SOLAR MODULE

Sunways SM 60MP monocrystalline

Sunways SM 60MP Solar Modules are exclusively equipped with state-of-the-art monocrystalline Sunways Solar Cells and have a capacity of up to 260 Wp. The 3-busbar technology ensures a homogeneous appearance and a high yield. The innovative P3 Technology ensures planning security, high yields and high efficiency from the start.

Product benefits

- **P3 Technology**
  High efficiency from the beginning
  Protected against light-induced degradation („LID-Effect")
  Protected against potential induced degradation („PID-Effect")
  High-performance Sunways Solar Cells, made in Germany
  Guaranteed performance and safety
  Performance guarantee 90% over 12 years, 80% over 25 years according to the current warranty conditions
  Safety through product warranty 10 years
  High yields
  High efficiencies and minimised module mismatch through tight cell and module tolerances
- **Innovative Anti reflective coating**
  Minimization of reflection while increasing the energy yield
- **OutputPlus+**
  Measured power exceeds the specified rated output (0 to 5 W)
- **SolidPlus+**
  3.2 mm hardened safety solar glass, robust aluminium hollow section profile for stability and durability (5400 Pa)
- **Guaranteed quality**
  TÜV SÜD certified according to IEC 61215 Ed.2 and EN 61730

Product characteristics	
Category:	monocrystalline
Module size (L x W x T):	1642 mm x 994 mm x 40 mm
Area:	1.63 m²
Weight:	20 kg
Cells:	60 Sunways Solar Cells, monocrystalline, 3 busbars
Cell format:	156 x 156 mm, pseudo square

Design	
Front:	Anti reflective coated solar glass
Frame:	hollow section profile, light anodized aluminium
Junction box:	certified junction box IP65 with 6 bypass diodes
Connectors & cables:	MC4 compatible, 2 x 1.0 m, cable cross-section 4 mm²

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Photovoltaic Technology

Technical Data SM 60MP

Article No.	SM60MP240S2A	SM60MP245S2A	SM60MP250S2A	SM60MP255S2A	SM60MP260S2A
Output classes	**240**	**245**	**250**	**255**	**260**
Electrical data at STC [1]					
Rated output P_{MPP} (W)	240	245	250	255	260
Voltage U_{MPP} (V)	30.1	30.4	30.6	30.9	31.3
Current I_{MPP} (A)	8.06	8.13	8.20	8.27	8.32
Open-circuit voltage V_{OC} (V)	37.0	37.2	37.5	37.8	38.0
Short-circuit current I_{SC} (A)	8.47	8.53	8.60	8.67	8.75

1) STC-Standard Test Conditions: Air mass AM 1.5 – Irradiance 1000 W/ m^2 – Cell temperature 25°C; Measuring tolerance +/-3%

Electrical data at NOCT [2]					
Rated output P_{MPP} (W)	181	185	188	192	195
Voltage U_{MPP} (V)	28,1	28,3	28,6	28,9	29,3
Current I_{MPP} (A)	6,45	6,51	6,57	6,62	6,66
Open-circuit voltage V_{OC} (V)	34,4	34,6	34,8	35,1	35,3
Short-circuit current I_{SC} (A)	6,78	6,82	6,88	6,94	7,00

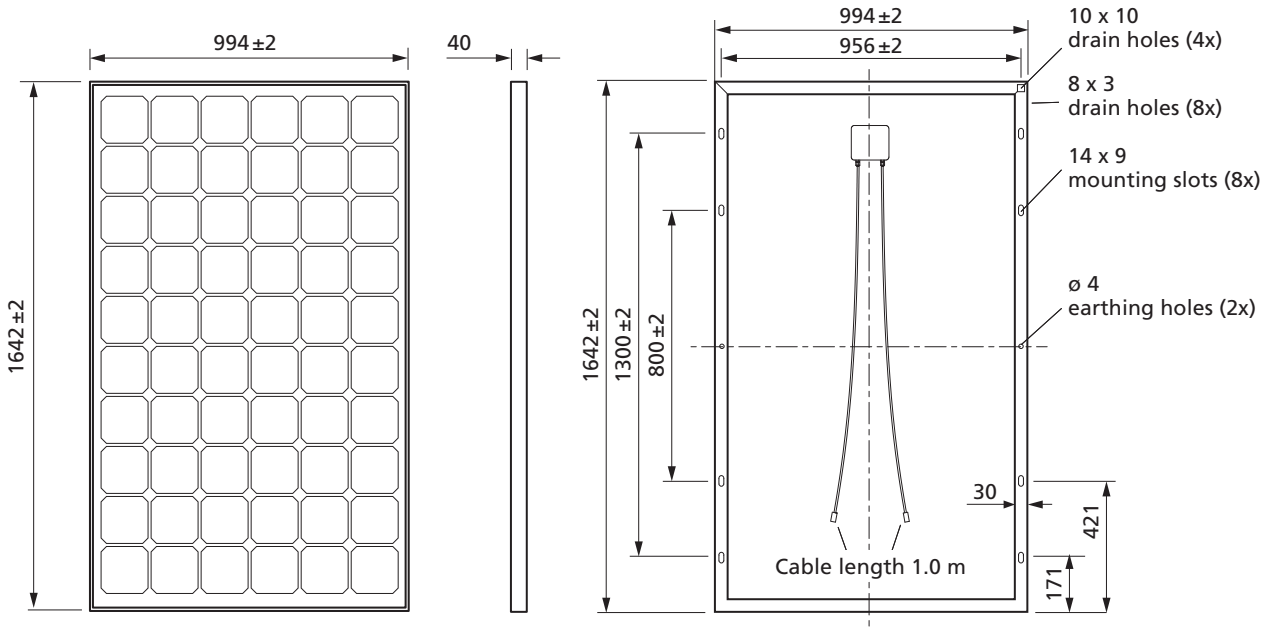
2) The NOCT values are typical values. NOCT: Nominal operating cell temperature (45°C); Measuring tolerance +/-3%
Typical cell temperature with: Irradiance 800 W/mm^2 – Ambient temperature 20°C – Wind speed 1m/s

Other electrical parameters	
Maximum system voltage (V)	1000
Temperature coefficient I_{SC} (% / K)	0.06
Temperature coefficient U_{OC} (% / K)	-0.31
Temperature coefficient P_{MPP} (% / K)	-0.42
Series Fuse Rating	20.0

Application	
Permissible module temperature	-40°C ... +85°C
Snow load	5400 Pa corresponds to 550 kg/m², i.e. snow load zone 3
Wind load	130 km/h (800 Pa), factor 3 for wind gusts
Application class	A
Installation / operation	Follow the installation and operating manual!

Qualifications and certificates	IEC 61215 Ed.2, EN 61730, CE, Protection class II ⧈ Internal quality checks: at least twice the load specified in IEC Standard

Dimensional drawings



Datasheet compliant with IEC EN 50380. Technical data are preliminary and subject to modification, version 04/2013
This module is also available in B-quality (article numbers SM60MPxxxS2B)