THE POWER OF SYNERGY

LX321

Parameter list

Product version V2.2.1.0

PARAMETER LIST I

Software settings

Parameter		Default settings	Custom settings	Min. value	Max. value
Stability & Buildup	Build-up Gain	2x		0.1x	14x
	Loop Gain	0.100x		0.022	1.000
	Initial voltage	15%		0 %	67.5 %
	Build-up Time	5 Sec		1 Sec	60 Sec
Protections	Excitation loss	ON		Off	On
	Phase loss	ON		Off	On
	Current loss	ON		Off	On
	Stop at fault	OFF		Off	On
Analog Input/output	Analog in	OFF		**Options:** Off VM PF VM & PF	
	Analog Out (1) (2)	OFF		**Options:** Off PI Ctrl Gen. Voltage Gen. Current PF Gen. Freq Exc. current Voltage SP PF SP General SP	
Regulation mode	INV mode	OFF		Off	On
	VPH mode	OFF		Off	On
	Min. Excitation mode	OFF		Off	On
	Reset to defaults?	NO		No	Yes

(1) AVR Assistant required. Other settings can also be changed with AVR, see advanced settings (page 5,6,7).

(2) Do not use. (Only manufacturer)

(3) Only available in OEM access level. (Contact manufacturer for more information)

PARAMETER LIST II

Software settings

Parameter		Default settings	Custom settings	Min. value	Max. value
[3] Calibration (1/2)	Exc Offset [1]	0		-127	127
	Exc Gain [1]	0		-127	127
	U Offset [1]	0		-127	127
	U Gain [1]	0		-127	127
[3] Calibration (2/2)	I(u) Offset [1]	0		-127	127
	I(u) Gain [1]	0		-127	127
	Analog Gain [1]	-1		-127	127
	Analog Offset [1]	-1		-127	127
	PF offset [1]	0		-127	127

[1] *AVR Assistant required. Other settings can also be changed with AVR, see advanced settings (page 5,6,7).*

[2] *Do not use. (Only manufacturer)*

[3] *Only available in OEM access level. (Contact manufacturer for more information)*

PARAMETER LIST III

Hardware settings

Parameter		Default settings	Custom settings
Rotary switch	UFRO	Position : 0	
	Current Limit	Position : 9	
Potentiometer	Voltage coarse	+/- 50% (adjusted: 200V/50Hz)	
	Voltage fine	50 %	
	Prop. gain	50 %	
	Int. time	50 %	
	Droop	0 %	
	Exc. Trip	100 %	
	Cosphi (4) Steepness	50%	
	Trim (4) Min. exc φ	0%	
Terminals	K1-K2	Linked	
	1-2	Linked	
	CAN1-CAN2	Linked	
	TH1-TH2	Linked	
	PF1-PF2 (4)	Open	

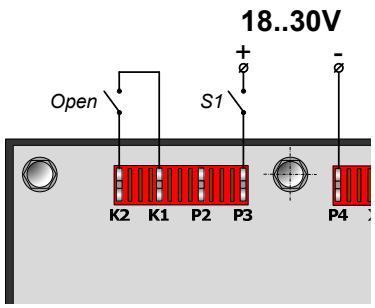
(4) Function can be changed with software settings.

ADVANCED SETTINGS I

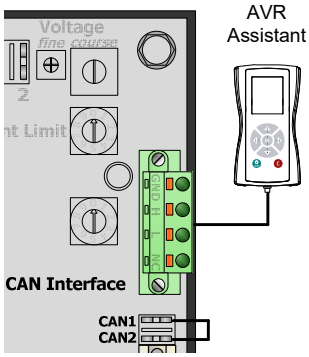
Flowchart : Change advanced settings with AVR Assistant

Start

Start situation



Connect AVR Assistant



Communication

Enable power supply

S1

AVR Assistant

Shift

Online

Select LX321

Select Device OK

LX321 OK

Vx.x.x.x OK

(LX321 Version)

Read settings

Advanced Settings OK

Read settings OK

Change settings

Select parameter OK

Change value OK

C

Menu "Settings"

Write settings

Write settings OK

Hold OK OK

C

Menu "Select mode"

Restart AVR

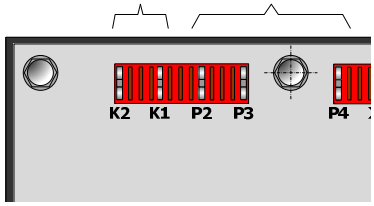
Restart AVR OK

Reset power supply

S1

Reconnect wires

AVR *On/Off* **AVR supply**



Done

(Disconnect AVR Assistant)

ADVANCED SETTINGS II

Flowchart : Change advanced settings with rotary switches

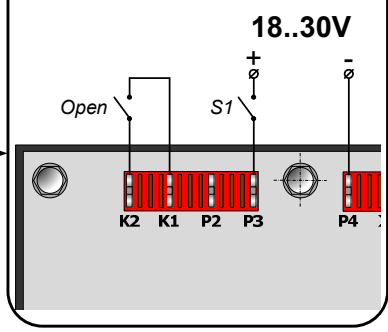
Begin ***(Generator stopped !)***

Remember settings

UFRO (Example)

Current Limit (Example)

Start situation



Selection

UFRO **Position 7** (Example)

Current Limit **Position 1** (Example)

Example: Voltage match enable

More settings?

Programming

Enable power supply

S1

OPT1
OPT2

Place Link for 2s.

Blink red
(Stored)

Set back settings

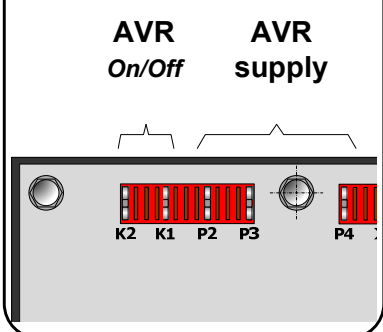
Reset power supply

S1

UFRO (Example)

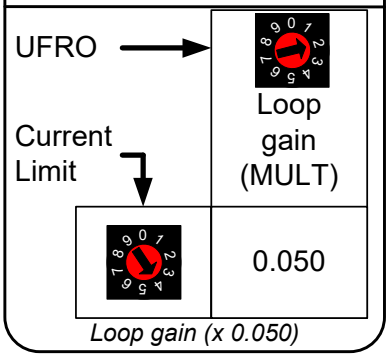
Current Limit (Example)

Reconnect wires



Done

Selection example



Note

Change of setting only take effect after restart

Advanced settings can be adjusted according the flowchart.
Advanced settings are available with firmware version 3.0, 5.0 and higher than 5.0.

ADVANCED SETTINGS III

Table : Change advanced settings with rotary switches

UFRO

Current Limit	Buildup gain (MULT)	Loop gain (MULT)	Initial voltage, SE Mode.	Protections	Buildup time @ startup	Option output	Accessory input modes	Operation modes
	0.1 (slowest)	1.000 (fastest)	0%	Excitation loss disabled	1 sec.	Do not use *	Voltage match disabled	Inverted output disabled
	0.2	0.200	10%	Excitation loss enabled	3 sec.		Voltage match ** enabled	Inverted output enabled
	0.5	0.100	15%	Phase loss disabled	5 sec.		Cosphi setpoint disabled	Do not use *
	1	0.066	22.5%	Phase loss enabled	7 sec.		Cosphi setpoint enabled	
	2	0.050	30%	Current loss disabled	10 sec.		Do not use *	VPH Mode disabled
	4	0.040	37.5%	Current loss enabled	20 sec.			VPH Mode enabled
	6	0.033	45%	Do not use *	30 sec.			Min. Exc. at Cosphi disabled
	8	0.028	52.5%	Do not use *	45 sec.			Min. Exc. at Cosphi enabled
	10	0.025	60%	Exc. stop after error disabled	60 sec.			Do not use *
	14 (fastest)	0.022 (slowest)	67.5%	Exc. stop after error enabled	Cosphi setpoint 0..255 sec.			
Description	Extra multiplication factor for proportional gain. Only applied during field flash.	Extra multiplication factor for proportional gain.	Initial setpoint from wich the AVR ramps up after field flash. Setpoint in % of Unom.	Enable or disable the required protections.	The speed by which the AVR ramps from the minimum setpoint to the nominal setpoint.	Special application	Enable or disable the required modes of operation	Enable or disable the required modes of operation

* Do not use. (Only manufacturer)

** LX_VMA unit required.

Default factory settings are highlighted in table. By setting both UFRO and Current Limit at position 9 and placing the programming jumper, will reset the AVR to **default factory settings**.

CONTACT

EMRI Electronics B.V.
Morsestraat 10
6716 AH, Ede, Netherlands
Tel: +31 (0)318 620 427
Website: www.emri.nl
E-mail: info@emri.nl

Manufacturer

THE POWER OF SYNERGY

CANARY ISLANDS, Las Palmas
Zamakona Yards
Tel: +34 928467521
Fax: +34 928461233
Website: www.zamakonayards.com/
E-mail: jbetancor@zamakonayards.com

CHILE, Santiago
Lucio Vicencio y CIA.LTDA
Tel: +1-281-334-2904
Fax:: +1-832-221-5642
Website: www.luciovicencio.cl
E-mail: luciovincencioltda@gmail.com

GREECE, Piraeus
Stavros Kassidiaris S.A.
Tel: +30 210 4636000
Fax: +30 210 4624471
Website:www.kassidiaris.gr
E-mail: info@kassidiaris.gr

ICELAND, Hafnarfjordur
Rafeining ehf
Tel: +354 565 3049
Fax: +354 565 3048
Website: www.rafeining.is
E-mail: rafeining@rafeining.is

INDIA, Faridabad
Power Solutions
Tel: +91 9868907903
Fax:: +91 129 2431216
Website: www.psolindia.com
E-mail: ramesh.powersolutions@gmail.com

NORWAY, Bergen
Frydenbø Electric A/S
Tel: +47 55 34 91 00
Fax: +47 55 34 91 10
Website: www.frydenbo.no
E-mail: firma.fel@frydenboe.no

POLAND, Gdynia
An-Elec Sp. z o.o.
Tel: +48 58 668 44 00
Fax: +48 58 668 44 66
Website: http://an-elec.pl
E-mail: info@an-elec.pl

POLAND, Szczecin
MARCONTREL
Tel: +48 91 4 888 474
Fax: +48 91 4 888 475
Website: www.marcontrel.com
E-mail: emri@marcontrel.com

POLAND, Szczecin-Mierzyn
Marel Serwis
Tel: +48 91 48 58 388
Fax: +48 91 48 79 948
Website: www.marel.szczecin.pl
E-mail: handel@marel.szczecin.pl

REPUBLIC OF PANAMA, Panama
PASRAS S.A.
Tel: +507 3140095
Fax: +507 3140094
Website: www.pasras.com
E-mail: info@pasras.com

ROMANIA, Constanta
SAMTEC SRL
Tel: +40 241 517 047
Fax: +40 241 517 047
Website: www.samtec.ro
E-mail: samtec_srl@yahoo.com

SINGAPORE, Singapore
Cyclect Electrical Engineering
Tel: +65 6868 6013
Fax: +65 6863 6260
Website: www.cyclect.com.sg
E-mail: heng.p@cyclect.com.sg

SOUTH AFRICA, Roodepoort
Yneldo Electronics
Tel: +27(0)117637053
Fax: +27(0)117634212
Website: www.yneldo.com
E-mail: yneldo@yneldo.com

SWEDEN, Kungälv
Elektrisk Drivteknik EDT AB
Tel: +46-705-28 20 60
Tel: +46-709-50 47 90
Website: www.edtab.se
E-mail: info@edtab.se

THAILAND, Bang Lamung
Semtec Maritime/Genetech Co.Ltd
Tel: +66 38301262
Fax: +1-832-221-5642
Website: semtecmaritime.com/
Email: info@semtecmaritime.com

TURKEY, Izmir
INTEGRAL
Tel: +90 (555) 211 55 75
Email: ozgur@integralguc.com

UNITED ARAB EMIRATES, Sharjah
KDU Technical Services
Tel: +971-6-5575480
Fax: +971-6-5575490
Website: www.kdutech.ae
E-mail: kdutech@kdutech.ae

UNITED KINGDOM, Stockton on Tees
MJR Controls
Tel: +44 1642 762 151
Fax: +44 1642 762 502
Website: www.mjrcontrols.com
Email: chris.milner@mjrcontrols.com

UNITED KINGDOM, Cheadle Hulme
TGS Total Generator Solutions Ltd
Tel: +44161 8188720
Fax: +447754677963
Website: http://totalgeneratorsolutions.com
Email: sales@totalgeneratorsolutions.com

UNITED STATES, Kemah - Texas
Ramtec Marine Systems LLC
Tel: +1-281-334-2904
Fax: +1-832-221-5642
Website: www.ramtec-marine.com
Email: waling@ramtec-marine.com