ISMGT1
Solar Inverter with HF Transformer

CARLO GAVAZZI



ISMGT1

- High Frequency Coupling Transformer
- 3 or 4 Connectable Strings
- 100% Power up to 55°C
- Connectable to Single Phase Grid Without Neutral (PE)
- Integrated AC and DC Disconnection Switch
- Replaceable ground fuse
- Built in Communication
- Remote Monitoring SW
- 5+5 Year Warranty
- National Recommendations
  According to VDE0126, RD1663/2000, RD 661/2007, DK5940, G83

General Description

ISMGT1 Series Inverters are equipped with internal HF Transformer. The main advantage of this feature is that they can be used with "thin film" PV cells, which normally have positive ground polarisation. The Smart MPPT Technology provides high efficiency, up to 95,8% even at 20% of rated power. It is equipped with built-in switch in order to easily disconnect the DC input, and the inverter from the grid, in case of emergency or when service to system is required. The interface protection with anti-islanding can be set according to mayor european reccomendations, or with custom settings. Built in serial communication, RS232/RS485, with modbus protocol, together with Carlo GAVAZZI free monitoring software offer the possibility of controlling the production, and log data from remote. The inverter is equipped with up to 4 DC inputs in order to enhance flexibility during installation. The external fuse helder for ground fusing. ISMGT1 inverters can also feed phase/phase (without neutral) grids providing the VAC is within specified limits.

Ordering Key

ISMGT 1 28 DEN

- Model
- Grid connection
- Max. AC power
- Options
- Country

Options:
D = Switch (Standard Model)

Type Selection

Grid connection	
1	**Single Phase**
Max. AC power	
28	**2.8kW**
38	**3.8kW**
40	**4.0kW**
50	**5.0kW**
Country	
EN	**Europe**
ES	**Spain**
IT	**Italy**
DE	**Germany**
FR	**France**
UK	**Great Britain**

Approvals

CE RoHS COMPLIANT

RD 1663/2000 RD 661/2007 [1]

DK5940 Ed. 2.2 April 2007 [2]

G.83 [4]

VDE0126-1-1 [3]

Notes:
[1] Spanish Recommendation
[2] Italian Recommendation
[3] This Recommendation is currently adopted by: Germany, Austria, Belgium, France, Greece, Holland, Czech Republic, Poland, Portugal
[4] UK Recommendation

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. REV2 070211

CARLO GAVAZZI

Photovoltaic DC Input Data

Model	ISMGT 128	ISMGT 138	ISMGT 140	ISMGT 150
Nominal DC power	3.0kW	4.0kW	4.2kW	5.2kW
Max. DC power	3.1kW	4.1kW	4.3kW	5.3kW
Nominal voltage	550VDC			
Max. DC voltage	600VDC			
Min. DC voltage (P_{nom})	235VDC			
MPP voltage range	200-550VDC			
Max. DC current per each string	15A			
DC current range per each string	0 ÷ 15A			
Number of MPP trackers	1			
Max. No. of parallel strings for MPP	3	4		
Overvoltage protection	Yes			
Ground fault monitoring	Yes, with led indication			
Polarity safeguard	Diode + transformer insulation			
Surge absorption	Mov Varistor			

AC Output Data

Model	ISMGT 128	ISMGT 138	ISMGT 140	ISMGT 150
Nominal AC power	2.8kW	3.8kW	4.0kW	5.0kW
Max. AC power	2.8kW	3.8kW	4.0kW	5.0kW
Power factor	> 0.99 @ nominal power			
Distortion factor (THD)	< 3%			
Grid connection	Single phase, 230VAC			
AC voltage range	Depending upon setting 230VAC nominal			
AC nominal current	12.2A	16.6A	17.4A	21.8A
Max. AC current	12.2A	16.6A	17.4A	21.8A
Frequency range	Depending upon setting 50Hz Nominal			
Safety class	I			

General Features

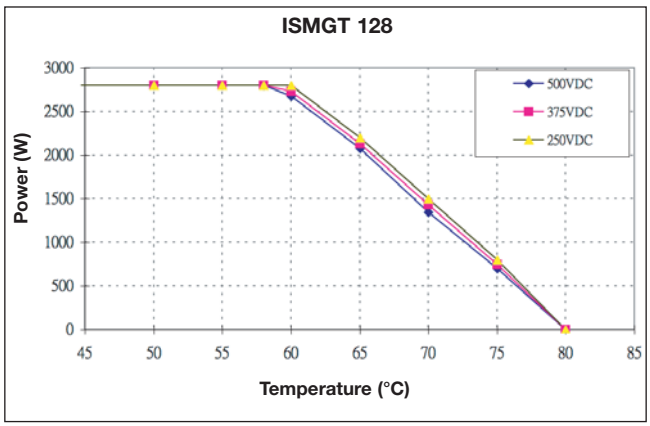
Model	ISMGT 128	ISMGT 138	ISMGT 140	ISMGT 150
Max. efficiency	96.4%		96.5%	
EU efficiency	95.4%	95.7%	95.8%	
Stand-by consumption				
Night consumption	0.5W			
Protection device	Grid monitoring system			
Anti-islanding monitoring	Yes			
Grid monitoring	Integrated interface protection (ES: according to RD 1663/2000; RD 661/2007) (IT: according to DK5940 Ed. 2.2 April 2007) (FR, EN, DE: according to VDE0126-1-1) (UK Recommendation G.83)			

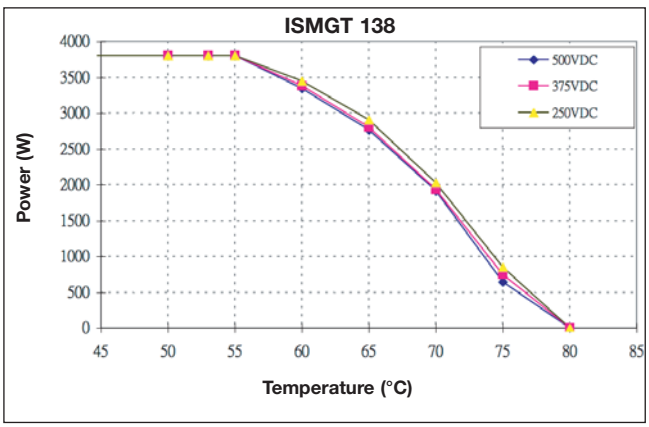
Environmental Data

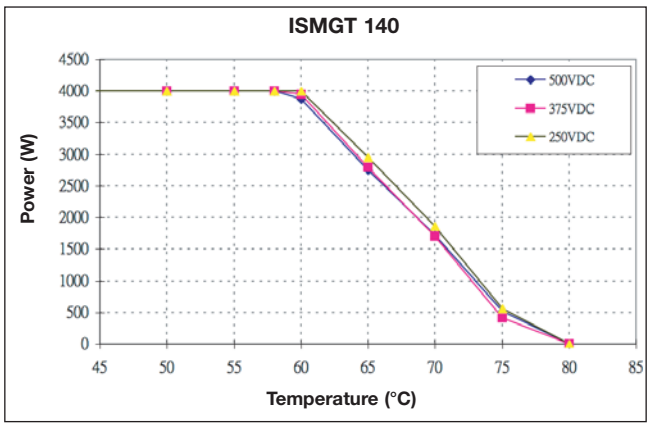
Model	ISMGT 128	ISMGT 138	ISMGT 140	ISMGT 150
Operating temperature range	-25°C...+65°C / -13°F..149°F			
Max. full power operating temperature without derating	+58°C / 136°F	+55°C / 131°F	+58°C / 136°F	+54°C / 129°F
Humidity	Max. 95%			
Temperature control	Automatic controlled by software			
Cooling	Convection	Controlled forced ventilation		
Protection degree	IP44			
Installation location	Indoor / Outdoor protected			

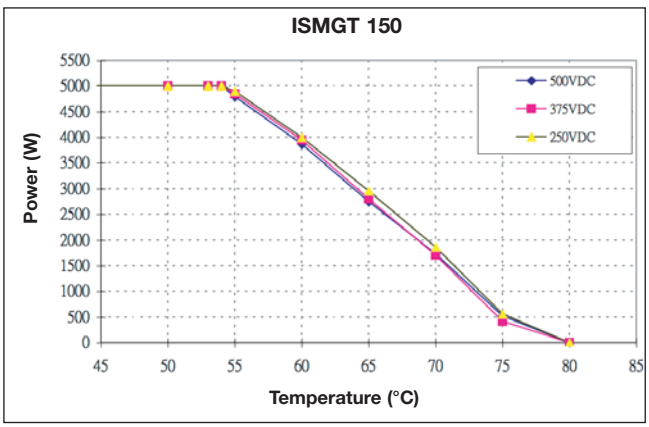
Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. REV2 070211

Derating

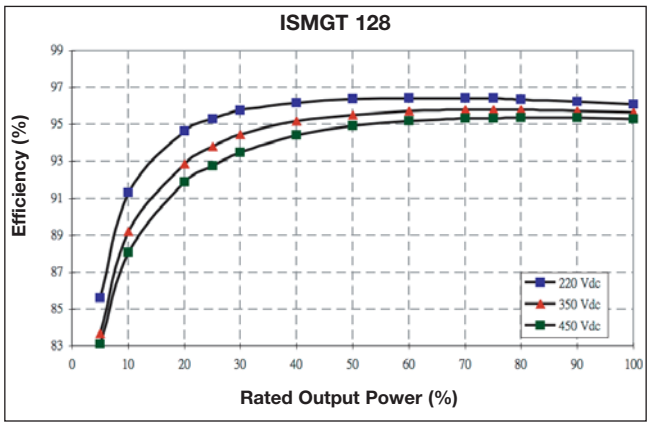


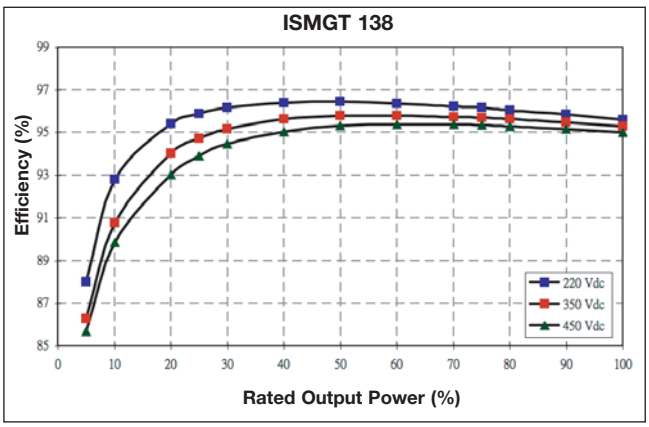


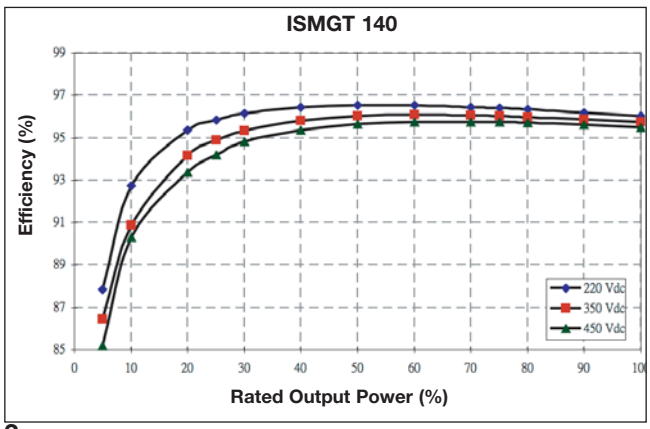


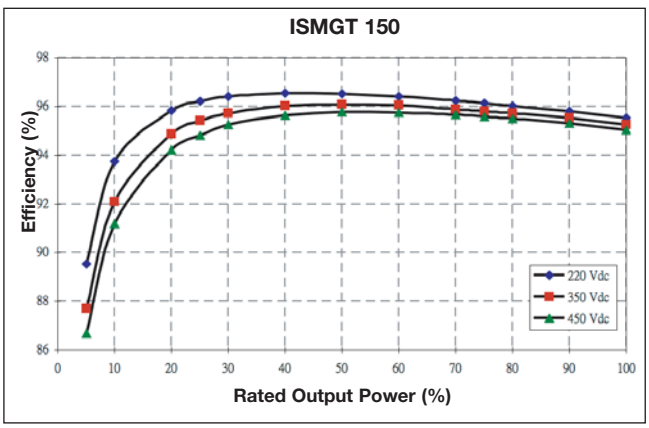


Efficiency









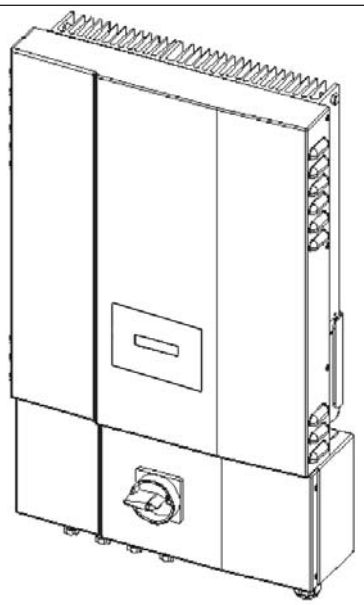
Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. REV2 070211

Mechanical Data

Model	ISMGT 128	ISMGT 138	ISMGT 140	ISMGT 150
Inverter Weight	23kg		28kg	
Shipping Weight	27kg		32kg	

Dimensions

Model	ISMGT 128	ISMGT 138	ISMGT 140	ISMGT 150
Inverter H x W x D mm inches	768x454x175 (+6.5 mounting supp.) 30.2”x17.9”x6.9” (+0.26” mounting supp.)		768x454x210 (+6.5 mounting supp.) 30.2”x17.9”x8.3” (+0.26” mounting supp.)	
Shipping H x W x D mm inches	840.5x540x275 (+6.5 mounting supp.) 33”x21.2”x10.8” (+0.26” mounting supp.)		840.5x548x275 (+6.5 mounting supp.) 33”x21.5”x12” (+0.26” mounting supp.)	



Mounting Plate

