iMars BG Series Three phase Grid-tied Solar inverters for US

BG7KTR-US BG9KTR-US BG10KTR-US BG12KTR-US BG15KTR-US BG17KTR-US

Description

iMars BG series three-phase grid-tied solar inverters adopt the latest technologies combination of T Topology 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 98.3%.
- Wide input voltage range gives more possibilities for accepting different string configuration and different Topology 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 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.

are optional for realizing multiple monitoring solutions via local or internet by PC, smart phone, etc.

Specification

	BG7KTR-US	BG9KTR-US	BG10KTR-US		
Input (DC)					
Max. DC voltage (V)	1000				
Starting Voltage (V)	200				
Min. Operation Voltage (V)	180				
MPPT Operating Voltage Range (V) / Rated Voltage (V)	180 - 800/610V				
Rated power voltage range (V)	220 - 800 240 - 800				
Number of MPPT / String Per MPPT	2/3				
Max. DC Power (W)	7300	9400	10500		
Max. DC Current (A) Per MPPT x Number Of MPPT	19 x 2	21 x 2	23 x 2		
DC switch	Integrated				
Output (AC)					
Rated power (W)	7000	9000	10000		
Max AC Current (A)	20	25	28		
Rated AC Voltage (V)	3/PE, 230(220/230V)				
Rated Grid frequency (Hz)	50 (47~ 51.5Hz)				
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%		
Euro-efficiency	97.60%	97.80%	97.80%		
MPPT efficiency	99.9%				
Protection	IP65				
Self-consumption (at night)	<0.5W				
Standard	VDE4105 VDE0126-1-1 EN50438 EN61000-6-3:2010 EN62109-1-1:2010				
Operating temperature range	-25 ℃~+60 ℃ (derate after 45 ℃)				
Relative humidity	<50dB				
Protection	DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc.				
Display and communication					
Display	3.5inches LCD display, support backlit display				
System language	English, Chinese, German, Dutch				
Communication interfaces:	RS485 (Standard), Ethernet, WiFi (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 4mm ²)				
Factory warranty (years)	5 (standard) / 10, 15, 20 (optional)				

Specification

Induit (IC)Max. DC variage (V)→ 1000Min. Operation Voltage (V)→ 280MPPT operation Voltage (V)280 - 800 / 910VRated voltage (V)320 - 800320 - 800Min. Operation Voltage (N)320 - 800320 - 800Namber of MAPPT224320 - 800Namber of MAPPT26 × 230 × 2Max. DC Current (A) Per MAPTX26 × 230 × 2Namber of MAPPT26 × 230 × 2Output (AC)Integrated17400Namber of MAPPT26 × 230 × 2Output (AC)Integrated17000Carrent (A)3434 42Rated AC Voltage327 + 200 / 17000Max CD Carrent (A)34422Rated AC Voltage34 - 20 × 50 / 47 - 51 5Hz)Power Inform→ 50 / 47 - 51 5Hz)System→ 50 / 47 - 51 5Hz)System→ 50 / 47 - 51 5Hz)Power Inform⊕ 90 / 51 - 50 / 400 / 90 / 51 - 50 / 400 / 90 / 51 - 50 / 400 /		BG12KTR-US	BG15KTR-US	BG17KTR-US		
Starling Voltage (Y)200Min. Operation Voltage (ng)320 - 800320 - 800Rated Voltage (ng)320 - 800320 - 800Rated Voltage (ng)320 - 800320 - 800String Per MPPT248320 - 800Max. DC Curret (A) Per MPPTA2481400Max. DC Curret (A) Per MPPTA25 & 233 & 2Octower (W)120001500017400Max. DC Curret (A) Per MPPTA25 & 233 & 2Octower (W)120001500017000Consult (A)120001500017000Max AC Curret (A) Per MPPTA25 & 238 & 2Octower (W)120001500017000Max AC Curret (A)14004848Rated AC Voltage39 & 20 & 30 & 100017000Max AC Curret (A)150001700048Rated AC Voltage39 & 20 & 30 & 100017000Max AC Curret (A)150001700048Rated AC Voltage39 & 20 & 30 & 100017000Rated AC Voltage39 & 20 & 30 & 100010000Max Curret (A)98 & 30 & 30 & 30 & 30 & 30 & 30 & 30 & 3	Input (DC)					
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Number of MPPT / String Per MPPT / String Per MPPT /24CounceMax, DC Cremer (N)124001540017400Max, DC Cremer (N)25 x.230 x 233 x 2DC switch		280 - 800 / 610V				
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Number Of MPPT Lona 30 X 2 Contra DC switch	Max. DC Power (W)	12400	15400	17400		
Output (AC) Rated power (W) 12000 15000 17000 Max AC Current (A) 34 42 48 Rated AC Voltage 34 42 48 Relative All (fictory) 35 60 (47 - 51.5Hz) Post Power factor 90.95 98.40% 98.40% Burno efficiency 98.80% 98.40% 98.40% Post efficiency 97.80% 98.00% 98.00% Berlow efficiency 98.30% 98.40% 98.40% Post efficiency 97.80% 98.00% 98.00% <td></td> <td>25 x 2</td> <td>30 x 2</td> <td>33 x 2</td>		25 x 2	30 x 2	33 x 2		
Rated power (W)120001500017000Max AC Current (A)344248Rated AC Voltage	DC switch	Integrated				
Max AC Current (A)344248Rated AC Voltage	Output (AC)					
Rated AC Voltage 3/PE, 230/220/230// 127 Rated Grid frequency (Hz) S0 (47- 51.5Hz) Power factor 0.8 -0.8 (adjustable) THD	Rated power (W)	12000	15000	17000		
Rated Grid frequency (Hz) 50 (47- 51.5Hz) Power factor 60 (47- 51.5Hz) Power factor C.0.8 (-4.0.8 (-4.0.8 (-4.0.9.5Hz)) THD C.0.8 (-4.0.8 (-4.0.9.5Hz)) AC connection System Cooling method Cooling method Max efficiency 98.30% 98.40% Port efficiency 97.80% 98.40% Degree of protection OPERT efficiency 9.9% Degree of protection Colling method Operating temperature range	Max AC Current (A)	34	42	48		
Power factor.0.8-+0.8 (adjustable)THD-0.8-+0.8 (adjustable)THD-3% (at rated power)AC connectionThree-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE)SystemSystemCooling method98.30%98.30%Bas dificiency98.30%98.40%Euro-efficiency97.80%97.80%98.40%Degree of protection99.9%98.00%Degree of protection-1985-1985Self-consumption (at night)-11985-11985Self-consumption (at night)-11985-11985Operating temperature range-11985-11985ProtectionDC isolation monitoring, CD connitoring, grounding fault monitoring, grid monitoring,	Rated AC Voltage	3/PE, 230(220/230V) / 127				
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AC connection Three-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE) System Cooling method Smart Cooling method Max efficiency 98.30% 98.30% 98.40% Euro-efficiency 99.30% 97.80% 98.00% MPPT efficiency 97.80% 98.00% 98.00% MPPT efficiency 97.80% 98.00% 98.00% Degree of protection	Power factor	-0.8~+0.8 (adjustable)				
System Cooling method Smart Cooling method Max efficiency 98.30% 98.40% Euro-efficiency 97.80% 97.80% 98.40% MPPT efficiency 97.80% 97.80% 98.40% MPPT efficiency 97.80% 97.80% 98.40% Degree of protection IP65 99.9% 98.40% Degree of protection IP65 Self-consumption (at night)	THD	< 3% (at rated power)				
Cooling methodSmart Cooling methodMax efficiency98.30%98.40%Buro-efficiency97.80%98.00%MPPT efficiency97.80%98.00%Degree of protection99.9%Self-consumption (at night)	AC connection	Three-phase (L1, L2, L3, PE) or (L1, L2, L3, N, PE)				
Max efficiency98.30%98.30%98.40%Euro-efficiency97.80%97.80%98.00%MPPT efficiency99.%98.00%Degree of protection99.%98.00%Self-consumption (at night)-1965-1970Operating temperature range-25℃~+60℃ (derate after 45℃)-25℃Relative humidity-50dB-25℃ProtectionDC isolation monitoring, grounding fault monitoring, grid monitoring, signal protection, overvoltage and short circuit protection, etc.Display and communicationDC isolation monitoring, strounding fault monitoring, grid monitoring, signal protection, etc.System language	System					
Euro-efficiency97.80%97.80%98.00%MPPT efficiency99.9%Degree of protectionIP65Self-consumption (at night)IP65Self-consumption (at night)IP65Operating temperature range25°C~+60°C (derate after 45°C)Relative humidityOC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, gr	Cooling method	Smart Cooling method				
MPPT efficiency 99.9% Degree of protection IP65 Self-consumption (at night) <1W	Max efficiency	98.30%	98.30%	98.40%		
Degree of protectionIP65Self-consumption (at night)<1W	Euro-efficiency	97.80%	97.80%	98.00%		
Self-consumption (at night) <1W Topology Transformerless Operating temperature range -25°C~+60°C (derate after 45°C) Relative humidity <50dB	MPPT efficiency	99.9%				
TopologyTransformerlessOperating temperature range-25°C ~+60°C (derate after 45°C)Relative humidity<50dB	Degree of protection	IP65				
Operating temperature range-25°C ~+60°C (derate after 45°C)Relative humidity<50dB	Self-consumption (at night)	<1W				
Relative humidity <50dB Protection DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc. Display and communication Display and communication 3.5 inches LCD display, support backlit display System language English, Chinese, German, Dutch Communication interfaces: RS485 (Standard), Ethernet, WiFi (Optional) Mechanical parameters Dimension (H x W x D mm) 660x525x220 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 4mm ²)	Topology	Transformerless				
Protection DC isolation monitoring, DC monitoring, grounding fault monitoring, grid monitoring, grid monitoring, island protection, overvoltage and short circuit protection, etc. Display and communication Display Sistem LCD display, support backlit display Display Genmunication English, Chinese, German, Dutch Communication interfaces: RS485 (Standard), Ethernet, WiFi (Optional) Mechanical parameters English, Chinese, German, Dutch Dimension (H x W x D mm) G60x525x220 Meight (kg) Genomunication Others English, BC03A, BC03B (PV-FT-CF-C-4-300-BU (-); PV-FT-CM-C-4-300-RD (+), Helios H4 4mm²)	Operating temperature range	-25℃~+60℃ (derate after 45℃)				
Protection island protection, overvoltage and short circuit protection, etc. Display and communication Display Display 3.5 inches LCD display, support backlit display System language English, Chinese, German, Dutch Communication interfaces: RS485 (Standard), Ethernet, WiFi (Optional) Mechanical parameters Dimension (H x W x D mm) Dimension (H x W x D mm) 660x525x220 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)	Relative humidity	<50dB				
Display3.5 inches LCD display, support backlit displaySystem languageGerman, DutchCommunication interfaces:RS485 (Standard), Ethernet, WiFi (Optional)Mechanical parametersDimension (H x W x D mm)Dimension (H x W x D mm)G60x525x220Weight (kg)52InstallationWall mountingOthersDC terminalBC03A, BC03B (PV-FT-CF-C4-300-BU (-); PV-FT-CM-C-4-300-RD (+), Helios H4 4mm²)	Protection					
System language English, Chinese, German, Dutch Communication interfaces: RS485 (Standard), Ethernet, WiFi (Optional) Mechanical parameters Dimension (H x W x D mm) Dimension (H x W x D mm) 660x525x220 Weight (kg) 52 Installation Wall mounting Others DC terminal BC03A, BC03B (PV-FT-CF-C4-300-BU (-); PV-FT-CM-C-4-300-RD (+), Helios H4 4mm²)	Display and communication					
Communication interfaces: RS485 (Standard), Ethernet, WiFi (Optional) Mechanical parameters Dimension (H x W x D mm) Dimension (H x W x D mm) 660x525x220 Weight (kg) 52 Installation Wall mounting Others DC terminal BC03A, BC03B (PV-FT-CF-C4-300-BU (-); PV-FT-CM-C4-300-RD (+), Helios H4 4mm²)	Display	3.5 inches LCD display, support backlit display				
Mechanical parameters Dimension (H x W x D mm) 660x525x220 Weight (kg) 52 Installation Wall mounting Others DC terminal BC03A, BC03B (PV-FT-CF-C-4-300-RD (+), Helios H4 4mm²)	System language	English, Chinese, German, Dutch				
Dimension (H x W x D mm) 660x525x220 Weight (kg) 52 Installation Wall mounting Others DC terminal BC03A, BC03B (PV-FT-CF-C4-300-BU (-); PV-FT-CM-C4-300-RD (+), Helios H4 4mm²)	Communication interfaces:	RS485 (Standard), Ethernet, WiFi (Optional)				
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Installation Wall mounting Others DC terminal BC03A, BC03B (PV-FT-CF-C4-300-BU (-); PV-FT-CM-C-4-300-RD (+), Helios H4 4mm ²)	Dimension (H x W x D mm)	660x525x220				
Others DC terminal BC03A, BC03B (PV-FT-CF-C-4-300-BU (-); PV-FT-CM-C-4-300-RD (+), Helios H4 4mm ²)	Weight (kg)	52				
DC terminal BC03A, BC03B (PV-FT-CF-C-4-300-BU (-); PV-FT-CM-C-4-300-RD (+), Helios H4 4mm ²)	Installation	Wall mounting				
	Others					
Factory warranty (years) 5 (standard) / 10, 15, 20 (optional)	DC terminal	BC03A, BC03B (PV-F	T-CF-C-4-300-BU (-); PV-FT-CM-C-4-300-	-RD (+), Helios H4 4mm ²)		
	Factory warranty (years)	5 (standard) / 10, 15, 20 (optional)				