

Subtype BES MONOBLOK 16KW

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 16KW
Registration number	011-1W0870
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	2.6 kg
Certification Date	14.08.2024
Testing basis	HP KEYMARK certification scheme rules V14

Model BES MONOBLOK 16KW

Model name	BES MONOBLOK 16KW
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	19.50 kW	21.00 kW
El input	4.25 kW	6.66 kW
COP	4.59	3.15

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	74 dB(A)	74 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	176 %	136 %
Prated	16.40 kW	15.40 kW
SCOP	4.48	3.46
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.53 kW	13.60 kW
COP Tj = -7°C	3.38	2.56
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	8.86 kW	8.25 kW
COP Tj = +2°C	4.32	3.32
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	8.24 kW	7.96 kW

COP Tj = +7°C	5.73	4.47
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	9.69 kW	9.47 kW
COP Tj = 12°C	7.65	6.23
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	14.53 kW	13.60 kW
COP Tj = Tbiv	3.38	2.56
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	15.20 kW	15.08 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.13	2.31
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	1.20 kW	0.33 kW
Annual energy consumption Qhe	7569 kWh	9787 kWh