



## Three Phase String Inverter **Trio Zen Series** 40 / 45 / 50

*Simple. Reliable. Efficient*



High  
Efficiency



Zero  
Export



Wide  
Voltage Range



High PV  
Voltage



Remote  
Monitoring



IP65

40.0kW

45.0kW

50.0kW

## **Trio Zen 40K / Trio Zen 45K / Trio Zen 50K /**



Trio Zen Series provides high-capacity three-phase string inverter solutions designed for medium to large-scale commercial and industrial solar energy projects. Its advanced multi-MPPT architecture supports maximum energy yield even in complex PV configurations, while high efficiency and a wide output voltage range ensure strong and stable grid interaction. With a durable mechanical design, efficient thermal management, and comprehensive protection features, the Trio Zen Series is a reliable solution for long-term, high-performance solar installations.



	Trio Zen 40K	Trio Zen 45K	Trio Zen 50K
<b>PV STRING INPUT DATA</b>			
Max. PV Input Power (kW)	52	58.5	65
Max. PV Input Voltage (V)		1100	
Start-up Voltage (V)		250	
MPPT Voltage Range (V)		200-1000	
Rated PV Input Voltage (V)		600	
Max. Operating PV Input Current (A)	40+40+40		40+40+40+40
Max. Input Short Circuit Current (A)	60+60+60		60+60+60+60
No. of MPP Trackers			
No. of Strings MPP Tracker	3/3+3+3		4/3+3+3+3
<b>AC OUTPUT SIDE</b>			
Rated AC Output Active Power (kW)	40	45	50
Max. AC Output Apparent Power (kVA)	44	49.5	55
Rated AC Output Current (A)	60.6/58	68.2/65.2	75.8/72.5
Max. AC Output Current (A)	66.7/63.8	75/71.7	83.3/79.7
Rated Output Voltage/Range (V)		220/380V, 230/400V	0.85Un-1.1Un
Grid Connection Form		3L/N/PE	
Rated Output Grid Frequency/Range (Hz)		50/45-55, 60/55-65	
Power Factor Adjustment Range		0.8 leading to 0.8 lagging	
Total Current Harmonic Distortion THDi		<3%	
DC Injection Current		<0.5% In	
<b>EFFICIENCY</b>			
Max. Efficiency		98.7%	
Euro Efficiency		98.1%	
MPPT Efficiency		>99%	
<b>EQUIPMENT PROTECTION</b>			
DC Reverse Polarity Protection		Yes	
AC Output Overcurrent Protection		Yes	
AC Output Overvoltage Protection		Yes	
AC Output Short Circuit Protection		Yes	
Thermal Protection		Yes	
Insulation Impedance Detection		Yes	
DC Component Monitoring		Yes	
Arc Fault Circuit Interrupter (AFCI)		Optional	
Anti-islanding Protection		Yes	
Residual Current Detection		Yes	
Surge Protection Level		TYPE II(DC), TYPE II(AC)	
DC Switch		Yes	
<b>INTERFACE</b>			
Communication Interface		RS485/RS232	
Monitor Mode		GPRS/WIFI/Bluetooth/4G/LAN(optional)	
<b>GENERAL DATA</b>			
Operating Temperature Range (°C)		-25 to +60°C, >45°C Derating	
Permissible Ambient Humidity		0-100%	
Permissible Altitude (m)		4000m	
Noise (dB)		<65	
Ingress Protection (IP) Rating		IP 65	
Inverter Topology		Non-Isolated	
Over Voltage Category		OVC II(DC), OVC III(AC)	
Cabinet Size (WxHxD mm) (Excluding Connectors and Brackets)		434x570x243	
Weight (kg)		39	
Warranty		5 Years	
Type of Cooling		Intelligent Air Cooling	
Grid Regulation		IEC 61727, IEC 62116, EN 50549	
Safety EMC/Standard		IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2	