



# LX449

*Parameter list*  
Product version V1.5.8.2

# PARAMETER LIST I

Software settings					
Parameter		Default settings	Custom settings	Min. value	Max. value
<i>Stability</i> (1/1)	<i>Build-up Gain</i>	2x		0.1x	14x
	<i>Loop Gain</i>	0.100x		0.022	1.000
<i>Buildup</i> (1/1)	<i>Initial voltage</i>	37.5%		0 %	67.5 %
	<i>Build-up Time</i>	5 Sec		1 Sec	60 Sec
<i>Protections</i> (1/1)	<i>Excitation loss</i>	ON		Off	On
	<i>Phase loss</i>	ON		Off	On
	<i>Current loss</i>	ON		Off	On
	<i>Stop at fault</i>	OFF		Off	On
<i>Analog Input 1</i> (1/2)	<i>Voltage Match</i>	OFF		Off	On
	<i>Cosphi infl.</i>	OFF		Off	On
<i>Analog Input 2</i> (2/2)	<i>Cosphi infl.</i> <sup>(1)</sup>	OFF		Off	On
<i>Analog Output</i> (1/1)	<i>Analog Output</i> <sup>(1) (2)</sup>	Output OFF		<b>Options:</b> Output off PID Output UVW (V) I-v (A) Cosphi Freq. (Hz) I-Exc. (A) UVW SP(V) Cosphi SP General SP 5Vdc 10Vdc I-v SP(A)	
<i>Regulation mode</i> (1/1)	<i>INV mode</i>	OFF		Off	On
	<i>VPH mode</i>	OFF		Off	On
	<i>Min. Excitation mode</i>	OFF		Off	On
	<i>Reset to defaults?</i>	NO		No	Yes

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

<sup>(2)</sup> Do not use. (Only manufacturer)

<sup>(3)</sup> Only available in OEM access level. (Contact manufacturer for more information)

# PARAMETER LIST I I

Software settings						
<i>Parameter</i>		<i>Default settings</i>	<i>Custom settings</i>	<i>Min. value</i>	<i>Max. value</i>	
<i>Calibration (1/2)</i>	<sup>(3)</sup> <i>Exc Offset</i> <span style="float: right;"><sup>(1)</sup></span>	<i>0</i>		-127	127	
	<i>Exc Gain</i> <span style="float: right;"><sup>(1)</sup></span>	<i>0.0 %</i>		-12.7 %	12.7 %	
	<i>U Offset</i> <span style="float: right;"><sup>(1)</sup></span>	<i>0</i>		-127	127	
	<i>U Gain</i> <span style="float: right;"><sup>(1)</sup></span>	<i>0.0 %</i>		-12.7 %	12.7 %	
<i>Calibration (2/2)</i>	<sup>(3)</sup> <i>I(u) Offset</i> <span style="float: right;"><sup>(1)</sup></span>	<i>0.0</i>		-12.7	12.7	
	<i>I(u) Gain</i> <span style="float: right;"><sup>(1)</sup></span>	<i>0.0 %</i>		-12.7 %	12.7 %	
	<i>Analog In-Zero</i> <span style="float: right;"><sup>(1)</sup></span>	<i>-1</i>		-127	127	
	<i>Analog In-Span</i> <span style="float: right;"><sup>(1)</sup></span>	<i>-0.1 %</i>		-12.7 %	12.7 %	
	<i>PF offset</i> <span style="float: right;"><sup>(1)</sup></span>	<i>0</i>		-127	127	

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

<sup>(2)</sup> Do not use. (Only manufacturer)

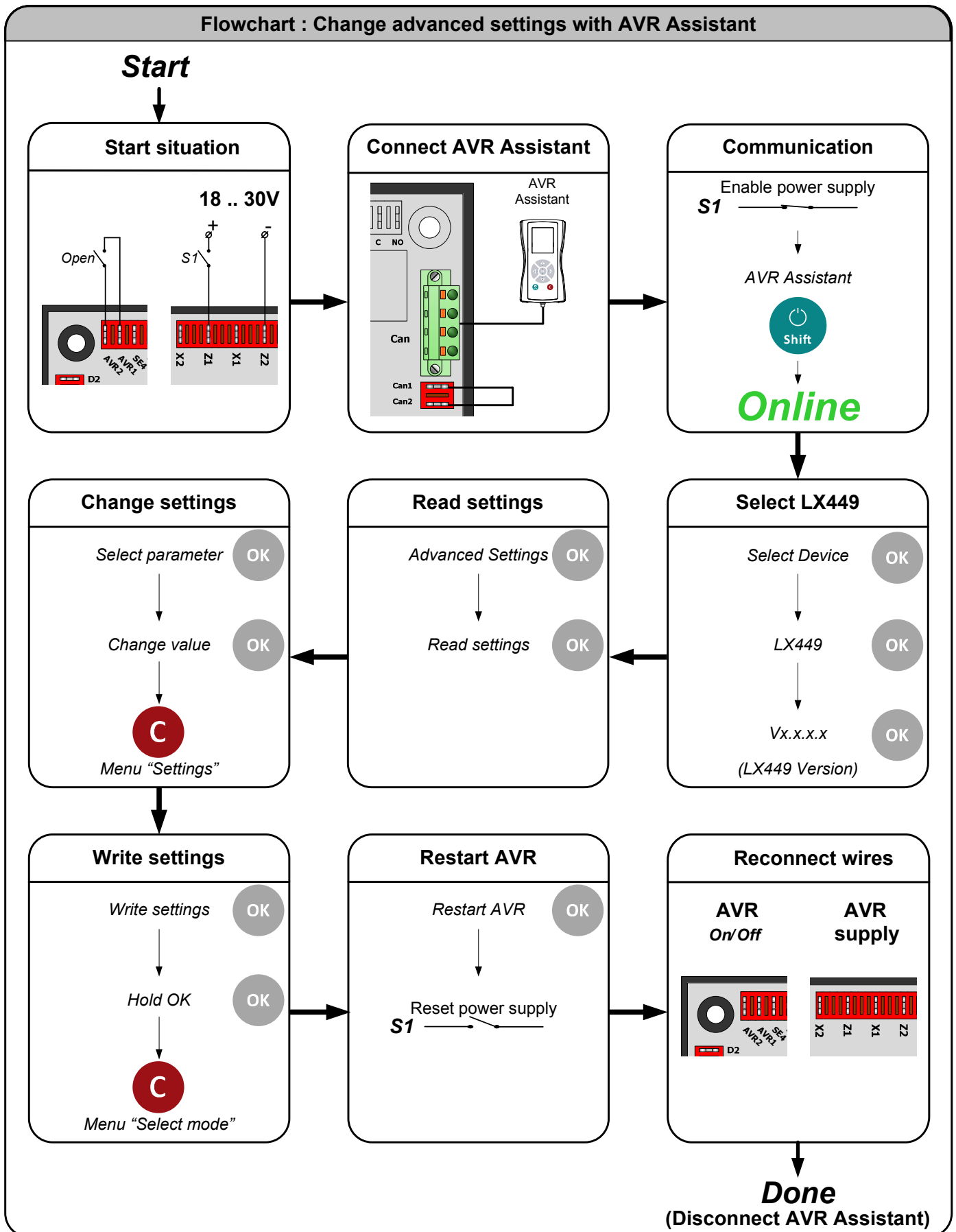
<sup>(3)</sup> Only available in OEM access level. (Contact manufacturer for more information)

# PARAMETER LIST I I I

Hardware settings			
	<i>Parameter</i>	<i>Default settings</i>	<i>Custom settings</i>
<i>Rotary switch</i>	<i>M-Select</i>	<i>Position : 0</i>	
	<i>I-Limit</i>	<i>Position : 9</i>	
<i>Potentiometer</i>	<i>Voltage coarse</i>	<i>+/- 50% (adjusted: 400V/50Hz)</i>	
	<i>Voltage fine</i>	<i>50 %</i>	
	<i>Prop. gain</i>	<i>50 %</i>	
	<i>Int. time</i>	<i>50 %</i>	
	<i>Droop</i>	<i>0 %</i>	
	<i>Cosphi</i> <i>Steepness</i> <sup>(4)</sup>	<i>50%</i>	
	<i>Excitation ceiling</i> <i>Cap. limit</i> <sup>(4)</sup>	<i>100%</i>	
	<i>Acc-range</i> <i>Min. exc φ</i> <sup>(4)</sup>	<i>0%</i>	
<i>Terminals</i>	<i>AVR1-AVR2</i>	<i>Linked</i>	
	<i>SE1-SE2</i>	<i>Linked</i>	
	<i>SE3-SE4</i>	<i>Linked</i>	
	<i>S-T</i>	<i>Linked</i>	
	<i>CAN1-CAN2</i>	<i>Linked</i>	
	<i>TH1-TH2</i> <sup>(4)</sup>	<i>Linked</i>	
	<i>PF1-PF2</i> <sup>(4)</sup>	<i>Open</i>	
<sup>(4)</sup> <i>Function can be changed with software settings.</i>			

# ADVANCED SETTINGS I

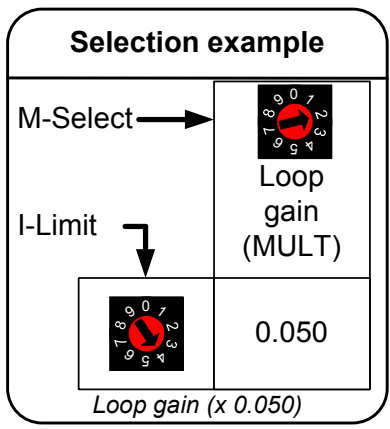
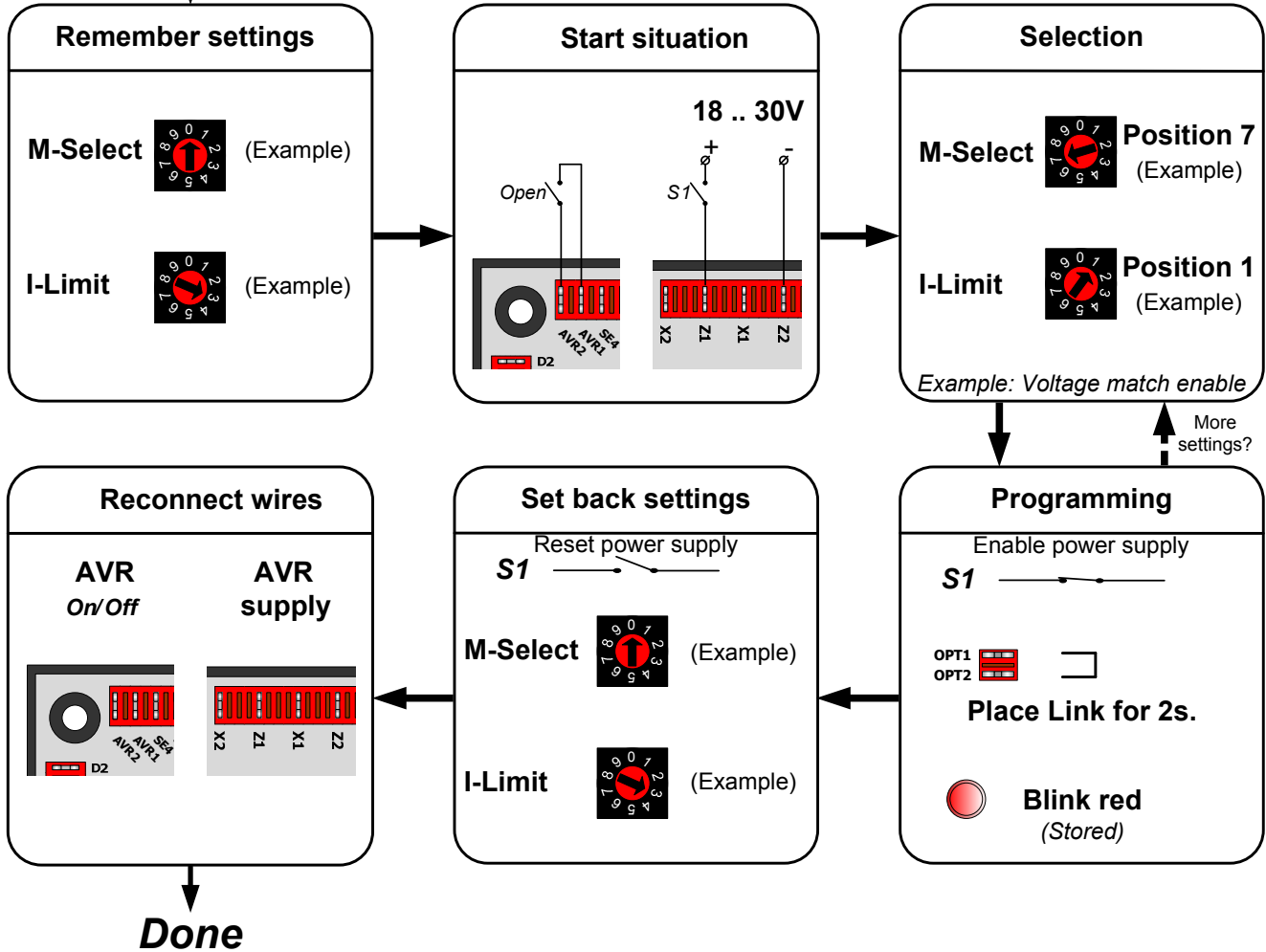
Flowchart : Change advanced settings with AVR Assistant



# ADVANCED SETTINGS I I

Flowchart : Change advanced settings with rotary switches

**Begin** (Generator stopped !)





















**Note**

*Change of setting only take effect after restart*

Advanced settings can be adjusted according the flowchart.  
Advanced settings are available with firmware version 1.2 and higher.

# ADVANCED SETTINGS I I I

**Table : Change advanced settings with rotary switches**

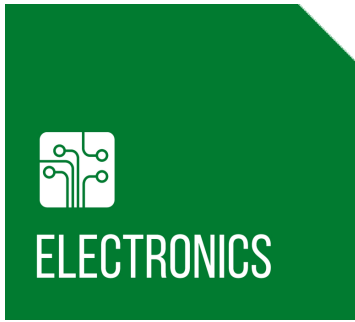
<i>M-Select</i>									
	 Buildup gain (MULT)	 Loop gain (MULT)	 Initial voltage, SE Mode.	 Protections	 Buildup time @ startup	 Option output	 Accessory input modes	 Operation modes	
<i>I-Limit</i>									
	0.1 (slowest)	1.000 (fastest)	0%	Excitation loss disabled	1 sec.	Do not use *	Voltage match 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 which 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 M-Select and I-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](http://www.emri.nl)  
E-mail: [info@emri.nl](mailto:info@emri.nl)

**Manufacturer**



**CANARY ISLANDS**, Las Palmas  
**Zamakona Yards**  
Tel: +34 928467521  
Fax: +34 928461233  
Website: [www.zamakonayards.com/](http://www.zamakonayards.com/)  
E-mail: [jbetancor@zamakonayards.com](mailto:jbetancor@zamakonayards.com)

**CHILE**, Santiago  
**Lucio Vicencio y CIA.LTDA**  
Tel: +1-281-334-2904  
Fax: +1-832-221-5642  
Website: [www.luciovicencio.cl](http://www.luciovicencio.cl)  
E-mail: [luciovincenciolt@gmail.com](mailto:luciovincenciolt@gmail.com)

**GREECE**, Piraeus  
**Stavros Kassidiaris S.A.**  
Tel: +30 210 4636000  
Fax: +30 210 4624471  
Website: [www.kassidiaris.gr](http://www.kassidiaris.gr)  
E-mail: [info@kassidiaris.gr](mailto:info@kassidiaris.gr)

**ICELAND**, Hafnarfjordur  
**Rafeining ehf**  
Tel: +354 565 3049  
Fax: +354 565 3048  
Website: [www.rafeining.is](http://www.rafeining.is)  
E-mail: [rafeining@rafeining.is](mailto:rafeining@rafeining.is)

**INDIA**, Faridabad  
**Power Solutions**  
Tel: +91 9868907903  
Fax: +91 129 2431216  
Website: [www.psolindia.com](http://www.psolindia.com)  
E-mail: [ramesh.powersolutions@gmail.com](mailto: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](http://www.frydenbo.no)  
E-mail: [firma.fel@frydenboe.no](mailto: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](mailto:info@an-elec.pl)

**POLAND**, Szczecin  
**MARCONTROL**  
Tel: +48 91 4 888 474  
Fax: +48 91 4 888 475  
Website: [www.marcontrol.com](http://www.marcontrol.com)  
E-mail: [emri@marcontrol.com](mailto:emri@marcontrol.com)

**POLAND**, Szczecin-Mierzyn  
**Marel Serwis**  
Tel: +48 91 48 58 388  
Fax: +48 91 48 79 948  
Website: [www.marel.szczecin.pl](http://www.marel.szczecin.pl)  
E-mail: [handel@marel.szczecin.pl](mailto:handel@marel.szczecin.pl)

**REPUBLIC OF PANAMA**, Panama  
**PASRAS S.A.**  
Tel: +507 3140095  
Fax: +507 3140094  
Website: [www.pasras.com](http://www.pasras.com)  
E-mail: [info@pasras.com](mailto:info@pasras.com)

**ROMANIA**, Constanta  
**SAMTEC SRL**  
Tel: +40 241 517 047  
Fax: +40 241 517 047  
Website: [www.samtec.ro](http://www.samtec.ro)  
E-mail: [samtec\\_srl@yahoo.com](mailto:samtec_srl@yahoo.com)

**SINGAPORE**, Singapore  
**Cyclelect Electrical Engineering**  
Tel: +65 6868 6013  
Fax: +65 6863 6260  
Website: [www.cyclelect.com.sg](http://www.cyclelect.com.sg)  
E-mail: [heng.p@cyclelect.com.sg](mailto:heng.p@cyclelect.com.sg)

**SOUTH AFRICA**, Roodepoort  
**Yneldo Electronics**  
Tel: +27(0)117637053  
Fax: +27(0)117634212  
Website: [www.yneldo.com](http://www.yneldo.com)  
E-mail: [yneldo@yneldo.com](mailto: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](http://www.edtab.se)  
E-mail: [info@edtab.se](mailto:info@edtab.se)

**THAILAND**, Bang Lamung  
**Semtec Maritime/Genetech Co.Ltd**  
Tel: +66 38301262  
Fax: +1-832-221-5642  
Website: [semtecmaritime.com/](http://semtecmaritime.com/)  
Email: [ron@northstarusa.co](mailto:ron@northstarusa.co)

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

**UNITED ARAB EMIRATES**, Sharjah  
**KDU Technical Services**  
Tel: +971-6-5575480  
Fax: +971-6-5575490  
Website: [www.kdutech.ae](http://www.kdutech.ae)  
E-mail: [kdutech@kdutech.ae](mailto:kdutech@kdutech.ae)

**UNITED KINGDOM**, Stockton on Tees  
**MJR Controls**  
Tel: +44 1642 762 151  
Fax: +44 1642 762 502  
Website: [www.mjrcontrols.com](http://www.mjrcontrols.com)  
Email: [chris.milner@mjrcontrols.com](mailto: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](mailto: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](http://www.ramtec-marine.com)  
Email: [waling@ramtec-marine.com](mailto:waling@ramtec-marine.com)