

# ZGR-CTR4500 UL

## CENTRAL MODULAR PV INVERTER

ZGR-CTR4500 guarantees **Max Power up to 50°C** with high performance in medium and large-sized PV plants.

The ZGR-CTR4500 modular inverters have been specifically designed to take advantage of the performance and increase the power density in medium-sized PV generators and large plants.

They have a high-power density per unit volume, making possible a significant reduction in the space required for the implementation of PV inverters in utility-scale plants.

Another very important feature is its reactive regulation and its capabilities regarding communications between the inverters and centralized control and supervision systems. The ZGR-CTR4500 inverters adapt to various regulations to meet the requirements for response to voltage dips without disconnection.

They are perfect for medium-large PV Utility-Scale projects and are specifically designed to operate under severe climatic conditions.

### Characteristics

- Maximum Power Point Tracking (MPPT).
- High efficiency > 99.8%.
- Very low harmonic distortion, THD < 3%.
- Adjustable power factor.
- Anti-island protection with automatic disconnection.
- Quick response to changes in the set point.
- Wide range of working temperatures, from -20°C to +60°C.
- Maximum Power without derating up to 50°C.
- Scalable and modular using power modules.
- AC protections:
  - Short-circuits and overloads.
  - Overvoltages and voltage drops.
  - Over frequencies and frequency drops
- NEMA 3R Protection Level.
- Maximum operation altitude up to 4,000 m.
- Low-cost maintenance.
- Remote monitoring.
- Support for voltage sags.
- Protection against:
  - Reverse polarity.
  - Short-circuits.
  - Overvoltages.



### Applications



TECHNICAL SPECIFICATIONS	
Model	ZGR-CTR4500
Power modules	6
DC INPUT	
Max power voltage range (Pmax)	975 1500 V
Number of MPPT's	1-2 (configurable upon request)
Max DC voltage, V dc max	1500 V
Max input current, Idc	4620 A
Max short circuit current, Isc	6930 A
Max N° input	36
Overvoltage category	OVC II
AC OUTPUT	
Nominal Power with cos phi = (@ 50°C)	4500 kW
Nominal output current, Iac	3762 A
Nominal voltage	690 Vac ± 10%
THDi	<3% at nominal power
Power Factor range	0,5 lead - 0,5 lag (configurable)
Grid frequency AC / range	60 Hz ±5 Hz
Maximum short circuit current, Isc (Breaking capacity)	65 kA
Maximum fault current (Ipeak 5 mseg)	9750 A
Output overcurrent electronic protection (2 seg)	4512 A
Output overcurrent protection (<500 mseg)	7524 A
Overvoltage category	OVC III
EFFICIENCY	
Max	98,8% ± 0,1%
PROTECTIONS	
DC connection protection	Fuse + DC breaker
AC connection protection	AC breaker
DC surge protection	Surge arrester, type II
AC surge protection	Surge arrester, type II
Ground fault monitoring	GFDI / (Isolation monitoring optional)
Degree of protection: (according to IEC 60529)	Outdoor - NEMA 3R
PHYSICAL AND ENVIRONMENTAL	
Dimmensions (H x W x L)	2529 x 2014 x 4053 mm
Approx. Weight	6200 Kg
Self-consumption (stand-by)	< 250 W
Internal auxiliary power supply	Integrated transformer
Operating temperature range	-20°C - +60°C (Max power up to 50°C)
Noise emissions	<65 dB @ 10m
Max. relative humidity (without condensation)	0% to 95%
Protection class	Class I
Max. operating altitude (without derating / with derating)	2000 m / 4000 m
Air consumption	24000 m3 / h
DC connection	Connection for cable terminal for each inlet (one per pole)
AC connection	Connect0in for cable terminal for each inlet (one per phase)
Enclosure colour	RAL 7035
COMMUNICATIONS	
Communications	Ethernet, Modbus TCP
CERTIFICATIONS & COMPLIANCE	
Standards	UL 1745SB; UL 1998; NEC2023; UNE-EN IEC 62109-1; UNE-EN IEC 62109-2; CISPR 11/ EN 55011 + AMD1 + AMD2; EN 61000-6-2; UNE 217002

\*Specifications subject to change