

iMars Series Grid-tied Solar Inverters



Accessoires



WiFi 200 / GPRS
Via RS485 interface



Data Webbox
Support up to 16 inverters



APPs
for iOS and Android



Web monitoring
With INVT Cloud server

Description

BG series three phase inverter is a new generation of PV string inverters which has been developed by INVT for residential and small commercial customers. This series adopts the latest technologies and combination of T type three level topology with SVPWM. This series also has many outstanding advantages such as compact size, light weight, easy installation and maintenance, and most of all, competitive prices.

It also provides flexible system configuration and monitoring solutions for household and commercial systems.

Features

- The core technologies are from Germany.
- Software optimization for the power grid with much wider adaptability.
- Global integrated monitoring and management, supporting all kinds of portable mobile devices, HMI is optional.
- Wider voltage range, lower starting voltage and higher conversion efficiency.
- Designed with latest thermal simulation technology for longer service life.

iMars - BG4~10KTR



ACT witness Lab certified by TÜV SÜD



**G83/G59 C10/11
TF3.2.1 MEA PEA**



iMars PhoneExpert
(for iOS)



iMars PhoneExpert
(for Android)

Specification

	BG4KTR	BG5KTR	BG6KTR	BG8KTR	BG10KTR
Input (DC)					
Max. DC voltage (V)	900				
Starting voltage /Min. operation voltage (V)	220/180				
Starting power (W)	150				
MPPT operating voltage range / Rated voltage (V)	200-800/580				
Rated power voltage range (V)	210-800	260-800	300-800	400-800	450 - 800
Number of MPPT / String per MPPT	2/1				
Max. DC Power (W)	4200	5200	6200	8300	10400
Max. DC Current (A) Per MPPT x Number of MPPT	10x2	10x2	10x2	12x2	12x2
DC switch	Optional				
Output (AC)					
Rated power (W)	4000	5000	6000	8000	10000
Max. AC Current (A)	7	8.5	10	13	15
Rated. AC voltage range	3/PE, 230/400V (320~460V) ;3/PE,220/380V (320~460V). According to VDE0126-1-1, VDE-AR-N4105, CQC, G83/2,C10/11, AS4777/3100.				
Grid frequency	50Hz (44~55Hz) / 60Hz (54~65Hz) According to VDE0126-1-1, VDE-AR-N4105, CQC, G83/2,C10/11, AS4777/3100.				
Power factor	-0.8~+0.8 (Adjustable)				
THD	< 3% (at rated power)				
AC connection	Three-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE)				
System					
Cooling method	Natural Cooling method				
Max efficiency	98.10%	98.10%	98.20%	98.20%	98.20%
Euro-efficiency	97.50%	97.60%	97.70%	97.70%	97.70%
MPPT efficiency	99.9%				
Degree of protection	IP65				
Self-consumption (at night)	<0.5W				
Topology	Transformerless				
Operating temperature range	-25℃~+60℃ (derate after 45℃)				
Relative humidity	0~95%, no condensation				
Protection	DC isolation monitoring, grounding fault monitoring, island protection, overvoltage and short circuit protection, etc				
Noise	< 30dB			< 50dB	
Display and communication					
Display	2.1 inches LCD display, support backlit display				
System language	English, Chinese, German, Dutch				
Communication interfaces:	RS485 (Standard), WiFi, Ethernet (Optional)				
Mechanical parameters					
Dimension (H x W x D mm)	530x360x150			575x360x150	
Weight (kg)	20			23	
Installation	Wall mounting				
Others					
DC terminal	BC03A, BC03B (PV-FT-CF-C-4-300-BU (-); PV-FT-CM-C-4-300-RD (+), Helios H4 4mm²)				
Certifications	VDE0126-1-1, VDE-AR-N4105, G59/3, C10/11, AS4777/3100, CQC EN61000-6-1:4, EN61000-11:12, IEC62109-1:2010, PEA, LVRT				
Factory warranty (years)	5 (standard) / 10, 15, 20 (optional)				



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Y7/1-02 (V2.4)

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Description

iMars BG series three-phase grid-tied solar inverters adopt the latest technologies combination of T type three level topology and SVPWM, provide flexible system configuration and monitoring solutions for household, commercial and power plant systems.

Features

- Dual MPPTs work independently and allow unbalanced input power. One MPPT maximum input is up to 60% of Max. DC power.
- High efficiency and stable performance at entire input voltage and output power range.
- Max. efficiency is up to 98.6%.
- Wide input voltage range gives more possibilities for accepting different string configuration and different type of PV modules.
- Bus capacitors consist of advanced film capacitors, designed with the latest thermal simulation technology for longer lifespan.
- Integrated intelligent DC combiner and surge protection improve system's flexibility and lower the cost.
- 5V 200mA auxiliary DC power interface is optional for system expansion.
- AC output power is adjustable between 1-100%.
- Reactive power control and power factor adjustable: 0.8 leading ~ 0.8 lagging.
- RS485, Ethernet, WIFI communication modes are optional for realizing multiple monitoring solutions via PC, mobile phones, internet etc. platforms.

iMars - BG12~20KTR



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**G83/G59 C10/11
TF3.2.1 MEA PEA**



iMars PhoneExpert
(for iOS)



iMars PhoneExpert
(for Android)

Specification

	BG12KTR	BG15KTR	BG17KTR	BG20KTR-M
Input (DC)				
Max. DC voltage (V)	1000			
Starting voltage /Min. operation voltage (V)	200/180			300/200
Starting power (W)	150			
MPPT Operating Voltage Range (V) / Rated Voltage	180- 800/610V			280- 800/610V
Rated power voltage range (V)	350 - 800	400 - 800	400 - 800	450-800
Number Of MPPT / String Per MPPT	2/2			
Max. DC Power (W)	12500	15600	17500	20800
Max. DC Current (A) Per MPPT x Number Of MPPT	19x2	21x2	23x2	25x2
DC switch	Integrated			
Output (AC)				
Rated power (W)	12000	15000	17000	20000
Max AC Current (A)	20	24	28	32
Rated AC Voltage And Range/ Rated Grid frequency And Range	3/PE, 230/400V, (320~460V), 3/PE,220/380V, (320~460V)			
	50Hz (44~55Hz) / 60Hz (54~65Hz)			
	According to VDE0126-1-1, VDE-AR-N4105, CQC, G59/3, C10/11, AS4777/3100.			
Power factor	-0.8~+0.8 (Adjustable)			
THD	< 3% (at rated power)			
AC connection	Three-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE)			
System				
Cooling method	Smart Cooling method			
Max efficiency	98.20%	98.30%	98.30%	98.40%
Euro-efficiency	97.60%	97.80%	97.80%	98.00%
MPPT efficiency	99.90%			
Degree of protection	IP65			
Self-consumption (at night)	<0.5W			
Topology	Transformerless			
Operating temperature range	-25℃~+60℃ (derate after 45℃)			
Relative humidity	0~95%, no condensation			
Protection Functions	DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc			
Noise	< 50dB			
Display and communication				
Display	3.5 inches LCD display, support backlit display			
System language	English, Chinese, German, Dutch			
Key	Integrated			
Communication interfaces:	RS485 (Standard),WiFi, Ethernet (Optional)			
Mechanical parameters				
Dimension (H x W x D mm)	610x480x204			
Weight (kg)	38			
Installation	Wall mounting			
Others				
DC terminal	BC03A, BC03B (PV-FT-CF-C-4-300-BU (-); PV-FT-CM-C-4-300-RD (+), Helios H4 4mm²)			
Certifications	VDE0126-1-1, VDE-AR-N4105, CQC, G59/3, C10/11, AS4777/3100. EN61000-6-1:4, EN61000-11:12, IEC62109-1:2010, PEA, LVRT			
Factory warranty (years)	5 (standard) / 10, 15, 20 (optional)			



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- 5V 200mA auxiliary DC power interface is optional for system expansion.
- AC output power is adjustable between 1-100%.
- Reactive power control and power factor adjustable: 0.8 leading ~ 0.8 lagging.
- RS485, Ethernet, WIFI communication modes are optional for realizing multiple monitoring solutions via PC, mobile phones, internet etc. platforms.



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**G83/G59 C10/11
TF3.2.1 MEA PEA**



iMars PhoneExpert
(for IOS)



iMars PhoneExpert
(for Android)

Specification

	BG20KTR	BG25KTR	BG30KTR	BG33KTR	BG35KTR
Input (DC)					
Max. DC voltage (V)	1000				
Starting voltage /Min. operation voltage (V)	300/280				
Starting power (W)	150				
MPPT Operating Voltage Range (V) / Rated Voltage	280 - 800/610V				
Rated power voltage range (V)	450 - 800	480 - 800	480 - 800	500-800	550-800
Number of MPPT / String Per MPPT	2/3			2/4	
Max. DC Power (W)	20800	26000	31200	36000	38000
Max. DC Current (A) Per MPPT x Number Of MPPT	25x2	30x2	33x2	33x2	33x2
DC switch	Integrated				
Output (AC)					
Rated power (W)	20000	25000	30000	33000	35000
Max AC Current (A)	32	40	48	48	48
Rated AC Voltage And Range/ Rated Grid frequency And Range	3/PE, 230/400V (320~460V); 3/PE, 220/380V (320~460V).				3/N/PE,243/400V, (357~483V)
	50Hz (44~55Hz) / 60Hz (54~65Hz)				
	According to VDE0126-1-1, VDE-AR-N4105, CQC, G59/3, C10/11, AS4777/3100, PEA				
Power factor	-0.8~+0.8 (Adjustable)				
THD	< 3% (at rated power)				
AC connection	Three-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE)				
System					
Cooling method	Smart Cooling method				
Max efficiency	98.40%	98.40%	98.50%	98.50%	98.50%
Euro-efficiency	98.00%	98.00%	98.00%	98.10%	98.10%
MPPT efficiency	99.9%				
Degree of protection	IP65				
Self-consumption (at night)	<0.5W				
Topology	Transformerless				
Operating temperature range	-25℃ ~+60℃ (derate after 45℃)				
Relative humidity	0~95%, no condensation				
Protection	DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc.				
Noise	< 50dB				
Display and communication					
Display	3.5inches LCD display, support backlit display				
System language	English, Chinese, German, Dutch				
Key	Integrated				
Communication interfaces:	RS485 (Standard), WiFi, Ethernet (Optional)				
Mechanical parameters					
Dimension (H x W x D mm)	660x525x250				
Weight (kg)	52				
Installation	Wall mounting				
Others					
DC terminal	BC03A, BC03B (PV-FT-CF-C-4-300-BU (-); PV-FT-CM-C-4-300-RD (+), Helios H4 4mm²)				
Certifications	TUV, CE, VDE0126-1-1, VDE-AR-N4105, G59/3,C10/11, TF3.2.1, AS4777/3100,CQC EN61000-6-1:4, EN61000-11:12, IEC62109-1:2010, PEA,ZVRT,LVRT				
Factory warranty (years)	5 (standard) / 10, 15, 20 (optional)				



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