

MEtaPower

Scalable Utility Inverter

A CENTRAL INVERTER FOR UTILITY SCALE APPLICATIONS

Complete solution; Cost Effective; Reliable Power Generation

Ario's MEtaPower Inverter has been designed to optimise utility scale solar power plants. The inverter cost is only a fraction of the total solar plant investment, but it holds the key to the total solar plant efficiency, cost and reliability.

The MEtaPower Inverter is modular and scalable, with customised installation options to suit the specific requirement of the client's site. The inverter design provides a unique balance of central inverter and string inverter attributes. Conversion economies of scale are created by clustering and interleaving 180kVA inverter modules to produce conversion blocks of several MVA. The modular design increases solar MPPT tracking, whilst making it easier and less costly to transport, install and maintain. This is a crucial benefit to large solar farms that are erected far from proper road access. The MEtaPower Inverters are fully qualified to international standards.

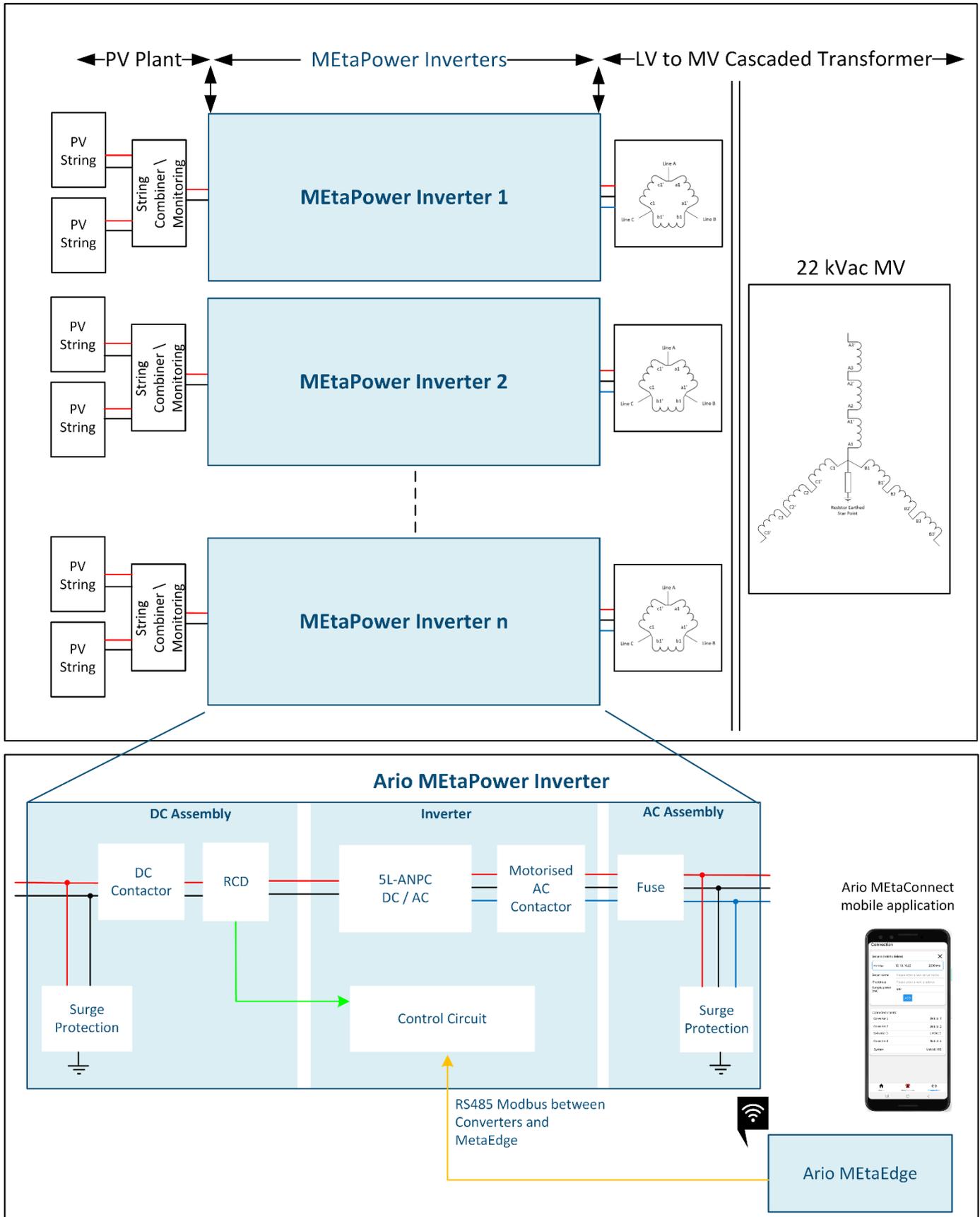
Key Features of MEtaPower Central Inverters

- Customised solution tailored to the site requirements.
- Night-time Power Factor correction.
- Modularity decreases downtime and loss of power.
- Configurable for easy upscale.
- High Power Density.
- Fault Tolerance Protection.
- Ethernet and Wi-Fi communication options.
- Easy configuration and commissioning with mobile application.
- Remote monitoring.
- Maximum Power Point Tracking on Solar input.



Installation options

Ario MEtaPower Inverters can be configured to suit the application. The installation can be done using modular units or delivered ready for operation, in a containerised or skid solution.

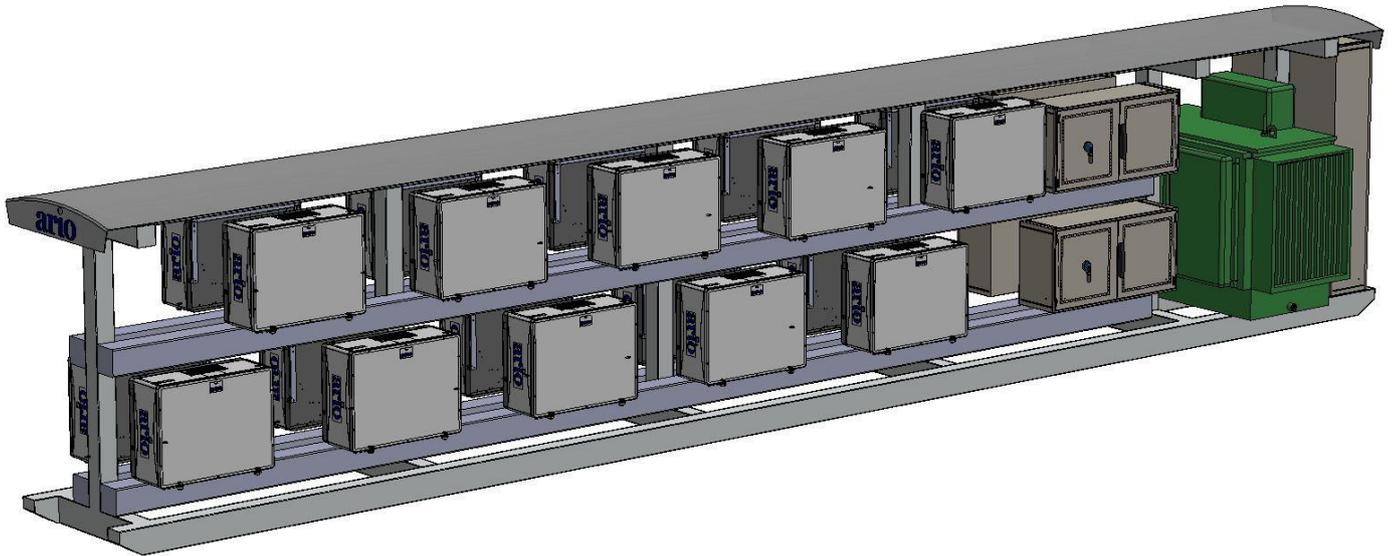


Specification

Datasheet – 3.6MVA System

DC Input data			
Operating range (MPPT)	580V - 1100V	790V – 1500V	990V – 1500V
Max. discharging / charging current	3.62kA		
Max. short circuit current	5.4kA		
Number of DC connections/Inverters	20		
AC Input / Output data			
Rated output	2.1 MVA at 400Vac	2.8 MVA at 550Vac	3.6 MVA at 690Vac
Line voltage	380V – 690Vac (3/PEN)		
Rate frequency (range)	50/60 Hz (42 - 68 Hz)		
Rated current	3 x 3.04 kA		
cos phi	0.8 ind. - 0.8 cap		
Grid connected current THD	<3%		
General data			
Max. efficiency	98.40% at 400Vac		
European efficiency	97.20%		
CEC efficiency	97.30%		
Parallel operation	Microgrid/Voltage and Frequency Droop control		
Circuitry topology	Multilevel		
Protective Functions	Overload protection; Overcurrent protection; Anti-islanding; Under/overvoltage; Over/under frequency		
Mechanical data			
Display	LEDs		
Interfaces	RS485 [Modbus RTU] Ethernet 100BaseTX [Modbus TCP/IP] CAN		
Fault signalling relay	Potential-free NOC max. 30V/1A		
Ambient temperature	Operating range: -20°C to +60°C		
Humidity	95% Non-condensing		
Min. distance from coast	2000 m		
Cooling	Temperature controlled fan		
Protection class	IP 66		
Noise emissions	<75dBA @ 1m		
H x W x D	(2.6x 12.2 x 2.5) m		
Weight	15 000 kg		
Certifications			
Safety	IEC 62109 -1/-2, EN 61000-6-2/-4		
Grid code connection	RPP 3.0, NRS 097		

System Skid Presentation



MEtaPower
turbine inverter

MEtaPower
Converter



MEtaPower Converters:

Utility Solar Inverters, fully integrated Hybrid and Battery inverters, Variable Speed Drives, Diesel Generator integration and Complete Turbine solutions from Ario - minimises costs and installation risk. Ario inverters' robust design and durability with backup from an innovative engineering team delivers customisable, modular solutions for new and existing installations.

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