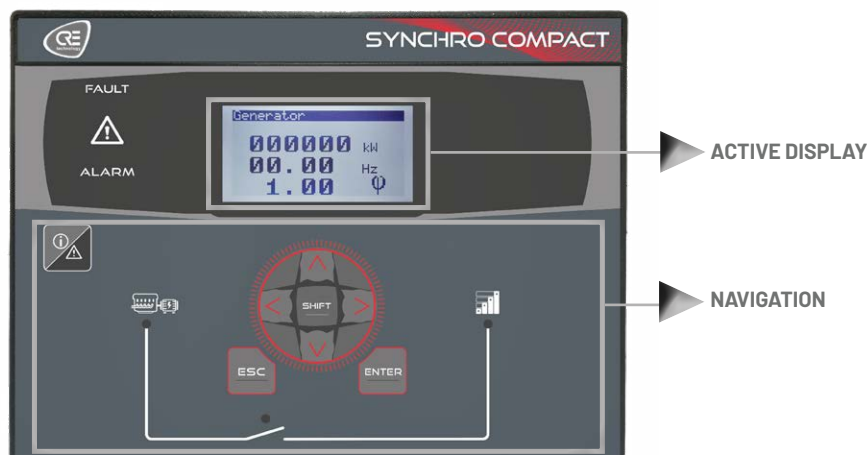


The purpose of this document is to allow a fast and easy handling of the product, nevertheless it is essential that you refer to the technical documentation for the commissioning.

For any further information on this product, please contact your local distributor or agent or directly our support team.

- All our products have a 1 year warranty
- Help desk: +33 492 38 86 86
- E-mail: support@cretechnology.com
- SKYPE: support-cretechnology.com

[Technical documentation](http://www.cretechnology.com/en/paralleling/119/synchro-compact) (www.cretechnology.com/en/paralleling/119/synchro-compact), technical documentations section (File: #synchro-compact-technical-documentation-en-xxxx.pdf#)



OPERATIONNAL MODES

The **SYNCHRO COMPACT** can be configured and controlled with the front panel:

- The top end and middle part: dedicated to the navigation, monitoring and measure display.

MENUS

Once the **SYNCHRO COMPACT** is switched on, you can access the menu on 3 different levels (To access the password page, press ESC.):

- **Level 0** : No password required, just press «ENTER» to access the display,
- **Level 1** : Just press «ENTER» to go to Display menu. Press «↓» to select «configuration or «system» of the **SYNCHRO COMPACT**. Press «ENTER» to switch to password mode. Press «↑» to change the character; press «→» to move to the next character level 1 password «1».

NOTE : The level 1 password gives you access to minimum settings recommended to start your commissioning on your power plant, is the equivalent of standard mode on the i4Gen Suite software.

- **Level 2** : Just press «ENTER» to go to Display menu. Press «↓» to select «configuration or «system» of the **SYNCHRO COMPACT**. Press «ENTER» to switch to password mode. Press «↑» to change the character; press «→» to move to the next character Level 2 password «1234»

NOTE : The level 2 password gives you access to maximum settings to commission your power plant, it is the equivalent of advanced mode on the i4Gen Suite software. For complex settings use i4Gen Suite (analogue inputs, Easyflex, scheduler, etc ..).

THE DIFFERENT MENUS WILL APPEAR AS FOLLOW

DISPLAY		CONFIGURATION		SYSTEM	
GENERATOR	Electrical measures on generator and AVR : frequency, voltage, PT.	GENERAL	Installation description (my number, number of generator). Level 2 : Dead bus management, voltage system, phase control.	DATE/TIME	Regional settings, on date and time
BUS	Electrical measures on bus : frequency, voltage, PT.	GENERATOR	Definition of the electrical measure, ratio PT and generator nominal values (Hz, V). AVR Control (amplitude, offset, droop). Level 2 : AVR Control (AVR Inverse, dead band, pulse divider).	SCREEN SETUP	Screen settings about contrast, backlight, screen saver
SYNCHRO.	Electrical measures on synchronisation : phase, frequency, voltage, phase sequence.	BUS	Nominal voltage and PT ratios.	ETHERNET	Ethernet communication settings, IP, etc ..
ENGINE	Engine speed measures : nominal speed and régulation.	ENGINE	Engine definition: Engine type, speed sensor and setpoint. Speed governor control (amplitude, offset, droop). Level 2 : J1939, speed Setpoint 2 Speed Control (Speed Inverse, dead band, pulse divider).		
INPUTS/ OUPUTS	Real time displays for digital I/Os, and CANOpen digital I/Os.	INPUTS/OUTPUTS	Digital inputs and outputs settings. Relays outputs settings. Breaker control settings.		
ABOUT	Information on hardware product : serial number, firmware version.	CONTROL LOOPS	Synchronization settings (Global gain Freq, phase, Volt). Level 2 : same settings with proportional, integral, derivative.		
		GENERATOR PROTECTIONS*	Protections on voltage, frequency and unbalance.		
		OTHER PROTECTIONS*	Protections on analogue inputs Battery, boost battery, outputs.		
		TIMERS*	Timers settings for stabilisation and horn.		
		SYNCHRO.*	Voltage, frequency, phase windows accept, and fail to synch timer.		
		MODIF. BY VAR NUMBER*	Personalized settings (for experienced users only).		

* LEVEL 2 ONLY

QUICK START SYNCHRO COMPACT

CONNECTIONS

WIRING CONNECTION

For the **SYNCHRO COMPACT** wiring and dimensions/panel cut out, [please check on the website](http://www.cretechnology.com/en/couplage/119/synchro-compact), (www.cretechnology.com/en/couplage/119/synchro-compact) in the **technical documentations section**. File : # synchro-compact-hmi-core-standard-wiring-schematics-revision-xxxx.pdf #

PC CONNECTION

Switch on the controller. Connect the Ethernet port (RJ45-LAN) of your computer to the Ethernet port of the controller. To be able to establish communication between the i4Gen Suite and the controller, the network addresses of both devices should be configured:

1. For PC network configuration, please refer to your Windows network settings.
2. The controller network configuration can be done from the controller front panel or via the i4Gen Suite software.
3. The network configuration of both devices has to be compatible: The IP address by default of CRE TECHNOLOGY controllers is: 192.168.11.1

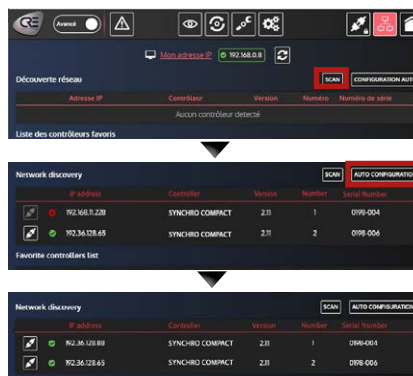
PC CONNECTION - WITH I4GEN SUITE SOFTWARE

Installation of the i4Gen Suite SOFTWARE

www.cretechnology.com/en/c/33/products/software



Open the i4Gen Suite software and go to Easy Connect menu



Click on the icon "SCAN".

Your SYNCHRO COMPACT will appear

Click on the icon

"AUTO CONFIGURATION" to adapt all IP's addresses

Your system is ready

You can click to connect on the product.

ONCE CONNECTED, YOU WILL BE ABLE TO NAVIGATE THROUGH THE FOLLOWING MENUS

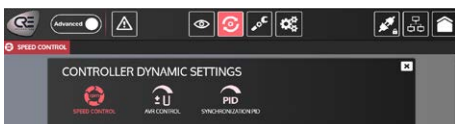
CONTROLLER SUPERVISION



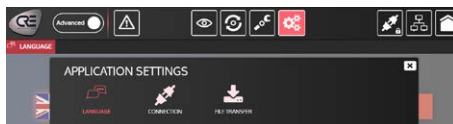
CONTROLLER STATIC SETTINGS



DYNAMIC SETTINGS



APPLICATION SETTINGS



NOTE

Before the commissioning or the operation of your equipment, please read carefully the user's manual and other related documentations. Carefully apply the safety instructions. **Not applying them may lead to human and machine damages.**

Engines, turbines or any other type of Generator must be equipped with protections (over speed, temperature, and pressure... depending on your installation). Any misuse of your equipment can lead to human or machine damages.

We also offer personalized and specific training on our product range and software, as well as additional services such as: onsite support, application engineering or specific support.

COMMISSIONING

- Check the emergency stop button. Check if it's possible to close the breaker on a dead bus. Try to open and close the breaker: then use one or several digital inputs for which function "Relay 1 forced" or "Relay 2 forced" has been selected. Disconnect the breaker control output. Check phase direction and phase concordance. Check the different voltage terminals assignment. Connect speed governor and AVR products, check if you can adjust at nominal value and amplitude at around + /- 8%.
- To increase or decrease the speed, use some digital inputs for which function: " Increase speed in manual mode" and " Decrease speed in manual mode" has been selected. To increase or decrease the voltage, use some digital inputs for which function: " Increase voltage in manual mode" and "Decrease voltage in manual mode" has been selected.
- Manage synchronization without connection with breaker, and check voltage difference <math>< 40V_{AC}</math> on breaker. If Ok, you can adjust the synchronization PID.



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QUICKSTART_SYNCHRO COMPACT_EN_A2020