

# MULTI-LINE 2 APPLICATION NOTES



# Getting started - USW 1.x

- Software download from internet
- Software installation
- Device setup
- Data backup



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# 1. Delimitation

### 1.1 Scope of Application notes, Getting started - USW 1.x

This document covers the following products:

- AGC from SW version 1.00.0
- BGC from SW version 1.00.0
- EC-1 from SW version 1.00.0
- GC-1 from SW version 1.00.0
- GPC from SW version 1.70.0
- GPU from SW version 1.70.0
- MDR-2 from SW version 1.00.0
- PPM from SW version 1.00.0
- PPU from SW version 1.70.0

Utility Software USW version 1.00.0 and later.

# 2. General information

### 2.1 Warnings, legal information and safety

#### 2.1.1 Warnings and notes

Throughout this document, a number of warnings and notes with helpful user information will be presented. To ensure that these are noticed, they will be highlighted as follows in order to separate them from the general text.

#### Warnings

Warnings indicate a potentially dangerous situation, which could result in death, personal injury or damaged equipment, if certain guidelines are not followed.

Notes



Notes provide general information, which will be helpful for the reader to bear in mind.

#### 2.1.2 Legal information and disclaimer

DEIF takes no responsibility for installation or operation of the generator set. If there is any doubt about how to install or operate the engine/generator controlled by the Multi-line 2 unit, the company responsible for the installation or the operation of the set must be contacted.



The Multi-line 2 unit is not to be opened by unauthorised personnel. If opened anyway, the warranty will be lost.

#### Disclaimer

DEIF A/S reserves the right to change any of the contents of this document without prior notice.

#### 2.1.3 Safety issues

Installing and operating the Multi-line 2 unit may imply work with dangerous currents and voltages. Therefore, the installation should only be carried out by authorised personnel who understand the risks involved in working with live electrical equipment.

![](_page_4_Picture_19.jpeg)

Be aware of the hazardous live currents and voltages. Do not touch any AC measurement inputs as this could lead to injury or death.

#### 2.1.4 Electrostatic discharge awareness

Sufficient care must be taken to protect the terminal against static discharges during the installation. Once the unit is installed and connected, these precautions are no longer necessary.

#### 2.1.5 Factory settings

The Multi-line 2 unit is delivered from factory with certain factory settings. These are based on average values and are not necessarily the correct settings for matching the engine/generator set in question. Precautions must be taken to check the settings before running the engine/generator set.

### 2.2 About the Application Notes

#### 2.2.1 General purpose

These Installation Instructions mainly include general product and hardware information, mounting instructions, terminal strip descriptions, I/O lists and wiring descriptions.

The general purpose of this document is to give the user important information to be used in the installation of the unit.

![](_page_5_Picture_6.jpeg)

Please make sure to read this document before starting to work with the Multi-line 2 unit and the gen-set to be controlled. Failure to do this could result in human injury or damage to the equipment.

#### 2.2.2 Intended users

These Installation Instructions are mainly intended for the person responsible for the design and installation. In most cases, this would be a panel builder designer. Naturally, other users might also find useful information in the document.

#### 2.2.3 Contents and overall structure

This document is divided into chapters, and in order to make the structure simple and easy to use, each chapter will begin from the top of a new page.

# 3. PC utility software

### 3.1 General information

The PC utility software (hereafter called USW) is a software programme that can be used for configuration of the Multi-line 2 products. There are two versions, 1.x and 3.x. This document will only be dealing with USW 1.x.

() The utility software is the software that is installed on the PC, notebook or desktop computer.

![](_page_6_Figure_6.jpeg)

### 3.2 Supported Windows systems

The following Windows versions are supported on both 32 and 64 bit platforms:

- Windows 8
- Windows 7
- Windows Vista
- Windows XP

### 3.3 Multi-line 2 products

The following DEIF-branded Multi-line 2 products can be programmed from the USW 1.x:

• AGC from SW version 1.00.0

- BGC from SW version 1.00.0
- EC-1 from SW version 1.00.0
- GC-1 from SW version 1.00.0
- GPC from SW version 1.70.0
- GPU from SW version 1.70.0
- MDR-2 from SW version 1.00.0
- PPM from SW version 1.00.0
- PPU from SW version 1.70.0

### 3.4 Obtain USW from DEIF

#### 3.4.1 USW

The USW is normally obtained from DEIF via the internet. Visit www.deif.com.

Select "Documentation & Software" from the menu on the top bar:

![](_page_7_Picture_14.jpeg)

Select "Software download" and then select the desired software from the drop-down menu:

-power in control	Technology   Power & Control Technology  Marine & Offshore Technology	SEARCH
Documentation & Software	Documentation & Software > Software download Software download	
> Software download	On this page, you can download software updates for your product(s) and help yourself to various utility tools and add-ons that will assist you in setting up, detecting	Contact Us
> Compile catalogue	faults and configuring your product(s).	
> Documentation by type	Please be advised that not all of our products can be updated by the user. Nor do all of our products come with a utility tool. Consequently, the list on this page cannot be	Please contact support@deif.com with question
> E-news	considered an overview of our product programme.	regarding DEIF software, produc
> DEIF newsletter	DEIF A/S will register your download along with the used e-mail address for the	opgrades and duinty tools.
> Publications	purpose of sending out information on future updates, if requested.	
> Cases & articles	DEIF A/S cannot be made responsible for any consequences of failed product undates or use of utility tools. Nor can DEIE A/S be made responsible for	
> What the press wrote	consequences of changes in behaviour of products due to a software upgrade. It is	
> DEIF logo	anways ure responsibility of the user to ensure correct set-up and configuration before commissioning. Please study the version log of the software before updating the product.	
	Select software to download	
	Hull-line 2 BGC Application Software series 1.x Hull-line 2 BGC Application Software series 2.x Hull-line 2 BGC Application Software series 1.7.x Hull-line 2 BGC Application BGC application Software Stress 1.7.x Hull-line 2 EC-10/GC 1.Application Software Stress 1.x Hull-line 2 EC-10/GC 1.Application Software Stress 1.x Hull-line 2 EC-10/GC 1.Application Software Stress 1.x Hull-line 2 BGC Application Software Stress 1.x Hull-line 2 GPU-3 BGC Application Software Stress 1.x Hull-line 2 Standard Application Software Stress 1.x Hull-line 2 Standard Application Software Stress 1.x Hull-line 2 Standard Application Software Stress 2.1.x md 2.4.x Hull-line 2 Standard Application Software Stress 3.1.x md 2.4.x Hull-line 2 Standard Application Software Stress 3.1.x md 2.4.x Hull-line 2 Standard Application Software Stress 3.1.x md 2.4.x Hull-line 2 Standard Application Software Stress 3.4.x Hull-line 2 Stand	

![](_page_8_Picture_4.jpeg)

The example above shows utility software version 3.x.

![](_page_9_Figure_2.jpeg)

Information about changes in the recent software compared with the previous version.

-power in control	Technology * Power & Control Technology * Marine & Offshore Technology *	SEARCH D
	Decumentation & Software 4 controlad	
Documentation & Software	Software download	
> Software download	On this page, you can download software updates for your product(s) and help yourself to various utility tools and add-ons that will assist you in setting up, detecting	Contact Us
> Compile catalogue	lauits and conliguning your product(s).	
> Documentation by type	Please be advised that not all of our products can be updated by the user. Nor do all of our products come with a utility tool. Consequently, the list on this page cannot be	Please contact support@delf.com with guestions
> E-news	considered an overview of our product programme.	regarding DEIF software, product
> DEIF newsletter	DEIF A/S will register your download along with the used e-mail address for the	upgrades and duinty tools.
> Publications	purpose of sending out information on future updates, if requested.	
> Cases & articles	DEIF A/S cannot be made responsible for any consequences of failed product	
> What the press wrote	consequences of changes in behaviour of products due to a software upgrade. It is	
> DEIF logo	always the responsibility of the user to ensure correct set-up and configuration before commissioning. Please study the version log of the software before updating the product.	
	Downloading and installing this software you should be aware that: • Prior to downloading this software you should be aware your product is a Multi-line 2 series product varion 3.xx or 4.xx or any other time the ist of supported products. In case of any doubt please contact our Support & Service department at support[db/ccsc]	
	Compared to last revision the recent has changed as follows:	
	<ul> <li>New features</li> <li>Support of redundancy (AGC-4 only)</li> <li>Indication of the parameters that have been changed since commissioning (AGC-4 only)</li> <li>Disnlaw in Anne Sumervision of the names assigned to engines, breakers</li> </ul>	
	and mains (AGC-4 only) • Possibility to reset logs in the controller (AGC-4 and AGC 200 only)	
	Changes • M-logic page is empty initially • M-L-cogic page adjusts to the width of the window • Device page can handle negative power values	
	Corrections • Batch write issue regarding Modbus configurator data was fixed • Application Configuration page does not show "AGC" in the header initially • Source laws (and can change the access love) of any parameter to any	
	lower level • Data tracer will show the same number of digits as in the Trending window Click here to see the entire change log.	5
	If you wish to download the recent version of this software please fill in your e-mail address and click' submit below - you will receive an e-mail with a link to download the software a few seconds after having submitted your request.	
	E-IIIII. AAAAA gaaaa gaaaa waxaa	

To receive the selected software, enter your e-mail address in the e-mail field and submit the request.

Shortly afterwards, you will receive an e-mail containing a link to the file. Please follow the instructions in this e-mail carefully.

When the USW has been saved to your PC, the software can be installed by executing the file you just down-loaded. Follow the instructions on the screen.

The installation process is not described further in this manual.

(i

# 4. Multi-line 2 application software

### 4.1 General information

![](_page_11_Picture_4.jpeg)

The application software (hereafter called ASW) is the software that is written in the ML-2 device.

When you receive the unit from the factory (DEIF A/S), software has already been downloaded, so it is ready to be parameterised with all necessary setpoints and adjustments.

### 4.2 Reason for upgrade

#### 4.2.1 Main reasons

There are various reasons for upgrading the ML-2 device. The main reasons are:

- 1. To get new functions available in the latest SW version.
- 2. The software has an error (bug) that needs to be fixed for cosmetic or functional reasons.

3. To prepare several ML-2 units with the same software, so they are identical prior to forwarding. Information about functions and bugs can be found on www.deif.com.

In most cases, it is not necessary to upgrade the units.

### 4.3 Precautions

#### 4.3.1 Warning

Please read this section carefully before attempting to upgrade your units.

#### 4.3.2 Genset condition

All software downloading to the ML-2 device must be carried out while the genset is at standstill.

#### 4.3.3 Protection

All protections are deactivated during download.

#### 4.3.4 Relay status

All relays are de-energised during download. Please check your diagrams carefully to understand the effect of this.

Status relay Please check relay on terminals 3 and 4 (AGC, GPC, GPU, MDR-2, PPM and PPU only).

Other relays

BGC – please check relay for MB and GB contactor, terminals 3 and 4 plus 29 and 42. EC/GC-1 – please check relay for MB and GB contactor and the status relay, terminal 10/11. EC/GC-1M - please check relay for GB contactor and the status relay, terminal 10/11.

### 4.4 Application software

#### 4.4.1 How to obtain ASW from DEIF

Please follow the description in the section "Obtain USW from DEIF".

# 5. Before writing new ASW

### 5.1 General information

During an installation of new ASW, the configuration of the unit will be lost. So if the configuration is to be reused, a manual procedure is to be followed. The following steps describe how to prepare upgrading of ASW from version 1.x. The procedure is to save the configuration to file before the installation of new ASW. After installation, the configuration can then be written back to the unit, and in that way the unit will have the same configuration as before the installation.

### 5.2 Application software, version 1.x

#### 5.2.1 ASW 1.x

For units using the ASW version 1.x, the USW-1 must be used to save the different configurations. As it appears from the table below, the units have different sets of configurations. In the ASW version 1.x units, each configuration has to be saved individually in a separate file.

	AGC	BGC	EC-1	GC-1	GPC	GPU	MDR-2	РРМ	PPU
Parameter file	Х	Х	Х	Х	Х	Х	Х	Х	Х
Input file	Х	Х	Х	Х	Х	Х	-	Х	Х
Output file	-	-	Х	Х	-	-	-	-	-
Inhibit file	-	-	-	-	Х	Х	-	Х	Х
Language file	Х	Х	Х	Х	-	-	-	-	-
M-Logic file	-	Х	-	-	-	Х	-	-	-
View file	Х	Х	-	-	Х	Х	Х	Х	Х

#### The available configurations of each unit:

### 5.3 Backup ASW 1.x

#### 5.3.1 How to prepare backup for ASW version 1.x

All the backup work from the USW requires that the Multi-line 2 unit is connected to the PC. Open the USW and connect to your device with the green "connect" button in the menu "Connection".

![](_page_14_Figure_5.jpeg)

Now, the various files can be saved.

If you fail to save the parameters prior to SW download, they will be lost. They cannot be restored when the software has been downloaded.

### 5.4 Parameter file

#### 5.4.1 How to save the parameter file

Open the USW and connect to your device. Select "Parameters" in the toolbar on the left.

![](_page_15_Picture_5.jpeg)

Click the "upload" icon (marked with a red arrow) in the horizontal toolbar.

![](_page_15_Picture_7.jpeg)

Now, the parameters are being uploaded from the device.

![](_page_15_Picture_9.jpeg)

When the upload has been completed, the screen will show the parameters that have just been retrieved from the device.

	Drag a column trea	ter here to ar	oup by that column	1								ľ
DEIF	Category	• a/ •	Text	Addres: V	Value 🔻	Un 🔻	Timer 💌	Outre. 🔻	Output -	En 💌	High	-
A	Protection	1010	Reverse power	1	-10	%	10	1	2			-1
AN	Protection	1016	Rev. P. Inverse	2	N/A.		N/A	N/A	N/A.		1	
eets.	Protection	1020	Over current 1	3	120	%	60	1	2			
Plant	Protection	1030	Over current 2	4	130	%	1,5	0	0			
¥1	Protection	1041	Over curr. inv. 1	5	110	%	5	N/A	NA		1	
	Protection	1042	Over curr. inv. 2	6	120	%	3,8	NSA	N/A		1	
storical alarms	Protection	1043	Over curr. inv. 3	7	140	%	2,5	N/A	N/A		1	
	Protection	1051	Over curr. inv. 4	8	160	%	1,5	N/A	N/A			
17027T	Protection	1052	Over curr. inv. 5	9	180	%	1	N/A	N/A			
United	Protection	1053	Over curr. inv. 6	10	200	%	0,5	N/A	N/A		1	
Trending	Protection	1060	Over curr. inv	11	N/A.	-	N/A	2	0			
,	Protection	1400	Reverse pow. S2	45	-5	%	10	N/A	N/A			
	Protection	1410	h-current 1 S2	46	115	%	10	N/A	N/A			
Daramatere	Protection	1420	h-current 2 S2	47	120	%	5	N/A	N/A			
araniccers	Control	2050	Sync Window	83	15	%	0,5	0	0		1	
4 years	Control	2110	Modes Active	90	0		N/A	N/A	N/A		1	
111	Control	2290	Delay regulatio	417	N/A	s	0	0	0			
uts / Outputs	Input	3120	Dig. Input 23	144	N/A		10	2	0			
8 1	Input	3130	Dig. Input 24	145	N/A.		10	2	0			
8-	Input	3140	Dig. Input 25	146	N/A		10	2	0			
	Input	3150	Dig. Input 26	147	N/A		10	2	0			
Options	Input	3160	Dig. Input 27	148	N/A		10	2	0			
911	Input	3170	Dig. Input 43	149	N/A		10	2	0			1
	Text			Timestamp					Active	17	Ack	
Loop												

Click the "save" icon in the horizontal toolbar to save the file.

### 5.5 Input file

#### 5.5.1 Input file

Open the USW and connect to your device. Open the menu "Settings" and select "Inputs/Outputs".

![](_page_16_Picture_8.jpeg)

The following dialogue box pops up:

I/O settings		×
🛎 🖬 💕 💕 🖄 🖪		
Inputs Outputs		
Alarminhibit		-
I/O number / function Terminal 23	-	
Alarm Ack.		
I/O number / function Terminal 24	×	
Start Sync./ Control		
1/0 number / function Terminal 25	•	
External Communicati		
1/0 number / function Terminal 26	•	
Block Loss of Mains		
1/0 number / function Terminal 27	×	
Island Mode		<u>.</u>
		Close

Click the "save" icon in the horizontal toolbar to save the file.

### 5.6 Output file

#### 5.6.1 How to save the output file

Open the USW and connect to your device. Open the menu "Settings" and select "Inputs/Outputs".

![](_page_17_Figure_8.jpeg)

The dialogue box shown below pops up. Select "Outputs" by means of Ctrl + Tab.

I/O settings		X
inputs Outputs		
Relay1	-	1
Relay2 10 number / function Alarm / Linit	2	
Relay3 1/0 number / function Prepare		
Relay4 1/0 number / function Run Col		
Relay5 1/0 number / function Starter		
		Qlose

Click the "save" icon in the horizontal toolbar to save the file.

### 5.7 Inhibit file

#### 5.7.1 How to save the inhibit file

Open the USW and connect to your device. Open the menu "Settings" and select "Inhibits".

![](_page_18_Figure_8.jpeg)

The following dialogue box pops up:

BB protection			_		
Condition 1	0	perator	_	Condition 2	
Inhibit	- L	ND	-	Logic 1	-
Gen. protection					
Condition 1	0	perator		Condition 2	
Inhibit	- 1	ND	•	Logic 1	•
Engine interface ca	d				
Condition 1	0	perator		Condition 2	
Inhibit	•	ND	•	Logic 1	*
df/dt Vector Jump					
Condition 1	0	perator		Condition 2	

Click the "save" icon in the horizontal toolbar to save the inhibit settings.

### 5.8 View file

#### 5.8.1 How to save the view file

Open the USW and connect to your device. Open the menu "Settings" and select "Views".

![](_page_19_Figure_8.jpeg)

The following dialogue box pops up:

![](_page_19_Figure_10.jpeg)

Click the "save" icon in the horizontal toolbar to save the file.

### 5.9 Translations file

#### 5.9.1 How to save the translations file

Open the USW and connect to your device. Select the "Translations" menu in the toolbar on the left.

![](_page_20_Picture_5.jpeg)

The screen is empty because the languages are not uploaded from the device. Upload the languages by clicking the "upload" icon in the horizontal toolbar.

![](_page_20_Picture_7.jpeg)

You will be prompted several times during the upload.

onfirm	D:			×
? Yo	u are about	to retrieve 14	183 texts. Do you want	to proceed?
~				
		Yes	No	

Click "Yes" to start uploading the languages available in the device.

texts	(maste	r langi	iade)

Click "Cancel" if you regret the data transfer.

![](_page_21_Picture_7.jpeg)

Click "Yes" if languages are already programmed in the device. Click "No" if only the master language is programmed in the device.

![](_page_21_Picture_9.jpeg)

Click "Cancel" to regret the data transfer.

![](_page_21_Picture_11.jpeg)

Click "OK".

The USW now looks like this:

DEIF utility software				-19
ile Connection Settin	ngs Trending Parameters Help			
6 % & & Ø.		' 🖇 🔳 🗊 🖓 🗊 🎞 🕄 🕄 🗳 🗳 🐼		
Statu	s Master	Translations:		15
DEIF	Mutti-line 2 AGC	Language L	Multi-line 2	AGC
	M Pow Ana98 ######WV	Language i	interve-same o	AUC
6	Oil P ###psi ##.#bar	Language 2		
44	VDO104 = Lev. switch	Language 3		
Diant	Cool. Temp.###F ###C	Language 4		
Plan	VDO105 = Lev. switch	Longuage 5		
¥1	Fuel level \$\$\$\$\$%	Language 0		
	Tacho ##### rpm	Language 6		
orical alarms	Run Time abs. #####H	Language 7		
	Run #####H Quaran. #	Language 8		
	Run Time rel, #####H	0 encirone L		
	GB Operations #####	Language a		
Trending	TB Operations #####	Language 10		
<b>2</b>	MB Operations #####	Language 11		
	Next ser. #####h ##m			
arameters	Next prio #####h ##m			
	Fire run #####h ##m			
* United	P Available #####kW			
***	P Mains #####XVV			
sts / Outputs	P DG's Tot #####kW			
8-11	DEL OA OB ENA			
8	DEL OA OB ENA FC N/X			
Catlana	DEL OA OB ENA FC			
Options	Pos. voltage ####.#%			
200	Neg. votage #### #%			
	Neg. Current ####.#%			
Logs	Zero votage #### #%			
10.0	Zero Current #### #%			
Text		Timestamp	Active	Ack
08 (	osition failure	2006-05-08 14:30:16.754		Ack.
ranslations MB P	osition failure	2006-05-08 14:30:16.754		Ack.

Click the "save" icon in the horizontal toolbar to save the language file.

### 5.10 M-Logic file

#### 5.10.1 How to save the M-Logic file

Open the USW and connect to your device. Select the menu "M-Logic" in the toolbar on the left. (Press Alt + F1 if it is not visible).

Connectio	n Settings Irending Parameters	Help						
20 B B	8 10 · 10 10 10 17 1	* 🖻 🖗 🔳 🔳	PIN 30 V	<b>6</b>				
	Logic 1		in the	ion testa i	1000	100		
EIF	Event A	Operator	Event B		Oper	ator		
	NOT Not used	▼ OR	NOT Not used		▼ OR		NOT	
nding	Enable this rule	Ļ	Output Not used	•	Delay (sec	.) •••0		
· ·	Logic 2							
	Event A	Operator	Event B		Oper	ator	S. 197	
neters	NOT Not used	• OR	NOT Not used		▼ OR	•	NOT	
	Enable this rule	Ļ	Output Not used	•	Delay (sec	.) •••0		
/Outputs	Logic 3	2000-00-0	Acres 1000					
	Event A	Operator	Event 8		Oper	ator		
	NOT Not used	▼ OR	NOT Not used		• OR		NOT	
tions	Enable this rule	Ļ	Output Not used	•	Delay (sec	.) •••0		
	Logic 4	Occurtor	Even B		0.00			
ogs	Event A	Operator	Event B		Oper	SEOF	-	-
é).	NOT Not used	< OK	NOT Not used		• OR	1	NOT	U
lations	Enable this rule	Ļ	Output Not used	•	Delay (sec	.) •••0		• •
T.	Text	Ti	mestamp			Active	Ack	
AND	GB Position failure	20	06-05-08 14:30:16.754			# Active	0	Ack.
NOT	MB Position failure	20	06-05-08 14:30 16 754			+ Active	0	Ack.

Click the "save" icon in the horizontal toolbar to save the file.

# 6. Upgrading ASW

### 6.1 General information

Before attempting to download application software to the device, please read the chapter "Before writing new ASW" for instructions about how to save the present configuration.

 $\triangle$ 

If you fail to save the parameters prior to SW download, they will be lost. They cannot be restored when the software has been downloaded.

### 6.2 ASW version 1.x

#### 6.2.1 Download of new ASW to unit

Start the download by clicking the "flash" icon in the horizontal toolbar to programme the new firmware.

DEIF utility software	
File Connection Settings Trending Parameters Help	
° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	

Select the software you have downloaded to your PC and open it.

![](_page_24_Picture_12.jpeg)

Confirm (or deny) that you really want to replace the device with new application software.

Confirm				×
2	This will erase the existing progr	am in your device w	ith the version you have chosen	. Do you want to proceed?
		Yes	No	

The screen informs you about the download.

![](_page_25_Picture_5.jpeg)

The display shows a display message.

![](_page_25_Picture_7.jpeg)

When the download is complete, the unit needs to be fully programmed.

![](_page_25_Picture_9.jpeg)

If you fail to programme the device after the download, it will not be ready for operation.

![](_page_26_Figure_2.jpeg)

After the download, you can confirm the Multi-line 2 type and software version in the status line.

### 6.3 Download of saved parameters to the unit

#### 6.3.1 How to download saved parameters to the unit

The Multi-line 2 unit can be programmed using the display (partial programming only) or the PC utility software. Programming of the unit is mainly required in the following cases:

- 1. Setup of new unit
- 2. Setup after software upgrade
- 3. Change of setup in existing unit

This describes the setup after software upgrade. Therefore, please keep in mind that the files mentioned in the chapter "Before writing new ASW" must be used (see the example below).

![](_page_27_Picture_3.jpeg)

### 6.4 Parameter file

#### 6.4.1 How to handle the parameter file

Open the USW and connect to your device. Select "Parameters" in the toolbar on the left.

![](_page_27_Picture_7.jpeg)

Select the "open" icon in the horizontal toolbar. (It is identical with the traditional Microsoft design "open" icon).

Ĩ

Now, the parameter file can be opened.

en		The second s			?
Look in:	Contemporary		-	3 🕫 🖻 🖽	) <del>.</del>
	ship_name_	DG1_date.param			
My Recent					
Desktop					
~					
<b>&gt;</b>					
ly Documents					
My Computer					
My Network	File name:	ship_name_DG1_date.p	aram	-	Open
Places	Files of type:	Device parameter file (".	param)		Cancel

Now, you can download the parameters by clicking the "download" icon.

![](_page_28_Picture_7.jpeg)

Enter the password.

Password		×
The feature you are tryin Please enter the requeste	g to access is pa ed password.	ssword protected.
Password	•	
Valid password	OK	Cancel

Confirm (or deny) that you want to download the parameters to the device.

![](_page_29_Picture_3.jpeg)

The parameters are sent. Please wait.

![](_page_29_Picture_5.jpeg)

#### 6.4.2 Consistency check

When attempting to download a parameter file from another software version than the current version of the unit, a consistency check will be started. Due to the vast amount of parameters, this will take about 5-10 minutes, depending on the ML-2 type.

The purpose of the consistency check is to compare the parameters from the file you want to download and the possible settings of the Multi-line connected to the PC.

The USW will notify you of the consistency check, if the options, the hardware or the software version differ from those of the device.

Warning	) <u>×</u>
<u>!</u>	The options from this parameter set differ from the options of the device. The hardware from this parameter set differs from the hardware of the device. The version of this parameter set differ from the version of the device.
	OK

Accept or decline the consistency check.

Informa	tion	×
į)	This parameter set comes from a device having different hardware and/or options settings. It is consistency checks (values compared to their min and max). Do you want to proceed?	vecessary to perform some

Wait while the consistency check is being performed.

![](_page_30_Picture_3.jpeg)

If there is a deviation between the possible settings in the parameter file and those of the device, these specific parameters will be marked with a red flag. This is indicated with a dialogue box.

Warning	) <u>×</u>
	At least one parameter has its values beyond limits. A red flag identifies it/them
	OK

If there is a mismatch, i.e. at least one parameter has been marked with a red flag, the settings of this parameter must be reviewed. If you fail to do this, the device will not work as expected!

The screen will jump directly to the first parameter that must be adjusted, but please review the entire parameter file for mismatches.

DEIF utility sof	tware													
ile Connection	Settings Trending	Paramet	ters Help											
6 6 8 8	💁 🗃 🖬 🍓	DA Y	* * * *		۲ II X	1.09	3		2					
	And the second second	A PROPERTY AND		UNITED V										
DFIF	Drag a column her	ader here t	o group by that o	olumn										
	Category -	(	Text 💌	Addre 💌 🕚	/alue 🔻	Ur 🕶	Timer 💌	Outr -	Outpi	Ena •	Higt -	Level 💌	Mi: 🕶	FaiCla 🕶
1	Prot1	1070	Fast Overcur	12	225	%	0,5	5 0	1	0 O	4	Customer	4	Trip of
AHIN	Prot1	1080	Fast Overcur	13	350	%	(	0 0	6 8	0 0	1	Customer	1	Trip of
	Prot1	1100	Gen high-volt 1	15	103	%	10	0 0		0 OF	-	Customer		Warning
Plant	Prot1	1110	Gen high-volt 2	16	105	%	4	6 0	1 8	0 OF	-	Customer		Warning
¥1	Prot1	1120	Gen low-volt 1	17	97	%	10	0 0	1 3	0 OF		Customer		Warning
	Prot1	1130	Gen low-volt 2	18	95	%	4	5 0		0 OF	-	Customer		Warning
torical alarms	Prot1	1140	Gen high-fre	19	103	%	10	0 0	1	0 OF	7	Customer		Warning
	Prot1	1150	Gen high-fre	20	105	%	4	6 0		0 OF	-	Customer		Warning
1000	Prot1	1160	Gen low-freq 1	21	97	%	10	0 0		0 OF	-	Customer		Warning
[1 <del></del>	Prot1	1170	Gen low-freq 2	22	95	%		6 0	1 8	0 OF	-	Customer		Warning
Trending	Prot1	1180	BUS high-volt 1	23	103	%	10	0 0		0 OF	-	Customer		Warning
	Prot1	1190	BUS high-yoft 2	24	105	%	4	0		0 OF	-	Customer	1	Warning
5 B	Prot1	1200	BUS low- Data	transfer		1		0		0 OF	-	Customer	-	Warning
	Prot1	1210	BUS low-	-				0		0 OF	-	Customer	-	Warning
arameters	Prot1	1220	BUS high-	Perfo	ming co	nsisten	cy checks	. 0		0 OF	-	Customer	-	Warning
Aurur	Prot1	1230	BUS high-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				0		0 OF	-	Customer	-	Warning
siana	Prot1	1240	BUS low-					0		0 OF	-	Customer	-	Warning
uts / Outputs	Prot1	1250	BUS low-freq 2	30	95	%	4	0		0 OF	-	Customer	-	Warning
e l	Prot1	1260	Over load 1	31	100	%	10	0 0		0 OF	-	Customer	-	Warning
	Prot1	1270	Over load 2	32	110	96		0		0 OF		Customer	-	Trip of
	Prot	1280	Liphalance cu	33	30	96	10	0		0 OF	-	Customer	-	Trip of
Options	Prot1	1290	Liphalance volt	34	10	96	10	0		0 05	-	Customer	-	Trip of
	Prot1	1300	var innort	35	50	96	10	0		0 05	-	Customer	-	Warning
	Prot	1310	var export	36	60	96	10	0		0 OF	-	Customer	-	Warning
	Prot	1320	Gen ne-sea c	37	20	96	0.4	0		0 OF	-	Oustomer	-	Trip of
Logs	Prot1	1330	Gen ne-seq v	38	5	96	0.4	0		0 05	-	Customer	-	Trip of
0é 🐂	Prot1	1350	dt/dt (ROCOF)	39	5	Hz/s	N/B	0		0 05		Customer	-	Trip of
	Prot	1351	dt/dt (BOCOE)	40	6	Der	N/J	NIA	N	A OF	-	Customer	-	N/A
ranslations	Prot	1360	Vector juno	40	10	den	N/J	0	10	0 05	-	Customer	-	Trip of
		1000				ucy			-		_		-	
	Text			1	Timestam	qp						Active	1	Ack
	GB Position failure				2006-06-	08 09:4	7:07.684					+ Active		💋 Not ack
	MB Position failure				2006-06-	08 09 4	7:07.684					+ Active		🕗 Not ack

## 6.5 Input file

#### 6.5.1 Input file

Open the USW and connect to your device. Open the menu "Settings" and select "Inputs/Outputs".

![](_page_31_Figure_7.jpeg)

The input/output dialogue box pops up:

I/O settings	×
s 🖬 📢 🗳 🖄 🗋	
Inputs Outputs	
Alarminhibit	-
1/0 number / function Terminal 23	×
Alarm Ack.	
1/0 number / function Terminal 24	
Start Sync./ Control	
1/0 number / function Terminal 25	
External Communicati	
1/0 number / function Terminal 26	<u>.</u>
Block Loss of Mains	
1/0 number / function Terminal 27	*
Island Mode	×
	Close

Click the red "download" icon to download the file.

### 6.6 Output file

#### 6.6.1 Output file

Open the USW and connect to your device. Open the menu "Settings" and select "Inputs/Outputs".

![](_page_32_Figure_8.jpeg)

The input/output dialogue box pops up. Select "Outputs" by means of Ctrl + Tab.

F 🖬 💕 🗳 🖨 🖪		
puts Outputs		
1/0 number / function Horn	×	ĺ
Relay2		
1/0 number / function Alarm / Limit	*	
Relay3		_
I/O number / function Prepare	•	
Relay4		
I/O number / function Run Coll	×	
Relay5		
1/0 number / function Starter	*	
		2
	F	Clean

Click the red "download" icon to download the file.

### 6.7 Inhibit file

#### 6.7.1 Inhibit file

Open the USW and connect to your device. Open the menu "Settings" and select "Inhibits".

![](_page_33_Figure_7.jpeg)

The inhibit dialogue box pops up.

BB protection					
Condition 1		perator	£	Condition 2	
Inhibit		AND	•	Logic 1	•
Gen. protection					
Condition 1		perator	<u> </u>	Condition 2	
Inhibit	-	AND	-	Logic 1	<u>•</u>
Engine interface card	. 77		5	Constitues 0	
Condition 1		perator	2	Condition 2	
Inhibit	21	AND	-	Logic 1	-
df/dt Vector Jump					
	107	1907010		0	

Click the red "download" icon to download the file.

### 6.8 View file

#### 6.8.1 View file

Open the USW and connect to your device. Open the menu "Settings" and select "Views".

![](_page_34_Figure_8.jpeg)

The view dialogue box pops up:

![](_page_34_Figure_10.jpeg)

Click the red "download" icon to download the file.

### 6.9 Translations file

#### 6.9.1 Translations file

Open the USW and connect to your device. Select the menu "Translations" in the toolbar on the left.

![](_page_35_Picture_5.jpeg)

The screen is empty because the language file has not been opened yet. Open the language file by clicking the "open" icon in the horizontal toolbar. (It is identical with the traditional Microsoft design "open" icon).

![](_page_35_Picture_7.jpeg)

Now, the language file can be opened.

n					1
Look in	temporary		- G	3 🕫 🖽 •	
	ship_name_	DG1_date.lang			
	No. 1 Contraction	in santan 1998			
)ocuments					
Desktop					
-					
1					
Documents					
1					
y Computer					
Contraction of the second					
	1				
ly Network	File name:	ship_name_DG1_da	te.lang	-	Open
	Files of type:	Language file (" lang	)		Cance

Please synchronise the file with the device.

![](_page_36_Picture_5.jpeg)

Select the language you want to download (if selection is possible) and click OK.

Language(s) selection		
Language 1		AI
Language 2		Ninna
Language 4		NOTIC
Language 5		Toggle
Language 6		
Language 8		
Language 9		
Language 10		
Language 11		
		_
	OK	Cancel

The download starts.

Data transfer		
6 <sup>39</sup>	Writing texts	

### 6.10 M-Logic file

#### 6.10.1 M-Logic file

Open the USW and connect to your device. Select the menu "M-Logic" in the toolbar on the left. (Press Alt + F1 if it is not visible).

Connection	n Settings Irending Parameters	Help						
20 33 3	1 12 · 12 8 8 8 7 P	t p* 🦸 🔳 🔳	PIN O O	<b>6</b>				
	Logic 1							
FIF	Event A	Operator	Event B		Operato	r,		
	NOT D Not used	▼ OR	NOT      Not used		• OR		NOT	
ending	Enable this rule	Ļ	Output Not used	•	Delay (sec.)	• • 0	,	
×.	Logic 2			14				
	Event A	Operator	Event B		Operato	6		
meters	NOT Not used	• OR	NOT      Not used		• OR		NOT	
***	Enable this rule	Ļ	Output Not used	•	Delay (sec.)	<b>« «</b> 0	,	
/Outputs	Logic 3		Aug. 1000					
Eh	Event A	Operator	Event B		Operato			
	NOT Not used	♥ OR	NOT Not used		▼ OR		NOT	
otions	Enable this rule	Ļ	Output Not used	•	Delay (sec.)	• • 0	,	
	Logic 4	Operator	Event B	-	Onerato	_		
0 a h	NOT Not used	• OR	NOT      Not used		• OR	•	NOT	
Islations	Enable this rule	Ļ	Output Not used	•	Delay (sec.)	• • 0	,	
T	Text	m	mestamp		Ac	ive	Ack	
	GB Position feiture	2	06-05-08 14:30:16.754		•	Active	O A	kck.
NOT	MR Deation takes	~	06.05.08 14:30 16 754			Active	0	ck

Open the file with the "open" icon in the horizontal toolbar. Download the M-Logic settings with the "download" icon (marked with a blue arrow).

# 7. Cable connections

### 7.1 General information

Different cables are used for connection, depending on type of the ML-2 unit.

### 7.2 DIN rail-mounted units

#### 7.2.1 DIN rail-mounted units

![](_page_38_Picture_7.jpeg)

#### This applies to the AGC, GPC, GPU, MDR-2, PPM and PPU units.

Use the PC cable that can be purchased from DEIF, option J3.

#### Extract from data sheet – list of available options:

J	Cables	
J1	Display cable with plugs, 3 m. UL94 (V1) approved	Other
J2	Display cable with plugs, 6 m. UL94 (V1) approved	Other
J3	PC cable for utility software (RS232). UL94 (V1) approved	Other
J4	Display cagle with plugs, 1 m. UL94 (V1) approved	Other

### 7.3 Panel-mounted units

#### 7.3.1 Panel-mounted units

This applies to the BGC, EC-1, EC-1M, GC-1 and GC-1M units.

#### Extract from data sheet – list of available options:

J	Cables	
J5	BGC converter box kit	Other