



**OMNILINK**  
GreenTech

## **The OMNILINK INVERTER**

*An All-In-One solution for*

**WIND POWER – SOLAR POWER – HYDRO-ELECTRIC**

## MODULAR POWER CONTROL SYSTEM

During the development of the OMNILINK DAWT it became apparent that the electronic control systems required were not readily available in the market place. Traditionally Wind Turbines utilize 3 separate modules for Control, Rectifying and Power Inversion, with even these limited available units in the required power range presently available. Separate inverters and wind turbine controllers are available, but it has proved impossible to find an “All in one” solution. Currently to install a Wind Turbine a combination of at least three different blocks is required. These separate units are typically large and cumbersome items, which are targeted to a limited power range.

The development of an All-In-One solution for the OMNILINK DAWT has enabled us to produce a system that not only meets the requirements of that system but can also be utilized to enhanced the output of a variety of renewable energy systems.

## HOW TO MAXIMIZE THE POTENTIAL OF RENEWABLE ENERGY SYSTEMS . . . ?

- Place your renewable technology in more suitable locations:
  - Stronger winds for Wind Energy
  - Equatorial locations for solar panels
  - High precipitation areas for hydro-electric
  - Faster flowing currents for tidal energy
- Improve the efficiency of energy conversion wherever you are
  - Every conversion of energy from one source to another creates losses
    - Minimize those losses and you improve energy production



## THE INVERTER SYSTEM CAN IMPROVE EFFICIENCY IN ALL AREAS OF RENEWABLE ENERGY . . .

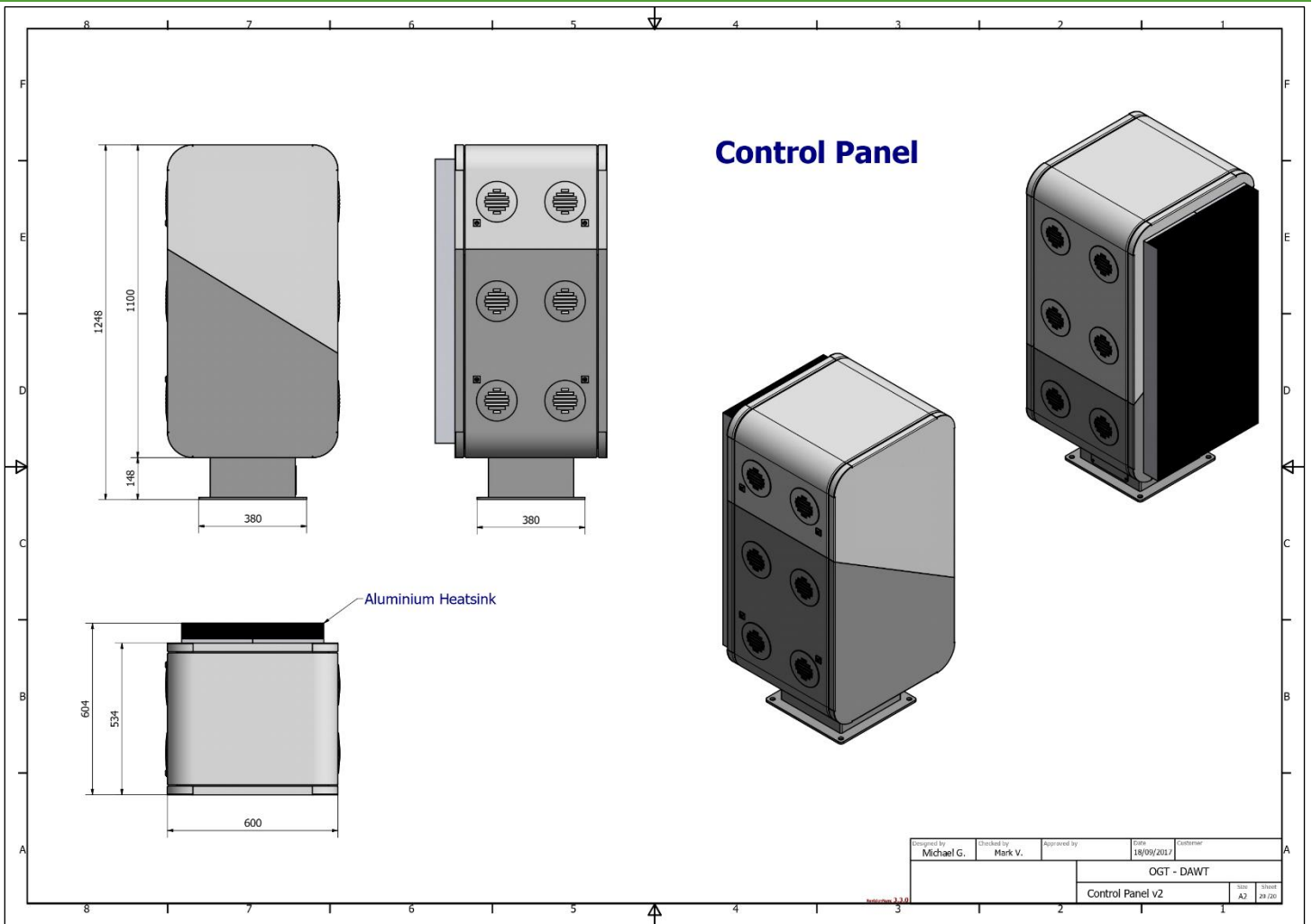
- Proprietary developed system from inception to completion
- Real world tested
- Developed by leading experts in aerospace and space / satellite electrical system
- Integrated components developed to improve efficiency across whole system
- Modular construction allows power curve matching across wider range than traditional systems

## THE SYSTEM . . .

The system was developed over 2 years to reduce the clumsy traditional 3 Block (Controller/Rectifier/Inverter) system into a single unit. Allowing optimal matching of components and algorithms.

- Dual Core CPU PLC processing unit
- 3kW to 30kW per device
- Three phase AC compatible
- Single phase AC compatible
- DC Compatible
- Full SCADA compatibility
- Built in UPS (Uninterruptable Power Supply)
- Grid Phase Matching
- Grid Voltage Regulated
- Utilizing Mitsubishi IGBT Technology
- Low production costs
- Solar tracking
- Wind Turbine blade pitch control
- IP65 Housing
- Power and Control Circuits Physically Isolated
- Premier sourced components
- Custom made PCBs
- Variable MPPT programming
- All-in-one solution

## SCHEMATICS . . .



## BENEFITS TO THE ENVIRONMENT . . .

- REDUCED
  - Carbon Emissions
  - Reliance on fossil fuels
  - Environmental damage
  - Manufacturing pollutants
  - End of life waste
  
- INCREASED
  - Renewable energy production
  - Use of recyclable materials
  - Responsible use of resources
  - Speed of return to natural conditions at location



Tradition Wind Energy

## BENEFITS TO SOCIETY . . .

- Global
  - Reduction in rate of climate change
  - Reduction in carbon emissions
  - Reduction in fossil fuel usage
  - Reduction in rare metal mining
- National
  - Climate neutrality
  - Compliance with international protocols and agreements
  - Recognition of green policy integration
  - World leaders in environmental awareness
  - World leaders in Renewable Technologies
  - World leaders in green investment
  - World leaders in energy efficiency
  - Reduction in infrastructure costs
  - Increase in employment
  - Reduced cost of renewable energy
- Local
  - Jobs for infrastructure
  - Jobs for installation
  - Jobs for maintenance
  - Jobs for management
  - Jobs for security
  - Local suppliers used where possible
  - Local logistics used where possible
  - Greater exploitation of renewable resource
  - Local energy production
  - Recognition as climate neutral community
  - Recognition as climate neutral organizations / businesses



Hydro-Electric Energy

## BENEFITS TO BUYER . . .

- Lower costs
- Lower initial installation costs
- Lower risk of investment
- Increased rate of return
- Increased climate neutrality
- Increased profitability
- Increased recognition for green investment

## FOR FURTHER INFORMATION . . .

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