



	Not standard included	
	Not possible as option	Possible as option
Obligatory	#	##
Not obligatory	*	**

(\*) Applicable for unit without integrated pump

A2P	A1P
<b>DIGITAL INPUTS</b>	<b>DIGITAL INPUTS</b>
D11 Reverse phase detection (L1-N)	X1 (I01-GND) : Flow switch
D12 Reverse phase detection (N-L3)	X1 (I02-GND) : Remote C/H selection
D13 M1C ON detection	X1 (I03-GND) : High pressure switch + discharge protector + overcurrent
D14 M2C ON detection	X1 (I04-GND) : Low pressure switch
D15 Safety device detection	X1 (I05-GND) : Remote On/Off
D16 Pump ON detection	
D17 ---	<b>DIGITAL OUTPUTS (RELAYS)</b>
D18 ---	X2 (C12-NO1) : Compressor M1C on
D19 ---	X2 (C12-NO2) : Compressor M2C on
D110 Reverse valve request	X2 (C34-NO3) : Voltage free contact for pump
<b>DIGITAL OUTPUTS (RELAYS)</b>	X2 (C34-NO4) : Reversing valve
RY1 Reversed phase protector	X2 (C5-NO5) : Alarm voltage free contact
RY3 Pump/general operation	
RY4-24 Fan speed relay 1	<b>ANALOG INPUTS</b>
RY5-25 Fan speed relay 2	X1 (I1-GND) : inlet water t°
RY6 Heaters	X1 (I2-GND) : outlet water t°
RY7 Reversing valve circ1	X1 (I3-GND) : none
RY8 Reversing valve circ2	<b>ANALOG OUTPUTS</b>
RY9 M1C off (during defrost)	X1 (Y-GND)
RY10 M2C off (during defrost)	
RY12-22 Fan speed relay 3	
RY27 Reversing valve of water circuit	

**OTHERS**

HAP Light emitting diode (service monitor green)

H1P,H2P Light emitting diode (service monitor red)

S1A Dipswitch (unit setting)

S2A Dipswitch (defr. & fan setting)

Units with integrated pump (400V)							
Fuses	5HP	8HP	10HP	12HP	16HP	20HP	24HP
F1,F2,F3 (= gL/gG)	3x20A	3x25A	3x32A	3x40A	3x50A	3x50A	3x63A

Units without integrated pump (400V)							
Fuses	5HP	8HP	10HP	12HP	16HP	20HP	24HP
F1,F2,F3 (= gL/gG)	3x20A	3x25A	3x25A	3x32A	3x40A	3x50A	3x63A

All models (400V)							
Fuses + overcurrent	5HP	8HP	10HP	12HP	16HP	20HP	24HP
F4	8A	8A	8A	8A	8A	8A	8A
F5	250mA	250mA	250mA	250mA	250mA	250mA	250mA
F7,8	5A	5A	5A	5A	5A	5A	5A
F1U	5A	5A	5A	5A	5A	5A	5A
F3U	315mA	315mA	315mA	315mA	315mA	315mA	315mA
K4S	9A	14A	17A	24A	14A	17A	24A
K5S	---	---	---	---	14A	17A	24A
K6S (st. pump or OPZH/L)	1.2A	1.2A	1.8A	1.8A	3A	3A	3A
K6S (op. pump or +OPZH/L)	1.9A	1.9A	1.9A	4.4A	4.4A	4.4A	4.4A

Y1R,Y2R	Reverse valve circuit 1, circuit 2	Q21F,Q22F	Thermal protector fan circuit 2	F3U	Fuse controller PCB
X1-82(A/B/M)	Connectors	Q11F,Q12F	Thermal protector fan circuit 1	F1U	Fuse I/O PCB
TR2	Transfo 230V-24V for supply of I/O PCB	Q1D, Q2D	Discharge thermal protector circuit 1, circuit 2	F7, F8	Fuse for fan motor circuit 1, circuit 2
TR1	Transfo 230V-24V for supply of controller PCB	PE	Main earth terminal	F6	Fuse for pumpcontactor
S21P	Switch for pump: Manual/Auto	M1P	Pump motor	F5	Surge proof fuse
S12M	Main isolator switch	M11F,M12F	Fan motors circuit 1	F4	Fuse I/O PCB & evaporator heaters
S10L	Flowswitch	M21F,M22F	Fan motors circuit 2	F1,F2,F3	Main fuses for the unit
S9S	Switch for remote start/stop or dual setpoint	M1C,M2C	Compressor motor circuit 1, circuit 2	E6H	Buffertank (55l) heater
S7S	Switch for remote cooling/heating selection or dual setpoint	K1P	Pumpcontactor	E5H	Field heater
S4LPS5LP	Low pressure switch circuit 1, circuit 2	K6S	Overcurrent relay pump	E3H,E4H	Evaporator heaters
S1HP,S2HP	High pressure switch circuit 1, circuit 2	K1M, K2M	Compressor motor circuit 1, circuit 2	E1H,E2H	Crankcase heater circuit 1, circuit 2
S2HP,S2HP	High pressure switch during defrost circuit 1, circuit 2	K1A	Auxiliary bypass relay	A71P	PCB: Power supply card
R7T,R8T	Coil temperature sensor for circuit 1, circuit 2	K21A,K22A	Auxiliary bypass relay	A72P	PCB: Remote user interface
R6T	Ambient temperature sensor	H6P	Indication lamp general operation	A5P	PCB: Softstarter for circuit 1
R4T	Evaporator outlet water temperature sensor	H5P	Indication lamp operation compressor 2	A3P	PCB: Address card
R3T	Evaporator inlet water temperature sensor	H4P	Indication lamp operation compressor 1	A2P	PCB: I/O PCB
		H3P	Indication lamp alarm	A1P	PCB: Controller PCB

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**NOTES**

- Terminal 1, --- : Wire 2, --- : Field wiring to be in accordance with the local electrical regulations, --- : Earth wiring, [Option symbol] : Option, [PCB symbol] : PCB, [Switchbox symbol] : outside switchbox
- If compressor rotates reversely, it may be damaged
- Optional:
  - OP10 = Evaporator heaters
  - EKAC10C = Address card kit for Modbus or remote user interface connection
  - EKSS = softstart
  - OP PUMP high = High head pressure pump
  - EKURMCA = Remote user interface
- Terminals for fieldwiring
  - X1M: H3-6P: output terminal for fieldwiring (voltage free contact max 2A / output)
  - X2M: E5H: fieldheater (max 500W resistive / 230VAC / 50Hz)
  - X3M: S7S,S9S: Input terminal for fieldwiring (don't connect voltage)(switch load 6mA / 30VDC)
- Y1R, Y2R are activated in cooling mode
  - S7S open = heating
  - S7S closed = cooling
- Dipswitch setting
 

S2A dipswitch: Defrost & Fan setting

1 > Only applicable for heatpump:  
Off-start condition 1 for defrost cycle  
On= start condition 2 for defrost cycle (5, 8, 10, 12, 16, 20, 24Hp)

2 > Off= fansetting 1 (5, 8, 16Hp)  
On= fansetting 2 (10, 12, 20, 24Hp)

S1A dipswitch: Unit setting

1 > Off= 1 circuit  
On= 2 circuit

234 > Off Off Off = WC CO & WC CL CO  
Off Off Off = AC CO  
On Off Off = AC HP (without compr. stop for defrost cycle)  
On Off On = AC HP (with compr. stop for defrost cycle)
- Pump contact for units without integrated pump