



## GRID TIED CONVERTERS FOR WIND TURBINES

### Maximising the performance of Medium Scale Systems

#### BENEFITS

- Back to back converter design and software control achieves best Annual Energy Production (AEP)
- Weather proof enclosure enables outdoor setup to minimise electrical installation costs
- All necessary protections and filters included to achieve one box “Plug & Play” approach
- Modular design for ease of maintenance and service
- Flexible range of control and monitoring options to achieve full turbine integration
- Remote programming aid setup and upgrade
- Advanced Smart Grid power control options improve local grid to aid connection applications

#### FEATURES

- Active Rectifier Design
- IP56 rated Outdoor Enclosure
- Turbine start-up assist
- Low Speed Energy Capture
- Full Grid and Turbine side Protection
- Automatic Over Voltage Protection
- Generator load angle optimisation
- Dynamic Ramp Rate Control
- Wide range of control options available:



Programmable Logic Controller



Control Inputs/Outputs



Smart Grid Ready Power Control



Wireless Health & Performance Monitoring



Communication Protocols – CANopen, Modbus, PROFIBUS



|  |   |
|--|---|
| GRID (NETWORK)                                 |   |
| Power Rating                                   | 250 kVA                                   |
| Voltage  | 380-415V                                  |
| Grid Connection                                | 3 Phase                                   |
| Power Factor<br>(With Power Factor Correction) | 1.0<br>(0.7 pf lagging to 0.7 pf leading) |
| Frequency                                      | 50/60 Hz                                  |
| TURBINE  |   |
| Max Voltage                                    | 520 V line to line                        |
| Max Current                                    | 345 A                                     |
| Turbine Cut In Voltage                         | 90 V line to line                         |
| PROTECTIONS                                    |   |
| EMC  | BSEN 61000-6-2/4                          |
| Grid Compliance                                | G59/3, IEEE 1547, VDE-AR-N 4105, CEI 0-21 |
| Isolation                                      | Physical Device                           |
| GENERAL  |   |
| Weight   | 1,010 kg                                  |
| Dimensions (HxWxD)                             | 1415 x 1200 x 800 (mm)                    |
| Maximum Efficiency                             | 97%                                       |
| ENVIRONMENT                                    |   |
| Operating Temperature Range                    | -25°C to +50°C                            |
| Enclosure Ingress Protection Rating            | IP56                                      |
| Cooling Method                                 | Air Cooled (Self-contained)               |

TPS' unique inverters are designed for outdoor use with features that simplify installation and minimise capital costs. With over 40 years' experience, a team of highly skilled engineers and technicians, and a track record in creating world-class power electronics, why go anywhere else?

To discuss your project or for any further information please contact our marketing department at [marketing@turbopowersystems.com](mailto:marketing@turbopowersystems.com) or +44 (0) 191 482 9288.



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