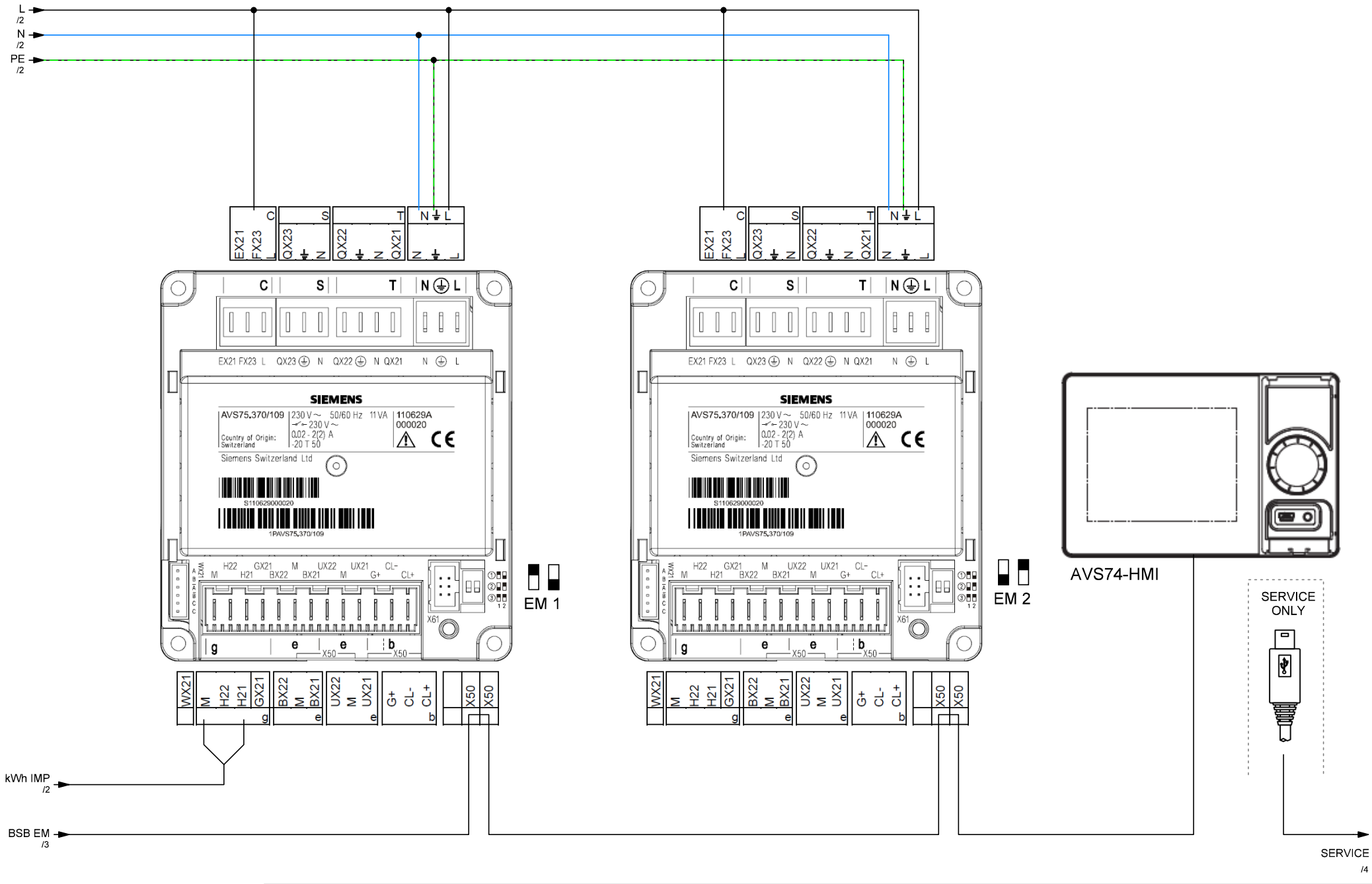
Heat pump

Consumer

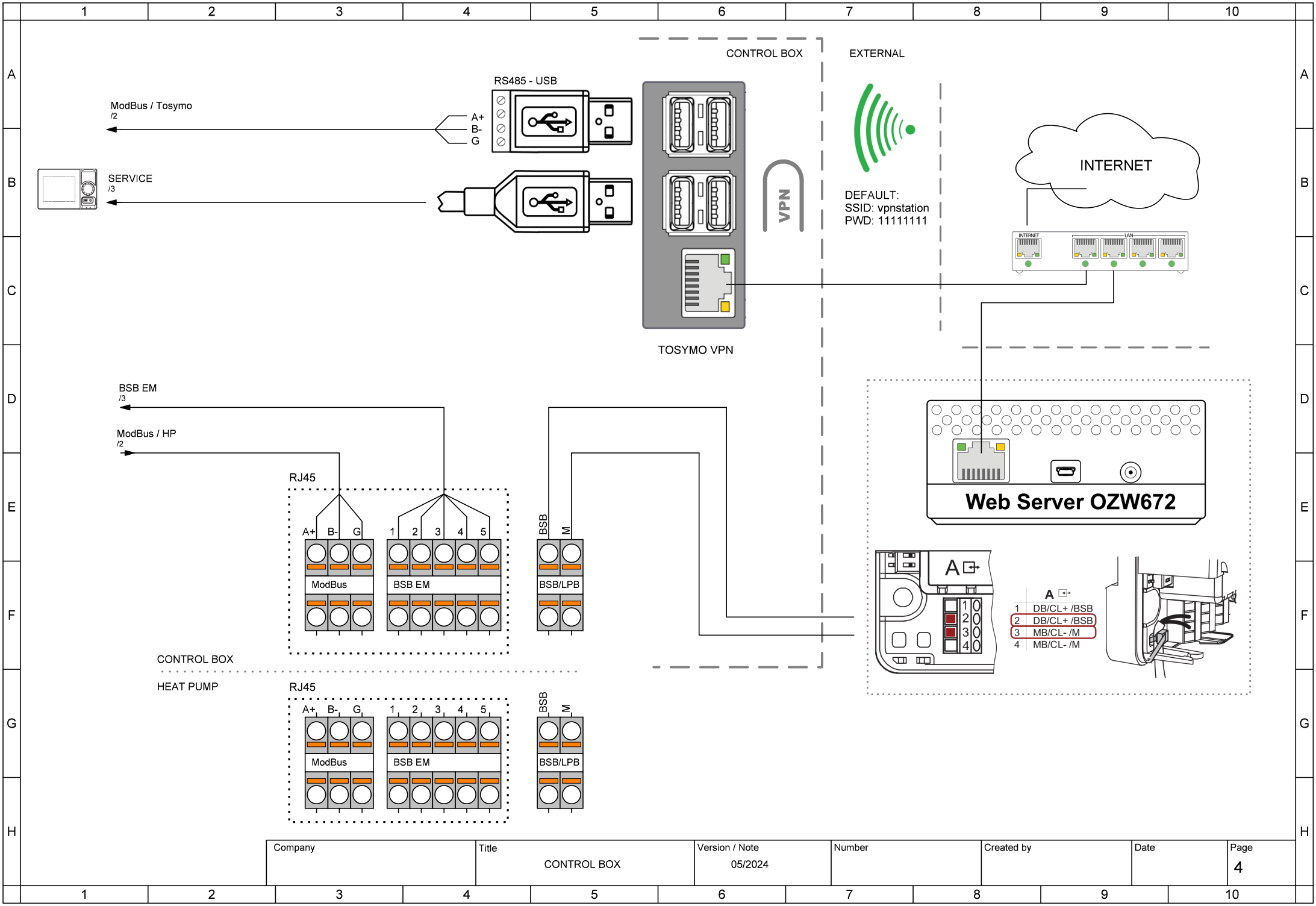
Company	Title	Version / Note	Number	Created by	Date	Page
	CONTROL BOX	05/2024				1



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

ControlBox v052024

Extension modules preconfiguration and standard wiring of inputs and outputs

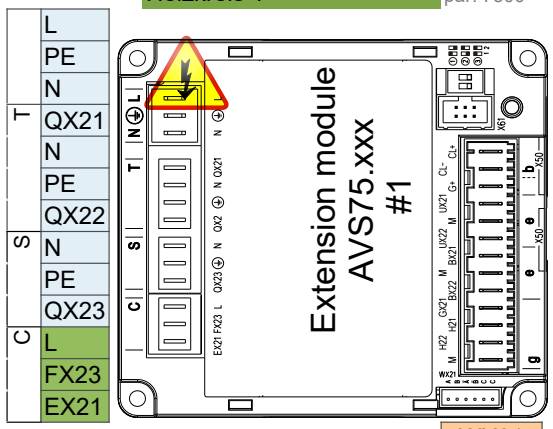
EN

AVS75.390
AVS75.391
AVS75.370

AVS75.370

Heizkreis 1 par. 7300

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

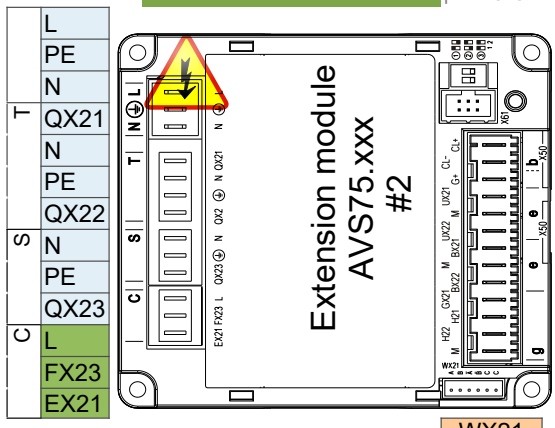


Extension module AVS75.xxx
Room unit QAA...
Room unit QAA...
B1 Flow sensor 1
Pulse count

AVS75.370

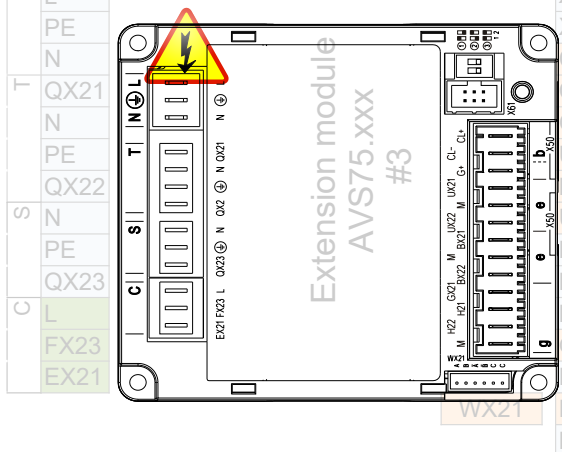
Multifunktional par. 7375

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 conntact technical support

5 MQTT IoT communication protocol

For more information contact technical support