

# ISGA

## Single Phase Solar Inverter



- Wide MPP input range from 150 to 450V
- Range from 2 to 5.5kW
- 1 or 2 MPP independent input strings
- Mimic LCD display
- Built in communication on all models
- Advanced DSP control technology
- IP 65/NEMA 3 R protection degree
- UL1741, CSA, IEEE1547 and FCC conformity
- CEC Rated

### Approvals



- UL1741 2nd Ed 2010
- CAN/CSA 22.2 n°107.1-01 2001/2006

### General Description

Transformerless ISGA series inverters from Carlo Gavazzi are available in 4 sizes with AC rated outputs ranging from 2.2kW up to 5.5kW. The use of advanced technology DSP control enables accurate and fast operation of the MPP tracking circuit which turns into high yield. The intuitive mimic display allows easy setup of the

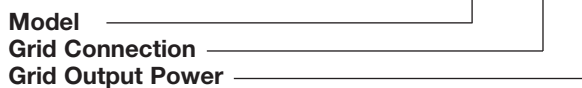
unit and provides to the user many useful information of the main production parameters: String by string voltage, current and power, output voltage, current and power, energy yield, inner and heatsink temperature, error and status messages. The 3 LEDs on the side of the display provide information about the unit status at a

glance. The ISGA inverters have a protection degree IP 65 / NEMA 3R and are thus suitable for indoor as well as outdoor installation, furthermore they are very quiet, as they not utilize a cooling fan. Long lifetime is ensured by high rating components and a thermal management design aimed to reduce components thermal

stress. ISGA inverters are particularly robust when it comes to grid faults, guaranteeing uninterrupted energy production even on highly disturbed utility grids.

### Ordering Key

**ISGA 1 53**



### Selection Model

<b>Grid Connection</b> Single Phase	<b>1</b>
<b>Grid Output Power</b> 2.2kW 3.3kW 4.4kW 5.5kW	<b>22</b> <b>33</b> <b>42</b> <b>53</b>

### General Features

Model	ISGA 1 22	ISGA 1 33	ISGA 1 42	ISGA 1 53
Max. efficiency	96.4%	96.3%	96.2%	96.2%
EU efficiency	95.5%	95.5%	95.6%	95.3%
CEC EFF	94.5%	95.0%	95.5%	95.5%
Stand-by consumption	0.1W			
Night consumption	0.25W		0.2W	
Noise	< 30dB			
Protection device	Yes			
Anti-islanding monitoring	Yes			
Grid monitoring	According to IEEE 1547, IEEE 1547.1, NEC Art 690			

## Photovoltaic DC Input Data

Model	ISGA 1 22	ISGA 1 33	ISGA 1 42	ISGA 1 53
Nominal DC power	2kW	3kW	4kW	5kW
Max. recommended DC power	2.5kW	3.5kW	4.5kW	5.5kW
Max. DC voltage	500VDC			
Min. DC voltage (P <sub>nom</sub> )	120VDC			
MPP voltage range	150...450V			
DC current nominal per each string	14.6A	22A	14.6A	18.3A
Number of MPP trackers	1		2	
Number of strings	1		2	
Overvoltage protection	Yes			
Ground fault monitoring	Yes			
Polarity safeguard	Yes			
Surge Protection	Varistor			

## AC Output Data

Model	ISGA 1 22	ISGA 1 33	ISGA 1 42	ISGA 1 53
Rated Output AC power	2kW	3kW	4kW	5kW
Max. AC power @ 25°C / 77°F	2.2kW	3.3kW	4.4kW	5.5kW
Power factor	> 0.99			
Distortion factor (THD)	< 3%			
Grid connection	240VAC 1 phase / 3 wires (L1,N,L2); True sine-wave			
AC voltage range	211 ... 264VAC			
AC rated current	8.3A	12.5A	16.67A	20.8A
AC Max. current	9.2A	13.75A	19.13A	23.91A
Frequency range	60Hz (59.3Hz ... 60.5Hz)			

## Environmental Data

Model	ISGA 1 22	ISGA 1 33	ISGA 1 42	ISGA 1 53
Operating temperature @ P <sub>nom</sub>	-20°C ... +45°C / -4°F ... 113°F			
Storage temperature	-20°C ... +70°C / -4°F ... 158°F			
Cooling	Free air convection			
Protection degree	IP65 / NEMA 3R			
Maximum Altitude	2000m / 6561ft			
Installation location	external / internal, in a sheltered position from sun, water or dust			

## User Interface

Model	ISGA 1 22	ISGA 1 33	ISGA 1 42	ISGA 1 53
Display	LCD Graphic Display + 3 LEDs			
Keypad	4 keys membrane			
AC connectors	Connection box : screw terminals			
DC connectors	Connection box : screw terminals			
Disconnect	Connection box : AC/DC disconnect			
Serial interface connectors	Sub D 9 poles			
Optional Communication Slot (only one card can be installed)	RS485 card - cod. ISGA1-OP485    USB card - cod. ISGA1-OPUSB RELAY card - cod. ISGA1-OPDCR    TCP-IP card - cod. ISGA1-OPETH			

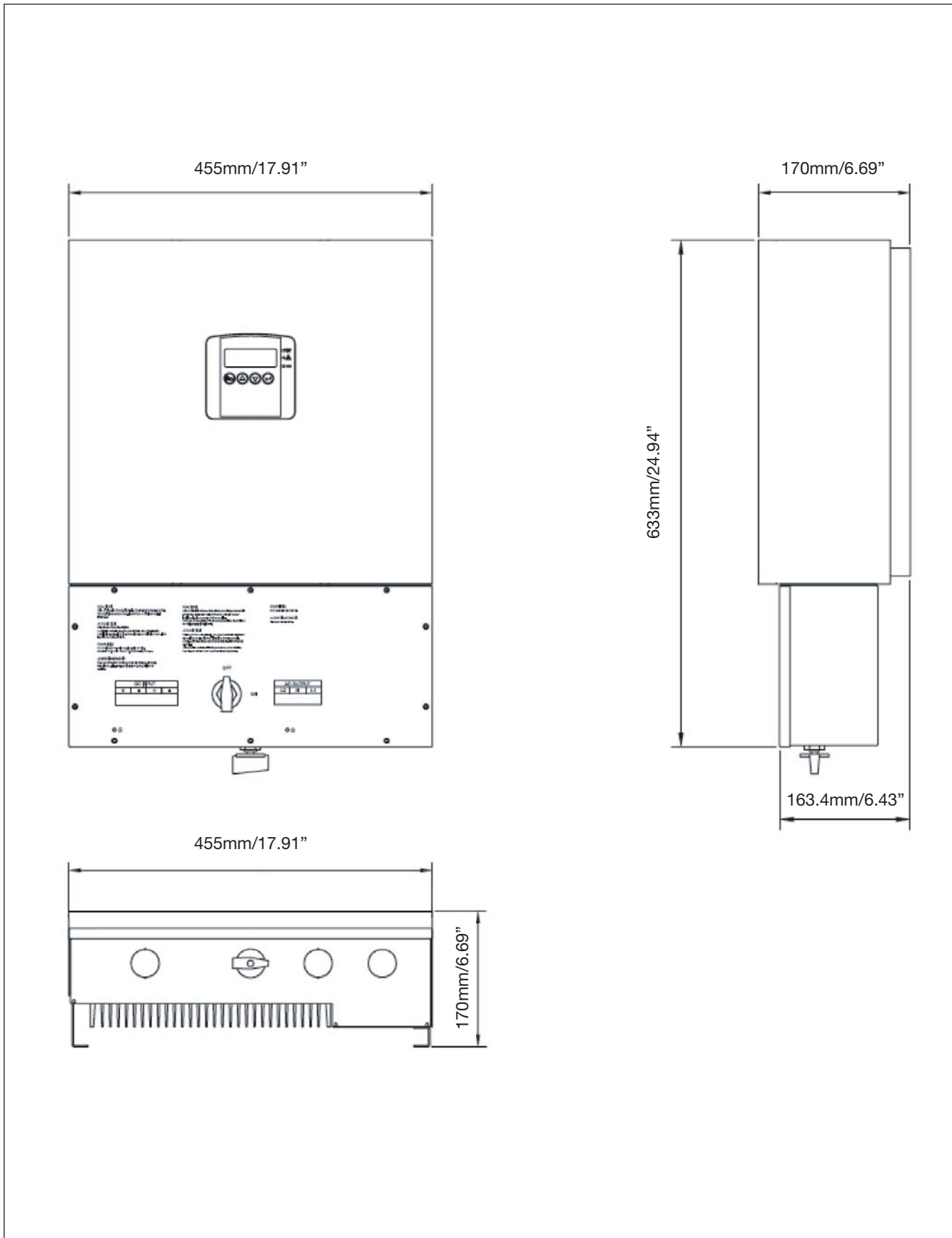
## Mechanical Data

Model	ISGA 1 22	ISGA 1 33	ISGA 1 42	ISGA 1 53
Housing material	power coated steel sheet			
Housing colour	RAL 7035			
Weight	28Kgb / 61.6lbs		35.5Kgb / 78.4lbs	

## Dimensions

Model	ISGA 1 22	ISGA 1 33	ISGA 1 42	ISGA 1 53
L x H x D    mm inches	455 x 633.5 (with Switch 660) x 170 17.91" x 24.94" (with Sw. 25.98") x 6.69"		455 x 713.5 (with Switch 740) x 170 17.91" x 28.09" (with Sw. 29.13") x 6.69"	

## Dimensions ISGA 1 22 - ISGA 1 33



## Dimensions ISGA 1 42 - ISGA 1 53

