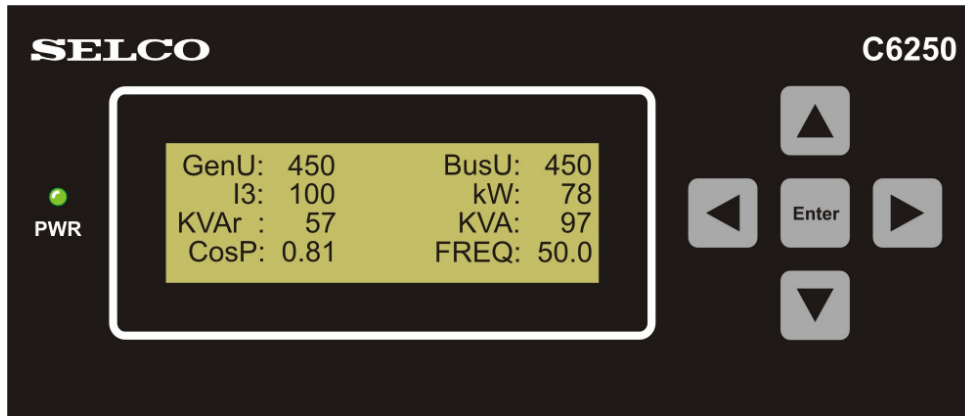


C6250 UI Module



User Manual

SELCO A/S
Betonvej 10 - DK-4000 Roskilde
Denmark
Phone: 45 7026 1122 - Fax: 45 7026 2522
e-mail: selco.dk@selco.com
Web site: www.selco.com

Table of Contents

1	Preface.....	3
2	Installation.....	4
2.1	Unit connections	4
2.2	Terminals	4
2.2.1	Unit.....	4
2.2.2	Power Supply	4
2.2.3	RS232.....	4
2.3	Dimensions.....	5
3	Display	6
3.1	Measurements	7
3.2	Protection	7
3.3	Plant overview.....	9
4	Menu	10
4.1	Measurements	10
4.2	Alarm Log	10
4.3	Service Status.....	11
4.4	Set Date Time.....	11
4.5	Config Menu/ Changing parameters	12
4.6	Service Menu	13
4.7	Backup	15
4.8	Restore Config	15
4.9	GenCtrl Info	15
4.10	UI Info.....	15
5	Upload/Download config.....	16
5.1	Upload config to PC.....	16
5.2	Download config to C6250.....	16
6	Specifications	17

1 Preface

The SELCO C6250 UI module is a display and configuration tool for the SELCO C6200 Gencontroller module. The UI module will access the configuration parameter stored in the module and present the parameter to the operator in a user-friendly and easy accessible menu structure. The UI module functions as a digital multi-meter, providing information about voltages, currents, load levels, power factor etc.

2 Installation

The C6200 is designed for flush mounting. Outside dimensions are H x W x D = 72 x 168 x 29mm. A cut out with dimensions H x W = 68 x 164mm must be made in order to install the unit in the switchboard cabinet. An installation depth of between 100 and 115mm is recommended. The C6200 is secured to the switch board plate through the use of the 4 mounting/fixing brackets included in the package.

Install the C6200 as described below.

- Find a location in the switch board cabinet with enough installation depth to house the C6250 unit. Make sure that the selected location is also satisfactory from the operator's point of view.
- Make a cut out with the dimensions H x W = 68 x 164 mm in the cabinet plate.
- Make sure the rubber gasket is in place behind the unit front plate. This gasket is necessary to ensure compliance with the IP54 requirements.
- Insert the unit into the cut out.
- Place the 4 mounting/fixing brackets in the small rectangular cut outs located at the top and bottom plates of the unit.
- Tighten the 4 mounting/fixing brackets with a screwdriver until the unit is firmly seated.

2.1 Unit connections

A serial cable (straight through cable) must be used for the communication connection between the C6200 and C6250. Max cable length is 30meters between C6200 and C6250.

2.2 Terminals

2.2.1 Unit

The UNIT connection is used for communication between the C6200 and C6250.

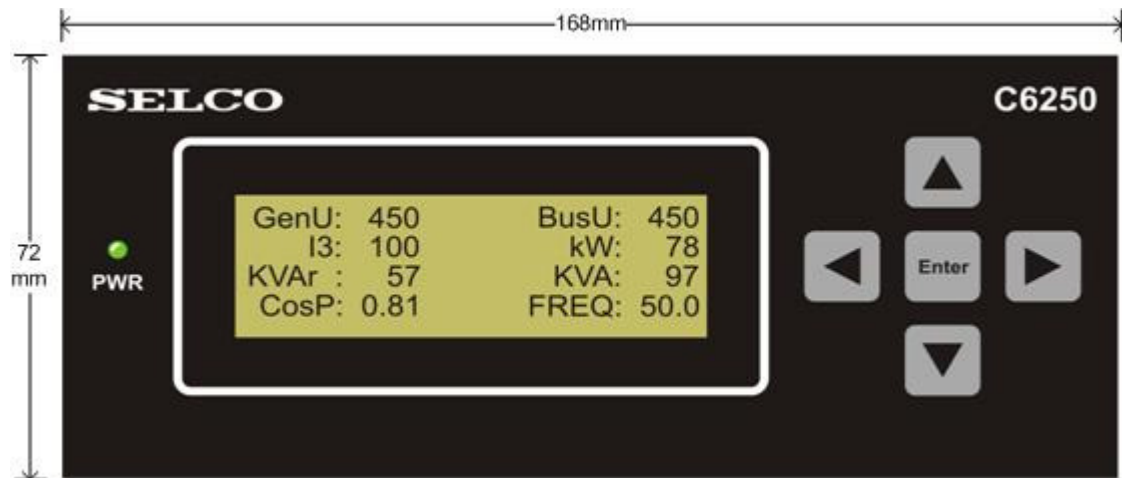
2.2.2 Power Supply

The power supply works on a nominal voltage of +24 VDC. When used with C6200 Gencontroller, the supply of C6250 is taken through the DB9 cable from C6200. Alternatively the power supply terminals can be used e.g. when the C6250 is connected to a PC

2.2.3 RS232

The RS232 connection is used to connect the C6250 with a laptop or PC when updating the unit's firmware or when uploading/downloading a configuration file

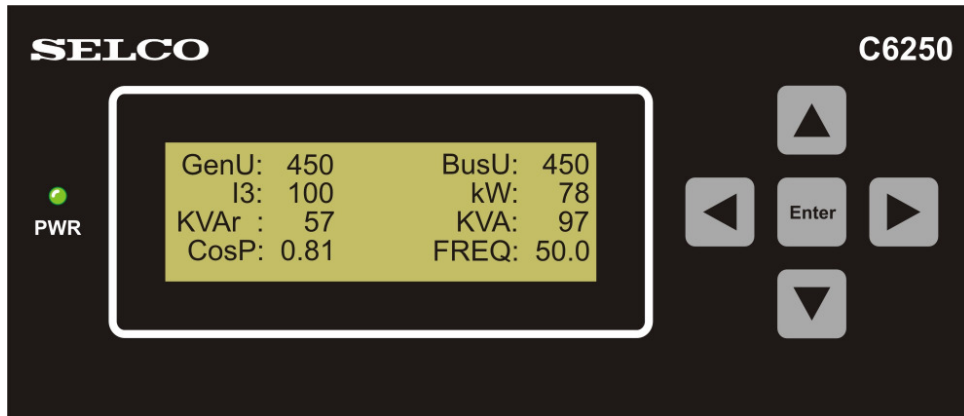
2.3 Dimensions



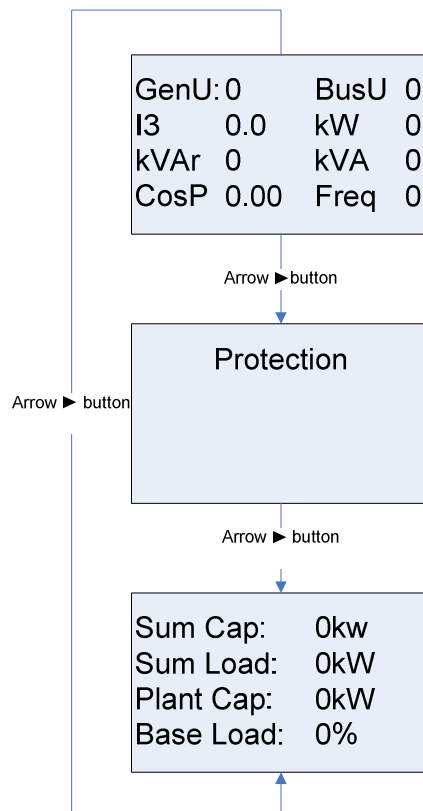
Cut out 68 x 164mm

3 Display

After power up of the C6250 module the C6250 will show the following display:.



With the left ◀ and right ▶ arrow buttons further displays can be chosen.



3.1 Measurements

After power up of the C6250 module, measurement display will be active. It shows following parameters:

GenU: 0	BusU 0
I3 0.0	kW 0
kVAr 0	kVA 0
CosP 0.00	Freq 0

Message	Description
GenU	Generator phase – phase voltage
I3	Current flowing through phase three
kVAr	Reactive power indicated as kVAr
CosP	Power factor
BusU	Bus bar phase - neutral voltage
kW	Total active power indicated as kW.
kVA	Volt- ampere is indicated as kVA
Freq	Frequency

3.2 Protection

The protection display is used to indication of protection messages from the generator. Listed protection messages can be reset (and cleared) by pressing the “Enter” button.



Following indications can be shown on this display:

Message	Description
Freq ctrl fault	In case the C6200 does not succeed to adjust the frequency to the nominal level within 10s from generator start, this alarm will be issued.
Sync fault	This alarm will be issued in case C6200 has synchronized the generator and given a C/B close command but the breaker did not close.
Sync timeout	Synchronization could not be completed within Sync timeout delay (see RS232 configuration WRITE AUTOSYNC SYNCTIME).
Rampup timeout	Ramp up could not be completed within ramp up time (see RS232 configuration WRITE ACTLS RAMPTIME) + 10seconds.
Unload timeout	Unload could not be completed within ramp down time (see RS232 configuration WRITE ACTLS RAMPTIME) + 10seconds.

Unload trip fault	C6200 has unloaded the generator and given a C/B trip command but the C/B did not open.
Message	Description
CB open and Load	C6200 does not receive any feedback from the C/B that C/B is closed but a current is detected through the CT inputs.
Gen idle CB closed	C/B closed feedback active while generator not running.
Volt ctrl fault	In case the C6200 does not succeed to adjust the voltage to the nominal level within 10s from generator start, this alarm will be issued.
Rea rampup timeout	Ramp up of the reactive load could not be completed within reactive load ramp up time (see RS232 configuration WRITE REACTLS RAMPTIME) + 10seconds.
Prot trip timeout	C6200 has issued a protection trip but the breaker did not open.
Gen start fault	C6200 has issued a generator start command but the engine did not start within engine start time out (15s).
Gen stop fault	C6200 has issued a generator stop command but the engine did not stop within engine stop time out (15s after stop signal has been issued).
Fail Measure Head	Internal fault in C6200 module. Contact SELCO.
Reverse Power	C6200 has tripped the generator because of reverse power.
Excitation Loss	C6200 has tripped the generator because of loss of excitation.
Freq Deviation	C6200 has tripped the generator because of frequency deviation (ROCOF/ df/dt) trip.
Vector Shift	C6200 has tripped the generator because of vector shift.
Over Volt	C6200 has tripped the generator because of over voltage.
Under Volt	C6200 has tripped the generator because of under voltage.
Over Freq	C6200 has tripped the generator because of over frequency.
Under Freq	C6200 has tripped the generator because of under voltage.
External Trip	External trip signal on C6200 digital input (see RS232 configuration WRITE IOFUNC EXTTRIP).
Service Warning	The C6200 includes a service counter. When activated this service hour counter will compare the running hours of the generator set (condition for this is that the C/B must be closed) with the pre defined Service

Interval. As soon as the running hours reach the amount of running hours specified in the service interval, the Service Warning will activate.

3.3 Plant overview

The plant overview is used display actual generator load, reserve capacity, total plant capacity and base load of all running generators.

Sum Cap:	0kW
Sum Load:	0kW
Plant Cap:	0kW
Base Load:	0%

Following indications can be shown on this display:

Message	Description
Sum Cap	Sum Cap. Indicates how many kW of reserve capacity is available from the generator
Sum Load	Sum Load. Indicates the utilization of the generator
Plant Cap	Plant Cap. Indicates the total power currently available to the installation by the generators
Base Load	Base Load indicates the total load of the running generators

4 Menu

To access the menu press Enter.

From the main menu screen the operator has access to all functions of the C6200. The functions are arranged in groups and displayed as follows:

C6250
Measurements
Alarm Log
Service Status
Set DateTime
Config Menu
Service Menu
Restore Config
Backup Config
GenCtrl. Info
UI Info

4.1 Measurements

The measurement screen displays the current condition of the connected generator set with all measurements and alarms. The measurement display is identical with the start up display (see 3.1)

4.2 Alarm Log

The C6200 saves the last 20 alarms. It displays one alarm at a time. Each alarm is displayed as follows:

Log
#1
Date Time
Text

#1 This means that this is the latest alarm

Date Date when the alarm appeared

Time Time when the alarm appeared

Text Alarm text. This text is identical with the text displayed in the protection display (see 3.2 Protection).

4.3 Service Status

The Service Status menu displays all information regarding service. When entering this menu the display will show following (Example):

```
SERVICE STATUS
DutyHour:      0
Next Service:  0
2008-09-03 18:55:56
```

DutyHour	Quantity of running hours
Next Service	Quantity of running ours until the next service
Current date	
Current time	

4.4 Set Date Time

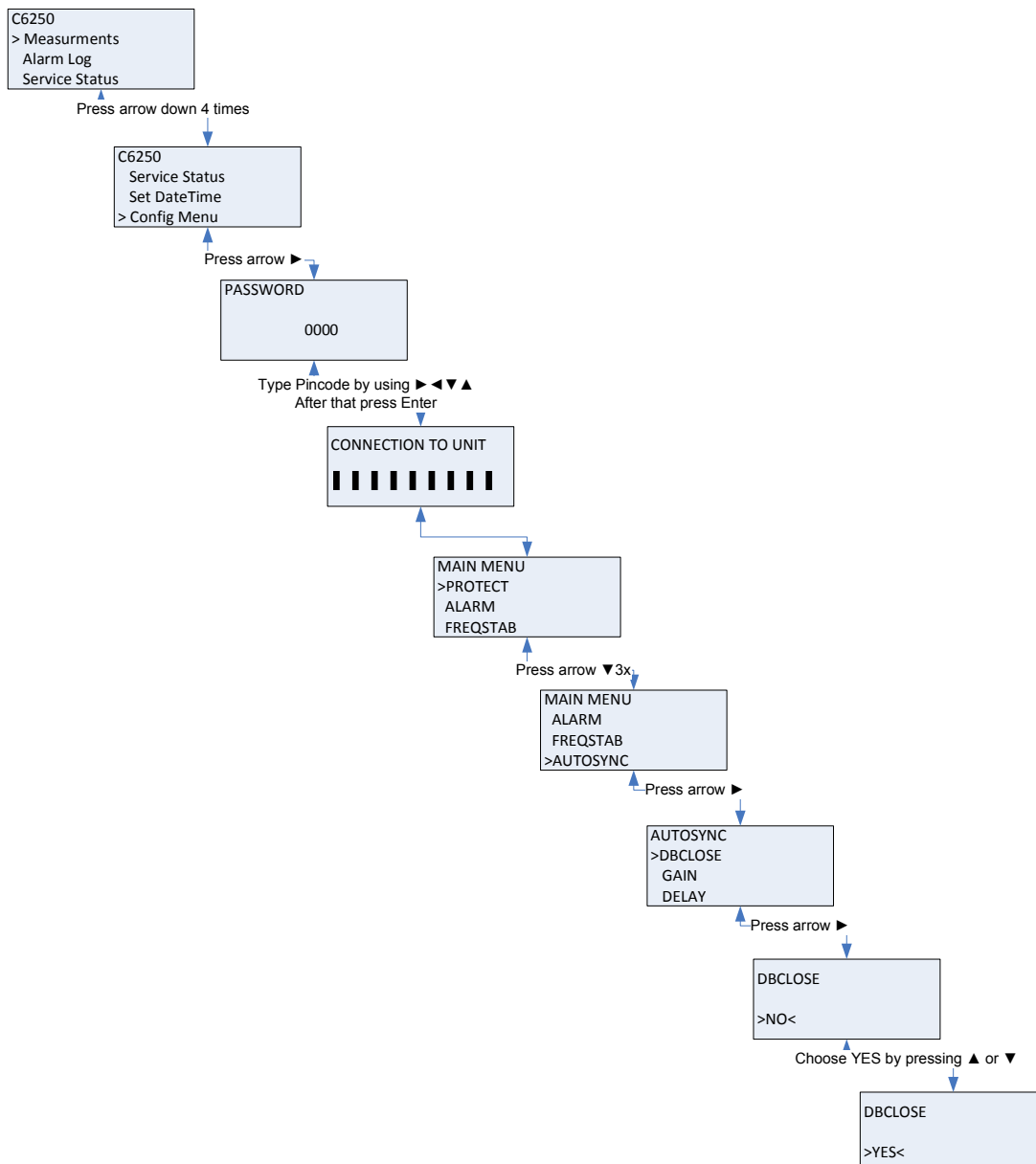
Here the Date and time can be set.

4.5 Config Menu/ Changing parameters

It is possible to access and change all settings of the C6200 module through the User Interface.

The example below describes how the operator can change a setting within the C6200 Gencontroller by using the C6250 UI module. To move forward or backwards in the menu use the Left or Right arrow keys. To adjust a parameter use the Up or Down arrow keys however any changes made will automatically be stored in the configuration file. **There are no fail safes so make changes with care.**

In the example below the DBCLOSE function is changed from NO to YES



Pressing the "Left" arrow key a few times returns the operator to the Main menu screen

4.6 Service Menu

In the Service Menu the service interval, the duty hours and service password can be set. The service can also be confirmed from the service menu.

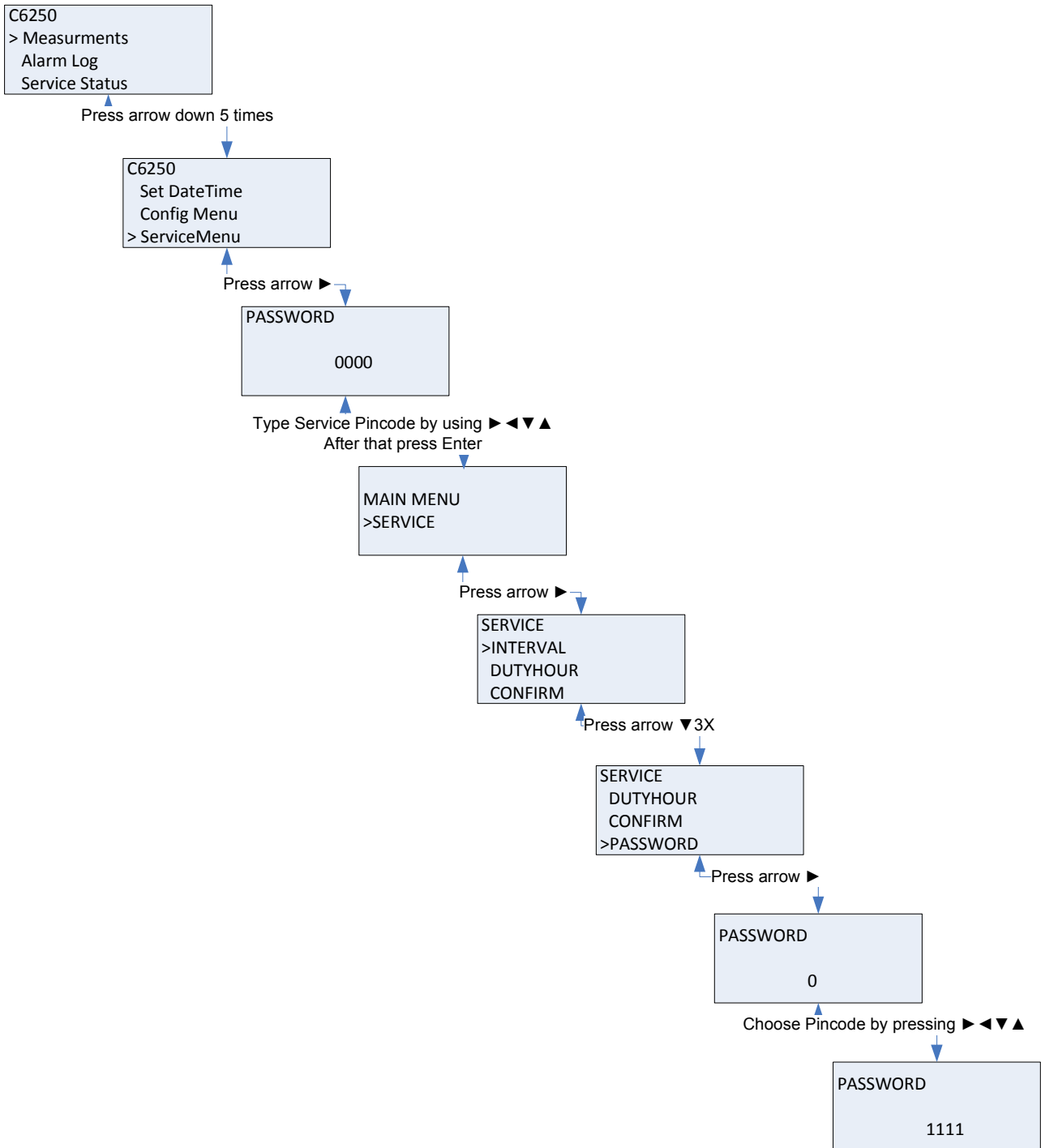
After After choosing SERVICE MENU the unit will ask for the service password.

After the service password has been entered, the unit will go into the service menu.

Following parameters can be accessed:

Interval	Quantity of running hours between each service.
Dutyhour	Quantity of hours the generator had run.
Confirm	This is used in order to confirm a service. After the service has been confirmed the service alarm will be set to the amount of hours defined in Interval.
Password	Here the service password can be configured.

Following example shows the change of the service password from 0 to 1111:



4.7 Backup

The operator can backup the configuration file from the C6200 Gencontroller and store it in the C6250. It is only possible to have one configuration file stored at a time. This feature can be used when installing more than one C6200 unit and the configuration file can be used in the next generator

Backup will save the settings of the connected C6200 Generator Controller on the C6250 UI Module.

4.8 Restore Config

The operator can restore the configuration file from the C6250 and send it to the C6200 Gencontroller. This has to be done with care due to possible changes made in the C6200 after backup have been made. . This feature can be used when installing more than one C6200 unit and the configuration file can be used in the next generator.

Restore will send the settings saved on the C6250 UI Module to the C6200 Generator Controller.

Before the settings can be send to the C6200, the C6250 UI Module will ask for the password.

4.9 GenCtrl Info

Read unit version displays C6200 revision info, Can bus address and Mod bus address. Press Enter to return to main menu.

4.10 UI Info

This menu displays the type number and firmware version of the C6250 UI Module. Press Enter to return to main menu.

5 Upload/Download config

The C6250 is more than just a switchboard mounted user interface. It can also be used as a programming tool for commissioning or general adjustment of unit parameters. When connecting the C6250 to the PC it is required to use a power supply. Connection is established through the RS232 terminal on both C6250 and the PC's com terminal.

HyperTerminal is used to communicate with C6250 and for further information on configuring HyperTerminal please read HyperTerminal Guide which is located on SELCO A/S webpage.

HyperTerminal commands

Commands	Description
Enable	Enables write function in the C6250
Read config	List the configuration file
Test keyboard	Tests keyboard by pressing the buttons on the C6250
Delete config	Deletes stored configurations file
Read version	Shows C6250 firmware version

5.1 Upload config to PC

The operator can upload the stored configuration file in the C6200 to a laptop or PC using the RS232 connection on the back of the unit.

5.2 Download config to C6250

The operator can download using a laptop or PC a configuration file to the C6250.

6 Specifications

Power Supply:	+24 V DC (-30 % / +30 %) Isolated
Display:	4 x 20 Characters (backlit)
Dimming:	LEDs and Display backlit 5 steps by RS232 command
RS232	
Connection:	Customized plug, 4-wire (non-isolated)
Function:	Configuration, Debugging or firmware update
Protocol:	ANSI terminal
Baud rate:	1200, 2400, 4800, 9600 or 19200 baud
Parity:	None, even or odd
Data bits:	7 or 8
Stop bits:	1 or 2
EMC / EMI tests:	
Marine tests:	
Connections:	Plug-in screw terminals (spring terminals available as option)
Dust and Water protection:	IP54 at front
Dimensions:	72 x 168 x 29mm (H x W x D) Cut out 68 x 164 mm.
Weight:	300 g
Fixation:	Flush mount (4 mounting brackets)

The specifications are subject to change without notice.