

Daikin Altherma low temperature split Technical Data

EHBH-D6V /
EHBH-D9W /
EHBX-D6V /
EHBX-D9W



EHBH04DA6V
EHBH08DA6V
EHBH08DA9W
EHBX04DA6V
EHBX08DA6V
EHBX08DA9W

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EHBH-D6V / EHBH-D9W / EHBX-D6V / EHBX-D9W

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1 Features

1 - 1 EHBX-D6V, EHBH-D9W, EHBH-D6V, EHBX-D9W

Wall mounted reversible air to water heat pump ideal for low energy houses

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- › Inclusion of all hydraulic components means no third party components are required
- › PCB board and hydraulic components are located in the front for easy access
- › Compact dimensions allows for small installation space, as almost no side clearances are required.
- › The unit's sleek design blends in with other household appliances.
- › Combine with a stainless steel tank or ECH2O thermal store.



Online
controller

2 Specifications

1 - 1 EHBX-D6V, EHBH-D9W, EHBH-D6V, EHBX-D9W

Technical specifications					EHBH04D6V	EHBH08D6V	
Heater capacity	Step 1			kW	2		
	Step 2			kW	2 or 4		
Power input	Nom.			kW	0.09		
Casing	Colour				White + Black		
	Material				Resin, sheet metal		
Dimensions	Unit	Height	mm	840			
		Width	mm	440			
		Depth	mm	390			
	Packed unit	Height	mm	450			
		Width	mm	650			
		Depth	mm	1,016			
Weight	Unit			kg	42.0		
	Packed unit			kg	46		
Packing	Material			Carton / PP (Straps) / EPS			
	Weight			kg	4		
PED	Category			Art4.3 / See note 7			
	Most critical part	Name		Plate heat exchanger			
		Ps*V	Bar*I	38			
Refrigerant side heat exchanger	Type			Plate heat exchanger			
	Quantity			1			
	Plates	Quantity		42			
Pump	Nr of speeds			PWM			
	Power input			W	52		
Water side Heat exchanger	Type			Plate heat exchanger			
	Quantity			1			
	Plates	Quantity		42			
	Water volume			l	0.95		
	Water	Min.		l/min	12.0 (1)		
	flow rate						
Expansion vessel	Volume			l	10		
	Max. water pressure			bar	3		
	Pre pressure			bar	1		
Water filter	Diameter perforations			mm	0.8		
	Material			Stainless steel / Plastic			
General	Supplier/Manufacturer details	Name or trademark			Daikin Europe N.V.		
		Name and address			Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium		
Water circuit	Piping connections diameter			inch	G 1" (female)		
Water circuit	Piping material			Cu			
	Internal piping diameter			inch	1"		
	Piping			inch	1"		
	Safety valve			bar	3		
	Manometer			Digital			
	Drain valve / fill valve			Yes			
	Shut off valve			Yes			
	Air purge valve			Yes			
	Total water volume			l	3.2		
	Minimum water volume in the system for heating			l	10 (2)		
	Refrigerant circuit	Gas side diameter			mm	15.9	
		Liquid side diameter			mm	6.35	
Sound power level	Nom.			dBA	42 (3)		
Sound pressure level	Nom.			dBA	28 (4)		
Operation range	Heating	Ambient	Min.	°C	0 (5)		
			Max.	°C	0 (5)		
		Water side	Min.	°C	0 (5)		
			Max.	°C	0 (5)		
	Indoor installation	Ambient	Min.	°CDB	5		
			Max.	°CDB	35		
	Domestic hot water	Ambient	Min.	°CDB	0 (5)		
			Max.	°CDB	0 (5)		
		Water side	Min.	°C	0 (5)		
			Max.	°C	0 (5)		
	Safety devices	Item	01			Thermal cut out	

Electrical specifications					EHBH04D6V	EHBH08D6V
Power supply	Name				See note 8	
	Voltage range	Min.	%		-10	
		Max.	%		10	
IP class	IP				IP X0B	

2 Specifications

1 - 1 EHBX-D6V, EHBH-D9W, EHBH-D6V, EHBX-D9W

2

Electrical specifications			EHBH04D6V	EHBH08D6V
Electric heater	Power supply	Name	6V3	
		Phase	1~ / 3~	
		Frequency Hz	50	
		Voltage V	230	
	Current	Maximum running current A	26.0	
Wiring connections	Recommended fuses		20.000 (6)	
	Communication cable	Quantity	3	
		Remark	1.5 mm ²	
	Electric meter	Quantity	2	
		Remark	Minimum 0.75 mm ² (5VDC pulse detection)	
	Preferential kWh rate power supply	Quantity	Power: 2	
		Remark	Power 6.3A (Select diameter and type according to national and local regulations)	
	Domestic hot water pump	Quantity	2	
		Remark	Minimum 0.75 mm ² (2A inrush, 1A continuous)	
	For power supply back-up heater	Quantity	Prewired	
		Remark	Select diameter & type according to national & local regulations	
	For connection with R6T	Quantity	2	
		Remark	Minimum 0.75 mm ²	
	For connection with A3P	Quantity	Depends on thermostat type, cf. installation manual	
		Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm ² / See note 9	
	For connection with M2S	Quantity	2	
		Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm ² / See note 9	
	For connection with optional FWXV* (demand	Quantity	4	
		Remark	100 mA, minimum 0.75 mm ²	

(1) Operation area is extended to lower flow rates only in case the unit operates with heat pump only. (Not in startup, no BUH operation, no defrost operation). |

(2) Excluding the water in the unit. This minimum water volume is sufficient for most applications. During critical processes extra water may be required. |

(3) DB/WB 7°C/6°C - LWC 35°C (DT=5°C) |

(4) Sound values are measured in a semi-anechoic room. Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings. Sound power level is an absolute value that a so |

(5) For more details, see operation range drawing |

(6) 4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

(7) PED unit category: Art353: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC |

(8) Above mentioned power supply for control box is for booster heater only. The switchbox of the controller box is supplied via the outdoor unit. The optional domestic hot water tank has a separate power supply. |

(9) Select diameter and type according to national and local regulations

Technical specifications				EHBH08D9W
Heater capacity	Step 1		kW	3
	Step 2		kW	max. 6 kW
Power input	Nom.		kW	0.09
Casing	Colour			White + Black
	Material			Resin, sheet metal
Dimensions	Unit	Height	mm	840
		Width	mm	440
		Depth	mm	390
	Packed unit	Height	mm	450
		Width	mm	650
		Depth	mm	1,016
Weight	Unit		kg	42.4
	Packed unit		kg	46
Packing	Material			Carton / PP (Straps) / EPS
	Weight		kg	4
PED	Category			Art4.3 / See note 7
	Most critical part	Name		Plate heat exchanger
		Ps*V	Bar*I	
Refrigerant side heat exchanger	Type			Plate heat exchanger
	Quantity			1
	Plates	Quantity		42
Pump	Nr of speeds			PWM
	Power input		W	52
Water side Heat exchanger	Type			Plate heat exchanger
	Quantity			1
	Plates	Quantity		42
	Water volume		l	0.95
	Water flow rate	Min.	l/min	12.0 (1)
	Expansion vessel			
Water filter	Volume		l	10
	Max. water pressure		bar	3
	Pre pressure		bar	1
Water filter	Diameter perforations		mm	0.8
	Material			Stainless steel / Plastic

2 Specifications

1 - 1 EHBX-D6V, EHBH-D9W, EHBH-D6V, EHBX-D9W

Technical specifications				EHBH08D9W	
General	Supplier/Manufacturer details	Name or trademark		Daikin Europe N.V.	
		Name and address		Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium	
Water circuit	Piping connections diameter		inch	G 1" (female)	
Water circuit	Piping material			Cu	
	Internal piping diameter		inch	1"	
	Piping		inch	1"	
	Safety valve		bar	3	
	Manometer			Digital	
	Drain valve / fill valve			Yes	
	Shut off valve			Yes	
	Air purge valve			Yes	
	Total water volume		l	3.2	
Refrigerant circuit	Minimum water volume in the system for heating		l	10 (2)	
	Gas side diameter		mm	15.9	
Sound power level	Liquid side diameter		mm	6.35	
	Nom.		dB(A)	42 (3)	
Sound pressure level	Nom.		dB(A)	28 (4)	
	Operation range				
Operation range	Heating	Ambient	Min.	°C	0 (5)
			Max.	°C	0 (5)
		Water side	Min.	°C	0 (5)
			Max.	°C	0 (5)
	Indoor installation	Ambient	Min.	°CDB	5
			Max.	°CDB	35
		Domestic hot water	Min.	°CDB	0 (5)
			Max.	°CDB	0 (5)
	Water side	Min.	°C	0 (5)	0 (5)
			°C	0 (5)	0 (5)
		Max.	°C	0 (5)	0 (5)
			°C	0 (5)	0 (5)
Safety devices	Item	01		Thermal cut out	

Electrical specifications				EHBH08D9W	
Power supply	Name			See note 8	
	Voltage range	Min.	%	-10	
		Max.	%	10	
IP class	IP			IP X0B	
Electric heater	Power supply	Name		9W	
		Phase		3~	
		Frequency		50	
		Voltage		400	
	Current	Maximum running current		13.0	
		Minimum Ssc value		Equipment complying with EN/IEC 61000-3-12	
	Recommended fuses		A	20.000 (6)	
Wiring connections	Communication cable	Quantity		3	
		Remark		1.5 mm ²	
	Electric meter	Quantity		2	
		Remark		Minimum 0.75 mm ² (5VDC pulse detection)	
	Preferential kWh rate power supply	Quantity		Power: 2	
		Remark		Power 6.3A (Select diameter and type according to national and local regulations)	
	Domestic hot water pump	Quantity		2	
		Remark		Minimum 0.75 mm ² (2A inrush, 1A continuous)	
	For power supply back-up heater	Quantity		Prewired	
		Remark		Select diameter & type according to national & local regulations	
	For connection with R6T	Quantity		2	
		Remark		Minimum 0.75 mm ²	
	For connection with A3P	Quantity		Depends on thermostat type, cf. installation manual	
		Remark		Voltage: 230V / Max. current: 100mA / Min. 0.75mm ² / See note 9	
	For connection with M2S	Quantity		2	
		Remark		Voltage: 230V / Max. current: 100mA / Min. 0.75mm ² / See note 9	
	For connection with optional FWXV* (demand	Quantity		4	
		Remark		100 mA, minimum 0.75 mm ²	

(1) Operation area is extended to lower flow rates only in case the unit operates with heat pump only. (Not in startup, no BUH operation, no defrost operation). |

(2) Excluding the water in the unit. This minimum water volume is sufficient for most applications. During critical processes extra water may be required. |

(3) DB/WB 7°C/6°C - LWC 35°C (DT=5°C) |

(4) Sound values are measured in a semi-anechoic room. Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings. Sound power level is an absolute value that a so |

(5) For more details, see operation range drawing |

(6) 4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

(7) PED unit category: Art353: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC |

(8) Above mentioned power supply for control box is for booster heater only. The switchbox of the controller box is supplied via the outdoor unit. The optional domestic hot water tank has a separate power supply. |

2 Specifications

1 - 1 EHBX-D6V, EHBH-D9W, EHBH-D6V, EHBX-D9W

(9) Select diameter and type according to national and local regulations

Technical specifications					EHBX04D6V	EHBX08D6V	
Heater capacity	Step 1			kW	2		
	Step 2			kW	2 or 4		
Power input	Nom.			kW	0.09		
Casing	Colour				White + Black		
	Material				Resin, sheet metal		
Dimensions	Unit	Height	mm	840			
		Width	mm	440			
		Depth	mm	390			
	Packed unit	Height	mm	450			
		Width	mm	650			
		Depth	mm	1,016			
Weight	Unit			kg	42.0		
	Packed unit			kg	46		
Packing	Material				Carton / PP (Straps) / EPS		
	Weight			kg	4		
PED	Category				Art4.3 / See note 7		
	Most critical part	Name			Plate heat exchanger		
		Ps*V	Bar*I		38		
Refrigerant side heat exchanger	Type				Plate heat exchanger		
	Quantity				1		
	Plates	Quantity			42		
Pump	Nr of speeds				PWM		
	Power input			W	52		
Water side Heat exchanger	Type				Plate heat exchanger		
	Quantity				1		
	Plates	Quantity			42		
	Water volume			l	0.95		
	Water flow rate	Min.		l/min	12.0 (1)		
Expansion vessel	Volume			l	10		
	Max. water pressure			bar	3		
	Pre pressure			bar	1		
Water filter	Diameter perforations			mm	0.8		
	Material				Stainless steel / Plastic		
General	Supplier/ Manufacturer details	Name or trademark			Daikin Europe N.V.		
		Name and address			Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium		
Water circuit	Piping connections diameter			inch	G 1" (female)		
Water circuit	Piping material				Cu		
	Internal piping diameter			inch	1"		
	Piping			inch	1"		
	Safety valve			bar	3		
	Manometer				Digital		
	Drain valve / fill valve				Yes		
	Shut off valve				Yes		
	Air purge valve				Yes		
	Total water volume			l	3.2		
	Minimum water volume in the system for cooling			l	10 (2)		
	Minimum water volume in the system for heating			l	10 (2)		
	Refrigerant circuit	Gas side diameter			mm	15.9	
		Liquid side diameter			mm	6.35	
Sound power level	Nom.			dBA	42 (3)		
Sound pressure level	Nom.			dBA	28 (4)		
Operation range	Heating	Ambient	Min.	°C	0 (5)		
			Max.	°C	0 (5)		
		Water side	Min.	°C	0 (5)		
			Max.	°C	0 (5)		
	Indoor installation	Ambient	Min.	°CDB	5		
			Max.	°CDB	35		
	Cooling	Ambient	Min.	°CDB	0 (5)		
			Max.	°CDB	0 (5)		
		Water side	Min.	°C	0 (5)		
			Max.	°C	0 (5)		
	Domestic hot water	Ambient	Min.	°CDB	0 (5)		
			Max.	°CDB	0 (5)		
		Water side	Min.	°C	0 (5)		
			Max.	°C	0 (5)		

2 Specifications

1 - 1 EHBX-D6V, EHBH-D9W, EHBH-D6V, EHBX-D9W

Technical specifications				EHBX04D6V	EHBX08D6V
Safety devices	Item	01		Thermal cut out	
Electrical specifications				EHBX04D6V	EHBX08D6V
Power supply	Name			See note 8	
	Voltage	Min.	%	-10	
	range	Max.	%	10	
IP class	IP			IP X0B	
Electric heater	Power supply	Name		6V3	
		Phase		1~ / 3~	
		Frequency	Hz	50	
		Voltage	V	230	
	Current	Maximum running current	A	26.0	
Wiring connections	Recommended fuses		A	20.000 (6)	
	Communication cable	Quantity		3	
		Remark		1.5 mm ²	
	Electric meter	Quantity		2	
		Remark		Minimum 0.75 mm ² (5VDC pulse detection)	
	Preferential kWh rate power supply	Quantity		Power: 2	
		Remark		Power 6.3A (Select diameter and type according to national and local regulations)	
	Domestic hot water pump	Quantity		2	
		Remark		Minimum 0.75 mm ² (2A inrush, 1A continuous)	
	For power supply back-up heater	Quantity		Prewired	
		Remark		Select diameter & type according to national & local regulations	
	For connection with R6T	Quantity		2	
		Remark		Minimum 0.75 mm ²	
	For connection with A3P	Quantity		Depends on thermostat type, cf. installation manual	
		Remark		Voltage: 230V / Max. current: 100mA / Min. 0.75mm ² / See note 9	
	For connection with M2S	Quantity		2	
		Remark		Voltage: 230V / Max. current: 100mA / Min. 0.75mm ² / See note 9	
	For connection with optional FWXV* (demand	Quantity		4	
		Remark		100 mA, minimum 0.75 mm ²	

(1) Operation area is extended to lower flow rates only in case the unit operates with heat pump only. (Not in startup, no BUH operation, no defrost operation). |

(2) Excluding the water in the unit. This minimum water volume is sufficient for most applications. During critical processes extra water may be required. |

(3) DB/WB 7°C/6°C - LWC 35°C (DT=5°C) |

(4) Sound values are measured in a semi-anechoic room. Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings.

Sound power level is an absolute value that a so |

(5) For more details, see operation range drawing |

(6) 4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

(7) PED unit category: Art353: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC |

(8) Above mentioned power supply for control box is for booster heater only. The switchbox of the controller box is supplied via the outdoor unit. The optional domestic hot water tank has a separate power supply. |

(9) Select diameter and type according to national and local regulations

Technical specifications				EHBX08D9W
Heater capacity	Step 1		kW	3
	Step 2		kW	max. 6 kW
Power input	Nom.		kW	0.09
Casing	Colour			White + Black
	Material			Resin, sheet metal
Dimensions	Unit	Height	mm	840
		Width	mm	440
		Depth	mm	390
	Packed unit	Height	mm	450
		Width	mm	650
		Depth	mm	1,016
Weight	Unit		kg	42.4
	Packed unit		kg	46
Packing	Material			Carton / PP (Straps) / EPS
	Weight		kg	4
PED	Category			Art4.3 / See note 7
	Most critical part	Name		Plate heat exchanger
		Ps*V	Bar*I	38
Refrigerant side heat exchanger	Type			Plate heat exchanger
	Quantity			1
	Plates	Quantity		42
Pump	Nr of speeds			PWM
	Power input		W	52

2 Specifications

1 - 1 EHBX-D6V, EHBH-D9W, EHBH-D6V, EHBX-D9W

2

Technical specifications					EHBX08D9W		
Water side Heat exchanger	Type				Plate heat exchanger		
	Quantity				1		
	Plates	Quantity			42		
	Water volume	l			0.95		
	Water flow rate	Min.	l/min		12.0 (1)		
Expansion vessel	Volume				l	10	
	Max. water pressure				bar	3	
	Pre pressure				bar	1	
Water filter	Diameter perforations				mm	0.8	
	Material				Stainless steel / Plastic		
General	Supplier/Manufacturer details	Name or trademark			Daikin Europe N.V.		
		Name and address			Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium		
Water circuit	Piping connections diameter				inch	G 1" (female)	
Water circuit	Piping material				Cu		
	Internal piping diameter				inch	1"	
	Piping				inch	1"	
	Safety valve				bar	3	
	Manometer				Digital		
	Drain valve / fill valve				Yes		
	Shut off valve				Yes		
	Air purge valve				Yes		
	Total water volume				l	3.2	
	Minimum water volume in the system for cooling				l	10 (2)	
	Minimum water volume in the system for heating				l	10 (2)	
	Refrigerant circuit	Gas side diameter				mm	15.9
		Liquid side diameter				mm	6.35
Sound power level	Nom.				dBA	42 (3)	
Sound pressure level	Nom.				dBA	28 (4)	
Operation range	Heating	Ambient	Min.	°C	0 (5)		
			Max.	°C	0 (5)		
		Water side	Min.	°C	0 (5)		
			Max.	°C	0 (5)		
	Indoor installation	Ambient	Min.	°CDB	5		
			Max.	°CDB	35		
	Cooling	Ambient	Min.	°CDB	0 (5)		
			Max.	°CDB	0 (5)		
		Water side	Min.	°C	0 (5)		
			Max.	°C	0 (5)		
	Domestic hot water	Ambient	Min.	°CDB	0 (5)		
			Max.	°CDB	0 (5)		
		Water side	Min.	°C	0 (5)		
			Max.	°C	0 (5)		
	Safety devices	Item	01			Thermal cut out	
Electrical specifications					EHBX08D9W		
Power supply	Name				See note 8		
	Voltage range	Min.	%		-10		
		Max.	%		10		
IP class	IP				IP X0B		
Electric heater	Power supply	Name			9W		
		Phase			3~		
		Frequency	Hz	50			
		Voltage	V	400			
	Current	Maximum running current	A	13.0			
		Minimum Ssc value	Equipment complying with EN/IEC 61000-3-12				
	Recommended fuses		A	20.000 (6)			

2 Specifications

1 - 1 EHBX-D6V, EHBH-D9W, EHBH-D6V, EHBX-D9W

Electrical specifications			EHBX08D9W
Wiring connections	Communication cable	Quantity	3
		Remark	1.5 mm ²
	Electric meter	Quantity	2
		Remark	Minimum 0.75 mm ² (5VDC pulse detection)
	Preferential kWh rate power supply	Quantity	Power: 2
		Remark	Power 6.3A (Select diameter and type according to national and local regulations)
	Domestic hot water pump	Quantity	2
		Remark	Minimum 0.75 mm ² (2A inrush, 1A continuous)
	For power supply back-up heater	Quantity	Prewired
		Remark	Select diameter & type according to national & local regulations
	For connection with R6T	Quantity	2
		Remark	Minimum 0.75 mm ²
	For connection with A3P	Quantity	Depends on thermostat type, cf. installation manual
		Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm ² / See note 9
	For connection with M2S	Quantity	2
		Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm ² / See note 9
	For connection with optional FWXV* (demand	Quantity	4
		Remark	100 mA, minimum 0.75 mm ²

(1) Operation area is extended to lower flow rates only in case the unit operates with heat pump only. (Not in startup, no BUH operation, no defrost operation). |

(2) Excluding the water in the unit. This minimum water volume is sufficient for most applications. During critical processes extra water may be required. |

(3) DB/WB 7°C/6°C - LWC 35°C (DT=5°C) |

(4) Sound values are measured in a semi-anechoic room. Sound pressure level is a relative value, depending on the distance and acoustic environment. For more details, please refer to the sound level drawings.

Sound power level is an absolute value that a so |

(5) For more details, see operation range drawing |

(6) 4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

(7) PED unit category: Art3S3: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC |

(8) Above mentioned power supply for control box is for booster heater only. The switchbox of the controller box is supplied via the outdoor unit. The optional domestic hot water tank has a separate power supply. |

(9) Select diameter and type according to national and local regulations

3 Electrical data

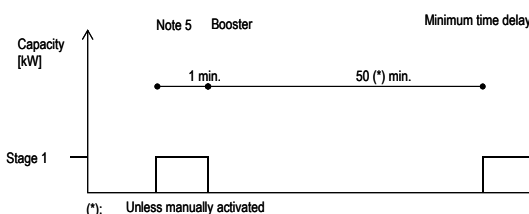
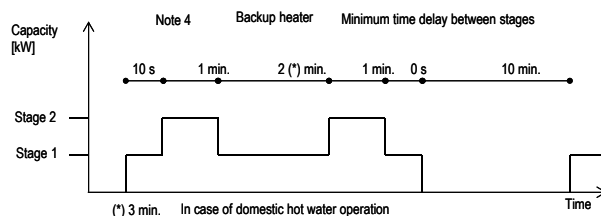
3 - 1 Electrical Data

3

EHBH-D6V
EHBH-D9W
EHBX-D6V
EHBX-D9W

Electrical specifications of the backup heaters and booster heaters

Backup heater	Type			6V						9W							
						2-4 (in case of emergency: 2-6)					3-6 (in case of emergency: 3-9)						
	Capacity setting					[kW]											
	Capacity stage					2	2	2	2	1	2	2	2	2			
	Capacity stage 1					2	2	2	2	6	3	3	3	3			
	Capacity stage 2					4	6	4	6	-	6	9	6	9			
	Minimum time delay between stages			Note 4						Note 4							
	Power supply (1)		Phase	1~						3~							
			Frequency							50							
			Voltage			230 ±10%						400 ±10%					
	Current		Nominal running current			A	17,4	26,1	17,4	26,1	15	8,7	13	8,7	13		
		Zmax (backup heater) (2)			Ω							-					
					Complex	0,22						-					
		Minimum Ssc value			kVA	(3)						-					
Booster heater (optional)(“KHW” models)																	
	Capacity setting					kW		3									
	Capacity stage					1											
	Minimum time delay between stages			Note 5													
	Nominal running current			+EK*V3	A	13											
	Booster heater			+EK*Z2		-						75					
	Zmax	Booster heater	(2)		Ω	-											
					Complex	-											
	Nominal running current	Backup heater +	Booster heater	Backup heater + EK*V3	A	30,4 (17,4+13)	39,1 (26,1+13)	30,4 (17,4+13)	39,1 (26,1+13)	28 (15 + 13)	21,7 (8,7+13)	26 (13+13)	21,7 (8,7+13)	26 (13+13)			
				Backup heater + EK*Z2	A	22,5 (15 + 7,5)						16,2 (8,7+7,5)	20,5 (13+7,5)	16,2 (8,7+7,5)	20,5 (13+7,5)		
	Minimum Ssc value	Backup heater +	Booster heater + EK*V3	kVA	(3)						(3)						
				Booster heater + EK*Z2	kVA	-						(3)					
Notes	(1) The above-mentioned power supply of the hydrobox is for the backup heater only. The optional domestic hot water tank has a separate power supply.																
	(2) In accordance with EN/IEC 61000-3-11, it may be necessary to consult the distribution network operator to ensure that the equipment is connected only to a supply with Zsys≤ Zmax.																
	(3) The equipment complies with EN/IEC 61000-3-12.																
	EN/IEC 61000-3- European/International Technical Standard setting the limits for voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated current≤ 75 A.																
	EN/IEC 61000-3- European/International Technical Standard setting the limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and≤ 75 A per phase.																
Zsys		System impedance															



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4 Combination table

4 - 1 Combination Table

EHBH-D6V
EHBH-D9W
EHBX-D6V
EHBX-D9W
Factory-mounted equipment for ·*HB(H/X)*DA*.

Description	*HB(H/X)04DA*		*HB(H/X)08DA*	
Heating only model ·EHBH*.	6V (8)	9W (8)	6V (8)	9W (8)
Reversible model ·*HBX*.	6V (8)	9W (8)	6V (8)	9W (8)
Backup heater ·3kW 1N~230 V·	-	-	-	-
Backup heater ·2-4-6kW 1N~230 V·	o	-	o	-
Backup heater ·2-4-6kW 3~230 V·	o	-	o	-
Backup heater ·3-6-9kW 3N~400 V·	-	o	-	o

Outdoor combination table for ·*HB(H/X)(04/08)DA*.

Description	*RGA04DAV3	*RGA06DAV3	*RGA08DAV3
EHBH04DA*	o	---	---
HBX04DA	o	---	---
EHBH08DA*	---	o	o
HBX08DA	---	o	o

Kit availability

Reference	Description	EHB*(04/08)DA*			RHBX(04/08)DA*			
EHBH*	Heating only indoor unit	04 - 6V	08 - 6V	08 - 9W	---	---	---	---
HBX	Reversible indoor unit	04 - 6V	08 - 6V	08 - 9W	04 - 6V	04 - 9W	08 - 6V	08 - 9W
EKRP1HBAA	Digital I/O PCB	*(1) (2)	o	o	o	o	o	o
EKRP1AHTA	Demand PCB	*(3)	o	o	o	o	o	o
EKRUDAS	Simplified user interface		o	o	---	---	---	---
EKPCCAB3	PC cable	*(4)	o	o	o	o	o	o
EKHWS150D3V3	Domestic hot water tank ·150 l 1~230 V·		o	o	---	---	---	---
EKHWS180D3V3			o	o	---	---	---	---
EKHWS200D3V3			o	o	---	---	---	---
EKHWS250D3V3			o	o	---	---	---	---
EKHWS300D3V3			o	o	---	---	---	---
EKHWSU150D3V3			o	o	---	---	---	---
EKHWSU180D3V3			o	o	---	---	---	---
EKHWSU200D3V3			o	o	---	---	---	---
EKHWSU250D3V3			o	o	---	---	---	---
EKHWSU300D3V3			o	o	---	---	---	---
*KHWP300B	Domestic hot water tank with solar connection	*(9)	o	o	o	o	o	o
*KHWP500B			o	o	o	o	o	o
*KHWP300PB			o	o	o	o	o	o
*KHWP500PB			o	o	o	o	o	o
BZKA7V3	Bizone kit		o	o	---	---	---	---
KRCS01-1	Remote indoor sensor	*(5)	o	o	---	---	---	---
EKRSCA1	Remote sensor for outdoor	*(5)	o	o	o	o	o	o
*BRP069A61	LAN adapter for smartphone control		o	o	o	o	o	o
BRP069A62	LAN adapter for smartphone control		o	o	---	---	---	---
EKHBCONV	Conversion kit: heating only to reversible.		o	o	---	---	---	---
*FWXV15AVEB	Heat pump convector	*(6)	o	o	o	o	o	o
*FWXV20AVEB	Heat pump convector	*(6)	o	o	o	o	o	o
EKVKHPC	Heat pump convector valve kit		o	o	o	o	o	o
*KRTWA	Wired room thermostat		o	o	o	o	o	o
*KRTR1	Wireless room thermostat		o	o	o	o	o	o
EKRTETS	External sensor room thermostat	*(7)	o	o	o	o	o	o

Notes

- PCB that provides additional output connections: · ·
 - Control external heat source (bivalent operation).
 - Output remote ON/OFF signal space heating/cooling OR bottom plate heater ·*KBPTH16*· control.
 - Remote alarm output
- Additional relays to allow bivalent control in combination with an external room thermostat are field-supplied.
- PCB to receive up to 4 digital inputs for power limitation, only for ·EHB(H/X)(04/08)DA*·.
- Data cable for connection with PC.
- Only 1 remote sensor can be connected: indoor OR outdoor sensor.
- The valve kit is mandatory if a heat pump convector is installed on a reversible model (not mandatory for heating only models).
- EKRTETS· can only be used in combination with ·*KRTR1·.
- The backup heater capacity depends on a user interface setting.
- Dedicated connection kit available: ·*KSRPS4A·.

Remark

Other combinations than mentioned in this combination table are prohibited.

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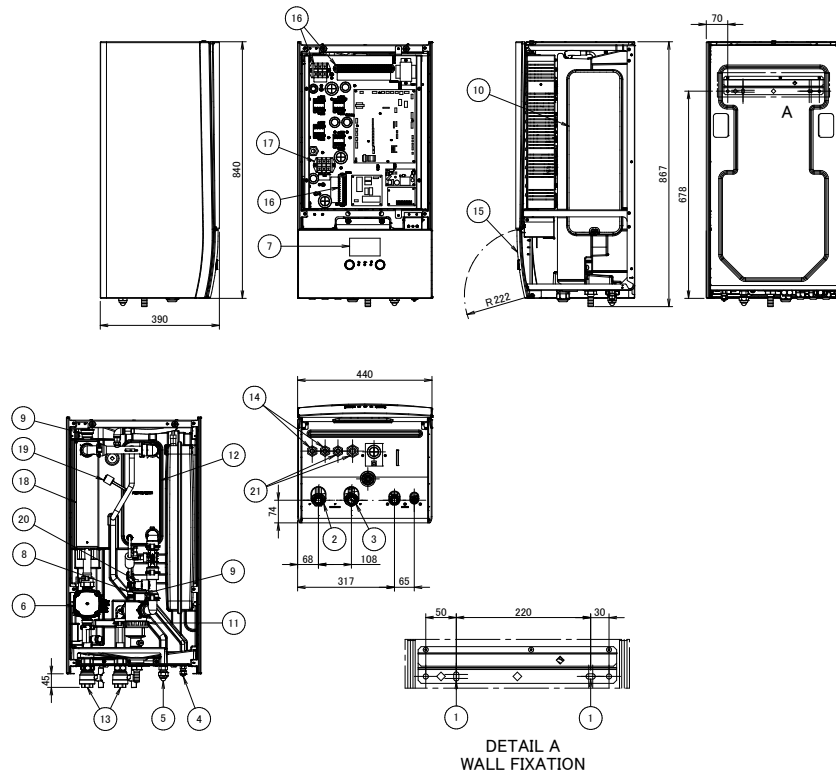
5 Dimensional drawings

5 - 1 Dimensional Drawings

EHBH-D6V
EHBH-D9W
EHBX-D6V
EHBX-D9W

5

- ① Holes (Ø8.5) for wall fixation
- ② Water out connection (1" F BSP)
- ③ Water in connection (1" F BSP)
- ④ Refrigerant liquid connection Ø6.35
Flare connection
- ⑤ Refrigerant gas connection Ø15.9
Flare connection
- ⑥ Pump
- ⑦ User interface
- ⑧ Safety valve
Pressure
- ⑨ Air purge
- ⑩ Expansion vessel
- ⑪ Magnetic filter / dirt separator
- ⑫ Heat exchanger (refrigerant / water)
- ⑬ Shut-off valves
- ⑭ Wire entrance of the power supply / communication wire
- ⑮ Service door
- ⑯ Switch box terminals
- ⑰ Switch box terminals for the domestic hot water tank (option)
- ⑱ Backup heater
- ⑲ Refrigerant pressure sensor
- ⑳ Space heating water pressure sensor
- ㉑ Options

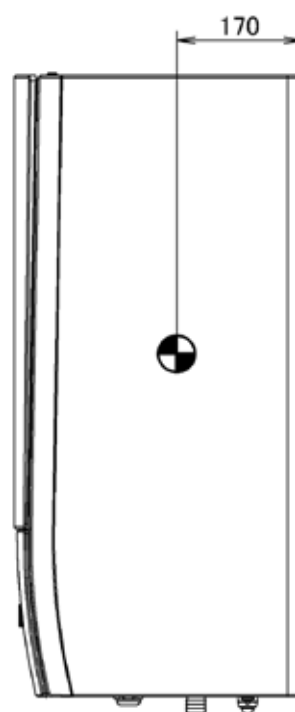
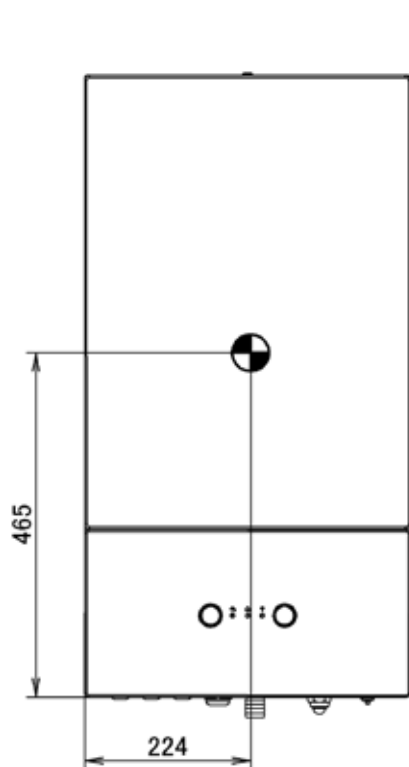


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6 Centre of gravity

6 - 1 Centre of Gravity

EBBH-D6V
EBBH-D9W
EBBX-D6V
EBBX-D9W

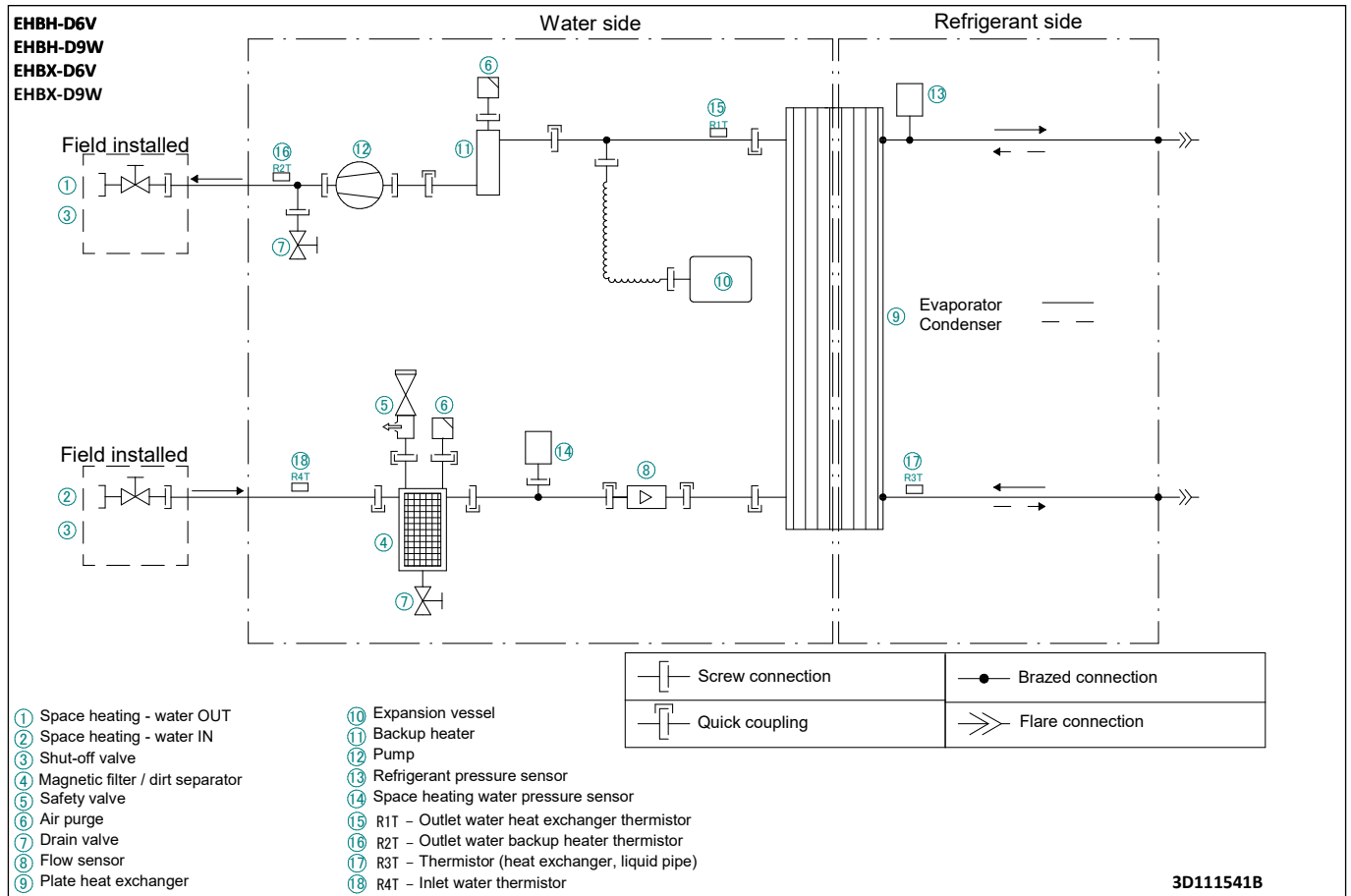


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7 Piping diagrams

7 - 1 Piping Diagrams

7



8 Wiring diagrams

8 - 1 Notes & Legend

EHBH-D6V
EHBH-D9W
EHBX-D6V
EHBX-D9W

NOTES to go through before starting the unit

X1M : Main terminal
X2M : Field wiring terminal for AC
X5M : Field wiring terminal for DC
X6M : BUH Power supply terminal
X7M, X8M : BSH Power supply terminal
--- : Earth wiring
--- : Field supply

① : Several wiring possibilities

--- : Option

--- : Wiring depending on model

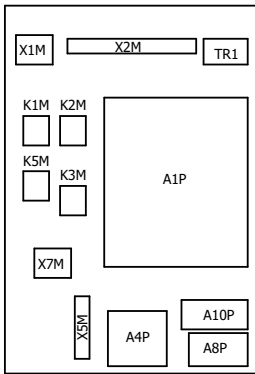
--- : Not mounted in switch box

--- : PCB

Note 1 : Connection point of the power supply for the BUH/BSH should be foreseen outside the unit.

- Backup heater power supply
- ☐ 3V (1N~, 230V, 3kW)
 - ☐ 6T1 (3~, 230V, 6kW)
 - ☐ 6V (1N~, 230V, 6kW)
 - ☐ 6WN/9WN (3N~, 400V, 6/9kW)
- User installed options:
- ☐ LAN adapter
 - ☐ Domestic hot water tank
 - ☐ Remote user interface
 - ☐ Ext. indoor thermistor
 - ☐ Ext. outdoor thermistor
 - ☐ Digital I/O PCB
 - ☐ Demand PCB
- Main LWT:
- ☐ ON/OFF thermostat (wired)
 - ☐ ON/OFF thermostat (wireless)
 - ☐ Ext. thermistor
 - ☐ Heat pump convactor
- Add LWT:
- ☐ ON/OFF thermostat (wired)
 - ☐ ON/OFF thermostat (wireless)
 - ☐ Ext. thermistor
 - ☐ Heat pump convactor

POSITION IN SWITCH BOX



LEGEND

Part n°	Description
A1P	main PCB
A2P	* ON/OFF thermostat (PC=power circuit)
A3P	* heat pump convactor
A4P	* digital I/O PCB
A8P	* demand PCB
A9P	status indicator
A10P	MMI PSU PCB
A11P	MMI main PCB
A12P	MMI display PCB
A13P	* LAN adapter
A14P	* user interface PCB
A15P	* receiver PCB (wireless ON/OFF thermostat)
B1L	flow sensor
B1PR	refrigerant pressure sensor
B1PW	water pressure sensor
BSK (A3P)	solar pump station relay
CN* (A4P)	* connector
DS1 (A8P)	* dipswitch
E1H	backup heater element (1 kW)
E2H	backup heater element (2 kW)
E3H	backup heater element (3 kW)
E4H	* booster heater (3 kW)
E*P (A9P)	indication LED
F1B	# overcurrent fuse backup heater
F2B	# overcurrent fuse booster heater
F1T	thermal fuse backup heater
F1U, F2U (A4P)	* fuse 5 A 250 V for digital I/O PCB
FU1 (A1P)	fuse T 6.3 A 250 V for PCB
FU2 (A10P)	fuse T 1.6 A 250 V for PCB
K1M, K2M	contactor backup heater
K3M	* contactor booster heater
K5M	safety contactor BUH
K*R (A1P-A4P)	relay on PCB
M1P	main supply pump
M2P	# domestic hot water pump
M2S	# 2 way valve for cooling mode

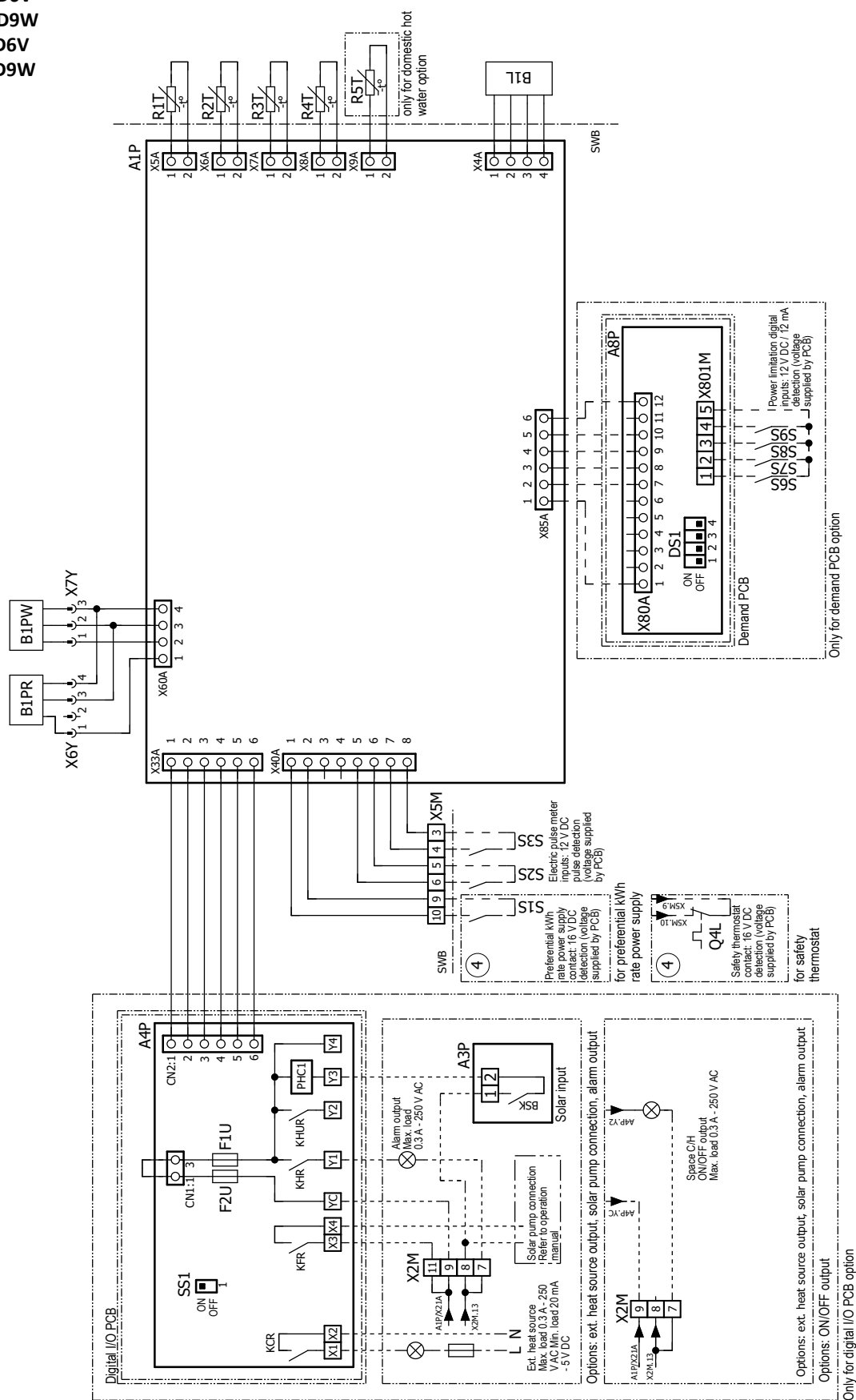
Part n°	Description
M3S	* 3 way valve for floorheating/domestic hot water
P1M	MMI display
PC (A15P)	* power circuit
PHC1 (A4P)	* optocoupler input circuit
Q1L	thermal protector backup heater
Q2L	* thermal protector booster heater
Q4L	# safety thermostat
Q*DI	# earth leakage circuit breaker
R1H (A2P)	* humidity sensor
R1T (A1P)	outlet water heat exchanger thermistor
R1T (A2P)	* ambient sensor ON/OFF thermostat
R1T (A14P)	* ambient sensor user interface
R2T (A1P)	outlet backup heater thermistor
R2T (A2P)	* external sensor (floor or ambient)
R3T	refrigerant liquid side thermistor
R4T	inlet water thermistor
R5T	domestic hot water thermistor
R6T	* external indoor or outdoor ambient thermistor
S1S	# preferential kWh rate PS contact
S2S	# electrical meter pulse input 1
S3S	# electrical meter pulse input 2
S6S-S9S	* digital power limitation inputs
SS1 (A4P)	* selector switch
SW1-2 (A12P)	turn buttons
SW3-5 (A12P)	push button
TR1	power supply transformer
X6M	# BUH power supply terminal strip
X6M	* BSH power supply connector
X7M, X8M	BSH power supply terminal strip
X*, X*A, J*X*Y*, Y*	connector
X*M	terminal strip

* : optional # : field supply

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8 - 2 Control Circuit

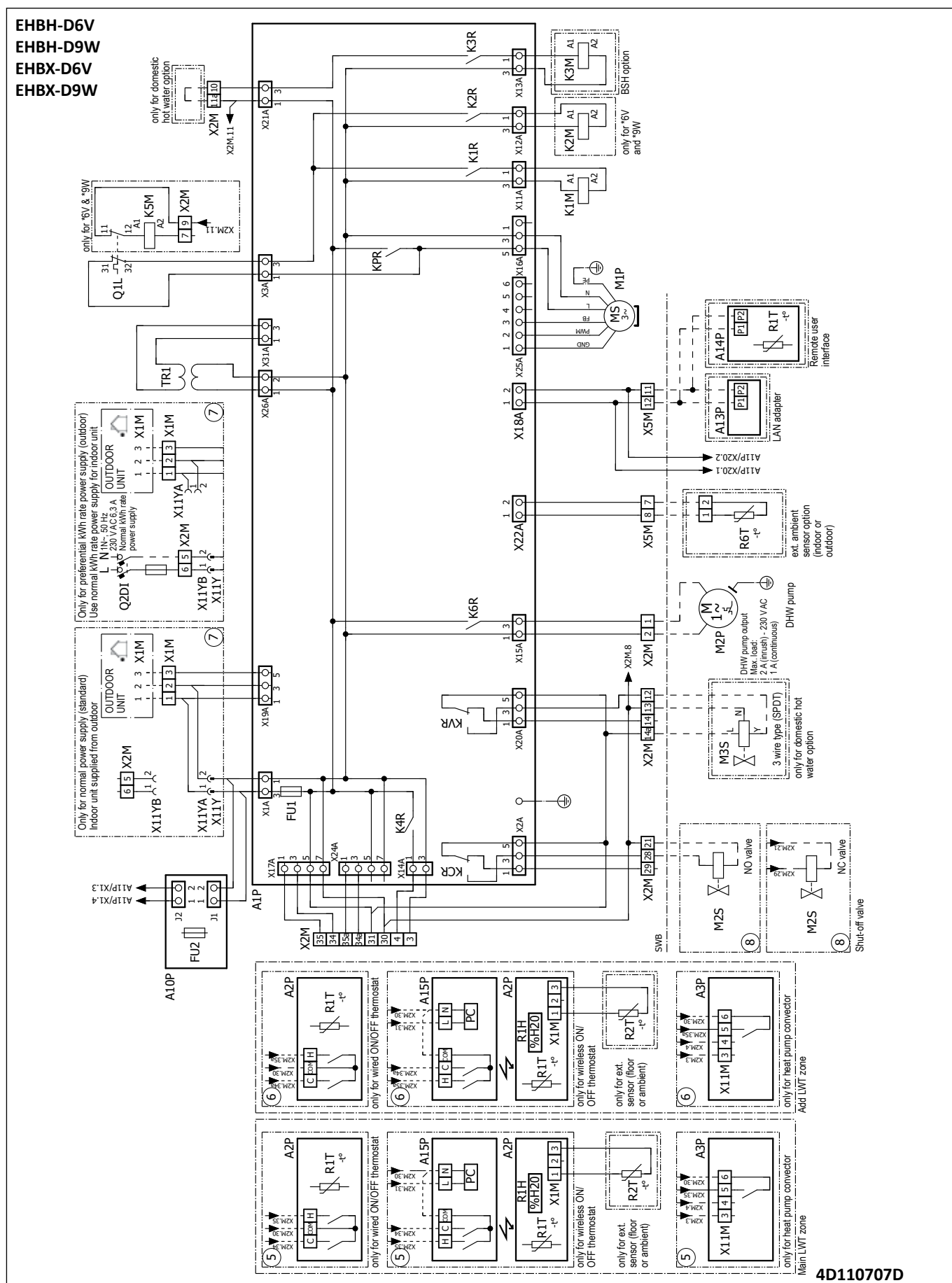
EHBH-D6V
EHBH-D9W
EHBX-D6V
EHBX-D9W



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8 - 2

Wiring diagrams



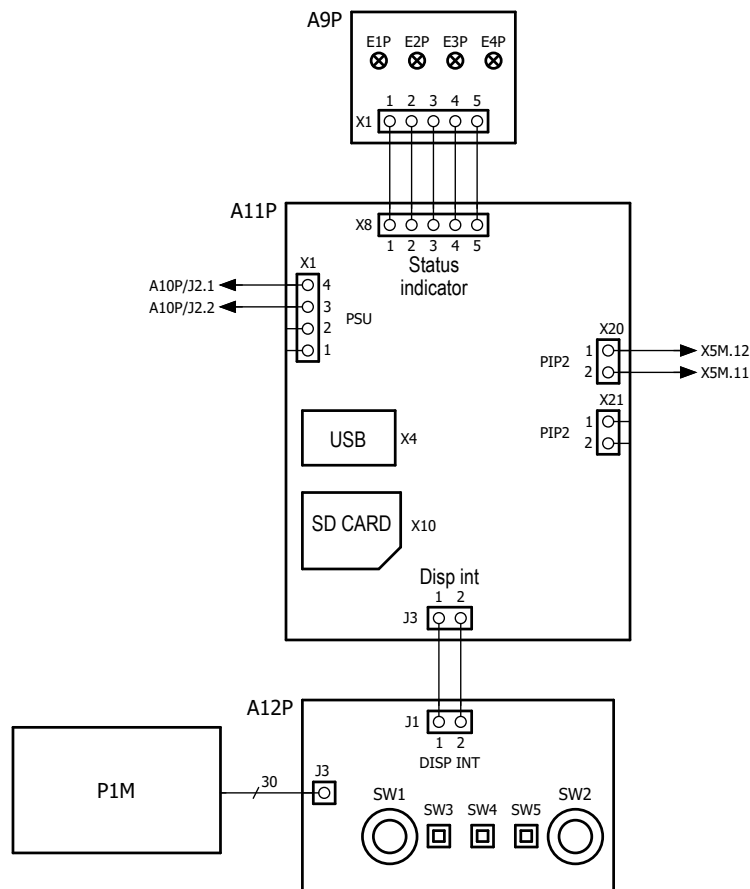
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8 Wiring diagrams

8 - 2 Control Circuit

8

EHBH-D6V
EHBH-D9W
EHBX-D6V
EHBX-D9W

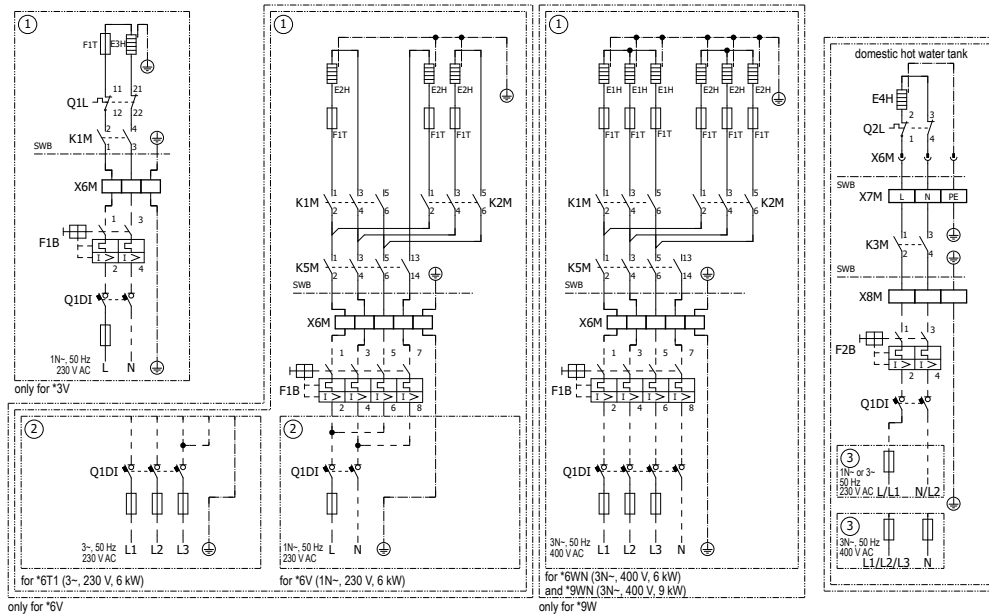


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8 Wiring diagrams

8 - 3 Power Supply, Back-up Heater

EHBH-D6V
EHBH-D9W
EHBX-D6V
EHBX-D9W



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9 External connection diagrams

9 - 1 External Connection Diagrams

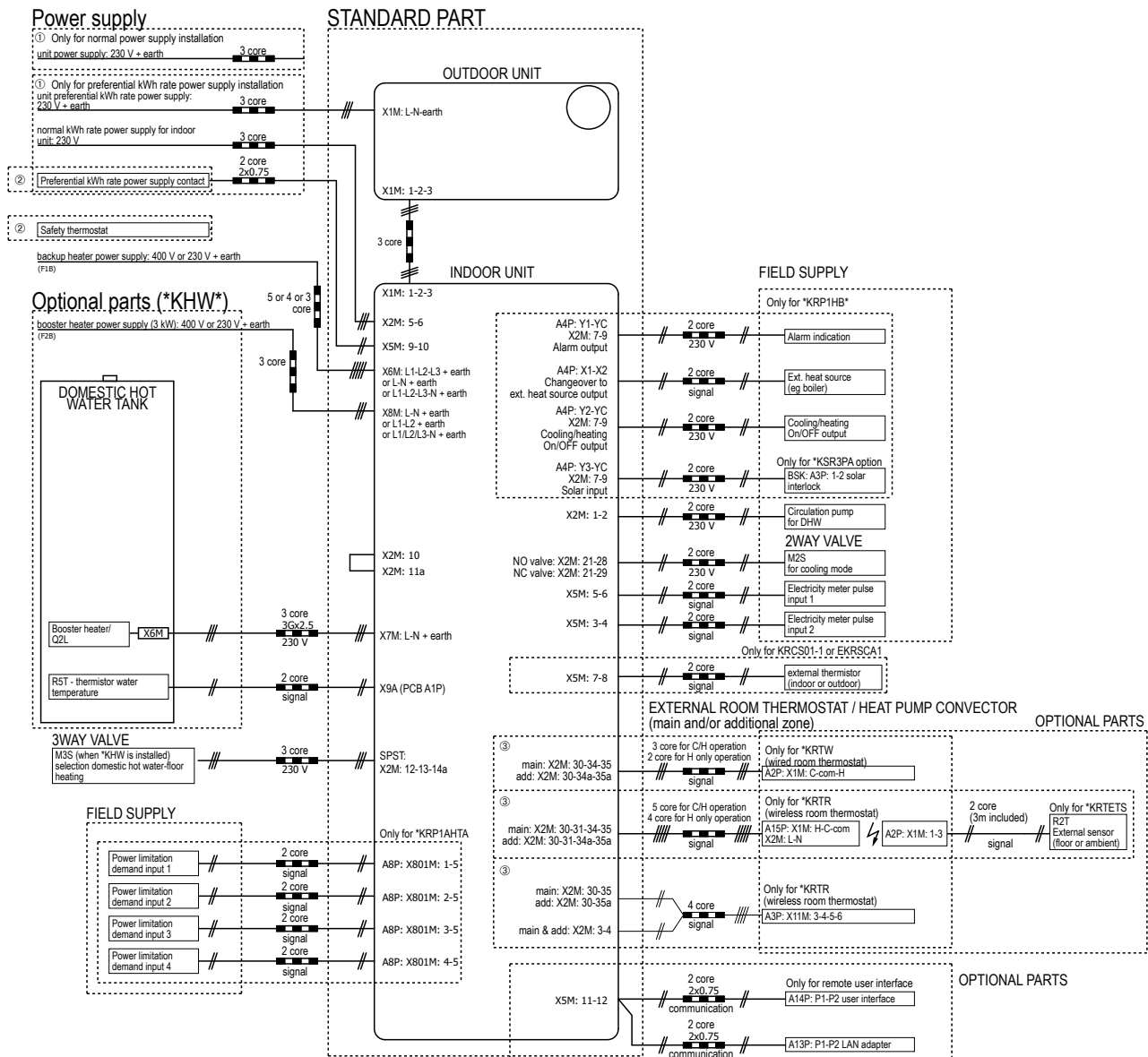
EHBH-D6V

EHBH-D9W

EHBX-D6V

EHBX-D9W

Electrical connection diagram Altherma Wallmounted



NOTE

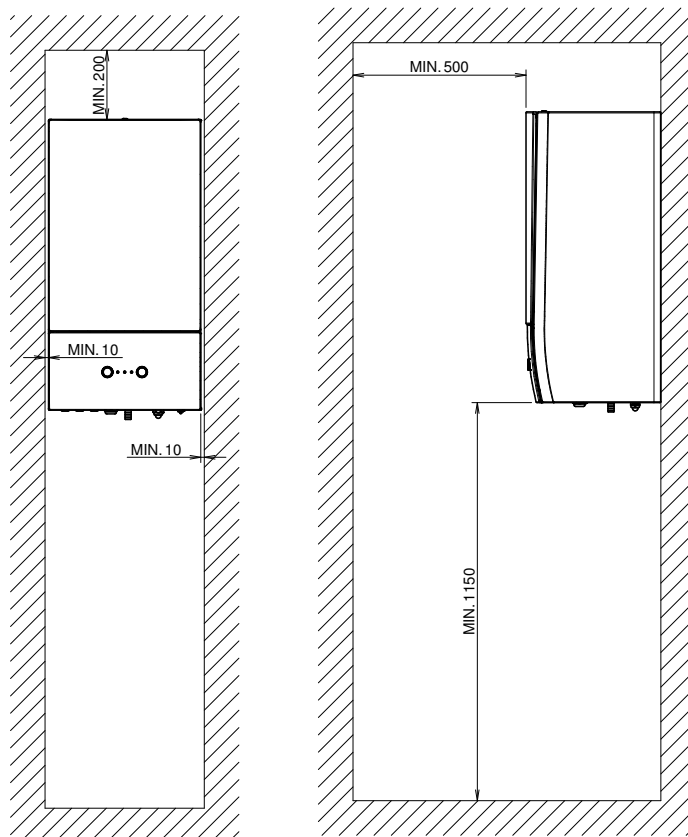
- In case of signal cable: keep minimum distance to power cables > 5 cm
- Available heaters depending on model: see combination table

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10 Installation

10 - 1 Installation Method

EBBH-D6V
EBBH-D9W
EBBX-D6V
EBBX-D9W



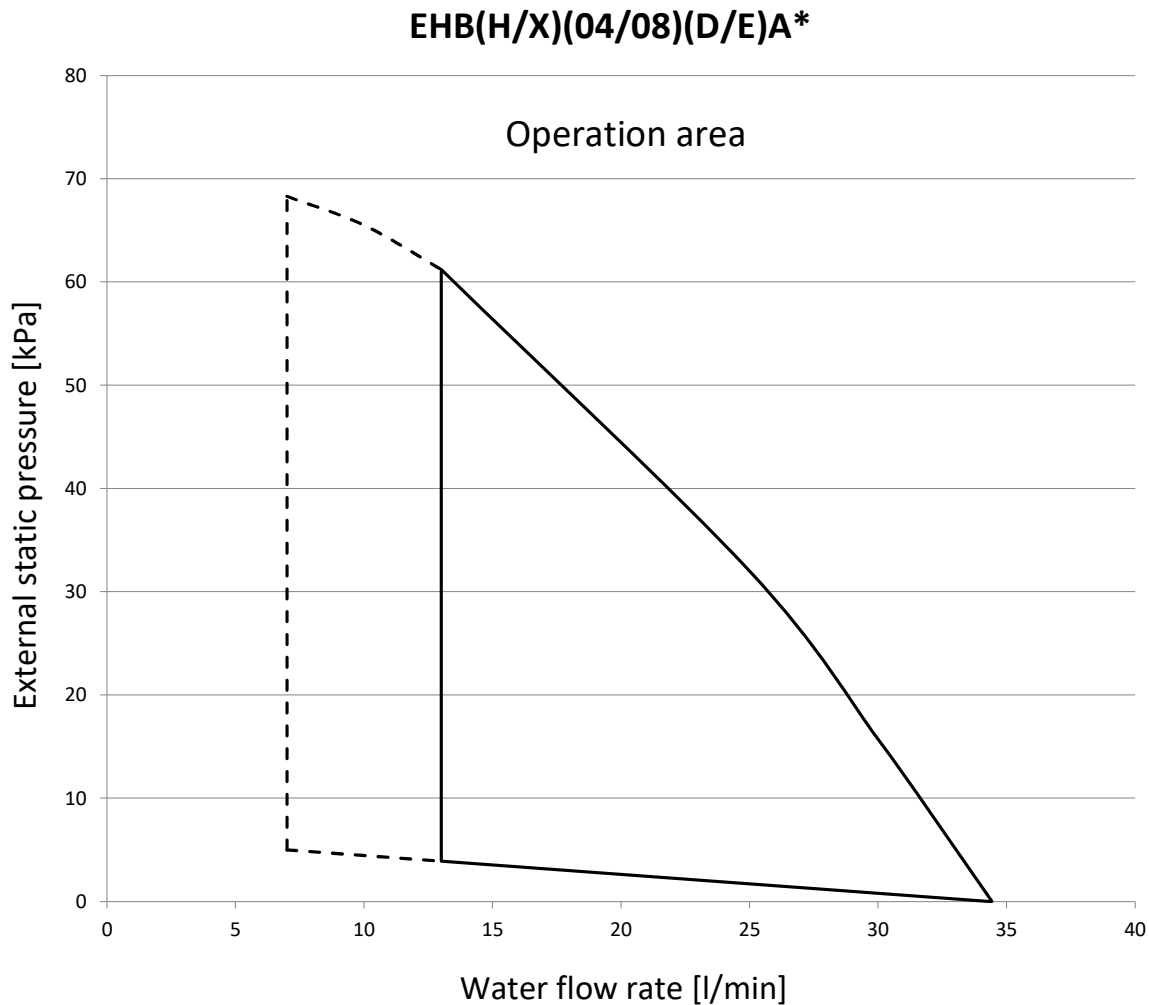
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11 Hydraulic performance

11 - 1 Static Pressure Drop Unit

11

EHBH-D6V
EHBH-D9W
EHBX-D6V
EHBX-D9W



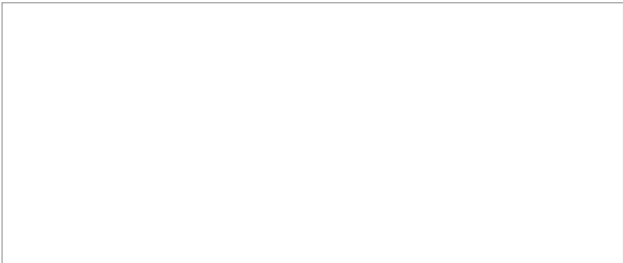
Operation area is extended to lower flow rates only in case the unit operates with heat pump only.

See dashed lines

Notes

1. Selecting a flow outside the operating area can damage the unit or cause the unit to malfunction.
See also the minimum and maximum allowed water flow range in the technical specifications.
2. Water quality must be according to EU directive 98/83 EC.

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12/2020



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