

## Conergy PowerPlus 215P-240P

Conergy PowerPlus solar modules offer premium quality that pays for itself. They guarantee high system yields and reliable operation over the entire term, and under the most demanding environmental and weather conditions. They are manufactured to the highest quality standards and are characterised by many well thought through details and characteristics that set standards in this combination. We offer a 10-year product warranty for this and comprehensive performance guarantees for a safe and profitable investment.









#### High yields in practice

- High-performance modules with polycrystalline, triple busbar cell technology
- High efficiency, even in poor light conditions
- Up to 2.5 % more module output through positive performance tolerance
- High yield security thanks to comprehensive performance guarantees for 25 years <sup>1</sup>

#### Premium quality for long service life

- 10-year product warranty 1
- High-quality and quality-tested materials and TÜV-certified production
- | Secure junction box and cavity-free frame
- High stability, for example in snow, wind and hail, and now with a module load of up to 6,000 Pascal
- Resistant to all weather conditions and to salt spray and ammonia vapours
- | Free module take-back programme through PV CYCLE 2

#### Planning flexibility

- Recommended for solar energy systems of any size and in any environment
- Optimum area utilisation with optional portrait or landscape installation

#### Easy to install

- Clamping areas now tested right into the corners for even more flexible installation
- | Simple transport one of the lightest modules of the performance class, with a load capacity of 6,000 Pascal
- Secure installation thanks to reverse polarity protected plugs with twist lock

#### 1 | More output

High level of performance, with up to 240 Wp rated capacity and an additional 2.5 % positive performance tolerance, increase the yield still further, even in small areas.

#### 3 | High-quality materials

Premium quality through the use of high-quality materials. The waterproof, soldered and sealed junction box, for example, is particularly secure, and with its passively cooled 3-bypass diodes, it ensures the highest yields, even in unfavourable ambient conditions.

#### 2 | Very high loading capacity

The high-quality design withstands loads of up to 6,000 Pascal or the impact of golf ball-sized hailstones falling at a speed of 120 km/h with ease.

### 4 | Conergy premium quality

The entire module development, production, quality assurance and module production is TÜV-certified to ISO 9001 and 14001, and meets or exceeds all relevant standards.





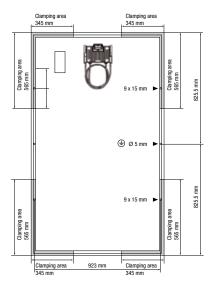




<sup>&</sup>lt;sup>1</sup> According to Conergy AG's current warranty conditions

<sup>&</sup>lt;sup>2</sup> Only for PV-CYCLE member countries, more information at www.pvcycle.com

# Conergy PowerPlus 215P-240P



Module dimensions (L  $\times$  W  $\times$  H): <sup>1</sup> Cell dimensions:

No. of cells: Cell type:

NOCT: 2 Maximum permissible load:

Front cover type: Cable: Plug type:

Frame material: Module weight: 4

Maximum permissible system voltage: Reverse current loadability (I<sub>R</sub>):

Reduction of efficiency from 1,000 W/m² to 200 W/m<sup>2</sup> in accordance with EN 60904-1:

Certification: Product warranty: 5 Performance guarantee 1: 5

Performance guarantee 2: 5

 $1,651 \times 986 \times 46 \,\mathrm{mm}$ 156 × 156 mm

Polycrystalline cell incorporating

3-busbar technology  $44^{\circ}C \pm 2^{\circ}C$ 6,000 Pa 3

Micro-structured solar glass, 3.2 mm diameter  $2 \times 1,000 \, mm$  length,  $4 \, mm^2$  cross-section

Huber + Suhner: plug connector with integrated twist lock Anodised aluminium

19.6 kg 1,000 V 20 A

At 200 W/m2, 97 % of STC efficiency is achieved

IEC/EN 61215 Ed. 2, IEC/EN 61730, SK II, MCS

10 years 12 years/92 % 25 years/80 %

Conergy PowerPlus	215P	220P	225P	230P	235P	240P
Electrical ratings under standard test conditions: 6						
Nominal output (P <sub>nom</sub> )	215W	220W	225W	230W	235W	240W
Performance tolerance	-0/+2.5 %	-0/+2.5 %	-0/+2.5 %	-0/+2.5 %	-0/+2.5 %	-0/+2.5 %
Module efficiency (P <sub>nom</sub> )	13.21 %	13.51 %	13.82%	14.13%	14.44%	14.74 %
Voltage at maximum performance $(U_{\rm mpp})^{7}$	28.55V	28.82V	29.05V	29.30V	29.49V	29.70V
Current at maximum performance (I <sub>mpp</sub> ) <sup>7</sup>	7.63A	7.74A	7.85 A	7.95 A	8.06A	8.15 A
Off-load voltage ( $U_{oc}$ ) $^7$	35.54V	35.76V	36.00V	36.22V	36.37 V	36.48V
Short-circuit current (I <sub>sc</sub> ) <sup>7</sup>	8.11 A	8.20A	8.30A	8.42A	8.51 A	8.62A
Temperature coefficient ( $P_{mpp}$ )	−0.44%/°C	−0.44 %/° C				
Temperature coefficient ( $U_{oc}$ ), absolute	−0.117 V/° C	−0.118 V/° C	−0.119 V/° C	−0.120 V/° C	−0.120 V/° C	−0.120 V/° C
Temperature coefficient ( $U_{\text{oc}}$ ), in percent	−0.33 %/° C	−0.33 %/° C	-0.33 %/° C	-0.33 %/° C	−0.33 %/° C	−0.33 %/° C
Temperature coefficient ( $I_{sc}$ ) absolute	4.73 mA/° C	4.78 mA/° C	4.84 mA/° C	4.90 mA/° C	4.97 mA/° C	5.02 mA/° C
Temperature coefficient ( $I_{sc}$ ) as a percentage	0.059%/°C	0.059 %/° C	0.059 %/° C	0.059 %/° C	0.059%/°C	0.059%/°C
Electrical rating at 800 W/m², NOCT and AM 1.5						
Power (P <sub>mpp</sub> )	163.49W	167.42W	171.14W	174.83W	178.39W	181.67W
Off-load voltage (U <sub>oc</sub> )	32.98V	33.18V	33.41 V	33.61 V	33.75V	33.85V
Short-circuit current (I <sub>sc</sub> )	6.72A	6.79A	6.88A	6.97A	7.05 A	7.14 A
Voltage (U <sub>mpp</sub> )	25.93V	26.18V	26.38V	26.61 V	26.78V	26.98V
Current (I <sub>mpp</sub> )	6.31 A	6.40A	6.49A	6.57A	6.66A	6.74 A

Available at:

 $<sup>^1</sup>$  Dimensional tolerance: +/-1 mm  $^2$  Nominal operating temperature of the cell at 800 W/m² irradiation, 20° C ambient temperature, Nominal operating temperature of the cell at 800 W/m² (fradiation, 20°) wind speed of 1 m/s
In accordance with IEC 61215 Ed. 2
Weight tolerance: +/-0.5 kg
According to Conergy AG's current warranty conditions
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
Typical production values

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