Conext[™] Core XC Series, 0G-XC-BB: Grid Settings by Utility Region Application Note

AP-XC-107

Revision A

Overview

This application note lists the default grid settings based on which Utility Region is selected for Conext Core XC Series inverters running version 5.01 or higher firmware. For all other information, refer to the Conext Core XC Series Inverter, 0G-XC-BB Planning and Installation Manual (part number: 990-5738) or the Conext Core XC Series Inverter, 0G-XC-BB Operation Manual (part number: 990-5737) or the Grid Support Guide for Conext Core XC Series Inverters (document number AP-XC-003).

Description

Table 1 and Table 2 list the default values for all Utility Region grid qualification and options; version 5.01 or higher firmware. Parameters that are read-only are grayed-out in the table. These settings can only be changed by contacting Schneider Electric.

Table 1 and *Table 2* also provide descriptions of all of the grid parameters that are defined by the Utility Region setting. Parameters that are read-only are grayed-out in the table. These settings can only be changed by contacting Schneider Electric.

You can adjust any settings that are not grayed out. Before making any changes to settings, refer to the *Grid Support Guide for Conext Core XC Series Inverters (document number AP-XC-003)* for important information about how to define parameters so that the inverter maintains continuous operation and continuous output current during grid-related events.

Table 1 on page 2 shows the following regions: USA MV-DG, France Arrete 23 avril 2008, IEEE1547 (50 Hz), IEEE1547 (60 Hz), BDEW-MSRL/FGW TR8, IEC61727 (50 Hz), IEC61727 (60 Hz).

Table 2 on page 7 shows the following regions: CHINA MV-DG (G/S), CHINA MV-DG (A/I), P.O.12.3 (Spain), RD661 /RD1663 (Spain), CEI 0-16, ANRE Code (RO).



Grid Settings for USA MV-DG, France Arrete 23 avril 2008, IEEE1547 (50 Hz), IEEE1547 (60 Hz), BDEW-MSRL/FGW TR8, IEC61727 (50 Hz), IEC61727 (60 Hz)

Table 1 Default grid settings for Conext Core XC inverters

		Utility Region									
Parameter	Password Required?	USA MV-DG ¹	France Arrete 23 avril 2008	IEEE1547 (50 Hz)	IEEE1547 (60 Hz)	BDEW- MSRL /FGW TR8	IEC61727 (50 Hz)	IEC61727 (60 Hz)	Firmware Version		
System L to L Voltage	Y	Not determined	by utility	region. Facto	ory defaults a	are 300 V,	350 V, and 3	880 V			
Disconn vHV	V	140	112	120	120	140	140	140	All		
Threshold (%)	Y	Level at which	disconne	ction occurs	due to AC ve	ery high vo	Itage (as a p	ercentage o	f nominal).		
D: 107		3.00	1.00	0.11	0.11	3.00	3.00	3.00	All		
Disconn vHV Delay (s)	N	Length of time t	that the in	verter must b	be at or abov	e "Disconr	n very HV Th	reshold" bef	ore it		
Disconn HV	V	120	112	110	110	110	110	110	All		
Threshold (%)	Y	Level at which disconnection occurs due to AC high voltage (as a percentage of nominal).									
Disconn HV	N	1.0	1.00	0.95	0.95	0.1	1.80	1.80	All		
Delay (s)	IN	Length of time the	hat the in	verter must b	e at or above	e "Disconn	HV Thresho	old" before it	disconnects.		
Disconn LV	Y	80	88	88	88	90	83	83	All		
Threshold (%)	·	Level at which of	disconnec	ction occurs	due to AC lov	w voltage (as a percen	tage of nomi	nal).		
Disconn LV	N	3.50	2.00	1.80	1.80	2.0	1.80	1.80	All		
Delay (s)		Length of time that the inverter must be at or below "Disconn LV Threshold" before it disconnect									
Disconn vLV	Y	25	20	50	50	25	50	50	All		
Threshold (%)		Level at which of					T	T			
Disconn vLV	N.	1.00	0.60	0.11	0.11	1.00	0.05	0.05	All		
Delay (s)	N	Length of time to disconnects.	hat the in	verter must b	e at or below	v "Disconn	vLV Thresh	old" before i	i -		
Disconn vHF	Y	70.0	52.05	65.0	65.0	70.0	70.0	70.0	All		
Threshold (Hz)		Value at which		Γ			· ·				
Disconn vHF	N	3.00	0.20	3.00	3.00	3.00	3.00	3.00	All		
Delay (s)		Length of time the				l	1		ı		
Disconn HF	Y	62.2	51.55	50.5	60.5	51.5	51.1	61.1	All		
Threshold (Hz)		Value at which	Г	I	ı	, 	-	T - 1-	I		
Disconn HF Delay (s)	N	0.16	20.00	0.11	0.11	0.10	0.15	0.15	All		
		Length of time to									
Disconn LF Threshold (Hz)	Y	59.0	47.45	49.5	59.5	47.5	48.90	58.90	All		
miesilolu (HZ)		Value at which	disconne	ction occurs	due to AC lo	w frequenc	cy.				

					Utility R	egion					
Parameter	Password Required?	USA MV-DG ¹	France Arrete 23 avril 2008	IEEE1547 (50 Hz)	IEEE1547 (60 Hz)	BDEW- MSRL /FGW TR8	IEC61727 (50 Hz)	IEC61727 (60 Hz)	Firmware Version		
Disconn LF	N	300.0	20.00	0.60	0.60	0.10	0.15	0.15	All		
Delay (s)	IN IN	Length of time t	hat the in	verter must b	e at or below	v "Disconn	LF Thresho	ld" before it o	disconnects.		
Disconn vLF	Y	56.5	46.95	47.0	57.0	40.0	40.0	50.0	All		
Threshold (Hz)		Value at which	disconne	ction occurs	due to AC ve	ry low fred	luency.				
Disconn vLF		0.16	0.20	0.11	0.11	3.00	3.00	3.00	All		
Delay (s)	N	N Length of time that the inverter must be at or below "Disconn vLF Threshold" before it disconnects.									
Voltage		135	135	135	135	135	135	135	All		
Envelope Threshold (%)	Y	Amount that the system voltage		_		ed the norr	nal peak val	ue of the AC	output		
Voltage		3 samples							All		
Envelope Delay	Y	Length of time that the inverter must be at "Voltage Envelope Threshold" before it disconnects.									
December UV		110	110	105	105	110	108	108	All		
Reconn HV Threshold (%)	N	Level at which t	_	-	ondition is cle	eared (as a	percentage	of nominal)	and the		
D 1 \/		90	90	95	95	95	90	90	All		
Reconn LV Threshold (%)	N	Level at which t		-	ndition is clea	ared (as a	percentage	of nominal) a	and the		
Reconn HF	NI	61.5	51.05	50.5	60.5	50.05	50.9	60.9	All		
Threshold (Hz)	N	Value at which	the AC hi	gh frequency	condition is	cleared a	nd the recon	nection dela	y begins.		
Reconn LF	N	59.0	47.7	49.8	59.8	47.50	49.1	59.1	All		
Threshold (Hz)	N	Value at which	the AC lo	w frequency	condition is	cleared an	d the reconr	ection delay	begins.		
Reconnection		20.00	20.00	300.00	300.00	20.00	20.00	20.00	All		
Delay (s)	N	Length of time the			-	-	ameters with	nin normal o _l	perating		
Power		Modbus							All		
Reference Selection	N	The type of pow	er referer	nce input: Mo	odbus or ana	log.					
User Reactive		Not determined	by utility	region. Facto	ory default is	0 kvar.			All		
Power Ref.	N	Max "User Read Limit" (positive f				-	_		Power		
User Active	N	Not determined kW.	by utility	region. Facto	ory defaults a	re 540.0 k	W, 630.0 kW	, and 680.0	All		
Power Limit		Max "User Activ	e Power I	Limit" is limite	ed by the val	ue of "Con	figured Activ	e Power Lim	nit".		

					Utility F	Region					
Parameter	Password Required?	USA MV-DG ¹	France Arrete 23 avril 2008	IEEE1547 (50 Hz)	IEEE1547 (60 Hz)	BDEW- MSRL /FGW TR8	IEC61727 (50 Hz)	IEC61727 (60 Hz)	Firmware Version		
User Apparent Power Limit	N	Not determined 680.0 kVA.	by utility	region. Facto	ory defaults a	re 540.0 k	VA, 630.0 k\	/A, and	All		
Power Limit		Max "User Apprent Power Limit" is limited by the value of "Configured Apparent Power									
User Phase		Not determined	Not determined by utility region. Factory default is 0 degrees.								
Angle Ref.	N	Phase angle for reactive power)	nase angle for Var Command (positive for capacitive reactive power, negative for ind active power).								
User Phase	N.	Not determined	by utility	region. Facto	ory default is	100%.			All		
Current Limit	N	User phase current limit.									
		ON							All		
Voltage Support Function	N	Action to take to 0 = OFF 1 = ON	Action to take to support voltage. 0 = OFF								
		Provides suppo high voltage ev	•	ing capacitiv	e current for	low voltag	e events and	l inductive c	urrent for		
Voltage	N	0	0	0	0	2	0	0	All		
Support Factor	IN .	VAC support fa	ctor.								
		80	90	88	88	90	85	85	All		
V-Support Low Threshold (%)	N	VAC support threshold, as a percentage of system line-to-line voltage. When system voltage is greater than "Voltage Support Threshold" + "Voltage Support Deadband", reactive power compensation is inductive. When system voltage is less than "Voltage Support Threshold" - "Voltage Support Deadband", reactive power compensation is capacitive.									
V 0		110	110	110	110	110	110	110	All		
V-Support High Threshold (%)	N	The voltage ran	•		which the sy	stem is co	nsidered to I	be in normal	operation		
Q-Reg Filter	V	Not determined	by utility	region. Facto	ory default is	0.010.					
Factor	Y	Low-pass filter	factor for i	reactive pow	er auto-regu	lation.					
A ()/		2.00	2.00	2.00	2.00	0.70	2.00	2.00	All		
Asymmetry V Factor	Y	Asymmetry Volt	~	-	ge of Vn to d	letermine v	whether asyr	nmetric volta	age ride		
A		0.40	0.40	0.40	0.40	0.60	0.40	0.40	All		
Asymmetry I	Y	Asymmetry Current Limit Factor—percentage of In to limit reactive current during asymmetric voltage ride through.									
Limit Factor		voltage ride thre	ough.								
P(f) Control,	N	voltage ride thro	ough. OFF	OFF	OFF	ON	OFF	OFF	All		

					Utility R	Region					
Parameter	Password Required?	USA MV-DG ¹	France Arrete 23 avril 2008	IEEE1547 (50 Hz)	IEEE1547 (60 Hz)	BDEW- MSRL /FGW TR8	IEC61727 (50 Hz)	IEC61727 (60 Hz)	Firmware Version		
		600.00	120.00	120.00	120.00	0	120.00	120.00	5.03 later		
P(f) Control, Reset Time (s)	N	Length of time t The actual time that the device	may be le	ess than the		-					
P(f) Control,		60.2	50.2	50.2	60.2	50.2	50.2	60.2	All		
Corner F High (Hz)	N	Frequency in H	z, at whic	h active pow	er control sta	rts reducir	ıg power.				
P(f) Control,		60.05	50.05	50.05	60.05	50.05	50.05	60.05	All		
Reset Freq. High (Hz)	N	Frequency belo	w which a	active power	control can r	esume no	rmal power.	<u> </u>	<u> </u>		
P(f) Control,		60.05	50.05	50.05	60.05	50.05	50.05	60.05	All		
Reset Freq. Low (Hz)	N	Frequency abo				resume no					
		0	0	0	0	0	0	0	All		
P(f) Control, Reset Delay (s)	N	Length of time that the inverter must be at or below "P(f) Control, Reset Freq. High" or at "P(f) Control, Reset Freq. Low" before active power control can resume normal power.									
Power Ref.		50	50	50	50	50	50	50	All		
Ramp Time (ms)	N	Time it takes to get from the current active power limit to the new active power limit. The actual time may be less than the value set in this parameter because the ramp step assumes that the device starts at 0% power.									
		0	0	0	0	0	0	0	All		
Reconn Power Ramp Time (s)	N	Length of time t active power lin system is rampi	nit followir	ng a grid erro	or event. If yo	u set this p					
Min. Power	Y	5	5	10	10	5	10	10	All		
Limit (%)	ľ	Initial active pov	wer limit fo	ollowing a gr	id error even	t.					
Anti-Islanding	Y	OFF	OFF	ON	ON	OFF	ON	ON	All		
Function		Sets whether or	not the a	ctive anti-isla	anding prote	ction is ena	abled for the	inverter.			
Anti-Islanding	Y	All Type 0							All		
Туре		Anti-Islanding p			1.6.16	0.45					
Anti-Islanding Pert Duration	Y	Not determined			ory default is	0.15 S.			All		
Anti-Islanding	Y	Not determined	ot determined by utility region. Factory default is firmware version dependant. To etermine the default value, contact Schneider Electric.								
Dort				,							
Pert Occurrence		Anti-Islanding p	erturb oc	currence.							
	Y	Anti-Islanding p			ory default is	6%.					

		Utility Region										
Parameter	Password Required?	USA MV-DG ¹	France Arrete 23 avril 2008	IEEE1547 (50 Hz)	IEEE1547 (60 Hz)	BDEW- MSRL /FGW TR8	IEC61727 (50 Hz)	IEC61727 (60 Hz)	Firmware Version			
Dawar Dama		6000.0	,	7	,		,	`	All			
Power Ramp Rate (%min)	N		ne power ramp rate per minute. This value is used to slew rate positive power outpu verter is online. This power slew rate will be desensitized if the value is maximum, 6									
Min. Power Ramp Step	Y	2.0	All									
(kW)		Minimum power ramp step for power positive slew rate.										
Reconnect	N	10	10	10	10	10	10	10	All			
Start Delay (s)	IN	The initial delay	for syste	m reconnect	ion.							
Reconnect	N	Grid error							All			
Power Ramp Type		٠	Type or flag to indicate how reconnect power ramp behaves. 0 = Grid Error, means ramp will o trigger by grid errors; 1 = Global, means ramp happens all the time when inverter transits from offline to online.									
OVSPD,		140	140	140	140	140	140	140	All			
Voltage Threshold (%)	N	Voltage above which ramp down starts.										
OVSPD, Power	N	100	100	100	100	100	100	100	All			
Limit (%)	IN IN	Power limit at w	hich ram	down stops). 3.				,			
OVSPD, Ramp	N	10.0	10.0	10.0	10.0	10.0	10.0	10.0	All			
Down Rate (s)	IN	Ramp down rate	e for activ	e power.								
OVSPD, Ramp	N	10.0	10.0	10.0	10.0	10.0	10.0	10.0	All			
Up Rate (s)	IN	Ramp up rate for Active power.										
GFD Max. Daily	Y	1	5	1	1	5	5	5	All			
Count ²	•	GFD max daily	count.									

Grid Settings for CHINA MV-DG (G/S), CHINA MV-DG (A/I), P.O.12.3 (Spain), RD661 /RD1663 (Spain), CEI 0-16, ANRE Code (RO)

Table 2 Default grid settings for Conext Core XC inverters

					Utility Region							
Parameter	Password Required?	CHINA MV- DG (A/I) ³	CHINA MV- DG (G/S) ³	P.O.12.3 (Spain)	RD661 /RD1663 (Spain)	CEI 0-16	ANRE Code (RO)	Firmware Version				
System L to L Voltage	Y	Not determined	by utility regio	n. Factory d	lefaults are 300	V, 350 V, and	380 V					
Disconn vHV	Y	120	120	130	130	130	140	All				
Threshold (%)	T	Level at which	disconnection	occurs due	to AC very high	voltage (as a	percentage of	nominal).				
D: 107		0.60	0.60	0.15	0.15	0.15	3.00	All				
Disconn vHV Delay (s)	N	Length of time to	that the inverte	r must be a	t or above "Disco	onn very HV T	hreshold" befo	ore it				
Disconn HV	V	110	110	110	110	125	110	All				
Threshold (%)	Y	Level at which of	disconnection of	occurs due	to AC high volta	ge (as a perce	entage of nom	inal).				
Disconn HV		11.0	11.0	1.50	1.50	0.65	0.10	All				
Delay (s)	Play (s)		Length of time that the inverter must be at or above "Disconn HV Threshold" before it disconnects.									
Disconn LV	Y	90	90	80	85	82	90	All				
Threshold (%)	T	Level at which of	Level at which disconnection occurs due to AC low voltage (as a percentage of nominal).									
Disconn LV	N	2.50	2.50	1.50	1.50	1.60	3.00	All				
Delay (s)	IN .	Length of time t	hat the inverter	must be at	or below "Disco	nn LV Thresh	old" before it o	disconnects.				
Disconn vLV	Y	40	40	20	20	20	15	All				
Threshold (%)	,	Level at which disconnection occurs due to AC very low voltage (as a percentage of nominal)										
Disconn vLV		2.20	2.20	1.00	1.00	0.50	0.625	All				
Delay (s)	N	Length of time that the inverter must be at or below "Disconn vLV Threshold" before it disconnects.										
Disconn vHF	Y	50.51	50.51	70.0	70.0	70.0	70.0	All				
Threshold (Hz)	'	Value at which	disconnection	occurs due	to AC very high	frequency.						
Disconn vHF	N	0.10	0.10	3.00	3.00	3.00	3.00	All				
Delay (s)	IN .	Length of time t	hat the inverter	must be at	or above "Disco	onn vHF Thres	shold" before i	t disconnect.				
Disconn HF	Y	50.5	50.5	51.0	51.0	51.60	52.05	All				
Threshold (Hz)	ľ	Value at which	disconnection	occurs due	to AC high frequ	iency.						
Disconn HF	N	0.10	0.10	3.00	3.00	0.15	0.10	All				
Delay (s)	IN .	Length of time t	hat the inverter	must be at	or above "Disco	nn HF Thresh	nold" before it	disconnects.				
Disconn LF	Y	49.5	49.5	48.0	48.0	47.50	47.45	All				
Threshold (Hz)		Value at which	disconnection	occurs due	to AC low freque	ency.						
Disconn LF	N	650	650	3.00	3.00	0.10	0.10	All				
Delay (s)		Length of time t	hat the inverter	must be at	or below "Disco	nn LF Thresh	old" before it o	lisconnects.				

					Utility Region					
Parameter	Password Required?	CHINA MV- DG (A/I) ³	CHINA MV- DG (G/S) ³	P.O.12.3 (Spain)	RD661 /RD1663 (Spain)	CEI 0-16	ANRE Code (RO)	Firmware Version		
Disconn vLF	Y	47.9	47.9	47.0	47.0	40.0	40.0	All		
Threshold (Hz)	•	Value at which	disconnection	occurs due	to AC very low f	requency.	_			
Disconn vLF	N	0.10	0.10	0.20	0.20	4.50	3.00	All		
Delay (s)	14	Length of time t	hat the inverter	must be at	or below "Disco	nn vLF Thres	hold" before it	disconnects.		
Voltage		135	135	135	135	135	135	All		
Envelope Threshold (%)	Y	Amount that the system voltage		~	ust exceed the n urs.	ormal peak va	alue of the AC	output		
Voltage	Y	3 samples						All		
Envelope Delay	Ť	Length of time t	hat the inverter	must be at	: "Voltage Envelo	pe Threshold	d" before it disc	connects.		
Danama IIV		110	110	105	105	110	108	All		
Reconn HV Threshold (%)	N	Level at which t	-	tage condit	tion is cleared (a	s a percentaç	ge of nominal)	and the		
Danam IV		90	90	95	95	90	91	All		
Reconn LV Threshold (%)	N		evel at which the AC low voltage condition is cleared (as a percentage of nominal) and the econnection delay begins.							
Reconn HF	N	50.2	50.2	50.7	50.7	50.10	52.00	All		
Threshold (Hz)	N	Value at which	nnection dela	y begins.						
Reconn LF	N	49.50	49.50	48.5	48.5	49.90	47.50	All		
Threshold (Hz)	N	Value at which	the AC low free	quency con	dition is cleared	and the recor	nection delay	begins.		
Reconnection		60.00	60.00	180.00	180.00	300.00	30.00	All		
Delay (s)	N	Length of time the conditions before			all grid-related pe online state.	parameters wi	ithin normal or	perating		
Power		Modbus						All		
Reference	N	The type of pow	er reference in	ınııt: Modhi	ıs or analog					
Selection		•••						All		
User Reactive	N	Not determined			limited by the va	lua of "Confid	urad Dagativa			
Power Ref.	.,				rer, negative for i	•		Power		
					lefaults are 540.0					
User Active	N	kW.	, , ,	,		•	,	All		
Power Limit		Max "User Activ	e Power Limit"	is limited b	y the value of "C	onfigured Act	tive Power Lim	it".		
User Apparent	N	Not determined 680.0 kVA.	by utility regio	n. Factory d	efaults are 540.0	0 kVA, 630.0 l	kVA, and	All		
Power Limit		Max "User Apprent Power Limit" is limited by the value of "Configured Apparent Power Limit".								
Heen Direct		Not determined	by utility region	n. Factory d	efault is 0 degre	es.		All		
User Phase Angle Ref.	N	Phase angle for reactive power)		d (positive f	or capacitive rea	ctive power, r	negative for in	ductive		

					Utility Region							
Parameter	Password Required?	CHINA MV- DG (A/I) ³	CHINA MV- DG (G/S) ³	P.O.12.3 (Spain)	RD661 /RD1663 (Spain)	CEI 0-16	ANRE Code (RO)	Firmware Version				
User Phase	N	Not determined	by utility regio	n. Factory d	efault is 100%.			All				
Current Limit	IN	User phase cur	rent limit.									
		ON						All				
		Action to take to	support volta	ge.								
Voltage	N.	0 = OFF										
Support Function	N	1 = ON										
		Provides support by adding capacitive current for low voltage events and inductive current for high voltage event.										
Voltage		2.2	2.2	2	2	2	2	All				
Support Factor	N	VAC support fac	ctor.				J					
_		90	90	85	85	85	90	All				
V-Support Low Threshold (%)	N	When system v	VAC support threshold, as a percentage of system line-to-line voltage. When system voltage is greater than "Voltage Support Threshold" + "Voltage Support Deadban reactive power compensation is inductive. When system voltage is less than "Voltage Support Threshold" - "Voltage Support Deadband",									
		reactive power	_	_		noid - Voita	ge oupport be	aubanu ,				
		110	110	110	110	115	110	All				
V-Support High Threshold (%)	N	The voltage ran (voltage suppor	-		ch the system is	considered to	b be in normal	operation				
Q-Reg Filter	.,	Not determined	by utility region	n. Factory d	lefault is 0.010.							
Factor	Y	Low-pass filter f	actor for reactive	ve power a	uto-regulation.							
		2.00	2.00	2.00	2.00	2.0	0.18	All				
Asymmetry V Factor	Y	Asymmetry Volt	-	~	of Vn to determin	e whether as	ymmetric volta	ge ride				
Asymmetry I		0.40	0.40	0.40	0.40	0.40	0.40	All				
Limit Factor	Y	Asymmetry Curr voltage ride thro		r—percent	age of In to limit	reactive curre	ent during asyr	nmetric				
P(f) Control,	N	OFF	OFF	OFF	OFF	ON	OFF	All				
Function	IN	Enables active	power control a	as a functio	n of power frequ	ency (P(f)) co	ntrol.					
		120.00	120.00	120.00	120.00	300.00	120.00	5.03 later				
P(f) Control, Reset Time (s)	N	1 ~	may be less th	an the valu	resume normal pe set in this para							
P(f) Control,	N.I.	50.2	50.2	50.2	50.2	50.3	50.2	All				
Corner Freq. (Hz)	N	Frequency in H	z, at which activ	ve power co	ontrol starts redu	cing power.	,					

		Utility Region								
Parameter	Password Required?	CHINA MV- DG (A/I) ³	CHINA MV- DG (G/S) ³	P.O.12.3 (Spain)	RD661 /RD1663 (Spain)	CEI 0-16	ANRE Code (RO)	Firmware Version		
P(f) Control,		50.05	50.05	50.05	50.05	50.09	50.02	All		
Reset Freq. High (Hz)	N	Frequency belo	w which active	power con	trol can resume	normal powe	r.	<u></u>		
P(f) Control, Reset Freq.	N	50.05	50.05	50.05	50.05	49.91	47.00	All		
Low (Hz)	IN IN	Frequency abov	ve which active	power con	trol can resume	normal powe	r.			
D/A Control		0	0	0	0	300	0	All		
P(f) Control, Reset Delay (s)	N	_			or below "P(f) C ive power contro					
Power Ref.		50	50	50	50	50	50	All		
Ramp Time (ms)	N		s than the valu		power limit to the parameter beca		-			
		0	0	0	0	1200	0	All		
Reconn Power Ramp Time (s)	N	active power lin	ength of time that the active power limit is increased from "Min. Power Limit" to 100% of the active power limit following a grid error event. If you set this parameter to greater than 0 while system is ramping up, the new value is not applied.							
Min. Power	Y	5	5	5	5	5	5	All		
Limit (%)	'	Initial active pov	wer limit followi	ng a grid e	rror event.					
Anti-Islanding	Y	ON	OFF	OFF	OFF	OFF	OFF	All		
Function		Sets whether or	not the active	anti-islandi	ng protection is	enabled for th	e inverter.			
Anti-Islanding	Y	All Type 0						All		
Туре		Anti-Islanding p	erturb type.							
Anti-Islanding	Y	Not determined	by utility regio	n. Factory d	efault is 0.15 s.			All		
Pert Duration		Anti-Islanding p	erturb duration	ı .						
Anti-Islanding Pert	Y	Not determined determine the d		-	lefault is firmwar eider Electric.	e version dep	endant. To	All		
Occurrence		Anti-Islanding p	erturb occurre	nce.						
Anti-Islanding	Y	Not determined	by utility regio	n. Factory d	efault is 6%.					
Pert Factor	1	The amplitude of	of perturb react	ive power =	(Pout * Anti-Isla	inding perturk	factor).			
Dawer Dawer		6000.0						All		
Power Ramp Rate (%min)	N		•		ue is used to sle	-				
Min. Power		2.0						All		
Ramp Step (kW)	Y	Minimum powe	r ramp step for	power posi	tive slew rate.					
Reconnect		10	10	10	10	30	10	All		
Start Delay (s)	N	The initial delay	for system rec	onnection		1	1	ı		

	Password Required?	Utility Region										
Parameter		CHINA MV- DG (A/I) ³	CHINA MV- DG (G/S) ³	P.O.12.3 (Spain)	RD661 /RD1663 (Spain)	CEI 0-16	ANRE Code (RO)	Firmware Version				
Reconnect		Grid error	,			Global	Grid error	All				
Power Ramp Type	N	••	rrors; 1 = Globa	•	wer ramp behav amp happens all							
OVSPD,		140	140	140	140	110	140	All				
Voltage Threshold (%)	N	Voltage above v	Voltage above which ramp down starts.									
OVSPD, Power	N	100	100	100	100	20	100	All				
Limit (%)	%) N	Power limit at w	hich ramp dow	n stops.			•					
OVSPD, Ramp	N	10.0	10.0	10.0	10.0	20.0	10.0	All				
Down Rate (s)	14	Ramp down rate for active power.										
OVSPD, Ramp	N	10.0	10.0	10.0	10.0	20.0	10.0	All				
Up Rate (s)	IN	Ramp up rate for Active power.										
GFD Max. Daily	Y	5	5	5	5	5	5	All				
Count ⁴	'	GFD max daily count.										
Al Disconn LF	N	49.50	49.50	N/A	N/A	N/A	N/A	5.02 only				
Threshold	IN	During anti-isla	nding, value at	which disc	onnection occur	s due to AC lo	w frequency.					
Al Disconn LF		0.10	0.10	N/A	N/A	N/A	N/A	5.02 only				
Delay	N	During anti-islanding, length of time that the inverter must be at or below "Al Disconn LF Threshold" before it disconnects.										
Al LF Disconn	N	ON	ON	N/A	N/A	N/A	N/A	5.02 only				
Function	IV	Sets whether or	not the LF disc	connection	function during a	anti-islanding	is enabled for	the inverter.				

¹ The USA MV-DG default setting is compliant with NERC PRC-024-1 Draft 1 A (Feb 17, 2009), WECC Off-Nominal Frequency (April 2005), and FRCC Regional Generator Performance During Frequency and Voltage Excursions (Version 5).

 $^{^{2}}$ Only applies to units that have an integrated GFD (ground fault detection) unit.

³ China MV-DG (A/I) and China MV-DG (G/S) regions only use firmware version 5.02.

⁴ Only applies to units that have an integrated GFD (ground fault detection) unit.

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