

COMPACT SERIES from 1 kVA to 4 kVA**Description**

EXZON Inverters type ID are a product of many years experience in the field of power conditioning system. The units are used for secure AC power supply of e.g.:

- Control systems in power station
- Control and monitoring devices
- Solar systems
- Data processing systems

The inverter uses the Insulated Gate Bi-polar Transistors (IGBT's) to produce a pure sine wave and combined with the microprocessor based design to provide tight regulation, Low THD, quick dynamic response and high accuracy output frequency synchronized to line voltage. A front mimic display is provided to monitor operation and alarm.

The output harmonic distortion (THD) was controlled by a Pattern Pulse Width Modulation controller (PPWM) and an output filter to maintain THD of the output voltage to the specified limits. The inverter input and output have surge protection to ensure in the event that there are surges or spikes voltage pass through the line.

The Inverter input is protected by fast acting fusing to prevent the damage to the solid-state devices in the inverter bridges and the output is used electrically current limited. Others protection are implement such over current shutdown, overload transfer and low battery voltage shutdown.

The COMPACT Series are designed for 2 type:-

1. **ON-LINE Operation:** the inverter mainly supply to the critical loads. The Static Transfer Switch (SSW) is provided as (Option). In case of the inverter fail, the transfer switch automatically switches the critical loads from the inverter to the utility power. When utility power returns, the transfer switch automatically switches the loads back.
2. **OFF-LINE Operation:** same application as emergency supply. In normal operation, the inverter in standby mode. Should the AC Source fail, the inverter automatically start and supply the backup AC power to loads.

The manually operated maintenance bypass(Option) switch is designed for application when the inverter failed and need to remove for maintenance. It permits bypassing the critical loads from the inverter to the utility power without interruption of power to those loads.



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Type Table	Input	Output	Output	Input	Physical (mm)			Weight
	[V]	[VA]	[W]	[A]	Height	Width	Depth	[Kg]
ID1-24/240-1K	24	1000	800	TBA	545	350	500	50
ID1-24/240-2K	24	2000	1600	TBA	545	350	500	50
ID1-24/240-3K	24	3000	2400	TBA	545	350	500	55
ID1-48/240-1K	48	1000	800	TBA	545	350	500	50
ID1-48/240-2K	48	2000	1600	TBA	545	350	500	55
ID1-48/240-3K	48	3000	2400	TBA	545	350	500	65
ID1-48/240-4K	48	4000	3200	TBA	545	350	500	70
ID1-110/240-1K	110/125	1000	800	TBA	545	350	500	60
ID1-110/240-2K	110/125	2000	1600	TBA	545	350	500	65
ID1-110/240-3K	110/125	3000	2400	TBA	715	350	500	75
ID1-110/240-4K	110/125	4000	3200	TBA	715	350	500	85

Technical Data

DC Input

Voltages: 24/48/110/125
 Voltage range: 20-32 / 40-64 / 99-144
 Permissible ripple voltage on DC rail < 5%rms.

AC Output

Voltages : 220/230/240VAC selectable
 Voltage regulation (static): +/- 2% (linear load)
 (dynamic): +/- 5%
 Correction time: < 25msec.
 Frequency : 50/60Hz +/- 0.5%
 Overload: <100% - 120% 30 min
 <120% - 150% 1 min
 <150% shutdown
 Short-circuit behavior: short-circuit proof
 Harmonic Distortion: < 5% total THD
 Load Power Factor: < 0.8

Conversion Efficiency

Inverter DC-AC > 80%, 75% for 24VDC

Environmental

Ambient Temperature: 0°C to 40°C
 Relative Humidity: 0-95% non-condensing
 Audible Noise: 65dB(A) at 1.0 m.
 Cooling: Automatic thermal control cooling fan

Alarm Indicators

Bypass AC source fail
 Low DC voltage
 Inverter fail
 SSW @ Bypass AC source
 SSW @ Inverter

Transfer Switch

Type : Static transfer switch
 ON-LINE operation
 Transfer time: zero (Inverter to bypass)
 Retransfer time: < 2ms (Bypass to inverter)
 OFF-LINE operation
 Transfer time: < 3ms (Bypass to inverter)
 Retransfer time: < 3ms (Inverter to bypass)
 Transfer Criteria: Inverter Bridge Failure
 Output overload
 Retransfer Criteria: Inverter in operational

Manual Bypass Switch(Optional)

Switch Style: 600VAC, rotary drum, make-before-break switching manually

Transfer Criteria:

Enclosure protection

Painting IP20 - STD.
 Epoxy powder-painted, Light grey

Basic Inverter Unit

- Inverter module
- Circuit Breakers - MCBs
- DC Input
- Inverter Output
- Bypass AC Source
- Meter
- Inverter Output Voltmeter
- Inverter Output Ammeter(Optional)
- Inverter Output Frequency Meter(Optional)
- Transfer Switch

OPTIONS

- Alarm Contacts(Optional)
- Fast fuse for Transfer switch(Optional)
- Manual Bypass Switch(Optional)
- Voltage Regulator(Optional)
- Output voltage +/-2% or +/-5%
- Alternate Source Transformer(Optional)
- Isolated Transformer 1phase or 3phase

NOTE : Some Options cause the dimensions differ from type table.