



Daikin Altherma low
temperature split
Air Conditioning
Technical Data

EHBH-E6V /
EHBH-E9W /
EHBX-E6V /
EHBX-E9W

EHBH04EF6V
EHBH08EF6V
EHBH08EF9W
EHBX04EF6V
EHBX08EF6V
EHBX08EF9W

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EHBH-E6V / EHBH-E9W / EHBX-E6V / EHBX-E9W

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1 Features

1 - 1 EHBX-E9W, EHBX-E6V, EHBH-E9W, EHBH-E6V

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

- 1 > W-LAN Adapter connection
- > 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.



Daikin
Residential
Controller



Online
controller

2 Specifications

1 - 1 EHBX-E9W, EHBX-E6V, EHBH-E9W, EHBH-E6V

Technical specifications					EHBH04E6V		EHBH08E6V	
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 8			
	Most critical part	Name			Plate heat exchanger			
	Ps*V		Bar*l		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)			
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	Min.	°CDB	0 (5)			
			Max.	°CDB	0 (5)			
	Water side	Min.	°C	0 (5)				
			°C	0 (5)				
		Max.	°C	0 (5)				
			°C	0 (5)				
Safety devices	Item	01		Thermal cut out				
Electrical specifications					EHBH04E6V		EHBH08E6V	
Power supply	Name				See note (6)			
	Voltage range	Min.	%		-10			
		Max.	%		10			
IP class	IP				IP X0B			

2 Specifications

1 - 1 EHBX-E9W, EHBX-E6V, EHBH-E9W, EHBH-E6V

2

Electrical specifications				EHBH04E6V	EHBH08E6V
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 (7)	
	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	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)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. |

(7)4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

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

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

Technical specifications				EHBH08E9W
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 8
	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

2 Specifications

1 - 1 EHBX-E9W, EHBX-E6V, EHBH-E9W, EHBH-E6V

Technical specifications					EHBH08E9W
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.		dB(A)		42 (3)
Sound pressure level	Nom.		dB(A)		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	Min.	°CDB	0 (5)
			Max.	°CDB	0 (5)
		Water side	Min.	°C	0 (5)
			Max.	°C	0 (5)
			Min.	°C	0 (5)
			Max.	°C	0 (5)
Safety devices	Item	01			Thermal cut out

Electrical specifications					EHBH08E9W
Power supply	Name				See note (6)
	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 (7)
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	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.

2 Specifications

1 - 1 EHBX-E9W, EHBX-E6V, EHBH-E9W, EHBH-E6V

Sound power level is an absolute value that a so |

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

(6)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. |

(7)4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

(8)PED unit category: Art3§3: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC |

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

2

Technical specifications				EHBX04E6V	EHBX08E6V
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 8	
	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)	

2 Specifications

1 - 1 EHBX-E9W, EHBX-E6V, EHBH-E9W, EHBH-E6V

Technical specifications					EHBX04E6V	EHBX08E6V
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	Min.	°CDB	0 (5)	
			Max.	°CDB	0 (5)	
	Domestic hot water	Water side	Min.	°C	0 (5)	
			Max.	°C	0 (5)	
		Ambient	Min.	°CDB	0 (5)	
			Max.	°CDB	0 (5)	
Safety devices	Item	01			Thermal cut out	

Electrical specifications					EHBX04E6V	EHBX08E6V
Power supply	Name	Min.	%		See note (6)	
					-10	
					10	
IP class	IP				IP X0B	
Electric heater	Power supply	Name	Phase	Frequency	6V3	
					1~ / 3~	
					50	
					230	
	Current	Maximum running current	A		26.0	
					20.000 (7)	
Wiring connections	Communication cable	Quantity	Remark		3	
					1.5 mm ²	
	Electric meter	Quantity	Remark		2	
					Minimum 0.75 mm ² (5VDC pulse detection)	
	Preferential kWh rate power supply	Quantity	Remark		Power: 2	
					Power 6.3A (Select diameter and type according to national and local regulations)	
	Domestic hot water pump	Quantity	Remark		2	
					Minimum 0.75 mm ² (2A inrush, 1A continuous)	
	For power supply back-up heater	Quantity	Remark		Prewired	
					Select diameter & type according to national & local regulations	
	For connection with R6T	Quantity	Remark		2	
					Minimum 0.75 mm ²	
	For connection with A3P	Quantity	Remark		Depends on thermostat type, cf. installation manual	
					Voltage: 230V / Max. current: 100mA / Min. 0.75mm ² / See note 9	
	For connection with M2S	Quantity	Remark		2	
					Voltage: 230V / Max. current: 100mA / Min. 0.75mm ² / See note 9	
	For connection with optional	Quantity	Remark		4	
					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) 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. |

(7) 4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

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

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

Technical specifications					EHBX08E9W	
Heater capacity	Step 1		kW		3	
					max. 6 kW	
Power input	Nom.		kW		0.09	
Casing	Colour				White + Black	
					Resin, sheet metal	

2 Specifications

1 - 1 EHBX-E9W, EHBX-E6V, EHBH-E9W, EHBH-E6V

2

Technical specifications					EHBX08E9W	
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 8				
	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	Min.	°CDB	0 (5)	
			Max.	°CDB	0 (5)	
	Domestic hot water	Water side	Min.	°C	0 (5)	
			Max.	°C	0 (5)	
		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					EHBX08E9W	
Power supply	Name				See note (6)	
	Voltage range	Min.	%	-10		
		Max.	%	10		
IP class	IP				IP X0B	

2 Specifications

1 - 1 EHBX-E9W, EHBX-E6V, EHBH-E9W, EHBH-E6V

Electrical specifications			EHBX08E9W
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 (7)
Wiring connections	Communication cable	Quantity	3
		Remark	1.5 mm²
	Electric meter	Quantity	2
		Remark	Minimum 0.75 mm² (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 mm² (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 mm²
	For connection with A3P	Quantity	Depends on thermostat type, cf. installation manual
		Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm²/ See note 9
	For connection with M2S	Quantity	2
		Remark	Voltage: 230V / Max. current: 100mA / Min. 0.75mm²/ See note 9
For connection with optional	Quantity	4	
	Remark	100 mA, minimum 0.75 mm²	

(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) 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. |

(7) 4 pole 20 A curve 400V tripping class C (refer to wiring diagram) |

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

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

2 Specifications

1 - 1 EHBX-E9W, EHBX-E6V, EHBH-E9W, EHBH-E6V

3 Electrical data

3 - 1 Electrical Data

EHBH-E6V

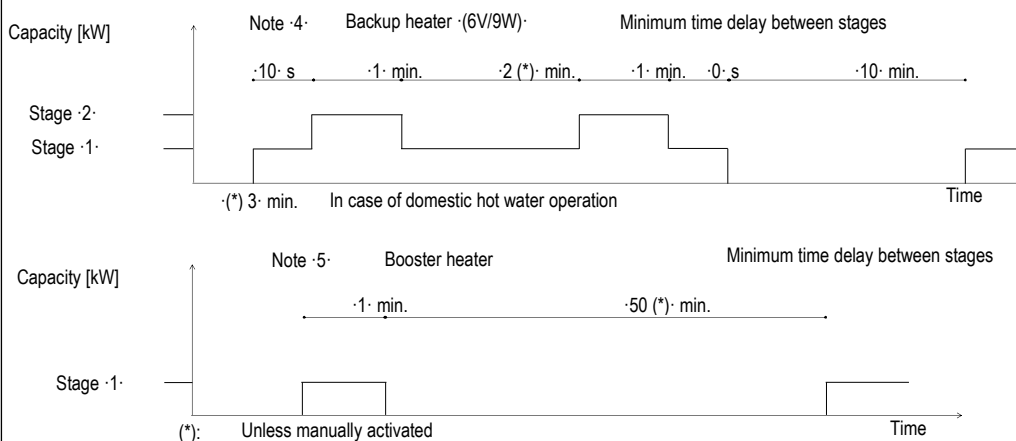
EHBH-E9W

EHBX-E6V

EHBX-E9W

Electrical specifications of the backup heaters and booster heaters

Backup heater	Type			6V				9W												
	Capacity setting		[kW]	2 - 4		2 - 6		-2-4- (in case of emergency: -2-6-)		6		3 - 6		3 - 9		-3 - 6- (in case of emergency: -3 - 9-)				
	Capacity stage -			2		2		2		2		1		2		2				
	Capacity stage -1-		kW	2		2		2		2		6		3		3				
	Capacity stage -2-		kW	4		6		4		6		-		6		9				
	Minimum time delay between stages			Note -4-										Note -4-						
	Power supply	Phase		1~										3~						
	(1)	Frequency		Hz	50										3~					
		Voltage		V	230 +10%										400 +10%					
		Nominal running current		A	17,4		26,1		17,4		26,1		15		8,7		13			
Current	Zmax (backup) (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)		
				Backup heater + EK*Z2	A											22,5 (15 + 7,5)		16,2 (8,7+7,5)		20,5 (13+7,5)
Minimum Ssc value	Backup heater -	Booster heater + EK*V3	kVA	(3)																
		Booster heater + EK*Z2		-										(3)		-		(3)		
			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 61000-3-11	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 61000-3-12	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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3 Electrical data

3 - 1 Electrical Data

3

EHBH-E6V
EHBH-E9W
EHBX-E6V
EHBX-E9W

* Electrical meter specification

- Pulse meter type/voltage-free contact for 5 V DC detection by PCB.
- Possible number of pulses
 - 0.1· pulse/kWh ·100· pulse/kWh ·10· pulse/kWh
 - 1· pulse/kWh ·1000· pulse/kWh
- Pulse duration
 - Minimum On time: ·40ms· Minimum OFF time: ·100ms·
- Measurement type (depending on installation)
 - Single-phase AC meter
 - Three-phase AC meter
 - Balanced loads
 - Unbalanced loads

* Electrical meter installation guideline

- It is the responsibility of the installer to cover the complete power consumption with electrical meters (combination of estimation and
- Required number of electrical meters

Outdoor unit type		ERGA(04/06/08)(D/E)AV3						ERLA03DAV3	
Indoor unit type		*HB(H/X)(04/08)(D/E)A*			*HV(H/X)(04/08)(D/E)(A/J)*			EHF*03S18DJ3V	
	Backup heater type	6V		9W	3V	6V		9W	3V
	Backup heater power supply	1~230V	3~230V	3~400V	1~230V	1~230V	3~230V	3~400V	1~230V
	Backup heater configuration	2/4/6kW	6kW	3/6/9kW	3kW	2/4/6kW	6kW	3/6/9kW	3kW
Normal kWh rate power supply									
Electrical meter type	1~	1	-	-	1	1	-	-	1
	3~ balanced	-	-	-	-	-	-	-	-
	3~ unbalanced	-	1	1	-	-	1	1	-
Preferential kWh rate power supply									
Electrical meter type	1~	2	1	1	2	2	1	1	2
	3~ balanced	-	-	-	-	-	-	-	-
	3~ unbalanced	-	1	1	-	-	1	1	-

Immersion heater (no backup heater)

Outdoor unit type		ERGA(04/06/08)DAV3	
Indoor unit type		*HV(H/X)(04/08)D(A/J)V	
	Backup heater type	Booster heater (·2.4· kW)	
	Immersion heater power supply	1~	
		230V	
		Normal kWh rate power supply	
Electrical meter type	1~	1	
	3~ balanced	-	
	3~ unbalanced	-	
		Unit preferential kWh rate power supply	
Electrical meter type	1~	2	
	3~ balanced	-	
	3~ unbalanced	-	

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4 Combination table

4 - 1 Combination Table

EHBH-E6V / EHBH-E9W / EHBX-E6V / EHBX-E9W

Factory-mounted equipment for EHB(H/X)*EA*

Description	EHB(H/X)04E(A/F)6V	EHB(H/X)08E(A/F)*
Heating only model EHBH*	6V (9)	6V (9) 9W (9)
Reversible model *HBX*	6V (9)	6V (9) 9W (9)
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

Outdoor combination table for EHB(H/X)(04/08)E(A/F)*

Description	ERGA04EAV3	ERGA06EAV3	ERGA08EAV3	ERGA04EAV3A	ERGA06EAV3A	ERGA08EAV3A	ERGA04EAV37
EHBH04E(A/F)* Heating only indoor unit	o	---	---	o	---	---	o
EHBX04E(A/F)* Reversible indoor unit	o	---	---	o	---	---	o
EHBH08E(A/F)* Heating only indoor unit	---	o	o	---	o	o	---
EHBX08E(A/F)* Reversible indoor unit	---	o	o	---	o	o	---

Kit availability

Reference	Description	EHB*(04/08)E(A/F)*
EHBH*	Heating only indoor unit	04 - 6V 08 - 6V 08 - 9W
EHBX*	Reversible indoor unit	04 - 6V 08 - 6V 08 - 9W
EKRP1HBAA	Digital I/O PCB	*(1) (2) o o o
EKRP1AHTA	Demand PCB	*(3) o o o
EKPCCAB4	PC cable	*(4) o o o
EKHWS150D3V3	Domestic hot water tank 150 l 1~230 V	o o o
EKHWS180D3V3	Domestic hot water tank 180 l 1~230 V	o o o
EKHWS200D3V3	Domestic hot water tank 200 l 1~230 V	o o o
EKHWS250D3V3	Domestic hot water tank 250 l 1~230 V	o o o
EKHWS300D3V3	Domestic hot water tank 300 l 1~230 V	o o o
EKHWSU150D3V3	Domestic hot water tank 150 l 1~230 V	o o o
EKHWSU180D3V3	Domestic hot water tank 180 l 1~230 V	o o o
EKHWSU200D3V3	Domestic hot water tank 200 l 1~230 V	o o o
EKHWSU250D3V3	Domestic hot water tank 250 l 1~230 V	o o o
EKHWSU300D3V3	Domestic hot water tank 300 l 1~230 V	o o o
EKHWP300BA	Domestic hot water tank with solar connection	*(5) o o o
EKHWP500BA	Domestic hot water tank with solar connection	*(5) o o o
EKHWP300PBA	Domestic hot water tank with solar connection	*(5) o o o
EKHWP500PBA	Domestic hot water tank with solar connection	*(5) o o o
EKHY3PART	Third-party tank connection kit for thermistor pocket	o o o
EKHY3PART2	Third-party tank connection kit for thermostat contact	o o o
BZKA7V3	Bizone kit	o o o
KRCS01-1	Remote indoor sensor	*(6) o o o
EKRSCA1	Remote sensor for outdoor	*(6) o o o
BRP069A71	WLAN module	*(7) o o o
BRC1HH*	HCI (Human Comfort Interface)	o o o
EKRELSG	Relay for Smart Grid	o o o
EKHBCONV	Conversion kit: heating only to reversible.	o o o
FWXT10ATV3	Heat pump convector	o o o
FWXT15ATV3	Heat pump convector	o o o
FWXT20ATV3	Heat pump convector	o o o
EKRTWA	Wired room thermostat	o o o
EKRTR1	Wireless room thermostat	o o o
EKRSETS	External sensor room thermostat	*(8) 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)E(A/F)*.
- Data cable for connection with PC.
- Dedicated connection kit available: *KSRPS4A.
- Only 1 remote sensor can be connected: indoor OR outdoor sensor.
- The WLAN cartridge is supplied in the accessory bag of the unit and is meant to be plugged into the SD card slot on the MMI-2. In case of bad signal reception, the WLAN cartridge can be removed and replaced by the WLAN module.
- Can only be used in combination with wireless room thermostat EKTR1.
- The backup heater capacity depends on a user interface setting.

Remark

Other combinations than mentioned in this combination table are prohibited.

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5 Dimensional drawings

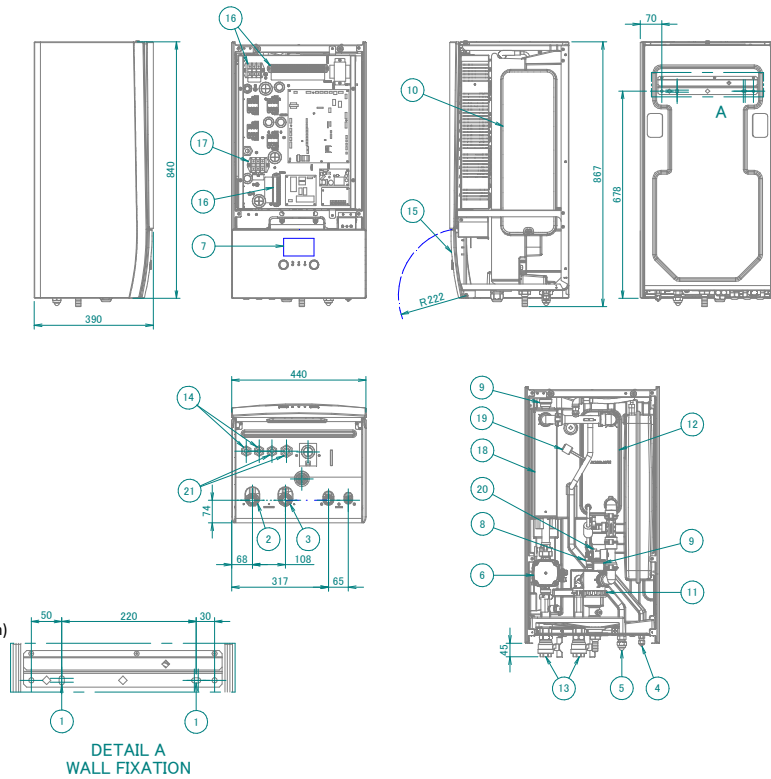
5 - 1 Dimensional Drawings

EHB(H-X)-E6V

EHB(H-X)-E9W

5

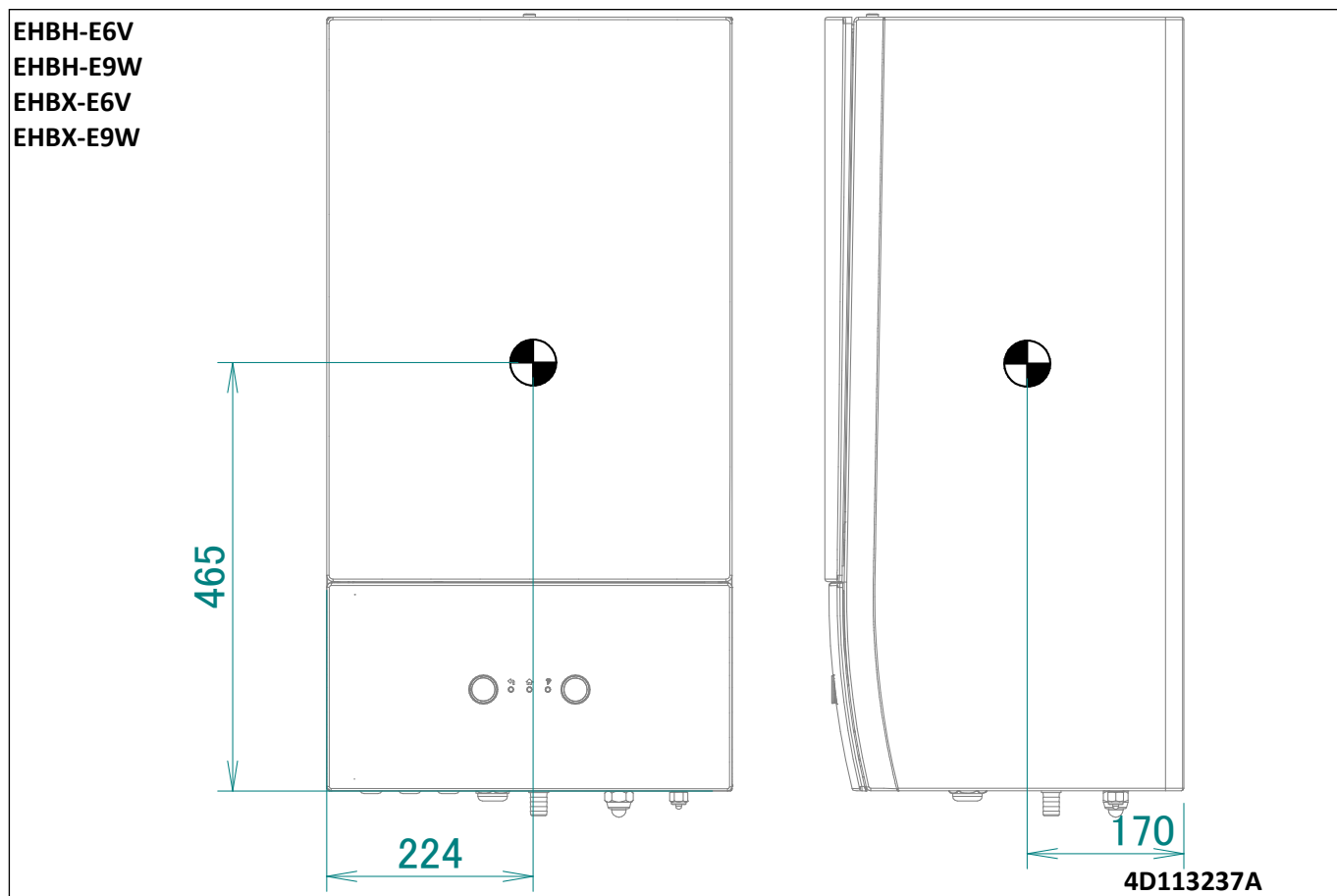
- 1 Holes (Ø8.5) for wall fixation
- 2 Water out connection (1" F BSP)
- 3 Water in connection (1" F BSP)
- 4 Refrigerant liquid connection Ø6.35 Flare connection
- 5 Refrigerant gas connection Ø15.9 Flare connection
- 6 Pump
- 7 User interface
- 8 Safety valve Pressure
- 9 Air purge
- 10 Expansion vessel
- 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

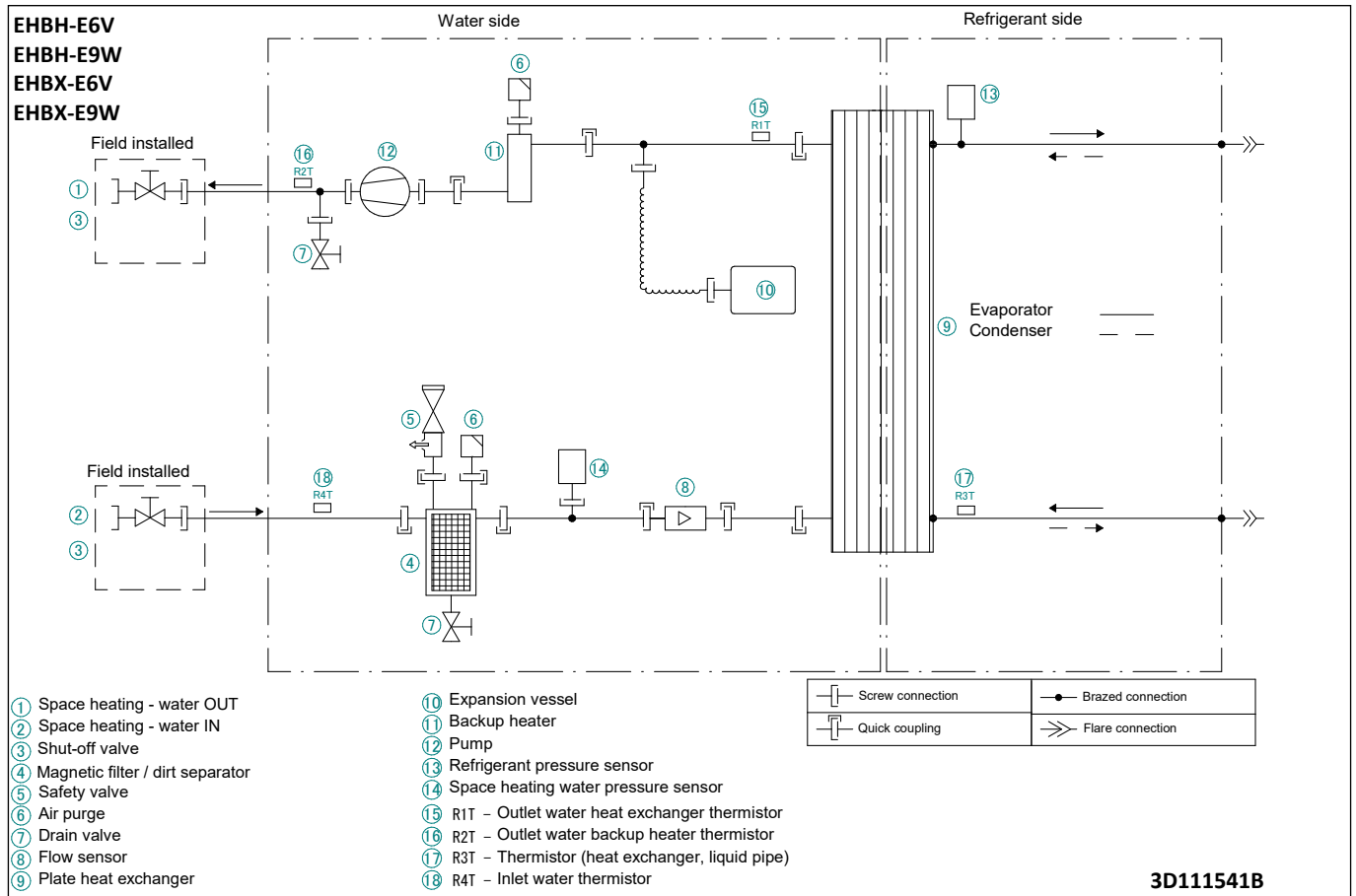


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7 Piping diagrams

7 - 1 Piping Diagrams

7



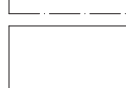
8 Wiring diagrams

8 - 1 Notes & Legend

EHBH-E6V
EHBH-E9W
EHBX-E6V
EHBX-E9W

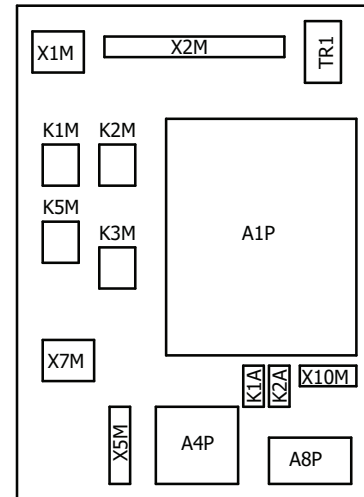
NOTES to go through before starting the unit

- 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
X10M : Smartgrid terminal
— : Earth wiring
- - - : Field supply
① : Several wiring possibilities

-  : Option
 : Wiring depending on model
 : Not mounted in switch box
 : PCB

Backup heater power supply User installed options:

POSITION IN SWITCH BOX



NOTES

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

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
A11P	MMI main PCB
A14P	* user interface PCB
A15P	* receiver PCB (wireless ON/OFF thermostat)
A20P	* WLAN module
B2L	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)
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
K1A, K2A	* high voltage smartgrid relay
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
M3S	* 3 way valve for space heating / domestic hot water

Part n°	Description
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
S4S	# smartgrid feed-in
S6S-S9S	* digital power limitation inputs
S10S-S11S	# low voltage smartgrid contact
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
X10M	* smartgrid power supply terminal strip
X*, X*A, X*H*, X*Y	connector
X*M	terminal strip

* : optional
: field supply

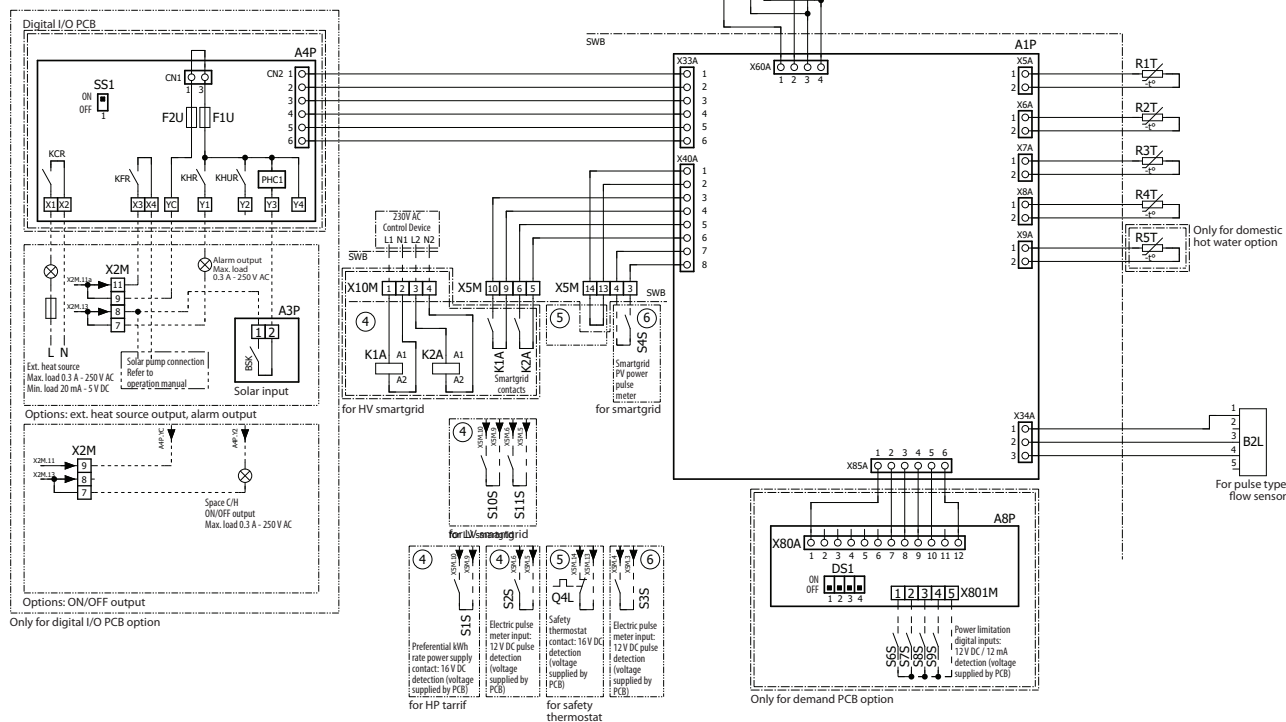
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8 Wiring diagrams

8 - 2 Control Circuit

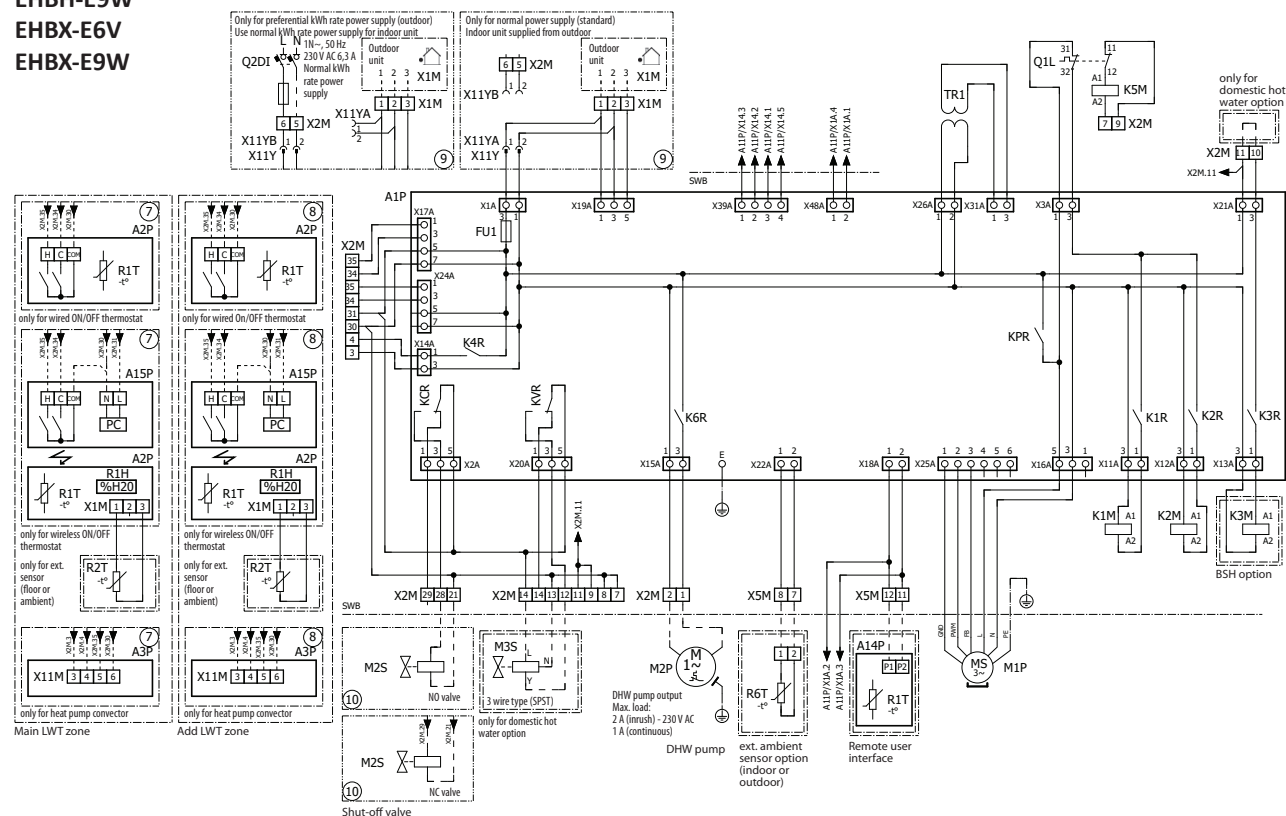
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EHBH-E6V
EHBH-E9W
EHBX-E6V
EHBX-E9W



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EHBH-E6V
EHBH-E9W
EHBX-E6V
EHBX-E9W

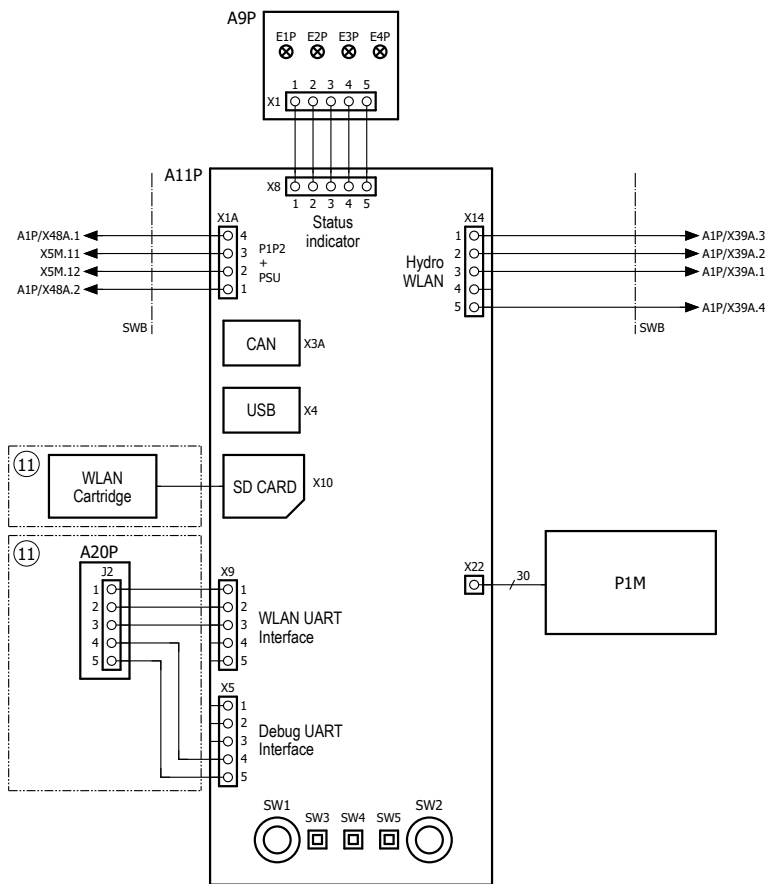


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8 Wiring diagrams

8 - 2 Control Circuit

EHBH-E6V
EHBH-E9W
EHBX-E6V
EHBX-E9W

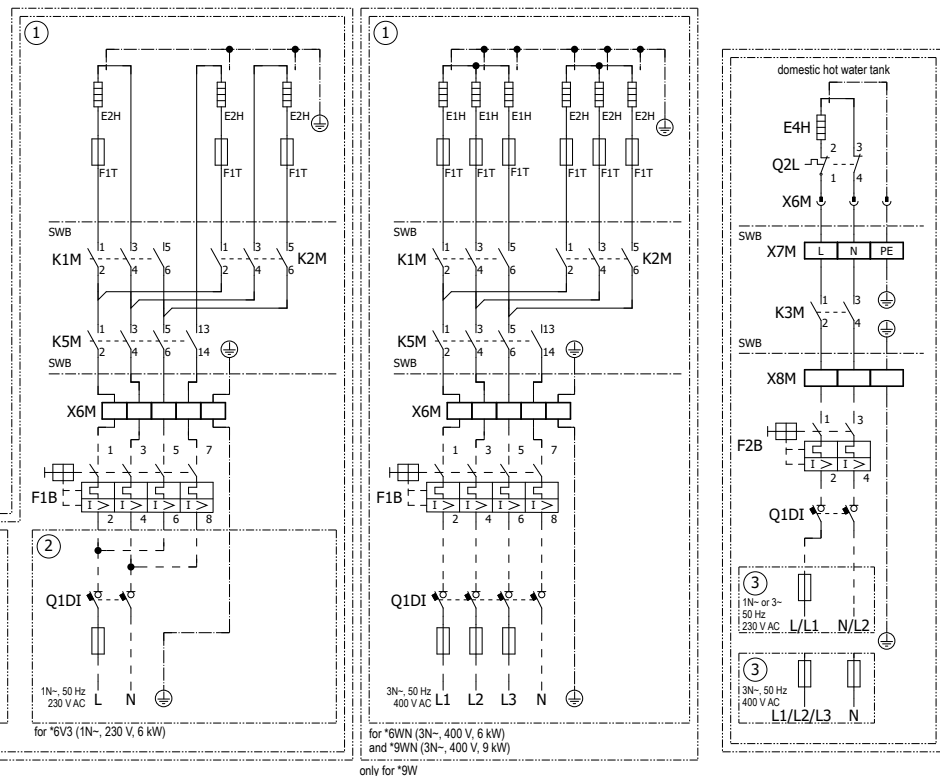


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8 Wiring diagrams

8 - 3 Power Supply, Back-up Heater

EHBH-E6V
EHBH-E9W
EHBX-E6V
EHBX-E9W



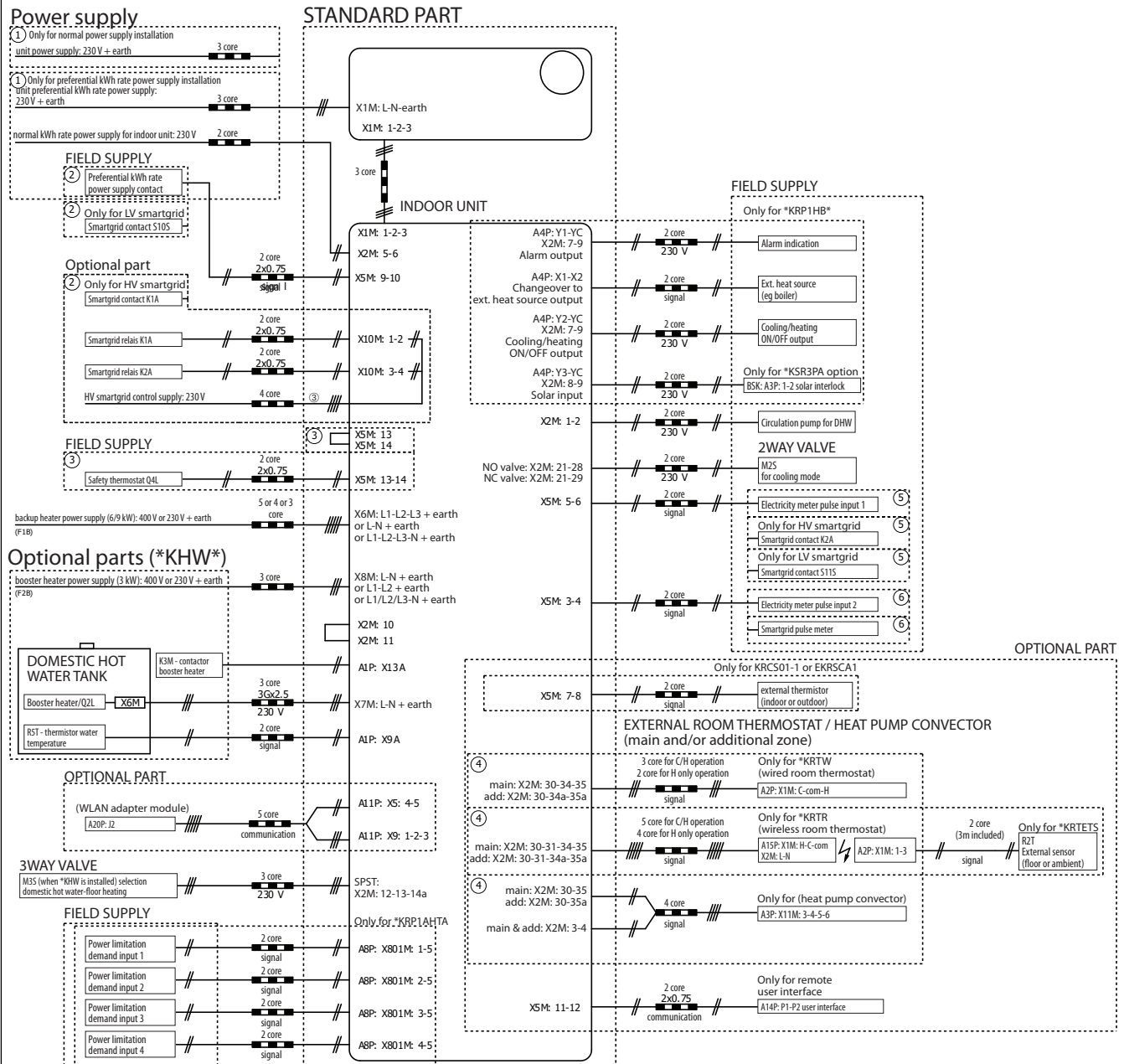
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9 External connection diagrams

9 - 1 External Connection Diagrams

EHB(H-X)-E6V EHB(H-X)-E9W

Electrical connection diagram Altherma BML WM - E-series



NOTE

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

For more details please check unit wiring

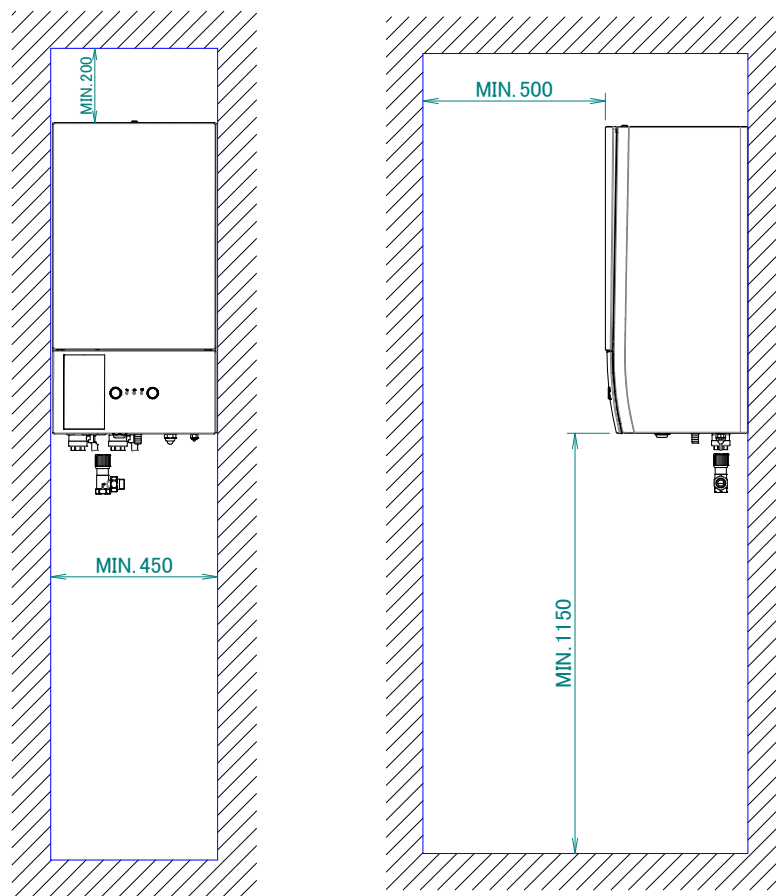
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10 Installation

10 - 1 Installation Method

10

EBBH-E6V
EBBH-E9W
EBBX-E6V
EBBX-E9W

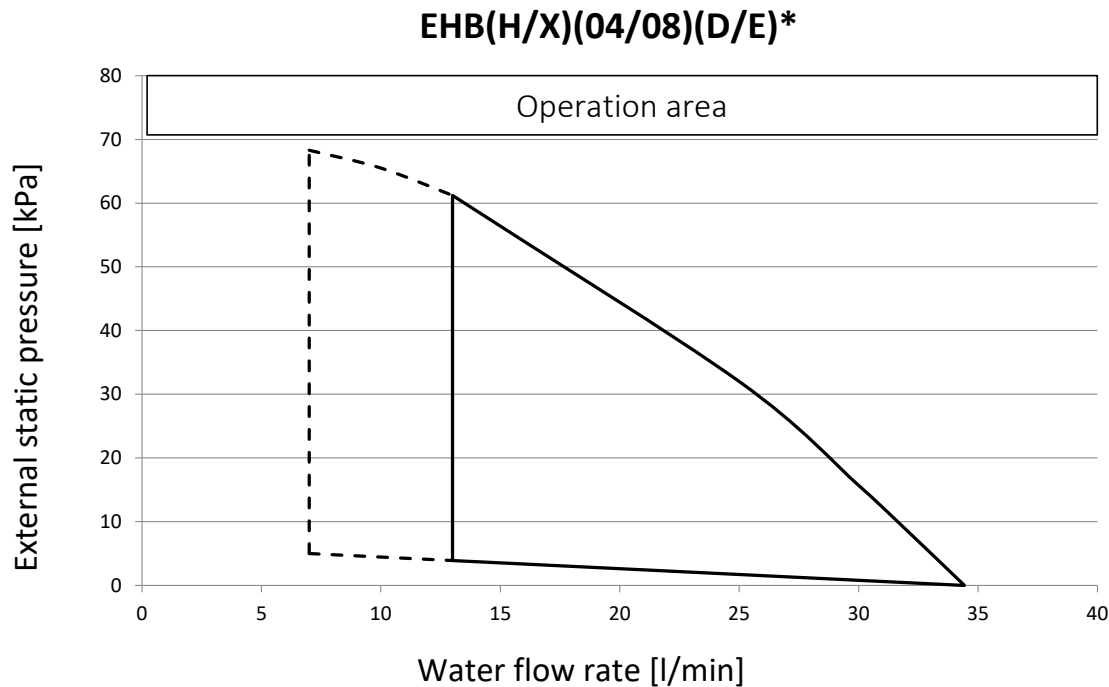


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11 Hydraulic performance

11 - 1 Static Pressure Drop Unit

EHBH-E6V / EHBH-E9W / EHBX-E6V / EHBX-E9W



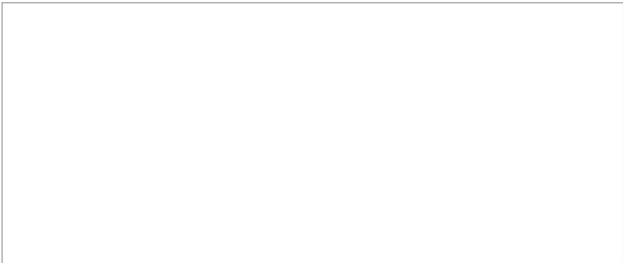
Operation area is extended to lower flow rates only in case the unit operates with heat pump only.

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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03/2021



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