

# ORION

## GRID FEEDING INVERTER 4.6kW



The new Orion 4.6kW is an exciting new product from SEA incorporating SEA's extensive experience of grid feeding inverters in a compact, quiet (fan less) package.

Orion is designed specifically for the small to medium size domestic installation. The Orion is particularly user friendly and easy for a professional to install. With an output rating of 4.6kW\* and with three independent MPPT's gives it the flexibility for installs in multi-facing strings.

### Product Description

The Orion is a highly efficient, true sine wave, non-isolated DC to AC inverter designed especially for solar grid-feeding applications.

The unit operates from a photovoltaic (PV) / solar array DC power source and generates a sinewave current output for direct connection to the 230VAC 50Hz L.V. power grid.

### Product Features

- Very high conversion efficiency 96% typical
- 3 MPP (Maximum Power Point) trackers with independent or parallel operation
- IP65 compliant for outdoor applications
- High power density, compact profile, low weight
- High reliability with dual micro controllers
- Natural convection cooling, quiet fan-less design
- User friendly LCD display showing complete status information
- RS232 communications with RS485 and network options
- Solar array isolation and earth leakage detection for your safety
- Australian Certificate of Suitability
- Approved to AS 4777, AS/NZS 3100 and C Tick compliant
- Stylish, modern casing
- Easy installation & Maintenance free

The Orion employs three independent MPPT (maximum power point trackers) for efficient use of the PV power system in a multi-string set up and is supplied with a built-in PV earth leakage detector for your protection.

A user friendly, backlit, LCD display allows full monitoring of instantaneous power, voltage and frequency as well as inverter status. The inverter is programmed and controlled using a single function button, the LCD display and two status LEDs.

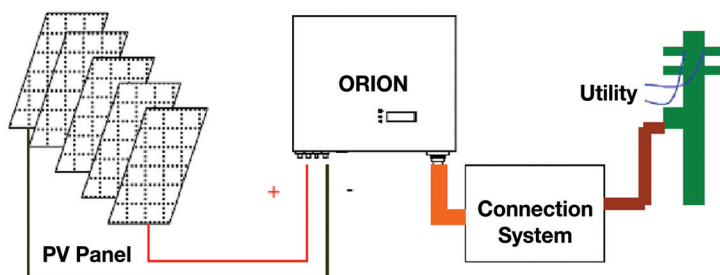
The Orion is also provided with a standard RS232 socket for connection to a PC for data acquisition. There are several optional components for state of the art communications via RS 485.

The unit is compliant with: AS/NZS 4777 "Grid Connection of Energy Systems Via Inverters", and AS/NZS 3100 "Approval and test specification – General requirements for electrical equipment" and is C-Tick approved.



<b>ELECTRICAL</b>	
<b>INPUT</b>	
Nominal input voltage	600Vdc
Maximum PV array open circuit voltage	750Vdc
Operating input voltage range	100V to 750Vdc
MPPT voltage range	125V to 750Vdc
Activating voltage	150Vdc
Number of inputs / MPP trackers	3
Maximum input power per input /tracker	3825W
Maximum inverter DC current drawn per input / tracker	8.5A
Input voltage range for full power per input / tracker	450V to 750Vdc
Maximum PV array short circuit current per input / tracker	17A
<b>OUTPUT</b>	
Nominal output Power	4600W
Maximum output Power (10 minutes)	5000W
Nominal output voltage	230Vrms
Nominal output frequency	50Hz
Nominal AC current	20A
Maximum AC current	25.5A
Maximum conversion efficiency	96%
<b>ENVIRONMENT</b>	
Protection degree	IP65 per AS60529
Operating temperature range	-20 to 55°C
Humidity	0 to 95% non-condensing
Cooling	Natural Convection
Power consumption – standby / night	< 8W / < 0.1W
<b>COMMUNICATIONS AND FEATURES</b>	
Communications interface	RS232 standard, RS485 optional
<b>MECHANICAL</b>	
W x D x H	429.8 x 531.2 x 130.6mm
Net Weight	27.85kg
<b>COMPLIANCES</b>	
Approvals	AS/NZS 3100, 4777, C-Tick CS9377N

## Typical Installation



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