



RDM 2.0 RANGE

Technical documentation



“Remote Display Module”

Part number:
A53 Y0 9 0020

CRE Technology believes that all information provided herein is correct and reliable and reserves the right to update at any time. CRE Technology does not assume any responsibility for its use. E & O E.

CRE TECHNOLOGY



130, Allée Victor Naudin
Zone des Templier
Sophia-Antipolis
06410 Biot
FRANCE



Phone: +33 (0)4 92 38 86 82

Fax: +33 (0)4 92 38 86 83

Website: www.cretechnology.com



Email: info@cretechnology.com

NOTE



Read this entire manual and all other publications pertaining to the work to be performed before installing, operating, or servicing this equipment. Apply all plant and safety instructions and precautions. Failure to follow instructions can cause personal injury and/or property damage.

Motors, turbines and any other type of generator must be equipped with protections (overspeed, high temperature, low pressure...) depending on the power plant.

Any changes of the normal use of the equipment can cause human and material damage.

For further information, please contact your CRE technology distributor or the After-Sales Service Team.

All CRE Technology products are delivered with one year warranty, and if necessary we will be happy to come on site for product commissioning or troubleshooting. The company also provides specific trainings on our products and softwares.



Technical support: +33 (0)4 92 38 86 86 (office hours: 8.30AM-12AM / 2PM-6PM GMT+1).

Email: support@cretechnology.com



SKYPE: support-cretechnology.com



INFORMATION

You can download the most up-to-date version of this documentation and different other documentations relating to CRE technology products on our Web site <http://www.cretechnology.com>.



NOTE FOR GENSYS 2.0 LT

This logo indicates that the function described in the chapter is not available in GENSYS 2.0 LT modules.

The main features unavailable in GENSYS 2.0 LT are the support of custom equations and CANopen I/O extensions. If you ever need one of these features, please use a standard GENSYS 2.0 module.

Technical documentation history





Date	Version	Comments
Jan. 2013	A	 <p>Initial revision. Firmware is v4.04 to match GENSYS 2.0 software version.</p>
Feb 2013	B	 <p>v4.55 version compatible with the v4.55 version of the GENSYS 2.0 range (GENSYS 2.0, GENSYS 2.0 CORE, GENSYS 2.0 LT, GENSYS 2.0 MARINE, GENSYS 2.0 CORE MARINE, GENSYS 2.0 LT MARINE) Automatic parameters backup. Backup procedure removed from this document. New: <ul style="list-style-type: none"> • import and export of the configuration texte file. • chapter 8: Reference </p>
March 2016	C	 <p>Add firmware upgrade description with v5.00</p>
March 2017	D	 <p>Add new product reference for RDM 2.0 MASTER MARINE Contrast and backlight settings</p>

Table of content

1	OVERVIEW.....	7
1.1	EUROPEAN UNION DIRECTIVE COMPLIANCE CE	7
1.2	ENVIRONMENT	7
1.3	MARINE APPROVAL (DNV)	7
1.4	MECHANICAL CHARACTERISTICS	8
1.5	APPLICATION.....	8
2	DESCRIPTION.....	10
2.1	FRONT PANEL	10
2.2	REAR PANEL – CONNECTORS.....	13
3	USER INTERFACE	15
4	INSTALLING AND COMMISSIONING AN RDM 2.0 APPLICATION	16
4.1	DIRECT CONNECTION TO A SINGLE GENSY 2.0 CORE	16
4.2	CONNECTION TO SEVERAL GENSY 2.0 CORE.....	16
5	SPECIAL FUNCTIONS	18
5.1	FIRMWARE UPGRADE	18
5.2	MODULE SELECT BY DIGITAL INPUTS	21
5.3	CONFIGURATION TEXT FILE	22
6	SUPPORT/TROUBLESHOOTING.....	24
7	MENU OVERVIEW.....	25
7.1	MENU INTRODUCTION	25
7.2	DISPLAY MENU.....	25
7.3	CONFIGURATION MENU.....	26
7.4	SYSTEM MENU.....	29
7.5	INITIALIZATION SCREEN	32
7.6	LIMITATIONS	33
8	REFERENCES	34
8.1	PRODUCT REFERENCE	34
8.2	COMPATIBLE PRODUCT REFERENCE	34
9	CRE TECHNOLOGY	35

List of figures

Figure 1 – Panel cut-out.....	8
Figure 2 – Multi-control HMI	9
Figure 3 –User interface of RDM 2.0 INDUSTRIAL	10
Figure 4 - User interface of RDM 2.0 MARINE	11
Figure 5 - User interface of RDM 2.0 MASTER MARINE	12
Figure 6 – Rear panel	13
Figure 7 - Safety warning	18
Figure 8 - Select firmware	19
Figure 9 – Firmware update.....	19
Figure 10 – Firmware update from v5.00	20
Figure 11 - Earth connection	24
Figure 12 - RDM 2.0 -> PC file	30
Figure 13 - PC -> RDM 2.0 file	31
Figure 14 – Access to CRE Technology	35
Figure 15 - CRE Technology distributors	36

List of tables

<i>Table 1 –Inputs/ outputs description</i>	<i>14</i>
<i>Table 2 – Module selected by input</i>	<i>21</i>
<i>Table 3 - Label definition bloc</i>	<i>22</i>
<i>Table 4 - Mode selection parameter</i>	<i>26</i>
<i>Table 5 – Digital inputs parameters.....</i>	<i>27</i>
<i>Table 6 - Input functions</i>	<i>28</i>
<i>Table 7 - Digital outputs parameters.....</i>	<i>28</i>
<i>Table 8 – Ethernet configuration</i>	<i>28</i>
<i>Table 9 – Display properties.....</i>	<i>29</i>
<i>Table 10 – Connect status.....</i>	<i>31</i>
<i>Table 11 – About.....</i>	<i>32</i>
<i>Table 12 – Initialization screen</i>	<i>32</i>
<i>Table 13 – RDM 2.0 product reference</i>	<i>34</i>
<i>Table 14 – Compatible product reference.....</i>	<i>34</i>

1 OVERVIEW

1.1 EUROPEAN UNION DIRECTIVE COMPLIANCE CE

The EMC Directive (89/336/EEC) deals with electromagnetic emissions and immunity. This product is tested by applying the standards, in whole or in part, which are documented in technical construction file CEM 2004/108/EC, which replaces directive CEM (89/336/EEC) relative to electromagnetic emissions as from July 20th 2009.

This product is developed to respect harmonized norms:

- ❖ EN 55099:2009
- ❖ EN 55099:2010
- ❖ EN 55088:2008
- ❖ 2006/95/EC (replaced directive 73/23/EEC since January 16th 2007).

Other standards:

- ❖ EN 61326-1: 2006 (Industrial location)
- ❖ EN 55011
- ❖ EN 61000-3-2
- ❖ EN 61000-3-3

Note: This is an A class product. In a domestic environment this product may cause radio interference. The user is responsible for taking the necessary precautions.

1.2 ENVIRONMENT

Temperature

Operating: 0...+55°C

Storage: -30...+70°C

Humidity: 5 to 95%

Altitude 2000m maximum (according to EN 61010-1 standard)

Tropic proof circuits for normal operation in humid conditions.

Front panel: IP65 protection.

Back panel: IP20 protection.

1.3 MARINE APPROVAL (DNV)



The RDM 2.0 MARINE (A53Y3) and RDM 2.0 MASTER MARINE (A53Y9) respect the DNV standard. Visit CRE Technology Web site or contact your local distributor for more details.

1.4 MECHANICAL CHARACTERISTICS

Size: 248x197x57mm (9.76x7.76x2.24in)

Weight: 1.9kg (4.2oz)

Panel cut-out:

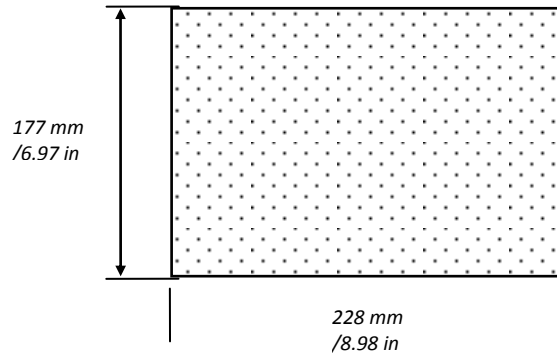


FIGURE 1 - PANEL CUT-OUT

Note: Cut-out must be cleaned and de-burred before mounting.

1.5 APPLICATION

The RDM 2.0 INDUSTRIAL is a remote interface module that can be used with any of the GENSYS 2.0 range modules: GENSYS 2.0/GENSYS 2.0 CORE/GENSYS 2.0 LT/MASTER 2.0/MASTER 2.0 CORE.



The RDM 2.0 MARINE is a remote interface module that can be used with any of the GENSYS 2.0 MARINE range modules: GENSYS 2.0 MARINE/GENSYS 2.0 CORE MARINE/GENSYS 2.0 LT MARINE.

The RDM 2.0 allows you to display, configure and control the connected module.

The GENSYS 2.0 and GENSYS 2.0 MARINE range modules can control a single or a multiple generating sets power plant.



NOTE



RDM 2.0 must be connected to a control unit (GENSYS 2.0/ GENSYS 2.0 CORE/ GENSYS 2.0 LT/MASTER 2.0) which firmware is at least v4.04. Previous firmware versions are not compatible with RDM 2.0 module.

Multi-control HMI:

A single RDM 2.0 can control up to 16 modules.

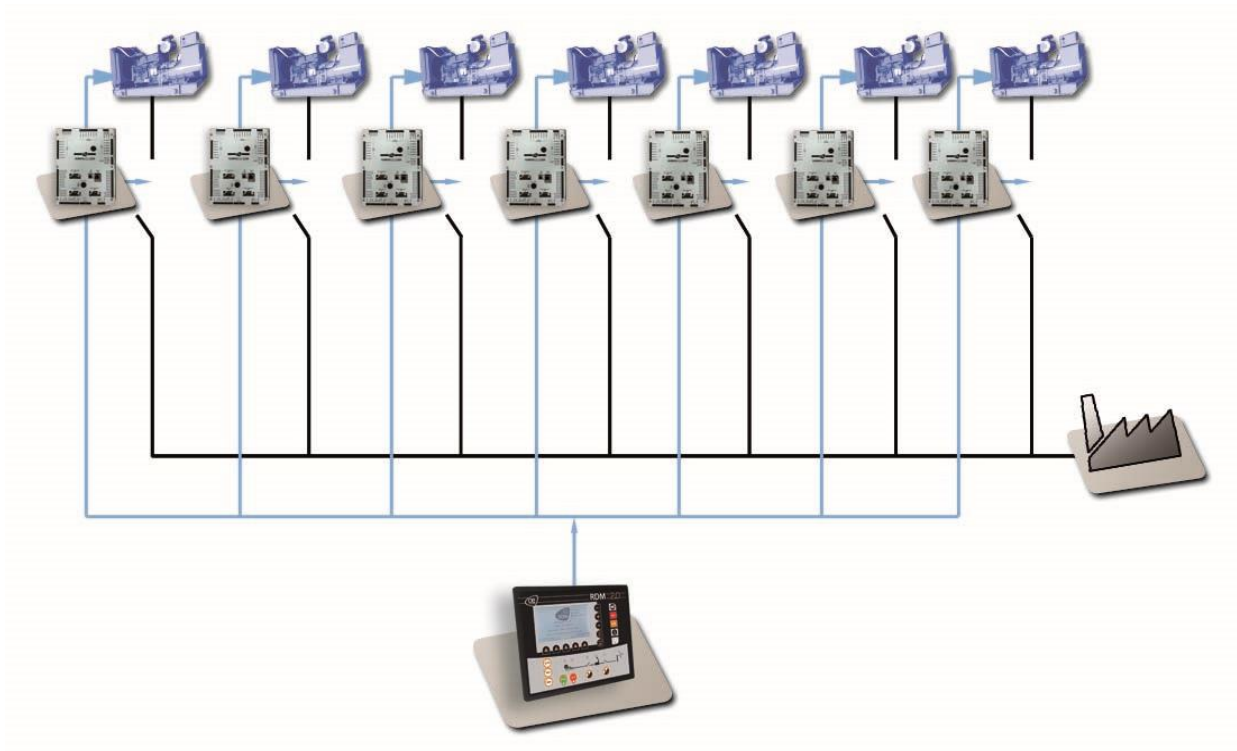


FIGURE 2 - MULTI-CONTROL HMI

2 DESCRIPTION

2.1 FRONT PANEL

Please refer to the A53 Z0 9 0020 X En Technical documentation for front panel description and use.

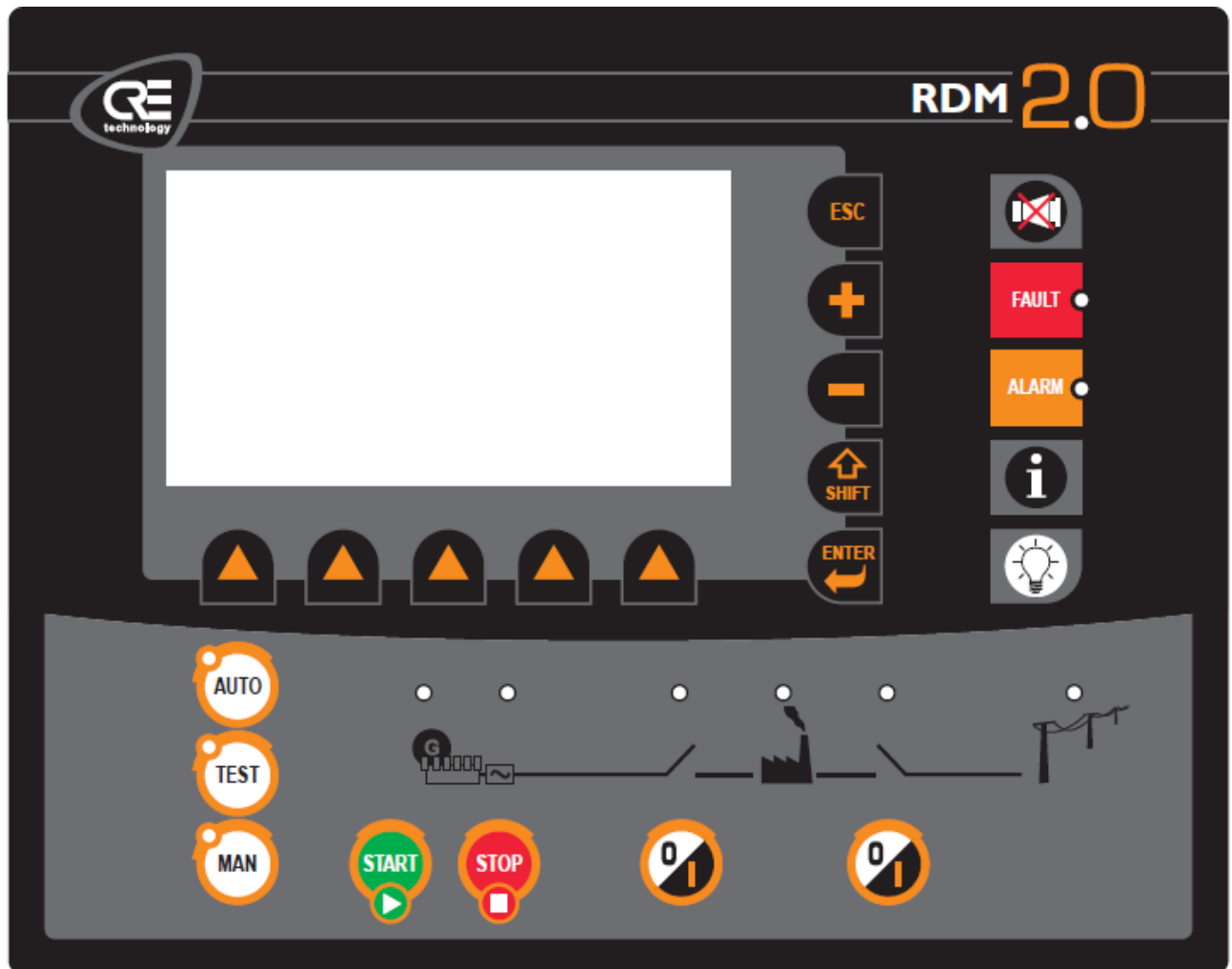


FIGURE 3 -USER INTERFACE OF RDM 2.0 INDUSTRIAL

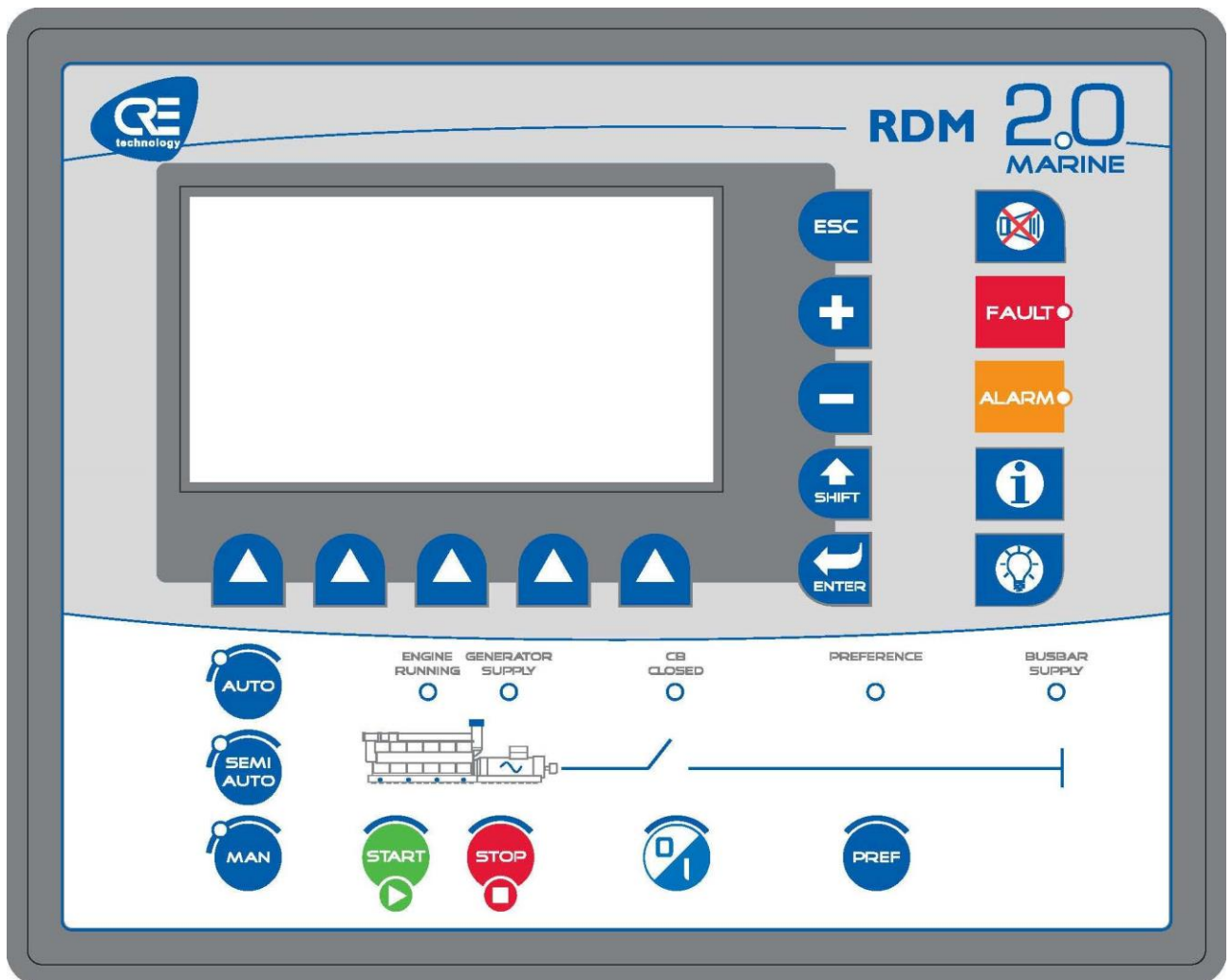


FIGURE 4 - USER INTERFACE OF RDM 2.0 MARINE

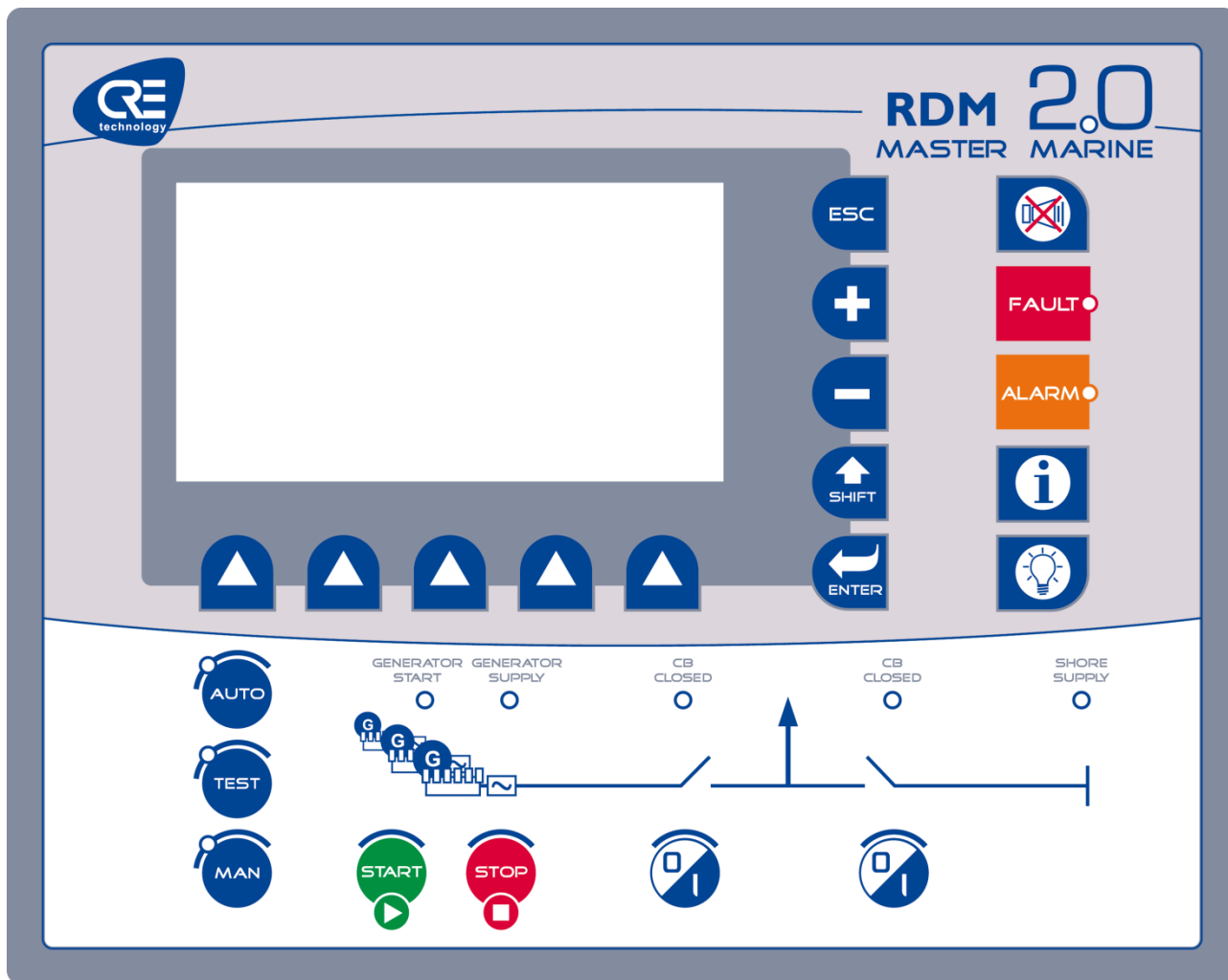


FIGURE 5 - USER INTERFACE OF RDM 2.0 MASTER MARINE

2.2 REAR PANEL - CONNECTORS

2.2.1 OVERVIEW

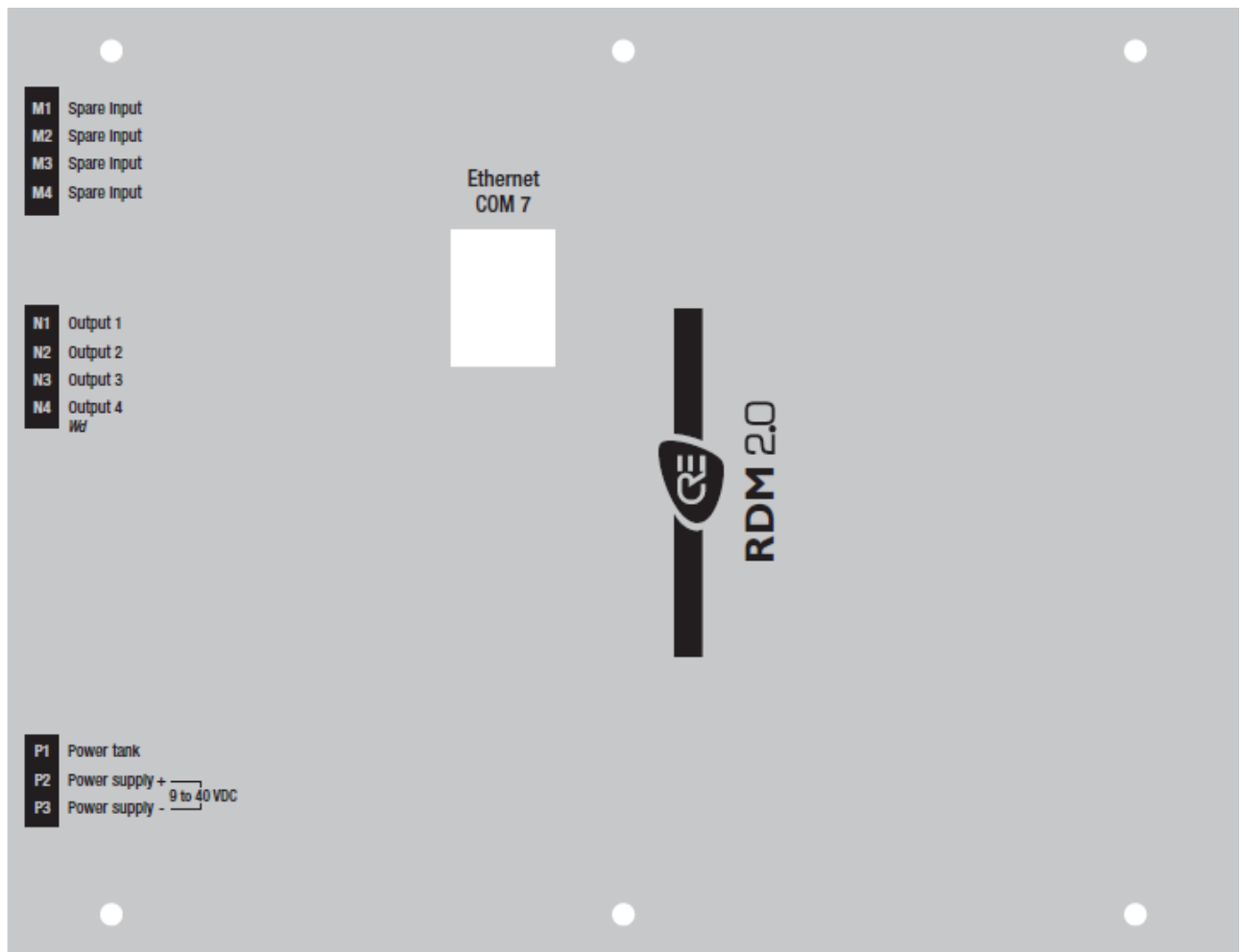


FIGURE 6 - REAR PANEL

2.2.2 INPUTS/OUTPUTS

Terminal	Description	Terminal capacity (mm ² / AWG)	Comment
M1 to M4	Spare Inputs	2.5/12	Digital input with 10kΩ pull-up. Each input can be configured with a predefined function. Not isolated. See details in §7.2.1.
N1 to N4	Spare outputs	2.5/12	Transistor output powered by the supply voltage (<350mA per output). Over current protected. Each output can be configured with a predefined function, see details in §7.2.2.
P1	Power tank	2.5/12	Only used for 12V power supply backup during crank time. An external capacitor can be connected between terminal P1 (+) and P3 (-) for better tolerance to power drops. A 47.000μF capacitor can help accept a 200ms power drop depending on outputs state.
P2	Power Supply +	2.5/12	9 to 40V, 5W consumption. Protected against polarity inversion. External 5A / 40V _{DC} fuse recommended.
P3	Power Supply -	2.5/12	
COM7	Ethernet	RJ45 CAT5	Standard isolated RJ45 ETHERNET connector. Use a 100Ω cable. During initialization step, the maximum flow rate between RDM 2.0 and connected module is 15kB/s. During normal operation, the average flow rate between RDM 2.0 and connected module is about 5kB/s. Uses TCP/IP and UDP protocols to communicate with other module and/or with external world. See §7.3.4 to configure your Ethernet communication.

TABLE 1 -INPUTS/ OUTPUTS DESCRIPTION

3 USER INTERFACE

The user interface can be controlled using different ways:

- Directly on local browser using front panel LCD screen and keyboard,
- Remotely using your favourite Internet Web browser.

The RDM 2.0 user interface is divided in 2 main parts:

- The specific RDM 2.0 interface,
- The remote interface of the connected module.

Note:

This documentation describes only the specific RDM 2.0 interface as well as some limitations of the RDM 2.0 compared to the connected module (See §7.6).

Please refer to the A53 Z0 9 0020 X En Technical documentation to get information about the connected module interface.

4 INSTALLING AND COMMISSIONING AN RDM 2.0 APPLICATION



NOTE



RDM 2.0 must be connected to a control unit (GENSYS 2.0/ GENSYS 2.0 CORE/ GENSYS 2.0LT) which firmware is at least v4.04. Previous firmware versions are not compatible with RDM 2.0 module.

4.1 DIRECT CONNECTION TO A SINGLE GENSYS 2.0 CORE

In this application, one RDM 2.0 is directly connected to one GENSYS 2.0 CORE.

- First check the name of the GENSYS 2.0 CORE you want to access in “system/about” menu of the GENSYS 2.0 CORE. By default, the name of the GENSYS 2.0 CORE is the serial number (xxxxAxxx) followed by the GENSYS 2.0 CORE product reference (A53Z1).
Ex: 3011A015A53Z1 for a GENSYS 2.0 CORE with serial number 3011A015.
- Go to the menu “RDM 2.0/Configuration/Remote module address” and select “Enter GENSYS 2.0 name” mode.
- Press the right arrow button [>>] and enter the GENSYS 2.0 CORE name.
- Connect your RDM 2.0 with a shielded crossover Ethernet cable directly to the COM 4 of your GENSYS 2.0 CORE.
- An initialization menu appears (§7.5): wait about 2 minutes until the end of the initialization.
- You have now access to the GENSYS 2.0 CORE menu from the RDM 2.0.

4.2 CONNECTION TO SEVERAL GENSYS 2.0 CORE

In this application, the RDM 2.0 could control up to 16 GENSYS 2.0 CORE. We consider that all modules are using a DHCP server to get their own IP address.

Note: please refer to GENSYS 2.0 documentation to configure the GENSYS 2.0 CORE in DHCP mode.

- Note down all the GENSYS 2.0 CORE names in “system/about” menu of the GENSYS 2.0 CORE modules. By default, the name of a GENSYS 2.0 CORE is the serial number (xxxxAxxx) followed by the GENSYS 2.0 CORE reference (A53Z1).
Ex: 3011A015A53Z1 for a GENSYS 2.0 CORE with serial number 3011A015.
- Go to the menu “RDM 2.0/Configuration/Remote module address” and select the mode “Input selector”.
- Press the right arrow button [>>] and enter all GENSYS 2.0 CORE names.
To connect the RDM 2.0 to 5 GENSYS 2.0 CORE, you need to use the 5 first lines of names.
- Go to the menu “RDM 2.0/Configuration/Inputs” and select the “GENSYS 2.0 select” function.

The number of inputs used depends on the number of connected module. For 5 modules, we have to use the first 3 inputs (See §5.2 for more details).

- Connect your RDM 2.0 with a shielded Ethernet cable (straight or crossover cable according to your switch) to your local network.
- An initialization menu appears (§7.5): wait about 2 minutes until the end of the initialization.
- According to the input value, the RDM 2.0 will be connected to the right GENSYS 2.0 CORE.

Note:

All GENSYS 2.0 CORE must have the same UDP port as the RDM 2.0 could connect on all modules.

*CRE Technology recommends the use of industrial switch or hub such as **IE-SW-BL0x-xTX** series from Weidmuller. These switches operate over a wide temperature range, comply with the DNV standard and can be mounted on DIN rail.*

5 SPECIAL FUNCTIONS

5.1 FIRMWARE UPGRADE

Note:

Programming a new firmware in your module will erase its actual setup (RDM 2.0 parameters) and replace it by the factory setup of the new firmware. Backup your actual setup if you want to keep it for future usage.

5.1.1 WITH A FIRMWARE VERSION OLDER THAN V5.00

To upgrade your module firmware, please follow those steps:

- Connect your PC to the module internal Web site using password level 2.
- Go into menu « System/Update software ».
- A safety warning may appear on your: tick the box and click on “Execute” button to allow the application to run.

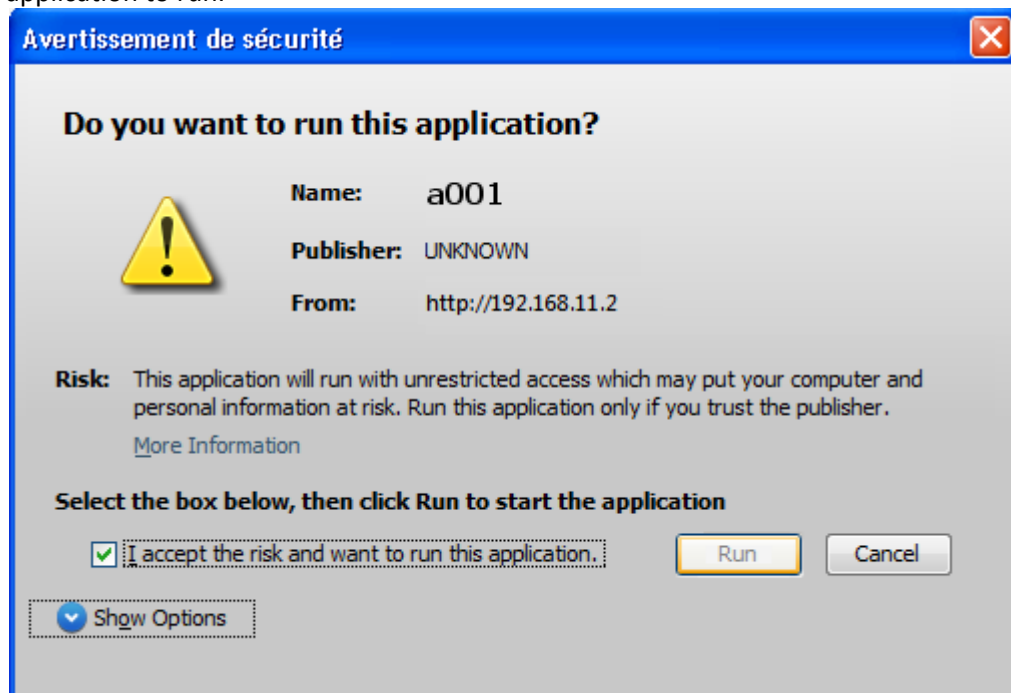


FIGURE 7 - SAFETY WARNING

- Click on « Select file ».
- Select the ZIP file firmware provided by CRE Technology you want to program into module.

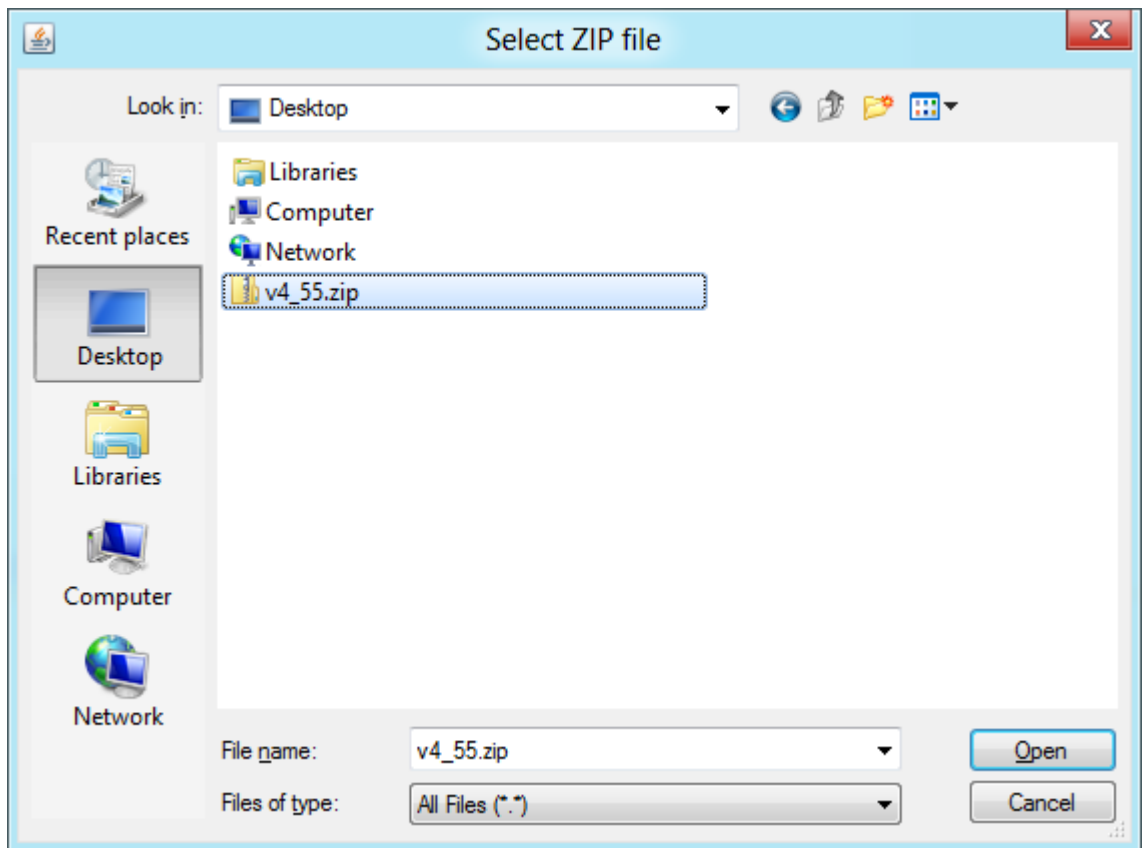


FIGURE 8 - SELECT FIRMWARE

- Click on « Update » button.

2 bar graphs indicate the progress of the update. This can take about 2mn. Don't cut power supply while updating.

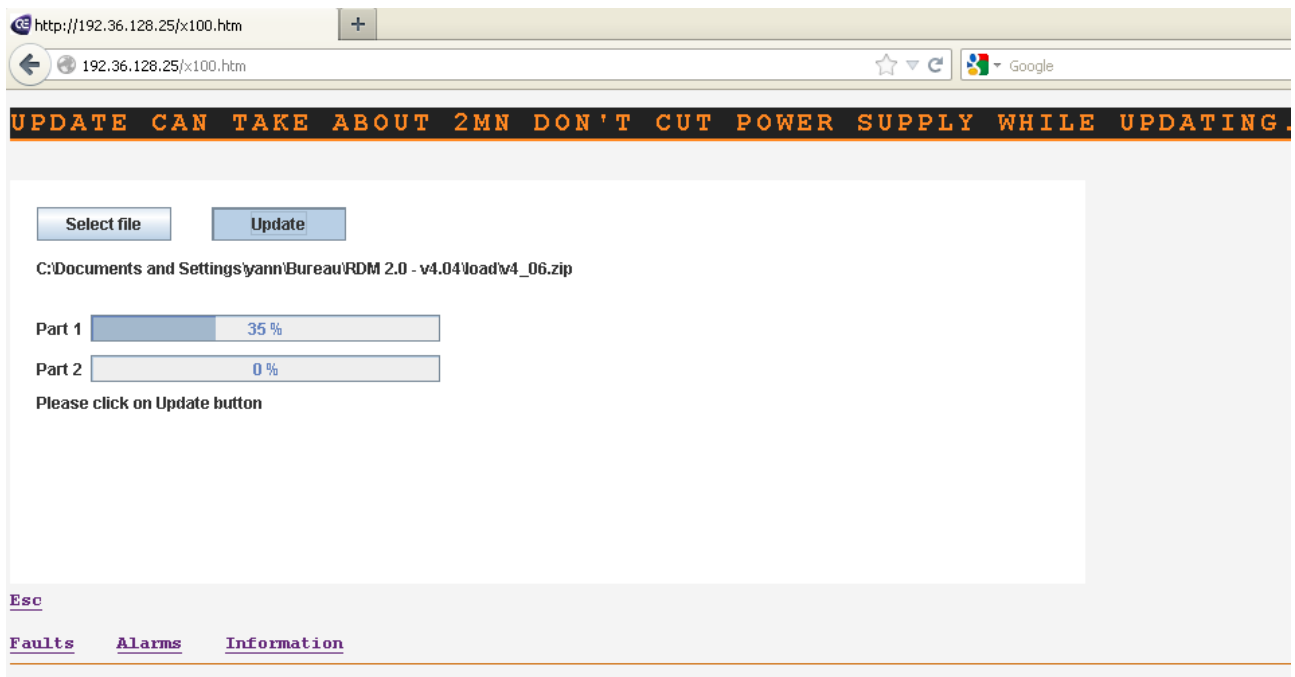


FIGURE 9 - FIRMWARE UPDATE

- Power off/on manually the RDM 2.0 to finish update.

5.1.2 WITH A FIRMWARE VERSION V5.00 OR MORE RECENT

- Connect your PC to the module internal Web site using password level 2.
- Go into menu « System/Update software ».
- Click on « Browse » button.
- Select the ZIP file firmware provided by CRE Technology you want to program into module.
- Click on « Save » button.
- Power off/on manually the RDM 2.0 to finish update.

1 bar graph and some information on status of the progress of the update are displayed. This can take about 2mn. Don't cut power supply while updating.



FIGURE 10 - FIRMWARE UPDATE FROM V5.00

5.2 MODULE SELECT BY DIGITAL INPUTS

RDM 2.0 can be setup to connect to different units. The unit to which the RDM 2.0 will connect can then be selected using RDM 2.0 spare inputs. To use this function, the select mode must set to “Input selector” in the “**remote module address**” menu and the name of the modules must be configured (See §7.3.1).

Then digital inputs must be configured as “GENSYS 2.0 select”. The required number of inputs used depends on the number of connected modules. For example, if 5 GENSYS 2.0 modules must be connected at least 3 inputs are necessary. Table below describes the selected module according to the value of the inputs.

Input 1	Input 2	Input 3	Input 4	Selected module
0	0	0	0	GENSYS 2.0 #01
1	0	0	0	GENSYS 2.0 #02
0	1	0	0	GENSYS 2.0 #03
1	1	0	0	GENSYS 2.0 #04
0	0	1	0	GENSYS 2.0 #05
1	0	1	0	GENSYS 2.0 #06
0	1	1	0	GENSYS 2.0 #07
1	1	1	0	GENSYS 2.0 #08
0	0	0	1	GENSYS 2.0 #09
1	0	0	1	GENSYS 2.0 #10
0	1	0	1	GENSYS 2.0 #11
1	1	0	1	GENSYS 2.0 #12
0	0	1	1	GENSYS 2.0 #13
1	0	1	1	GENSYS 2.0 #14
0	1	1	1	GENSYS 2.0 #15
1	1	1	1	GENSYS 2.0 #16

TABLE 2 - MODULE SELECTED BY INPUT

Inputs not set up as “GENSYS 2.0 select” are considered to be set to 0 for the selection of a module. That is why it is recommended to use the first inputs in priority.

Example:

If you have 4 GENSYS 2.0 CORE for 1 RDM 2.0, it's easier to use Input 1 & Input 2 than Input 3 & Input 4. With Input 1 & Input 2, the connected modules will be GENSYS #1, GENSYS #2, GENSYS #3 and GENSYS #4. With Input 3 & Input 4, the connected modules will be GENSYS #1, GENSYS #5, GENSYS #9 and GENSYS #13 as inputs 1 and 2 are considered to be set to 0.

Note: When switching from one connected module to another, it will take about 30s to initialize the RDM 2.0. A dedicated screen is displayed during initialization (See §7.5).

5.3 CONFIGURATION TEXT FILE



The complete RDM 2.0 configuration can be contained in a simple text file. This file can be downloaded from the module (See §7.4.1) to be kept on a computer. It can also be manually edited on a computer and sent to a module (see §0) to fully setup this module in a single step.

This text file is made up of 2 different blocks:

- Parameter values.
- Label definitions.

5.3.1 PARAMETER DEFINITION BLOCK

The starting point of this block is designated by a "{PARAMETERS}" statement.

Each parameter (variables 8xxx) can be found as an input in this block. The structure of the input is as follows:

V8001	2	Input 1 func	+00000	+65535	
		The variable parameter number preceded by the letter V			(Ex: V8001)
		The value			(Ex: 1)
		The label (optional: only for user information)			(Ex: Input 1 func)
		The minimal value (optional: only for user information)			(Ex: +00000)
		The maximal value (optional: only for user information)			(Ex: +65535)

5.3.2 LABEL DEFINITION BLOCK

The beginning of this block is shown by a "{LABELS}" statement.

This block is used to define the name of the connected module. The table below shows the correspondence between the text number and its associated value.

Identifier	Factory label	Description
T0813 to T0828	MODULE x	Module name to connect according to the state of the digital inputs (see §5.2)
T0851	NR123451A53Z0	Module name to connect when the selection mode is set to "module name".

TABLE 3 - LABEL DEFINITION BLOC

Each line of this block contains 2 elements:

- The variable number of the text, preceded by the letter "T".
Ex: T0851
- The text itself.

The text corresponds to the name of the module to connect. This text is made of the serial number of the module followed by the reference of the module (See §8.2). The name of the module can be visualized on "about" page.

Ex: 4908A5013A53Z5 is a GENSYS 2.0 LT MARINE with the serial number 4908A5013.

5.3.3 EXAMPLE

1511A529

V5.00

{PARAMETERS}

V8000	0	Output	+00000	+65535
V8001	2	Input 1 func	+00000	+65535
V8002	0	Input 2 func	+00000	+65535
V8003	2	Input 3 func	+00000	+65535
V8004	0	Input 4 func	+00000	+65535
V8005	0	Output 1 func	+00000	+65535
V8006	0	Output 2 func	+00000	+65535
V8007	0	Output 3 func	+00000	+65535
V8008	0	Output 4 func	+00000	+65535
V8009	1	Use DHCP	+00000	+65535
V8010	192	Fixed IP Add 0	+00000	+65535
V8011	168	Fixed IP Add 1	+00000	+65535
V8012	11	Fixed IP Add 2	+00000	+65535
V8013	2	Fixed IP Add 3	+00000	+65535
...				
V8022	0	Select mode	+00000	+65535
V8023	7024	UDP RDM 2.0	+00000	+65535
V8024	0	Inhibit button	+00000	+65535
V8025	7024	UDP GENSYS 2.0	+00000	+65535
V8026	0	AJAX or JAVA	+00000	+65535

{LABELS}

T0813	MODULE 1
T0814	MODULE 2
T0815	MODULE 3
T0816	MODULE 4
T0817	MODULE 5
T0818	MODULE 6
T0819	MODULE 7
T0820	MODULE 8
T0821	MODULE 9
T0822	MODULE 10
T0823	MODULE 11
T0824	MODULE 12
T0825	MODULE 13
T0826	MODULE 14
T0827	MODULE 15
T0828	MODULE 16
T0851	4908A013A53Z0

{END OF FILE}

6 SUPPORT/TROUBLESHOOTING

RDM 2.0 can't connect to the module

- Check the soft version of your module. GENSYS 2.0 CORE module can be connected to a RDM 2.0 from v4.04 version and newer version.
- Check the module name you typed in corresponds to the module you are trying to connect.
- Check you are using a suitable cable according to your application (straight or crossover cable).
- In fixed IP, check the IP address of the RDM 2.0 and the connected module. They must not have the same IP address but they must have the same prefix address of the subnet mask. Example: 192.168.11.1 and 192.168.11.2 will work but not 192.168.12.1 and 192.168.11.2 because the subnet mask is defined as 255.255.255.0. So the first 3 numbers must be the same in both modules.
- Check the UDP port of the RDM 2.0 and the connected module. They must be identical.

It seems there is a poor communication between RDM 2.0 and connected module

- Check you are using a shielded Ethernet cable.
- Check your modules are well connected on earth.

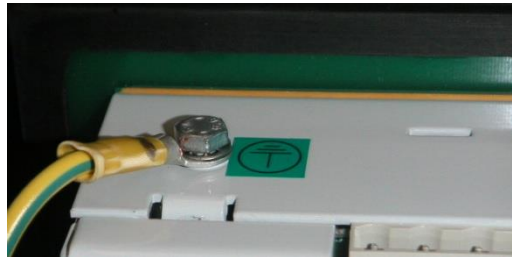


FIGURE 11 - EARTH CONNECTION

- If you are using a hub/switch, check you are using an industrial hub/switch that is correctly connected to the earth and respects the EMC immunity rules.

7 MENU OVERVIEW

7.1 MENU INTRODUCTION

Menu is entered when [ESC] key is pressed, and once password has been verified. The password will define which menu will be accessible on RDM 2.0 and on the remote unit connected.

For the connected module menu, please refer to the documentation of the module.

For the specific RDM 2.0 menu:

Level 0: will give access to display menu only. (Without password, only press Enter/Enter)

Level 1/Level2: will give access to all menus of RDM 2.0. Factory password level 1 is "1".

Note: Please contact your CRE Technology distributor to get the level 2 password.

3 main menus are available:

Display menu will give information about the RDM 2.0 status. (See §7.2)

Configuration is only accessible if you have entered a level 1 or 2 password. There you will be able to program RDM 2.0 according to your needs. (See §7.3)

System is only accessible if you have entered a level 1 or 2 password. The system menu will display information about RDM 2.0 system. (See §7.4)

7.2 DISPLAY MENU

This menu gives access to the following information:

- Inputs
- Outputs
- Connect status (only in level 0)
- About (only in level 0)

7.2.1 INPUTS

This menu shows the status of 4 digital inputs connected on the "M" terminal.
The name of each input is displayed with the status: Input active =1, Input inactive = 0.

7.2.2 OUTPUTS

This menu shows the status of 4 digital outputs connected on the "N" terminal.
The name of each output is displayed with the status: Output active =1, Output inactive = 0.

7.2.3 CONNECT STATUS

This menu is only display with the level 0 password. It's the same menu than « System/Connect status » available with the level 1 or 2 passwords (See §7.4.1).

7.2.4 ABOUT

This menu is only displayed with password level 0. It's the same menu as « System/About » which is available with password level 1 and 2 (See §7.4.5).

7.3 CONFIGURATION MENU

This menu allows you to configure the unit. You can access to this menu with the level 1 or 2 password.

The submenus are the followings:

- Remote module address
- Inputs functions
- Outputs functions
- Ethernet configuration

7.3.1 REMOTE MODULE ADDRESS

On this page, you can select the selection mode of the connected module.

Parameter	Available value	Comment
Select mode [E8022]	By GENSYS 2.0 name [0]	Only one module could be connected
	Input selector [1]	The connected module depends on the digital input state.

TABLE 4 - MODE SELECTION PARAMETER

You have access to the submenu to configure the name by pressing the arrow [>>] button.

7.3.2 INPUTS FUNCTIONS

This menu allows you to configure the digital inputs (M1 to M4).

Terminal	Name	Parameter
M1	Input 1 func.	E8001
M2	Input 2 func.	E8002
M3	Input 3 func.	E8003
M4	Input 4 func.	E8004

TABLE 5 - DIGITAL INPUTS PARAMETERS

For each digital input, you can select a function among those described in the following table.

ABOUT GENSYS 2.0 LT



GENSYS 2.0 LT and GENSYS 2.0 LT MARINE do not feature custom PLC equations. So in the case of an RDM 2.0 connected to a LT module, only function “GENSYS 2.0 select” (value 1) or “Inhibit buttons on remote modules” (value 2) can be used.

If you need to use another function, connect your RDM 2.0 to a GENSYS 2.0, a GENSYS 2.0 CORE, a GENSYS 2.0 MARINE or a GENSYS 2.0 CORE MARINE module.

Value	Function	Description
0	Unused	Should be selected if you do not use the input.
1	GENSYS 2.0 select	Used to select the connected module by digital input (See §5.2)
2	Inhibit button on other mod	Input is used to inhibit button on connected module (except on GENSYS 2.0 CORE)
1710	User Param 001	Value of input (0 or 1) will be written into variable [E1710] of connected module.
1711	User Param 002	Value of input (0 or 1) will be written into variable [E1711] of connected module.
1712	User Param 003	Value of input (0 or 1) will be written into variable [E1712] of connected module.
1713	User Param 004	Value of input (0 or 1) will be written into variable [E1713] of connected module.
1714	User Param 005	Value of input (0 or 1) will be written into variable [E1714] of connected module.
2283	Virtual Input 01	Value of input (0 or 1) will be written into variable [E2283] of connected module.
2284	Virtual Input 02	Value of input (0 or 1) will be written into variable [E2284] of connected module.
2285	Virtual Input 03	Value of input (0 or 1) will be written into variable [E2285] of connected module.
2286	Virtual Input 04	Value of input (0 or 1) will be written into variable [E2286] of connected module.
2287	Virtual Input 05	Value of input (0 or 1) will be written into variable [E2287] of connected module.
2440	User var. 001	Value of input (0 or 1) will be written into variable [E2440] “User var. 001” of connected module.

Value	Function	Description
2441	User var. 002	Value of input (0 or 1) will be written into variable [E2441] "User var. 002" of connected module.
2442	User var. 003	Value of input (0 or 1) will be written into variable [E2442] "User var. 003" of connected module.
2443	User var. 004	Value of input (0 or 1) will be written into variable [E2443] "User var. 004" of connected module.
2444	User var. 005	Value of input (0 or 1) will be written into variable [E2444] "User var. 005" of connected module.

TABLE 6 - INPUT FUNCTIONS

7.3.3 OUTPUT FUNCTIONS

This menu allows you to configure digital outputs N1 to N4.

Terminal	Name	Parameter
N1	Output 1 func.	E8005
N2	Output 2 func.	E8006
N3	Output 3 func.	E8007
N4	Output 4 func.	E8008

TABLE 7 - DIGITAL OUTPUTS PARAMETERS

You can select a different function for each digital output. See function list in the documentation of the connected module.

7.3.4 ETHERNET CONFIGURATION

This menu allows you to configure the Ethernet connection to communicate with the connected module or with the PC. Please contact your network administrator to configure router and module(s) according to your need.

Parameter	Possible value	Comment
Use DHCP [E8009]	Disable [0]	Enable to use DHCP protocol (dynamic IP address) or disable to set a fixed IP address.
	Enable [1]	
IP Address [E8010] to [E8013] ⁽¹⁾		Configure fixed IP address of the unit (Used when DHCP is disabled or in fault). Default address: 192.168.11.2.
UDP GENSY 2.0 [8025]		UDP communication port of the connected module. Default port: 7024.

TABLE 8 - ETHERNET CONFIGURATION

(1) Available only if the DHCP is disabled.

NOTE



The UDP GENSY 2.0 parameter of the RDM 2.0 must be identical to the UDP port of the module to connect in order to successfully connect the modules.

In order to apply the new Ethernet settings, the RDM 2.0 must be restarted.

7.4 SYSTEM MENU

This menu will give access to the following menus which display system parameters.

- Display properties (only on compatible hardware)
- RDM 2.0 -> PC file (only from computer)
- PC -> RDM 2.0 file (only from computer)
- Connect status
- About
- Update firmware (only in level 2 and from computer)

7.4.1 DISPLAY PROPERTIES



From v5.01 version and if the hardware is compatible, it's possible to modify contrast and backlight of the LCD screen

Parameter	Comment
Contrast [E8077]	Set contrast between 0 and 100%. Contrast can be modify by pressing SHIFT and BULB keys
Backlight [E8078]	Set backlight between 0 and 100%

TABLE 9 - DISPLAY PROPERTIES

7.4.2 RDM 2.0 -> PC FILE



This menu allows you to save the configuration of the RDM 2.0 in a text file.

By selecting “RDM_20_file.txt”, the current configuration file will be displayed in your internet browser.

Use the “File / Save as...” menu of your browser to save this file on your computer.

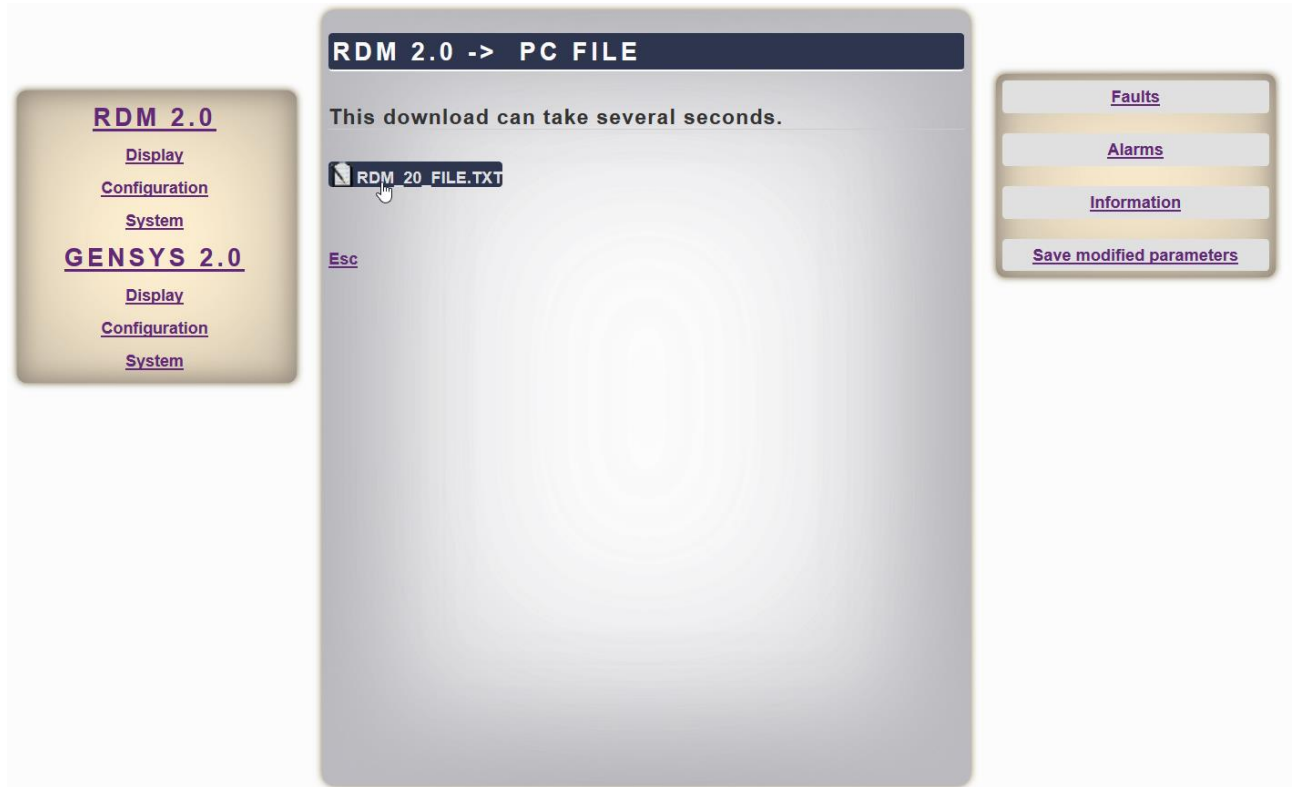


FIGURE 12 - RDM 2.0 -> PC FILE

Note: See §5.3 for a complete description of the RDM 2.0 configuration text file.

7.4.3 PC -> RDM 2.0 FILE

This menu allows to download a configuration text file from computer to RDM 2.0.



Use the “Browse...” button to choose the file to download and click on “save” button.

When the operation is completed, a screen will appear showing the compilation result.

Note: See §5.3 for a complete description of the RDM 2.0 configuration text file.



FIGURE 13 - PC -> RDM 2.0 FILE

7.4.4 CONNECT STATUS

This menu displays some information on module and connection.

Name	Description
RDM 2.0 name	Name of the RDM 2.0
RDM 2.0 IP	IP address of the RDM 2.0
RDM 2.0 MAC	MAC address of the RDM 2.0
RDM 2.0 DHCP	Indicate if DHCP is disable or enable
Remote comm.	Status of the remote communication <ul style="list-style-type: none"> • NC : Not Connected • INIT : Initialisation on going • OK : Connected on module • FAILED : the connexion failed
GENSYS 2.0 ⁽¹⁾	Name of the connected module
GENSYS 2.0 IP ⁽¹⁾	IP address of the connected module

TABLE 10 - CONNECT STATUS

(1) These status are displayed only if the connexion has been established.

7.4.5 ABOUT

This menu displays some information on module.

Name	Description
Serial number	Serial number of the RDM 2.0
Soft version	Actual soft version of the RDM2.0

TABLE 11 - ABOUT

7.4.6 UPDATE FIRMWARE

This menu is only available in level 2 and on computer.
It allows you to update the software with the latest version (See §5.1 for more details).

Note: Please contact your CRE Technology distributor to get the level 2 password.

7.5 INITIALIZATION SCREEN

Initialization screen is displayed when:

- RDM 2.0 is power up,
- RDM 2.0 is connecting to a module,
- Pressing the **[I]** button if no module is connected.

This screen contains:

- The module name to which RDM 2.0 is connecting.
- The connection status.

Symbol	Description
NC	Not Connected – RDM 2.0 is trying to connect to module.
INIT	RDM 2.0 is initializing
OK	Connection is done, RDM 2.0 is ready
FAILED	RDM 2.0 initialization has failed. To start a new initialization, either : <ul style="list-style-type: none">• modify the module name to which RDM 2.0 is connecting,• press [ENTER] button when initialization screen is displayed.

TABLE 12 - INITIALIZATION SCREEN

- A bar graph indicating the progress status of the initialization. This may take up to 30s.



NOTE

Don't cut power supply or disconnect the Ethernet cable during initialization.

7.6 LIMITATIONS

Some of the features proposed on the connected module cannot be done directly on RDM 2.0. As a consequence, corresponding menus are not available in the RDM 2.0.

Restricted features are:

- Update connected module's firmware
- Reset factory settings
- Download logo
- PC -> GENSYS 2.0 and GENSYS 2.0 -> PC menu for configuration file transfer.

7.6.1 UPDATE FIRMWARE

It is not possible to use RDM 2.0 Web site in order to update firmware of the connected module.

To update firmware of the connected module, connect directly to this module's embedded Web site.

7.6.2 RESET FACTORY SETTINGS

The reset factory settings function is only available from the connected module (Web site or front face).

7.6.3 DOWNLOAD LOGO

It's not possible to download a logo into the connected module. To download a logo into the connected module, you have to connect on the GENSYS 2.0 Web site.

Note: Even if the connected module has a different logo, the RDM 2.0 will keep the CRE Technology logo.

7.6.4 PC -> GENSYS 2.0 AND GENSYS 2.0 -> PC MENU

It's not possible:

- To send a file (ex: equation file) to the GENSYS 2.0 from the RDM 2.0 Web site.
 - To receive any file (ex: Alarm/Fault summary, equation file, data logging) from the GENSYS 2.0 by using the RDM 2.0 Web site.
- ⇒ Connect your Web browser directly to the GENSYS 2.0 Web site.

8 REFERENCES

8.1 PRODUCT REFERENCE



Reference	Description
A53Y0	RDM 2.0 INDUSTRIAL: Remote display module dedicate to GENSYS 2.0, GENSYS 2.0 CORE, GENSYS 2.0 LT or MASTER 2.0 module.
 A53Y3	RDM 2.0 MARINE: Remote display module dedicate to GENSYS 2.0 MARINE, GENSYS 2.0 CORE MARINE, GENSYS 2.0 LT MARINE module.
 A53Y9	RDM 2.0 MASTER MARINE : Remote display module Power plant controller with mains paralleling unit for marine product

TABLE 13 - RDM 2.0 PRODUCT REFERENCE

8.2 COMPATIBLE PRODUCT REFERENCE





Reference	Description
A53Z0	GENSYS 2.0: all-in-one door-mounted genset control and paralleling unit with integrated PLC.
A53Z1	GENSYS 2.0 CORE: all-in-one back-panel mounted genset control and paralleling unit with integrated PLC.
A53Z2	GENSYS 2.0 LT: all-in-one genset control and paralleling unit.
 A53Z3	GENSYS 2.0 MARINE: all-in-one door-mounted genset control and paralleling unit with integrated PLC and with marine functions.
 A53Z4	GENSYS 2.0 CORE MARINE: all-in-one back-panel mounted genset control and paralleling unit with integrated PLC and with marine functions.
 A53Z5	GENSYS 2.0 LT MARINE: all-in-one genset control and paralleling unit with marine functions.
A54Z0	MASTER 2.0: Complete power plant controller with mains paralleling
A54Z1	MASTER 2.0 CORE: Back-panel mounted power plant controller with mains paralleling unit with integrated PLC
 A53C9	GENSYS 2.0 CORE MASTER MARINE: Back-panel mounted power plant controller with mains paralleling unit with integrated PLC for marine

TABLE 14 - COMPATIBLE PRODUCT REFERENCE

9 CRE TECHNOLOGY



130, Allée Victor Naudin
Zone des Templier
Sophia-Antipolis
06410 Biot
FRANCE



Phone: +33 (0)4 92 38 86 82

Fax: +33 (0)4 92 38 86 83

Website: www.cretechnology.com



Email: info@cretechnology.com



Technical support: +33 (0)4 92 38 86 86 (office hours: 8.30AM-12AM / 2PM-6PM GMT+1).

Email: support@cretechnology.com



SKYPE: support-cretechnology.com

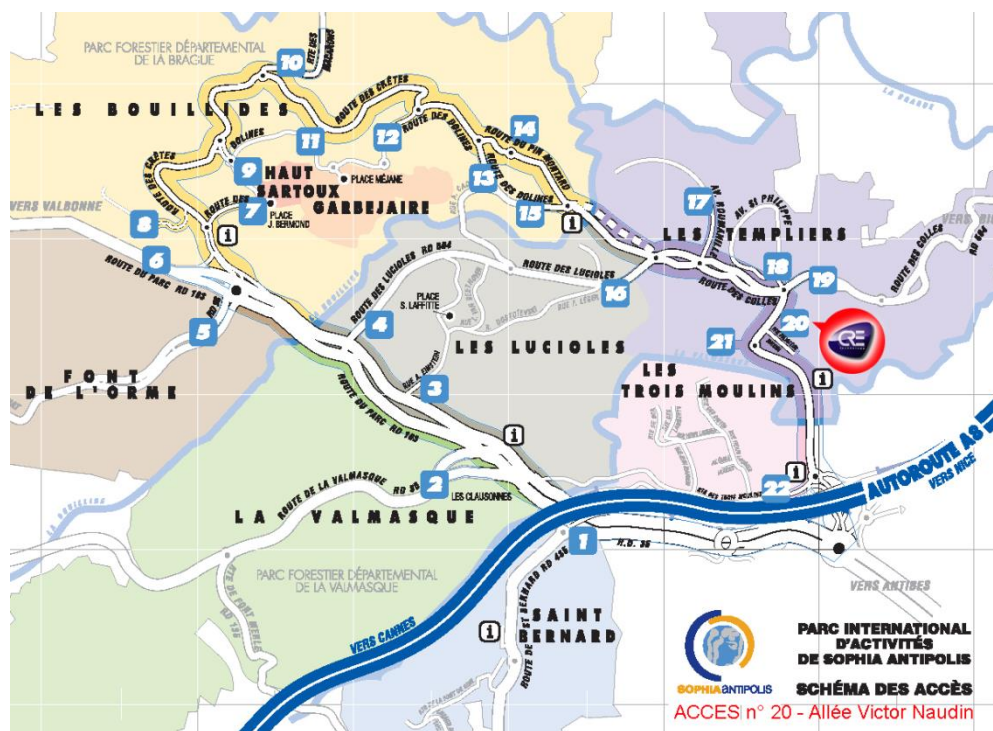


FIGURE 14 - ACCESS TO CRE TECHNOLOGY

Check our entire distributors list around the world on www.cretechnology.com tab "DISTRIBUTORS"



FIGURE 15 - CRE TECHNOLOGY DISTRIBUTORS

CRE Technology retains all copyrights in any text, graphic images, and software owned by CRE Technology and hereby authorizes you to electronically copy documents published herein solely for the purpose of transmitting or viewing the information.

© copyright
all rights reserved