

Subtype EVI DC Inverter Heat Pump- R32- 13/16

Certificate Holder	Fotowoltaika By Energy Solutions sp. z o. o.
Address	Rynek Glowny 28
ZIP	31-010
City	Krakow
Country	PL
Certification Body	BRE Global Limited
Subtype title	EVI DC Inverter Heat Pump- R32- 13/16
Registration number	041-K097-03
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	2.7 kg
Certification Date	15.08.2024
Testing basis	HP KEYMARK certification scheme rules rev. no.14
Testing laboratory	TÜV SÜD Certification and Testing Co., Ltd. Guangzhou Branch, CN

**Model BES 13 KW**

Model name	BES 13 KW
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	20.70 kW	19.68 kW
El input	4.58 kW	7.41 kW
COP	4.52	2.66

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level outdoor	69 dB(A)	73 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	175 %	134 %
Prated	16.17 kW	17.01 kW
SCOP	4.45	3.41
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.31 kW	15.05 kW
COP Tj = -7°C	3.53	2.34
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.72 kW	9.20 kW
COP Tj = +2°C	4.36	3.40
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	7.69 kW	7.50 kW

COP Tj = +7°C	5.44	4.29
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	10.06 kW	8.71 kW
COP Tj = 12°C	6.68	5.69
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	14.31 kW	15.05 kW
COP Tj = Tbiv	3.53	2.34
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.18 kW	13.79 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.97	2.16
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	50 °C	50 °C
Poff	5 W	5 W
PTO	15 W	5 W
PSB	5 W	5 W
PCK	50 W	50 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	3.22 kW
Annual energy consumption Qhe	7507 kWh	10293 kWh

**Model BES 16 KW**

Model name	BES 16 KW
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	20.49 kW	21.59 kW
El input	5.85 kW	7.46 kW
COP	3.50	2.89

**EN 12102-1 | Average Climate**

	Low temperature	Medium temperature
Sound power level outdoor	72 dB(A)	75 dB(A)

**EN 14825 | Average Climate**

	Low temperature	Medium temperature
$\eta_s$	175 %	132 %
Prated	17.67 kW	18.25 kW
SCOP	4.45	3.38
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	15.63 kW	16.14 kW
COP Tj = -7°C	3.55	2.20
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	9.53 kW	9.83 kW
COP Tj = +2°C	4.35	3.42
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	9.08 kW	7.82 kW

COP Tj = +7°C	5.44	4.22
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	9.31 kW	9.26 kW
COP Tj = 12°C	6.98	5.65
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	15.63 kW	16.14 kW
COP Tj = Tbiv	3.55	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	16.17 kW	14.19 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	2.10
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	50 °C	50 °C
Poff	5 W	5 W
PTO	15 W	15 W
PSB	5 W	5 W
PCK	50 W	50 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.50 kW	4.06 kW
Annual energy consumption Qhe	8198 kWh	11167 kWh