Subtype Air Source Heat Pump R32- 12	
Certificate Holder	Jiangsu Micoe Solar Energy Co., Ltd
Address	No.199, Yingzhou Road,
ZIP	222000
City	LianyungangCity, Jiangsu Province
Country	CN
Certification Body	BRE Global Limited
Subtype title	Air Source Heat Pump R32- 12
Registration number	041-K061-02
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.8 kg
Certification Date	08.08.2023
Testing basis	Heat Pump KEYMARK certification Scheme rules v12
Testing laboratory	TÜV SÜD Certification and Testing Co., Ltd. Guangzhou Branch, CN

Model MMHP-012B1	
Model name	MMHP-012B1
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water	

EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	10.31 kW	9.28 kW
El input	2.31 kW	2.96 kW
COP	4.47	3.13

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	64 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	176 %	126 %
Prated	7.86 kW	7.26 kW
SCOP	4.47	3.24
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.95 kW	6.42 kW
COP Tj = -7°C	3.25	2.29
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.19 kW	4.11 kW
COP Tj = +2°C	4.47	3.20
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.02 kW	3.71 kW

COP Tj = +7°C	5.70	4.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.94 kW	4.12 kW
COP Tj = 12°C	8.34	5.69
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.95 kW	6.42 kW
COP Tj = Tbiv	3.25	2.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.41 kW	6.35 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	51 °C	51 °C
Poff	9 W	9 W
PTO	19 W	19 W
PSB	9 W	9 W
PCK	40 W	40 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.45 kW	0.91 kW
Annual energy consumption Qhe	3630 kWh	4634 kWh

Model MMHP-012C1	
Model name	MMHP-012C1
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water	

EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	10.31 kW	9.28 kW
El input	2.31 kW	2.96 kW
COP	4.47	3.13

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	66 dB(A)	64 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	176 %	126 %
Prated	7.86 kW	7.26 kW
SCOP	4.47	3.24
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.95 kW	6.42 kW
COP Tj = -7°C	3.25	2.29
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.19 kW	4.11 kW
COP Tj = +2°C	4.47	3.20
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.02 kW	3.71 kW

COP Tj = +7°C	5.70	4.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.94 kW	4.12 kW
COP Tj = 12°C	8.34	5.69
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.95 kW	6.42 kW
COP Tj = Tbiv	3.25	2.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.41 kW	6.35 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	51 °C	51 °C
Poff	9 W	9 W
PTO	19 W	19 W
PSB	9 W	9 W
PCK	40 W	40 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.45 kW	0.91 kW
Annual energy consumption Qhe	3630 kWh	4634 kWh

Model MMHP-012B2	
Model name	MMHP-012B2
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	10.06 kW	10.01 kW
El input	2.14 kW	3.14 kW
COP	4.71	3.19

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	67 dB(A)	65 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	176 %	127 %
Prated	7.84 kW	7.46 kW
SCOP	4.48	3.25
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.93 kW	6.60 kW
COP Tj = -7°C	3.40	2.55
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.21 kW	4.02 kW
COP Tj = +2°C	4.40	3.24
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	3.68 kW

COP Tj = +7°C	5.33	3.64
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.89 kW	4.27 kW
COP Tj = 12°C	8.67	5.98
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.93 kW	6.60 kW
COP Tj = Tbiv	3.40	2.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.54 kW	6.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.19	2.27
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	51 °C	51 °C
Poff	15 W	15 W
PTO	26 W	26 W
PSB	15 W	15 W
PCK	40 W	40 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.30 kW	1.37 kW
Annual energy consumption Qhe	3611 kWh	4749 kWh

Model MMHP-012C2	
Model name	MMHP-012C2
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data	
Power supply	3x400V 50Hz
Off-peak product	n/a

Outdoor Air/Water	
EN 14511-4 | Heating	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating		
	Low temperature	Medium temperature
Heat output	10.06 kW	10.01 kW
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EN 12102-1 | Average Climate		
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Pdh Tj = +2°C	4.21 kW	4.02 kW
COP Tj = +2°C	4.40	3.24
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.13 kW	3.68 kW

COP Tj = +7°C	5.33	3.64
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.89 kW	4.27 kW
COP Tj = 12°C	8.67	5.98
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.93 kW	6.60 kW
COP Tj = Tbiv	3.40	2.55
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.54 kW	6.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.19	2.27
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PTO	26 W	26 W
PSB	15 W	15 W
PCK	40 W	40 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.30 kW	1.37 kW
Annual energy consumption Qhe	3611 kWh	4749 kWh