

Energy Saving Power Quality Conditioners

EdgeIQ – Compact AC Voltage Regulator

Models: EE-202-Series



FEATURES

Compact Voltage Optimizer which boosts residential solar yields, optimizes battery performance, and saves energy through Conservation Voltage Reduction (CVR) and Direct Voltage Reduction (DVR) applications

- ▮ Continuous voltage regulation eliminates voltage volatility and allows solar export at optimal voltage levels and enhances battery operations
- ▮ Voltage Output Regulated to $\pm 1\%$ for CVR/DVR energy savings
- ▮ High Efficiency $>98\%$ @ 80% Load
- ▮ Bidirectional – passes reactive power bi-directionally
- ▮ Optimal power and voltage regulation ensures 100% Solar inverter and battery up-time and full Solar energy recovery (within ratings and regulatory requirements and adjustable subject to customer requirements)
- ▮ Over-voltage protection (OVP) levels remotely configurable to meet the requirements of AS4777 and other standards
- ▮ IP54 Packaging
- ▮ Intelligent software control; Programmable over the internet
- ▮ Full Power Quality, Solar inverter Monitoring and Consumption Data available Locally or Remotely
- ▮ 1-Phase Input 180-275 VAC | 50 Hz | 5KVA
- ▮ With VO Regulation Current Capability 22A, bypass to 100A
- ▮ EMI Electrical Noise Suppression Networks
- ▮ Line Surge protected - NMI-M6 to 10KV / 40KA
- ▮ Approval Mark : RCM Mark
- ▮ Compliance to AS/NZS 60335.1:2011 + A1 + A2
- ▮ Communications option LAN, 3G, 4G
- ▮ Smaller Lower power units available



DESCRIPTION

The Edge Electronics Compact High Efficiency Bi-directional AC-AC Voltage regulator for Solar and battery optimization is part of the Edge Electron's Energy Saving and Power Quality product range. It is an intelligent, software-driven, automatic AC-AC Voltage CVR/DVR Regulator. The EdgeIQ is specifically designed to be Bi-directional and boosts any Power applied at the Voltage Regulated Output back to the Input, eliminates Voltage Volatility and protects sensitive loads from voltage surges.

The Edge Electronics EdgeIQ enables constant voltage regulation which significantly improves solar export, provides best environment for battery systems, lowers electricity consumption, reduces electricity costs, improves power quality and reliability, and helps protect the environment.

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Electrical Specifications

Configuration	Single Phase
Electrical Frequency	50/60Hz
Rated Voltage	180-275 VAC Line – Neutral
Rated Current	22A per phase regulating 100A per phase bypass
Rated Power	5kVA per phase regulating 25kVA per phase bypass
Lightning Strike	Power line surge protected to 10KV per NMI-M6
Peak Efficiency	98.2 %
Power & Energy Accuracy	2 % + 0.5A
Alarms and Event Logging	Grid over-voltage, grid under-voltage, over-current, ambient over-temperature

Connectivity

Communications Options	Cellular communications with embedded 3G / 4G modem, private APN with AES128 & SHA256 encryption IPSec tunnel
	Wired ethernet port ; WiFi using standard WiFi dongle
	SSN mesh wireless and LoRA (in development)
Communications Architecture	Periodic reporting to a central IoT Cloud server
IoT Communications	CoAP with DTLS security
Device Data Retention	1month of 1second Power Quality Data 1year of 1minute Power Quality Data 10,000 event logs
Cloud Data Retention	5 years

Mechanical and Environmental

Dimensions	L539 x W263 X D92 mm
Weight	10 KG
IP Rating	IP54
Operating Temperature and Humidity	-10°C to 60°C, 0-95% RH
Storage Temperature	-40°C to 70°C
Operating Altitude	3000m

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Fig 1 – EdgeIQ Voltage Regulation

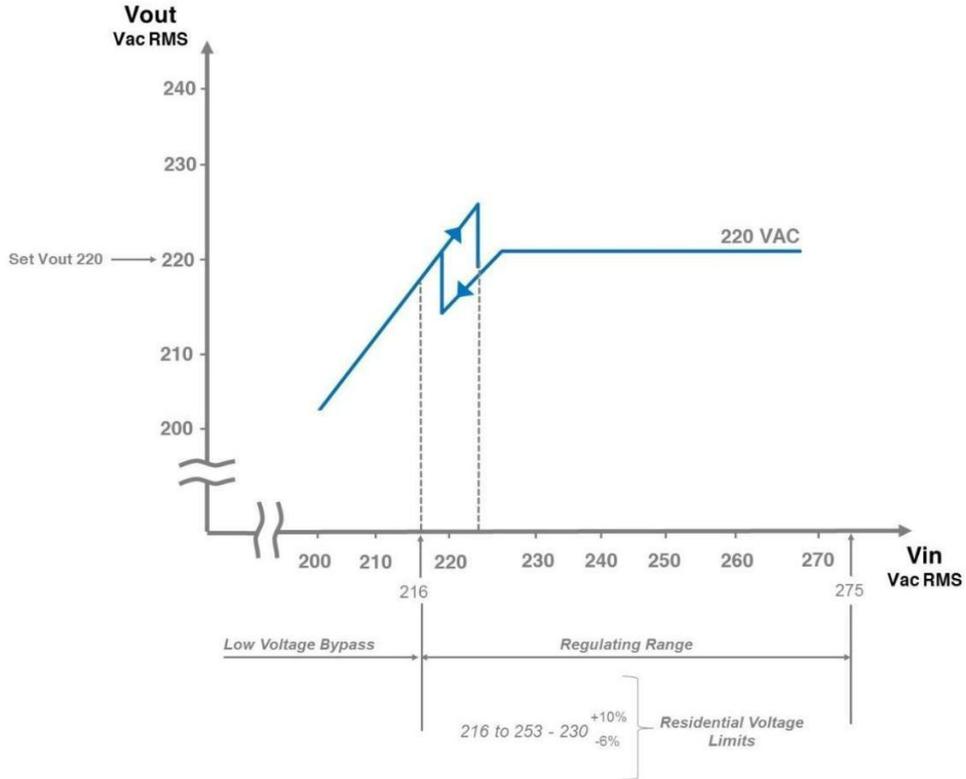
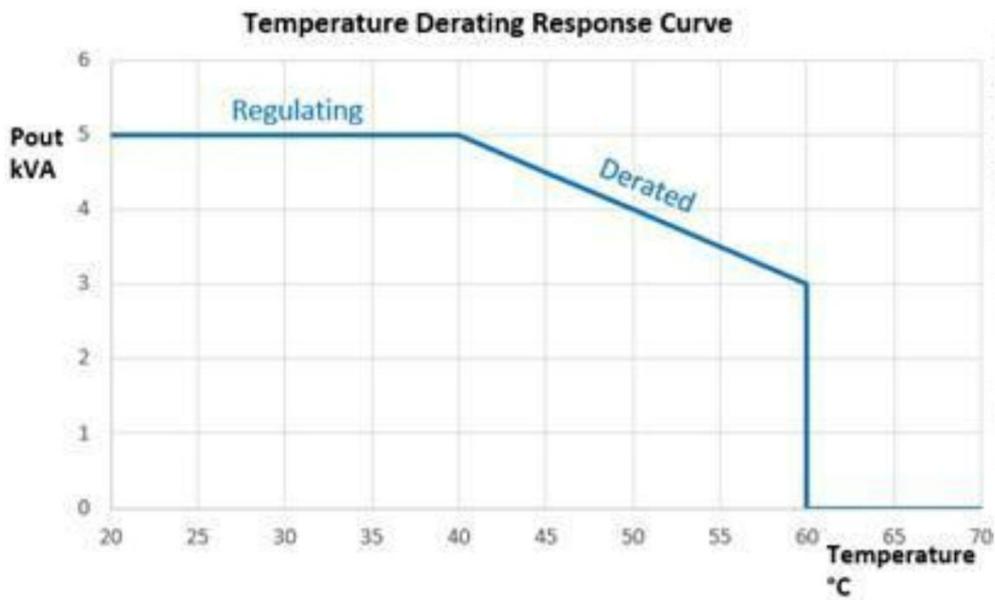


Fig 2 – Temperature Derating



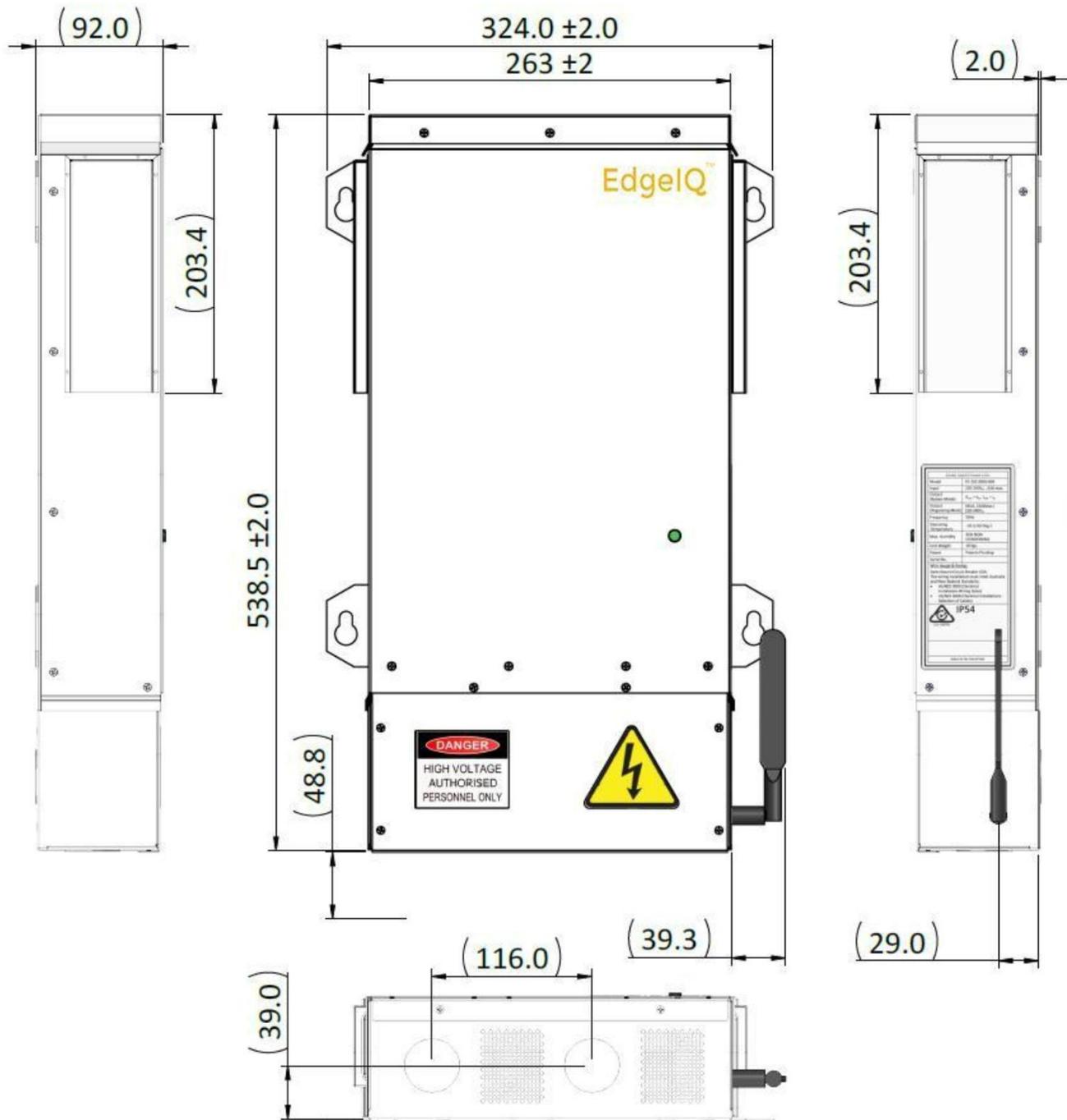
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UNIT DIMENSIONS



Contact

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