

## Subtype BES MONOBLOK 13KW

Certificate Holder	Fotowoltaika By Energy Solutions sp. z o. o.
Address	Rynek Główny 28
ZIP	31-010
City	Krakow
Country	PL
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	BES MONOBLOK 13KW
Registration number	011-1W0869
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	2.05 kg
Certification Date	14.08.2024
Testing basis	HP KEYMARK certification scheme rules V14

## Model BES MONOBLOK 13KW

Model name	BES MONOBLOK 13KW
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	3x230V 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	15.00 kW	18.00 kW
El input	3.61 kW	6.44 kW
COP	4.16	2.80

### EN 12102-1 | Average Climate

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

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	182 %	136 %
Prated	14.00 kW	14.10 kW
SCOP	4.62	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.67 kW	12.47 kW
COP Tj = -7°C	3.51	2.41
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.76 kW	7.92 kW
COP Tj = +2°C	4.48	3.38
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.34 kW	7.77 kW

COP Tj = +7°C	5.89	4.48
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	9.23 kW	9.24 kW
COP Tj = 12°C	8.40	7.07
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	12.67 kW	12.47 kW
COP Tj = Tbiv	3.51	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	14.29 kW	13.92 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.03	2.18
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	60 °C	60 °C
Poff	11 W	11 W
PTO	11 W	11 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.18 kW
Annual energy consumption Qhe	6394 kWh	8385 kWh