Conergy PowerPlus 215M–235M

Conergy PowerPlus modules stand for reliably high yields and long service life. They are wholly developed and manufactured in our factory in Frankfurt (Oder). The fully automated manufacturing process ensures that the quality of the modules remains consistently high. The positive performance tolerance and the outstanding weak-light properties enable more electricity can be produced over the period of system operation. In addition, comprehensive product and extended performance guarantees ensure a secure investment.

High yields in practical use
- High-performance modules with mono-crystalline 3-busbar cell technology from our own production plant
- High efficiency even under weak-light conditions
- Up to 2.5 % more module output thanks to positive performance tolerance
- High yield security thanks to comprehensive performance guarantees for 25 years [1]

Premium quality for a long service life
- High-quality, fully automatic, quality-tested production "Made in Germany"
- Safe junction box and frost resistant frame
- High stability, e.g. with regard to snow and wind pressure
- Resistant to all weather conditions and to salt mist and ammonia vapours
- Up to 10-year product warranty [1]

Planning flexibility
- Recommended for solar systems of any size and in any environment
- Optimal area utilisation with optional upright and crosswise installation

Easy to install
- Convenient transport – one of the lightest modules of the performance class with a loadability of 5,400 Pascals
- Safe connection thanks to reverse polarity protected plug with twist lock

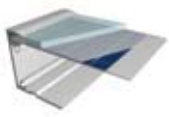
1 | **Cell**
The high-efficient 3-busbar cells from our own production have an optimised cell design.

2 | **Frame and glass**
Whether it's wind pressure, snow loads or temperature fluctuations – the especially loadable solar glass and the twist-resistant frame without hollow cavities stand up to even the most extreme conditions.

3 | **Junction box**
The water-tight, soldered and cast junction box is especially safe and ensures maximum yields with the passively cooled 3-bypass diodes, even with unfavourable environmental conditions.

4 | Made in Germany
The entire module development, production and quality assurance at the Conergy module production plant in Frankfurt (Oder) is certified by the German TÜV (technical inspectorate) according to ISO 9001 and 14001.

1

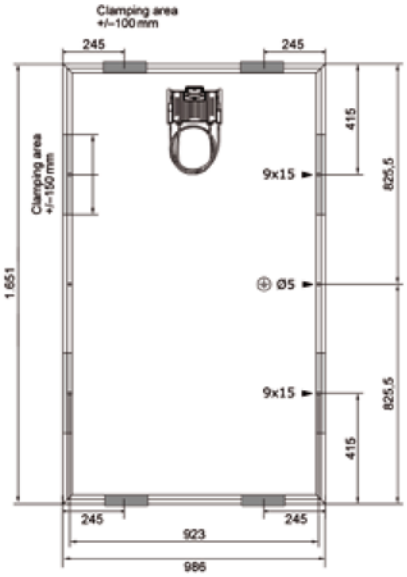

2


3


4
TÜVRheinland®
CERT
ISO 9001
ISO 14001

[1] According to Conergy AG's current warranty conditions.

Conergy PowerPlus 215M–235M



All specifications in mm

Module dimensions (L × W × H): [1]	1,651 × 986 × 46 mm
Cell dimensions:	156 × 156 mm
No. of cells:	60
Cell type:	Mono-crystalline cell incorporating 3-busbar technology
NOCT: [2]	47° C ± 2° C
Maximum permissible load:	5,400 Pa [3]
Front cover type:	Micro-structured solar glass
Cable:	2× 1,000 mm length, 4 mm² cross section
Plug type:	Huber + Suhner: plug connector with integrated twist lock
Module weight: [4]	19.6 kg
Certification:	IEC/EN 61215 Ed. 2, IEC/EN 61730, SK II, ISO 9001:2008, ISO 14001:2004
Product warranty: [5]	5 years, can be extended to 10 years
Performance guarantee 1: [5]	12 years, 92 % of nominal output
Performance guarantee 2: [5]	25 years, 80 % of nominal output
Maximum permissible system voltage:	1,000 V
Reverse current loadability (I_R):	20 A
Frame material:	Anodised aluminium
Reduction of efficiency from 1,000 W/m² to 200 W/m² in accordance with EN 60904-1:	At 200 W/m², 96 % of STC efficiency is achieved

Conergy PowerPlus	215M	220M	225M	230M	235M
Electrical ratings under standard test conditions: [6]					
Nominal output (P_{nom})	215 W	220 W	225 W	230 W	235 W
Performance tolerance	–0/+2.5 %	–0/+2.5 %	–0/+2.5 %	–0/+2.5 %	–0/+2.5 %
Module efficiency (P_{nom})	13.21 %	13.51 %	13.82 %	14.13 %	14.44 %
Voltage at maximum performance (U_{mpp}) [7]	28.49 V	28.75 V	29.12 V	29.29 V	29.67 V
Current at maximum performance (I_{mpp}) [7]	7.63 A	7.76 A	7.82 A	7.94 A	8.00 A
Off-load voltage (U_{oc}) [7]	35.33 V	35.89 V	36.34 V	36.87 V	37.20 V
Short-circuit current (I_{sc}) [7]	8.30 A	8.30 A	8.31 A	8.34 A	8.37 A
Temperature coefficient (P_{mpp})	–0.47 %/° C	–0.47 %/° C	–0.47 %/° C	–0.47 %/° C	–0.47 %/° C
Temperature coefficient (U_{oc}), absolute	–0.120 V/° C	–0.122 V/° C	–0.124 V/° C	–0.125 V/° C	–0.126 V/° C
Temperature coefficient (U_{oc}), in percent	–0.34 %/° C	–0.34 %/° C	–0.34 %/° C	–0.34 %/° C	–0.34 %/° C
Temperature coefficient (I_{sc}) absolute	4.1 mA/° C	4.1 mA/° C	4.2 mA/° C	4.2 mA/° C	4.2 mA/° C
Temperature coefficient (I_{sc}) as a percentage	0.05 %/° C	0.05 %/° C	0.05 %/° C	0.05 %/° C	0.05 %/° C
Electrical rating at 800 W/m², NOCT and AM 1.5					
Power (P_{mpp})	157.94 W	161.89 W	165.39 W	168.78 W	172.30 W
Off-load voltage (U_{oc})	32.36 V	32.88 V	33.28 V	33.77 V	34.08 V
Short-circuit current (I_{sc})	6.69 A	6.69 A	6.69 A	6.72 A	6.75 A
Voltage (U_{mpp})	25.87 V	26.11 V	26.44 V	26.59 V	26.93 V
Current (I_{mpp})	6.10 A	6.20 A	6.26 A	6.35 A	6.40 A

[1] Dimensional tolerance: +/–1 mm.
[2] Nominal operating temperature of the cell at 800 W/m² irradiation, 20° C ambient temperature, wind speed of 1 m/s.
[3] In accordance with IEC 61215 Ed. 2.
[4] Weight tolerance: +/–0.5 kg.
[5] According to Conergy AG's current warranty conditions.
[6] Standard Test Conditions defined as follows: 1,000 W/m² radiant power at a spectral density of AM 1.5 and a cell temperature of 25° C.
[7] Typical production values.

This data sheet complies with the specifications of DIN EN 50380.