AQUILA POWER [AP SERIES - SINGLE PHASE] STAND-ALONE INVERTER TECHNICAL SPECIFICATION

FUNCTIONAL PARAMETERS		AP SERIES MODEL NUMBERS		
		AP20	AP25	AP30
General Inverter Description		AP Series Renewable Energy Off Grid (SPS) Inverters are used for continuous AC power generation from multiple DC input power sources in Domestic, Rural, Commercial and Industrial applications		
Mechanical and Isolation Protection	Equipment Classification	Class 1		
	Ingress Protection [IP]	IP 20		
	Inverter Isolation Type	The inverter is Isolated between Input and Output circuits		
	Safety Standards	Certified I.A.W IEC 62109.1 - IEC 62109.2		
DC Power Input	Rated Power (kVA)	21.82 kVA	27.80 kVA	33.00 kVA
	Operating DC Input Range (V_{RANGE})	352 - 705 (V_{DC})		
	Maximum DC Input Voltage (V_{MAX})	750 (V_{DC})		
	Maximum DC Input Current (I_{MAX})	62.0 Amps	79.0 Amps	94.0 Amps
	Solar PV Short Circuit Current (I_{SC})	62.0 Amps	79.0 Amps	94.0 Amps
	DC Input (suitable power sources)	Any continuous or intermittent DC input power source within the DC Input Voltage range, with < 10% RMS ripple is acceptable		
AC Power Output	Apparent Power (kVA)	20.00 kVA	25.00 kVA	30.00 kVA
	Rated Power (kVA)	20.00 kVA	25.00 kVA	30.00 kVA
	Real Power (kW)	16.00 kW	20.00 kW	24.00 kW
	Power Factor (PF)	0.8 - 1.0 (Typical Reactive load 0.8 - Resistive load 1.0)		
	Voltage (V_{AC}) and Phases (Ø)	1 Phase Ø - 230 V_{AC} +/- 3%		
	Frequency (Hz)	50 Hz +/- 0.5 Hz		
	Rated Output Current (A)	86.9 Amps	108.7 Amps	134.4 Amps
	Waveform Distortion THD (%)	< 5.0 % (Linear load)		
	Dynamic Load Response (%)	< 5.0% (Lagging for linear load from 0% to 100%)		
	Overload Power Capability (%)	150% (of Rated Power for 10 Seconds)		
	Efficiency Indicative (%)	> 90% (at 80% Resistive load)		
	Conversion Response DC→AC (%)	< 20.0 ms		
	Display Type	LCD (Scrolling menu buttons)		
Operating Environment	Insulation (Input↔Output) (V_{AC})	3000 (V_{AC}) (Applied dielectric insulation test voltage)		
	Noise (dB)	< 50 dB (at 1 metre)		
	Ambient Temperature (°C)	- 15°C to + 55°C		
	Humidity (%)	0% - 95% (no condensation)		
	Altitude (m)	< 4000 m		
Mechanical	Dimensions (mm)	830 x 450 x 1100 (mm)		
	Weight (Kgm)	260 Kgm		
Functional Protection	DC Input +/- Polarity protection	Yes		
	DC Input Under-voltage protection	Yes		
	DC Input Over-voltage protection	Yes		
	AC Output Overload protection	Yes		
	AC Output Short-circuit protection	Yes		
	Over Temperature protection	Yes		
Communications Monitoring Display	Local Data Acquisition, Control and Performance Data Display Capability	Data Monitoring and Control System and User Interface via LCD Display		
Product Registration and Approval	Australian Clean Energy Regulator Australian Clean Energy Council (ERAC) Responsible Supplier	A registered and safety approved Off Grid inverter for sale and use in Australian Renewable Energy Off Grid (SPS) installations		
Applicable Standards	CEC/CER Mandatory requirements for Off Grid SPS Inverters	IEC 62109.1 - IEC62109.2		

AQUILA POWER [AP SERIES - THREE PHASE] STANDALONE INVERTER TECHNICAL SPECIFICATION						
FUNCTIONAL PARAMETERS		AP SERIES MODEL NUMBERS				
		AP(SPS/OFF/MICROGRID/) 40/3	AP(SPS/OFF/MICROGRID/) 50/3	AP(SPS/OFF/MICROGRID/) 60/3	AP(SPS/OFF/MICROGRID/) 75/3	AP(SPS/OFF/MICROGRID/) 100/3
General Inverter Description		AP Series Renewable Energy Off Grid (SPS) Inverters are used for continuous AC power generation from multiple DC input power sources in Domestic, Rural, Commercial and Industrial applications				
Mechanical and Isolation Protection	Equipment Classification	Class 1				
	Ingress Protection [IP]	IP 20				
	Inverter Isolation Type	The inverter is Isolated between Input and Output circuits				
	Safety Standards	Certified I.A.W IEC 62109.1 - IEC 62109.2				
DC Power Input	Rated Power (kVA)	44.00 kVA	55.00 kVA	66.00 kVA	82.50 kVA	110.00 kVA
	Operating DC Input Range (V_{RANGE})	400 - 705 (V_{DC})				
	Maximum DC Input Voltage (V_{MAX})	750 (V_{DC})				
	Rated DC Input Current (I)	80.0 Amps	100.0 Amps	120.0 Amps	150.0 Amps	200.0 Amps
	Maximum DC Input Current (I_{MAX})	120.0 Amps	150.0 Amps	180.0 Amps	225.0 Amps	300.0 Amps
	Solar PV Short Circuit Current (I_{SC})	120.0 Amps	150.0 Amps	180.0 Amps	225.0 Amps	300.0 Amps
	DC Input (suitable power sources)	Any continuous or intermittent DC input power source within the DC Input Voltage range, with < 10% RMS ripple is acceptable				
AC Power Output	Apparent Power (kVA)	40.00 kVA	50.00 kVA	60.00 kVA	75.00 kVA	100.00 kVA
	Rated Power (kVA)	40.00 kVA	50.00 kVA	60.00 kVA	75.00 kVA	100.00 kVA
	Maximum Active Power Output (kW)	40.00 kW	50.00 kW	60.00 kW	75.00 kW	100.00 kW
	Power Factor (PF)	1.0 (Typical Load)				
	Rated 3 Phase Output Voltage (V_{AC})	3 Phase Ø - 400/230 V_{AC} +/- 3%				
	Frequency (Hz)	50 Hz +/- 0.5 Hz				
	Rated 3 Phase Output Current (A)	57.7 Amps	71.2 Amps	86.6 Amps	108.3 Amps	144.3 Amps
	Waveform Distortion THD (%)	< 5.0 % (Linear load)				
	Dynamic Load Response (%)	< 5.0% (Lagging for linear load from 0% to 100%)				
	Overload Power Capability (%)	150% (of Rated Power for 10 Seconds)				
	Efficiency Indicative (%)	> 90% (at 80% Resistive load)				
	Conversion Response DC→AC (%)	< 20.0 ms				
	Display Type	LCD (Scrolling menu buttons)				
Operating Environment	Insulation (Input↔Output) (V_{AC})	3000 (V_{AC}) (Applied dielectric insulation test voltage)				
	Noise (dB)	< 50 dB (at 1 metre)				
	Ambient Temperature (°C)	- 15°C to + 45°C				
	Humidity (%)	0% - 95% (no condensation)				
	Altitude (m)	< 2000 m				
Mechanical	Dimensions (mm)	1.2 x 0.9 x 2.1	1.2 x 0.9 x 2.1	1.2 x 0.9 x 2.1	1.2 x 0.9 x 2.1	1.2 x 0.9 x 2.1
	Weight (Kgm)	490 Kg	590 Kg	740 Kg	840 Kg	1100 Kg
Functional Protection	DC Input +/- Polarity protection	Yes				
	DC Input Under-voltage protection	Yes				
	DC Input Over-voltage protection	Yes				
	AC Output Overload protection	Yes				
	AC Output Short-circuit protection	Yes				
	Over Temperature protection	Yes				
Communications Monitoring Display	Local Data Acquisition, Control and Performance Data Display Capability	Data Monitoring and Control System and User Interface via LCD Display				
Product Registration and Approval	Australian Clean Energy Regulator Australian Clean Energy Council (ERAC) Responsible Supplier	A registered and safety approved Off Grid inverter for sale and use in Australian Renewable Energy Off Grid (SPS) installations				
Applicable Standards	CEC/CER Mandatory requirements for Off Grid SPS Inverters	IEC 62109.1 - IEC62109.2				

Global Connections Group Pty Ltd (Aquila Power)
Conditional Product Warranty
10 Year Repair or Replacement

Warranty information for the Aquila Power Series of Stand Alone Inverters [1 and 3 Phase] models:

Single Phase Stand Alone Inverter Models:

AP20; AP 25; AP30

Three Phase Stand Alone Inverter Models:

AP(SPS/OFF/MICROGRID)-40/3; AP(SPS/OFF/MICROGRID)-50/3; AP(SPS/OFF/MICROGRID)-60/3; AP(SPS/OFF/MICROGRID)-75/3; AP(SPS/OFF/MICROGRID)-100/3

Purchasers should keep their warranty certificate and purchase receipt safely filed, in order to validate proof of purchase in the event of a future warranty claim being initiated.

Aquila Power Warrants that:

Aquila Power will repair or replace a purchasers Stand Alone Inverter and/or associated Power Switching and Control Unit if in Aquila Power's opinion after inspection, that the product has been used in accordance with the installation and operating instructions provided, and it requires repairing because a manufacturing or product materials defect has been identified, for a period of **Ten (10) Years** from the date of purchase or when first installed (whichever is the earlier date).

This Aquila Power warranty only applies to service within Australia for products purchased within Australia. This warranty is not transferable and applies to the original purchaser only. No Aquila Power employee or authorised third party sales or service person or organisation, has authority to vary the terms of this product warranty. Products accepted for service under warranty may be replaced with either new or refurbished products of the same or similar type, and refurbished parts may be used to repair the products at the repairers' discretion.

Place of service, repair, or replacement:

Repairs or replacement of products will be conducted at the purchasers premises within Australia free of charge irrespective of where that location is. Service calls will be made during normal business hours, Monday to Friday.

What this Aquila Power Warranty does not cover:

- Any product where the specifications plate or serial number plate has been removed damaged or rendered illegible.
- Any product that has been subjected at any time and under any circumstance, to any voltages or currents including spikes or surges, of greater value than those maximum limits described in the owner user manual supplied at the time of purchase.
- Any product that has been misapplied or used outside of the specified operating conditions as described in the owner user manual supplied at the time of purchase.

- Maintenance or repair or replacement of any consumable part that is considered by Aquila Power inconsequential to the overall product performance, that exhibits minor deterioration or fault or low grade wear and tear.
- Maintenance or repair or replacement of any part damaged by accident, negligence, malicious misuse or abuse by any person, misapplication, or any unforeseeable acts of God.
- Damage attributed to vermin, cockroaches, mice, rats or other insects, rodents, or fauna.
- Damage attributed to platform vibration that is considered by Aquila Power to be abnormal.
- Replacement of consumable items such as light bulbs, filters, or battery cells.
- Consequential damage of any kind whatsoever including damage to other appliances or products, buildings, structures, vehicles or machinery, or general goods.
- Damage caused during transportation and handling activities including scratches, dents, chips and/or any other cosmetic damage to the appearance of the product.

Instances and circumstances that will void this Warranty:

- Any evidence of unauthorised tampering or intrusion or attempted tampering or intrusion whatsoever of the product, by any person other than a certified and authorised Aquila Power installer technician.

Other consumer rights:

The benefits provided by this Aquila Power warranty are in addition to and do not limit or restrict any other rights and remedies that you may have under Australian law.

Aquila Power products come with guarantees that cannot be excluded under Australian Consumer Law and you may be entitled: subject to the terms and conditions of this warranty being satisfied, to a replacement product or refund for a major failure. You are also entitled to have the goods repaired or replaced if the goods are proven to be of unacceptable technical quality; or technically unfit for the prescribed purpose.

How to initiate a Warranty claim in Australia:

To initiate a claim in accordance with the provisions of this warranty, you must contact Aquila Power within the applicable warranty period and provide satisfactory proof of product purchase and ownership via either of the contact methods described below:

1. Internet: visit: http://www.aquilapower.solutions/contact and initiate an online message form including your Name, Email, Mobile phone number and Product details. A service engineer will contact you promptly to assist you with your claim.

2. Mobile Hotline: call: Aquila Power Customer Service Centre and talk to one of our service engineers who will assist you with your claim. Mob. Hotline (24/7): 0408620230

3. Email (24/7): email: support@aquilapower.com (for a prompt response)

4. Postal Address: post your claim to: Aquila Power PO Box 3840, Robina Town Centre, Qld 4230

APPROVALS®

Certificate of Suitability

Certificate No.: **SAA161222**

Certificate Holder:	Global Connections Group Pty Ltd T/as Aquila Power 3/385 Oxley Drive Runaway Bay QLD 4216 Australia
Regulatory Definition:	Non-Prescribed
Product Description:	Stand Alone Inverter
Trade Name/s:	AQUILAPOWER
Model No.:	AP30
Rating/Marking/s:	Input: 750Vdc Max, 352-705Vdc, 94A Max Output: 230V~ 50Hz 30kVA ta:45°C, Class I
Standard/s:	IEC 62109-1 Ed. 1.0 IEC 62109-2 Ed. 1.0
Condition/s:	Nil
Approval Marks:	RCM and SAA161222
Initial Issue Date:	24 June 2016
Expiry Date:	24 June 2026

R.A. Nill

For and on Behalf of
SAA Approvals Pty Ltd

This certificate is issued by SAA Approvals Pty Ltd in accordance with the SAA Approvals Electrical Product Safety Certification Scheme accredited by JAS-ANZ under AS/NZS ISO/IEC 17065 and RECS accreditation under the Queensland Government legislative requirements. SAA certifies the product nominated in this certificate complies with standard/s listed above in accordance with the schemes herein.

For SAA Contact Details and to verify this Certificate go to:

www.saaapprovals.com.au

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www.jas-anz.org/register

SAA Approvals CERTIFIED

Issued: 24-03-21 161222/1a
Renewed, updated

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Certificate of Suitability

Addendum

Certificate No.: **SAA161222**

Date of Issue: **24 March 2021**

Regulatory Definition: Non-Prescribed
Product Description: Stand Alone Inverter

Additional Models	Trade Name	Rating / Marking
AP25	AQUILAPOWER	Input: 750Vdc Max 352-705Vdc 79A Max Output: 230V~ 50Hz 25kVA ta:45°C, Class I
AP20	AQUILAPOWER	Input: 750Vdc Max 352-705Vdc 62A Max Output: 230V~ 50Hz 20kVA ta:45°C, Class I

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For and on Behalf of
SAA Approvals Pty Ltd

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Issued: 24-03-21 161222/2a
Renewed, updated

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Certificate of Suitability

Certificate No.: **SAA210623**

Certificate Holder:
Global Connections Group Pty Ltd T/as
Aquila Power
3/385 Oxley Drive
Runaway Bay QLD 4216
Australia

Regulatory Definition: Non-Declared
Product Description: Stand Alone Inverter
Trade Name/s: AQUILA POWER
Model No.: AP(SPS/OFF/MICROGRID)-40/3
Rating/Marking/s: Input: 400-705Vdc, Max 750Vdc 120A, Isc: 120A
Output: 3/N/PE 230/400V~ 50Hz 40kVA 57.7A
Class I, -15°C to +45°C, IP20

Standard/s: IEC 62109-1 Ed 1.0
IEC 62109-2 Ed 1.0
Condition/s: Nil

Approval Marks: SAA210623

Initial Issue Date: 7 April 2021
Expiry Date: 7 April 2026

For and on Behalf of
SAA Approvals Pty Ltd

This certificate is issued by SAA Approvals Pty Ltd in accordance with the SAA Approvals Electrical Product Safety Certification Scheme accredited by JAS-ANZ under AS/NZS ISO/IEC 17065 and REAS accreditation under the NSW Government legislative requirements. SAA certifies the product nominated in this certificate complies with standard/s listed above in accordance with the scheme herein.

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Issued: 07-04-21 210623/1

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Certificate of Suitability

Addendum

Certificate No.: **SAA210623**

Date of Issue: **7 April 2021**

Regulatory Definition: Non-Declared
Product Description: Stand Alone Inverter

Additional Models	Trade Name	Rating / Marking
AP(SPS/OFF/MICROGRID)-50/3	AQUILA POWER	Input: 400-705Vdc, Max 750Vdc 150A, Isc: 150A Output: 3/N/PE 230/400V~ 50Hz 50kVA 72.2A Class I, -15°C to +45°C, IP20
AP(SPS/OFF/MICROGRID)-60/3	AQUILA POWER	Input: 400-705Vdc, Max 750Vdc 180A, Isc: 180A Output: 3/N/PE 230/400V~ 50Hz 60kVA 86.6A Class I, -15°C to +45°C, IP20
AP(SPS/OFF/MICROGRID)-75/3	AQUILA POWER	Input: 400-705Vdc, Max 750Vdc 225A, Isc: 225A Output: 3/N/PE 230/400V~ 50Hz 75kVA 108.3A Class I, -15°C to +45°C, IP20
AP(SPS/OFF/MICROGRID)-100/3	AQUILA POWER	Input: 400-705Vdc, Max 750Vdc 300A, Isc: 300A Output: 3/N/PE 230/400V~ 50Hz 100kVA 144.3A Class I, -15°C to +45°C, IP20

For and on Behalf of
SAA Approvals Pty Ltd

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