



## Power Management Instruments

Online UPS

Industrial UPS

DC Battery Charger

Electronic pf Corrector Systems

Microprocessor Controlled Voltage Stabilizers

Inverter

# Inverter for Alternative Energy Applications

GESS Off-Grid Inverter topology consists of 3 full-bridge microprocessor-controlled high frequency IGBT switching at 20kHz and output isolation transformer. With this topology the output waveform has no distortion for neither non-linear nor reactive loads.

Having mono-phase and three-phase alternatives GESS Inverter systems are ideal for off-grid solar applications, wind turbine systems and for specific requirements of mission-critical processes where there is a need for reliable AC/DC conversion.

## MONOPHASE INVERTER (DC/AC CONVERTER) SYSTEMS

	INV-1000	INV-2000	INV-3000	INV-4000	INV-5000	INV-7500	INV-10000	INV-15000
Output Power	1000 VA	2000 VA	3000 VA	4000 VA	5000 VA	7500 VA	10 KVA	15 KVA
Power Factor	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Output Voltage	220 VAC/ 230 VAC ±1%	220 VAC/ 230 VAC ±1%	220 VAC/ 230 VAC ±1%	220 VAC/ 230 VAC ±1%	220 VAC/ 230 VAC ±1%	220 VAC/ 230 VAC ±1%	220 VAC/ 230 VAC ±1%	220 VAC/ 230 VAC ±1%
Input DC Voltage	24 VDC	48 VDC	120 VDC	120 VDC	144 VDC	144 VDC	144 VDC	144 VDC
DC Voltage Operating Range	20-30 VDC	40-60 VDC	100-150 VDC	100-150 VDC	120-180 VDC	120-180 VDC	120-180 VDC	120-180 VDC
Efficiency (Full Load)	90%	92%	94%	95%	95%	95%	95%	95%
Operating Topology	Microcontrolled High Frequency IGBT PWM with Output Isolation Transformer							
Protection	Short Circuit, Overload, Over Temperature, Over Voltage							
Dimension (HxWxD) in mm	810x355x485	810x355x485	810x355x485	1020x490x590	1020x490x590	1020x490x590	1020x490x590	1220x495x600
Weight in kg	71	110	110	120	177	200	238	286
Operating Temperature	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C

## THREEPHASE INVERTER (DC/AC CONVERTER) SYSTEMS

	INV-3/10	INV-3/15	INV-3/20	INV-3/30	INV-3/40	INV-3/80	INV-3/120	INV-3/150
Output Power	10 KVA	15 KVA	20 KVA	30 KVA	40 KVA	80 KVA	120 KVA	150 KVA
Power Factor	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Output Voltage	380 VAC 400 VAC ±1%	380 VAC 400 VAC ±1%	380 VAC 400 VAC ±1%	380 VAC 400 VAC ±1%	380 VAC 400 VAC ±1%	380 VAC 400 VAC ±1%	380 VAC 400 VAC ±1%	380 VAC 400 VAC ±1%
Input DC Voltage	264 VDC	264 VDC	264 VDC	264 VDC	264 VDC	360 VDC	360 VDC	360 VDC
DC Voltage Operating Range	220-330 VDC	220-330VDC	220-330VDC	220-330VDC	220-330VDC	300-450 VDC	300-450VDC	300-450VDC
Efficiency (Full Load)	90%	92%	94%	95%	95%	95%	95%	95%
Operating Topology	Microcontrolled High Frequency IGBT PWM with Output Isolation Transformer							
Protection	Short Circuit, Overload, Over Temperature, Over Voltage							
Dimension (HxWxD) in mm	1230x510x715	1230x510x715	1430x600x810	1430x600x810	1550x660x910	1700x780x960	1900x1350x800	1900x1350x800
Weight in kg	240	298	392	425	470	600	1110	1300
Operating Temperature	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C	-10 C / +50 C



# Inverter With Built-In Charger

GESS Inverter with built-in Charger(Rectifier) is designed for toughest loads such as air conditioner, refrigerator and vacuum cleaners etc. Unlike SMPS type inverters, GESS inverter offers long life time and complete load security with its industrial thyristor controlled rectifier, IGBT controlled inverter and output galvanic isolation transformer.

## PRODUCT FEATURES

- In-built thyristor controlled rectifier/charger
- IGBT controlled inverter with galvanic isolation transformer
- Automatic By-Pass at mains failure.
- Reliable operation for all loads at mains failure.
- Maintenance free, quiet, no smelling, no smoky.
- Economical and high efficiency.
- Easy operation, small dimensions and long life.



## SPECIFICATIONS

MODEL	OUTPUT POWER	BATTERY INPUT	DIMENSIONS (mm)	WEIGHT (kg)
JEN-1000	1000 VA	24 VDC	570 (H) x 290 (W) x 400 (D)	15
JEN-2000	2000 VA	24 VDC	570 (H) x 290 (W) x 400 (D)	30
JEN-3000	3000 VA	48 VDC	570 (H) x 290 (W) x 400 (D)	40
JEN-4000	4000 VA	48 VDC	570 (H) x 290 (W) x 400 (D)	45

## TECHNICAL FEATURES

### INTERNAL CHARGER/RECTIFIER SPECIFICATIONS

Line Input	110VAC / 220 VAC /230VAC $\pm$ 15%
Frequency	50 Hz & 60Hz
Line Protection	Over Current thermic fuse, overload varistor

Internal Charger is thyristor controlled in-built system and has constant current and constant voltage charging capability. With this capability in-built charger is able to charge any type of battery effectively

### INVERTER SPECIFICATIONS

Output Voltage	110VAC / 220 VAC/230VAC $\pm$ 2 %
Frequency	50 Hz & 60Hz
Output Wave Form	Short circuit, over load and over
Output Protection	Short circuit, over load and over voltage protection

Inverter topology consists of IGBT modules with isolation transformer creating pure sine wave at the output. Having a galvanic isolation transformer the system is perfectly isolated against the mains and charger failures

### GENERAL SPECIFICATION

Control Panel	Led indications, LCD Panels < 1 sec. Line / < 1 sec. Generator
Transfer Time	< 1 sec. Line / < 1 sec. Generator



Power Management Instruments

#### GROUP COMPANIES

Ortadođu Elektronik Sanayi Ltd. Őti.  
Karmet Makina Elektronik Tasarım A.S.  
PMI Elektrik Sistemleri Dis Tic. Ltd. Sti

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PMI/OES reserves the right to make alterations on technical specifications.



Design by: ARTVENTURE [www.artventuredesign.com](http://www.artventuredesign.com)

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