



The central inverters (3-phase) of the Conergy IPG series are packed with innovative, cutting-edge technology. Their optimised efficiency factor covers the entire performance spectrum and the high technical availability factor has been achieved by proven long-life components and the latest control procedures.

The exceptionally service-friendly and low-maintenance inverters are available in performance classes of 60, 80, 100, 110, 280 and 300 kW.

### Excellent efficiency factor

Because it has no low-voltage transformer, uses the newest IGBTs (Insulated Gate Bipolar Transistors) with a trench gate structure, and contains iron powder chokes, the Conergy IPG 300K is able to achieve an above-average European efficiency factor of 96.5 %. The inverter feeds directly into an external medium-voltage transformer which ensures the galvanic insulation of the modules from the public grid. The Conergy IPG 300K also produces high yields thanks to the particularly quick and precise MPP tracking.

### High availability factor

The design of the technical parameters has been optimised with regard to the operating time of the inverter. For example, the IGBTs not only increase the efficiency factor, but their high dielectric strength inhibits the transmission of voltage spikes.

The intelligent minimum-performance recognition system protects the AC contactors and a fast over-current recognition system for all transistors protects the IGBTs.

### Ease of installation

The Conergy IPG series inverters are only 180 cm high. This allows easy transport through any door and mounting in every type of compact concrete substation. As well as this, the footprint of the inverters has been kept very small. The central inverters do not need to be adjusted after installation.



CONERGY

Central inverters | Technical data

# Conergy IPG 300K

PHOTOVOLTAICS

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|---|--|
| <b>Recommended solar generator connected load (STC)</b> | 300 kWp  |
| <b>Output power</b>                                     | 270 kW   |
| <b>Maximum AC power</b>                                 | 270 kW   |
| <b>Maximum AC current</b>                               | 577 A  |
| <b>Maximum efficiency factor</b>                        | 97.0 %   |
| <b>European efficiency factor</b>                       | 96.5 %   |
| <b>Input voltage range</b>                              | $V_{pmin} = 530 V_{DC}$ to $V_{ocmax} = 965 V_{DC}$  |
| <b>MPP range at DC rated output</b>                     | 530–780 $V_{DC}$   |
| <b>Input current</b>                                    | 566 $A_{DC}$   |
| <b>Output voltage range</b>                             | 126-179 $V_{AC}$ (standard setup) adjustable for other country standards   |
| <b>Mains frequency range</b>                            | 50 Hz / 60 Hz (+1 Hz / -2.5 Hz)  |
| <b>Required grid format</b>                             | IT grid  |
| <b>Stand-by performance / nighttime performance</b>     | 55 W   |
| <b>Output current distortion</b>                        | < 3 %  |
| <b>AC outputs</b>                                       | L1, L2, L3, N and PE , each with 2 connection bolts M12  |
| <b>DC inputs</b>  | 4 / connection bolts M12   |
| <b>Automatic turn-on</b>                                | When sufficient solar generator power is available   |
| <b>Resetting time after AC deactivation</b>             | Min. 2 min (standard setup) adjustable for other country standards   |
| <b>Overload behaviour</b>                               | Performance limiting   |
| <b>DC voltage ripple</b>                                | 2 %  |
| <b>Operating mode</b>                                   | Maximum Power Point Tracking (> 99 % accuracy)   |
| <b>Ground fault monitoring</b>                          | Yes  |
| <b>Reverse polarity protection</b>                      | Short circuit diodes on the PV side  |
| <b>Overvoltage protection</b>                           | High performance varistors   |
| <b>Performance factor Cos Phi</b>                       | $\geq 0.99$ at rated power   |
| <b>Auxiliary supply</b>                                 | 230 V / 50 Hz / max. 700 W / terminals 1.5-2.5 mm <sup>2</sup>   |
| <b>Recommended series fuse for auxiliary supply</b>     | 10 A   |
| <b>Ambient temperature range</b>                        | -20 up to +40 °C   |
| <b>Relative humidity</b>                                | 95 % non-condensing  |
| <b>Housing colour</b>                                   | Conergy Brand Blue   |
| <b>Protection type / protection class</b>               | IP 20 / I  |
| <b>Fan flow</b>   | 3,230 m <sup>3</sup> /h  |
| <b>Weight</b>   | 1,540 kg   |
| <b>Dimensions (W x H x D)</b>                           | 2,010 x 1,800 x 800 mm   |
| <b>Approval</b>   | CE, GS   |
| <b>Transformer specifications</b>                       | Medium voltage according to public utility company specifications; low voltage 270 V eff.; nominal capacity 270 kVA; vector group Dyn5; short-circuit voltage $\leq 6$ %; if there are several Conergy IPG 300K, a low-voltage winding is required for each device |

Available from:

IPG300K-TD-ENG-0803