

# ZGR-CTR3000/4500 IEC

## CENTRAL MODULAR PV INVERTER

ZGR-CTR3000/4500 guarantees **Max Power up to 50°C** with high performance in medium and large-sized PV plants.

The ZGR-CTR3000/4500 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-CTR3000/4500 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
- IP55 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-CTR3000	ZGR-CTR4500
Power modules	4	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	3080 A	4620 A
Max short circuit current, Isc	4620 A	6930 A
Max N° input	24	36
Overvoltage category	OVC II	
AC OUTPUT		
Nominal Power with cos phi = (@ 50°C)	3000 kW	4500 kW
Nominal output current, Iac	2508 A	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	50 Hz ±5 Hz	
Maximum short circuit current, Isc (Breaking capacity)	65 kA	
Maximum fault current (Ipeak 5 mseg)	6500 A	9750 A
Output overcurrent electronic protection (2 seg)	3008 A	4512 A
Output overcurrent protection (<500 mseg)	5016 A	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 - IP55	
PHYSICAL AND ENVIRONMENTAL		
Dimmensions (H x W x L)	2529 x 2014 x 2850 mm	2529 x 2014 x 4053 mm
Approx. Weight	5250 Kg	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	16000 m3 / h	24000 m3 / h
DC connection	Connection for cable terminal for each inlet (one per pole)	
AC connection	Connection for cable terminal for each inlet (one per phase)	
Enclosure colour	RAL 7035	
COMMUNICATIONS		
Communications	Ethernet, Modbus TCP	
CERTIFICATIONS & COMPLIANCE		
Standards	UNE-EN IEC 62109-1; UNE-EN IEC 62109-2; CISPR 11/EN 55011 + AMD1 + AMD2; EN 61000-6-2; NTS UE 2016/631 Rev 2.1; NTS P.O.12.2 SENP; UNE 217002	

\*Specifications subject to change