

Monocrystalline Photovoltaic Panel

HBS-165-72-5-012-B, HBS-170-72-5-012-B

Quality- and Security Features

The solar cells are embedded in UV-resistant EVA synthetic material. The torsion resistant frame of the panel consists of corrosion-proof anodised aluminium. The panel can be mounted in various ways because it is solidly built. The front of the photovoltaic panel consists of thermal pre-stressed solar glass. This guarantees high transparency and protects the monocrystalline solar cells against environmental influences such as hail, snow and ice. The connection box on the backside is equipped with bypass diodes which prevent single monocrystalline solar cell from overheating (hot-spot-effect).

Panel Types

Power (W_p) *	165 W	170 W
Nominal Voltage (V_{mpp})	35.80 V	35.80 V
Nominal Current (I_{mpp})	4.62 A	4.75 A
Open Circuit Voltage (V_{oc})	44.50 V	44.20 V
Short Circuit Current (I_{sc})	5.04 A	5.05 A
Efficiency	≥12.9 %	≥13.3 %

* nominal power (+/- 3%) within standard test conditions (STC)

Electrical Details

NOCT (800 W/m ² ; 1 m/sec; 20°C)	47°C (± 2°C)
Temperature Coefficients of the Cells	
Short Circuit Current (I_{sc})	+ 0.10 %/K
Open Circuit Voltage (U_{oc})	- 0.38 %/K
Power (P_{max})	- 0.47 %/K
Max. System Voltage (U_{max})	1,000 V

Mechanical Details

Cell Type	Monocrystalline Silicon
Amount of Cells	72 (6 x 12)
Cell Dimensions	125 x 125 mm
Panel Length	1,580 mm
Panel Width	808 mm
Frame Thickness	35 mm
Weight	15 kg
Frame Material	Aluminium
Connectors	MC-4
By-Pass Diode	3 Pieces
Hail Safety	Steel ball falling down from 1m height

Warranties

Product Warranty	5 years
Power Guarantee	10 years for 90 %
Power Guarantee	25 years for 80 %
Testing Certificate	TUV Rheinland IEC-61215, -61730

