

Solarfun SF 160-24-P PV Modules

Polycrystalline Photovoltaic Modules



One of the few companies to meet Schüco's stringent quality standards, photovoltaic module manufacturer Solarfun Power is a trusted Schüco supplier. Solarfun Power's outstanding PV modules assure high-powered, reliable performance for solar projects both on- and off-grid.

Each PV cell features anti-reflective coatings, state-of-the-art silver front contacts, and full-coverage aluminum back contacts with a back surface field. Solarfun PV cells are meticulously manufactured

in accordance with the highest technical standards, ensuring excellence at every stage of the production process and resulting in highly efficient, long-life cells.

The frames are constructed of aluminum alloy for maximum endurance in rugged weather conditions. They are also given a double oxidation coating for added protection against the elements, assuring impressive longevity even under adverse conditions. The load-bearing capacity for snow and wind loads is 50lbs/sq ft.

The modules fully adhere to Germany's stringent ISO 9001 and ISO 14001 quality and environmental standards. Every cell is individually inspected and power-matched to ensure consistent performance between the cells in the module array. Moreover, each PV cell is individually inspected and checked for current reversion, micro cracks, chipping, warping, and any uneven thickness.

SCHÜCO

Technical Data

Electrical specifications				
Power output under standard test conditions (STC)*:	SF 160-24-P165	SF 160-24-P170	SF 160-24-P175	SF 160-24-P180
Rated power (P_{max})	165 W	170 W	175 W	180 W
Effective output tolerance(ΔP_{mpp})	+/- 5%			
Rated voltage (V_{mp})	35.5 V	35.5 V	35.7 V	35.8 V
Rated current (I_{mp})	4.65 A	4.78 A	4.90 A	5.03 A
Open circuit voltage (V_{oc})	43,7 V	44,1 V	44,5 V	44,7 V
Short circuit current (I_{sc})	5.14 A	5.17 A	5.20 A	5.23 A
Module efficiency	12.9%	13.3%	13.7%	14.1%
Cell efficiency	14.8%	15.3%	15.8%	16.6%
Cell technology	Poly-Si			
Number of cells	72 (6 x 12)			
Temperature coefficient α (P_{mpp})	-0.48% / °C			
Temperature coefficient β (I_{sc})	+0.05% / °C			
Temperature coefficient χ (U_{oc})	-0.34% / °C			
Temperature coefficient δ (I_{mpp})	+0.05% / °C			
Temperature coefficient ϵ (U_{mpp})	-0.34% / °C			
Normal operating cell temperature (NOCT)**	45 °C +/- 2 °C			
Max. system voltage permitted	600 V			
Fuse rating	10 A			

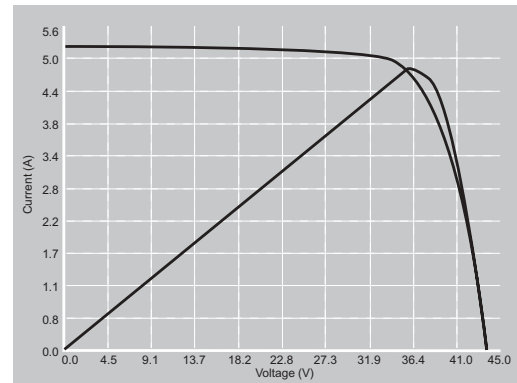
Mechanical specifications	
Outer dimensions (L x W x H)	62.2 in x 31.8 in x 1.8 in
Aluminum frame	Aluminum-alloy
Weight	33 lbs
Connection system/diameter of cable	MC-T4/4 mm ²
Length of cable	35.4 in
Front/Encapsulant/Back	Tempered glass/EVA/backsheet

Qualification and warranty	
Product standard	UL 1703, CE, ISO 9001
Extended product warranty	3 years
Warranty of 90% performance P_{mpp} min	10 years
Warranty of 80% performance P_{mpp} min	25 years

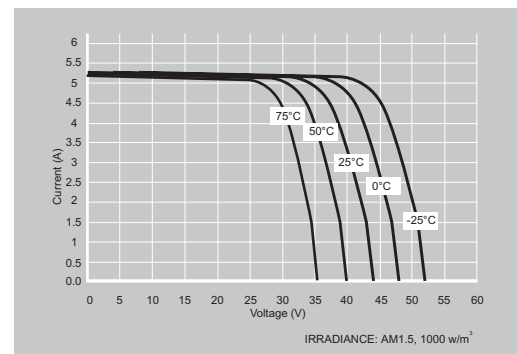
Miscellaneous	
Schüco end clamps Type 41-1	256 327
Schüco intermediate clamps Type 41-2	256 328
Schüco Art.-No 165 W	232 426
Schüco Art.-No 170 W	232 369
Schüco Art.-No 175 W	232 427
Schüco Art.-No 180 W	232 442
Packing unit	4 modules

* Irradiance 1,000 W/m², air mass 1.5, cell temperature 25°C
 ** Irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/s
 Photovoltaic modules show signs of electrical degradation. After they go into operation the degradation is initially degressive, and later it is linear.

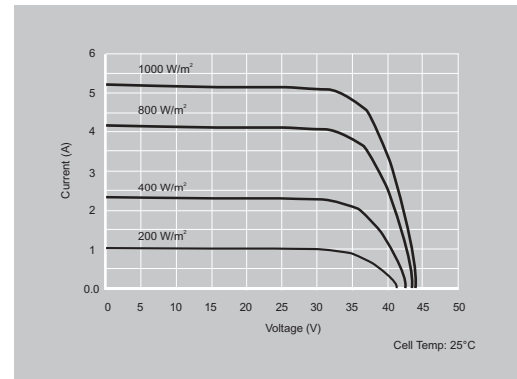
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IV Curves



Various Temperatures



Various Irradiance Levels

