Subtype Intelligent Inverter Heat Pump R290- U40+U40S

Certificate Holder	Guangdong PHNIX Eco-Energy Solution Ltd.
Address	No. 3 Tianyuan Road Dagang Town
ZIP	511470
City	Guangdong
Country	CN
Certification Body	BRE Global Limited
Subtype title	Intelligent Inverter Heat Pump R290- U40+U40S
Registration number	041-K020-16
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	0.98 kg
Certification Date	15.03.2024
Testing basis	Heat Pump Keymark Scheme Rules Rev 13
Testing laboratory	TÜV SÜD Certification and Testing Co., Ltd. Guangzhou Branch, CN

Model U40	
Model name	U40
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	9.98 kW	9.25 kW
El input	2.13 kW	3.00 kW
COP	4.67	3.09

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	59 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	191 %	143 %
Prated	9.84 kW	9.80 kW
SCOP	4.85	3.65
Tbiv	-7 °C	-7 °C
TOL	-25 °C	-25 °C
Pdh Tj = -7°C	8.70 kW	8.67 kW
COP Tj = -7°C	3.17	2.39
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.31 kW	5.28 kW
COP Tj = +2°C	4.82	3.61
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.68 kW	3.66 kW

COP Tj = +7°C	5.98	4.60
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.18 kW	3.91 kW
COP Tj = 12°C	8.38	5.89
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.70 kW	8.67 kW
COP Tj = Tbiv	3.17	2.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.75 kW	9.31 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.74	2.11
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	11 W	11 W
PTO	12 W	12 W
PSB	11 W	11 W
PCK	44 W	44 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.09 kW	0.49 kW
Annual energy consumption Qhe	4187 kWh	5554 kWh

Model U40S	
Model name	U40S
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	9.92 kW	9.25 kW
El input	2.21 kW	3.02 kW
COP	4.50	3.06

EN 12102-1 | Average Climate		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	59 dB(A)

EN 14825 | Average Climate		
	Low temperature	Medium temperature
ηs	189 %	138 %
Prated	9.83 kW	9.83 kW
SCOP	4.80	3.53
Tbiv	-7 °C	-7 °C
TOL	-25 °C	-25 °C
Pdh Tj = -7°C	8.70 kW	8.69 kW
COP Tj = -7°C	3.18	2.35
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.30 kW	5.31 kW
COP Tj = +2°C	4.70	3.45
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.53 kW	4.29 kW

COP Tj = +7°C	6.22	4.61
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.16 kW	4.99 kW
COP Tj = 12°C	8.34	6.19
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.70 kW	8.69 kW
COP Tj = Tbiv	3.18	2.35
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.70 kW	9.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.74	2.10
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	11 W	11 W
PSB	10 W	10 W
PCK	48 W	48 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.13 kW	0.64 kW
Annual energy consumption Qhe	4232 kWh	5748 kWh