PRELIMINARY TECHNICAL INFORMATION

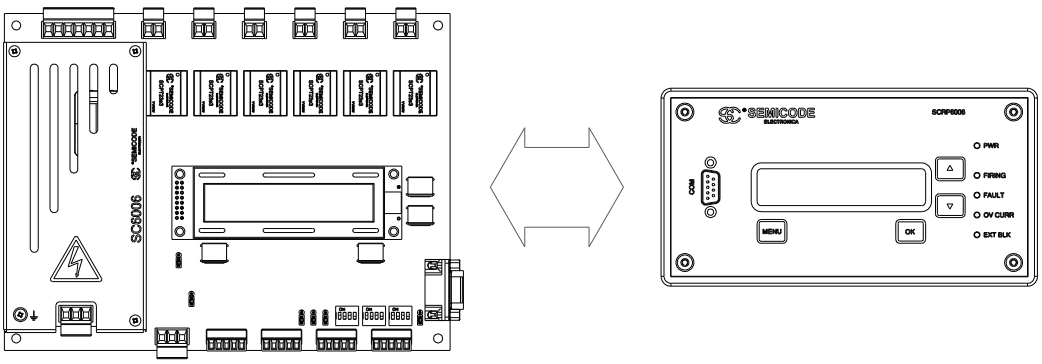
HIGHLIGHTS

- SC6006 remote panel interface
- Outputs and status LED indications
- Voltage and current monitorization
- Auxiliary RS232 optoisolated communication port

non-contractual photo

OVERVIEW

SCRP6006 is specially designed to interface the SC6006 SCR digital firing board. Provides a neat and easy way to remotely monitor and set up SC6006 SCR controller board and a clear monitorization of output voltage and current direct from the SC6006 controller.
The panel expands the on-board LCD screen, buttons and status LEDs for mounting in a cabinet door. Additionally it provides an optoisolated extension to SC6006 serial link communication port.



SUPPLY SPECIFICATIONS

Description	Symbol	Notes / Test Conditions	Min	Typ	Max
Supply voltage	V_{DC_IN}	±5%		12	
Typical input supply current	I_{DC_IN}				250

Data at T_a = 25 °C and rated values, unless otherwise indicated

CONFORMALS

Conformal coating	MIL-1-46058, Type UR
Security	EN60950-1, UL60950-1
Material	UL94-V0

131212 Rev.:2

Note:
SCRP6006 works only with SC6006 firmware version 1.20 or higher.

SERIAL COMMUNICATION

SCRP6006 has two serial communication ports: an internal connector for interfacing SC6006 (J4) and an external connector (J2) which extends the SC6006 serial communications interface to make basic operations of control and configuration of the system through a RS232 interface with, for example, a PC. This auxiliary communication serial port works the same way as SC6006 serial com link does.

The standard configuration of serial link with SC6006 is:

Baud rate: 9600 bps
Parity bit: none
Stop: 1 bit
Flow control: none

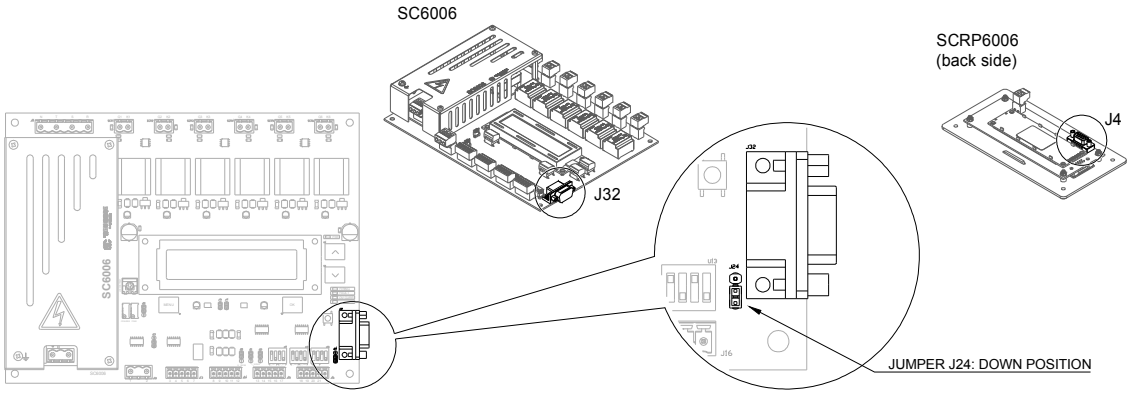
For further information of serial link configuration, command set and menus please check the SC6006 Operation Manual.

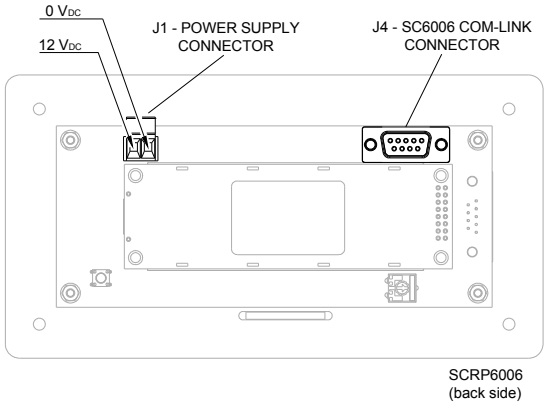
Notes:
Please use the cable provided with the remote panel to make the connection between the SC6006 and SCRP6006 or use a standard serial cable no longer than 10 m.

For the auxiliary serial link please use a standard cable with DB9 connectors M to F no longer than 10 m.

SC6006 INSTALLATION

- Connect a serial communication cable (also provided) with DB9 connectors M to F between J32 on SC6006 and J4 on SCRP6006.
- Put (down position) J24 jumper of the SC6006 as shown in the following picture.
- Provide, externally, 12 V_{DC} power supply (J1) for SCRP6006 remote panel.
- Configure SC6006. Activate “Remote” option under COM menu on SC6006, please check the SC6006 Operation Manual for more information regarding the communication port.





SCRP6006 ADJUSTMENTS

To set up internal parameters of the remote panel, when powered on, is done by pressing at the same time the UP and DOWN buttons on panel. Once in the internal menu you can set up the magnitudes representation of the panel and other remote panel internal configurations as backlight display.

The navigation through this menu is done in the same way as on SC6006 menu: [UP] and [DOWN] buttons to navigate between items and [OK] button to select/highlight option or change/accept its value. When highlighted some items can be changed using [UP] and [DOWN] buttons.

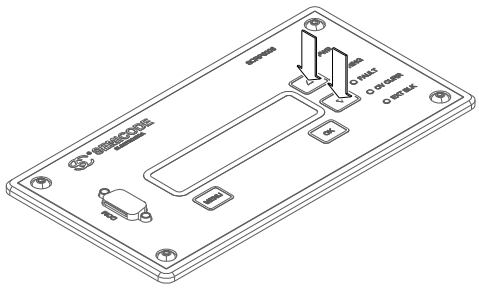


Image 1: Entering SCRP6006 Adjust menu.

By default when SCRP6006 is powered on it will check if there is any SC6006 connected to its serial port (J4 DB9 on the back), if after 10 seconds aprox. the remote panel is unable to stablish communication with SC6006 the red Fault LED of the panel will blink and a message will be shown on the panel status screen: “No COM!”. When in this state the panel keeps checking if a SC6006 is connected.

Adjustments on internal main menu
Following an explanation of each setting available on adjustments main menu.

1- Backlight
This option allows to set the LCD backlight ON/OFF. It also allows to set a the backlight ON only when any button is pressed and set a power off time after the last pulsation.
By default SCRP6006 is factory set with a backlight ON time of 30 seconds approx.

2- Main scr.
This option sets what will show the SCRP6006 on main screen:

[**`Echo `**] : When *Echo mode* is set (by default) the main screen works merely as a remote screen of the controller SC6006 and also extends the functionality of the all four push-buttons of the panel.

[**`Fdbk `**] : When *Fdbk mode* is set the main screen will show the actual output voltage and current. When in this mode the OK button will work as an ON/OFF button for the controller, the other pushbuttons have no application in this mode.

3- V Format.
This option permits to choose where to represent the decimal point on the voltage magnitude taking in account that 4 significant digits will be represented.
There are 3 options:

`[ 0000. ]` : no decimal point, ranging from 0 to 9999 V.
`[ 000.0 ]` : 1 decimal digit ranging form 0.0 to 999.9 V.
`[ 00.00 ]` : 2 decimal digits: 0.00 to 99.99 V. By default 000.0 (1 decimal digit).

4- Max. Volt.
The maximum voltage value (in V) which corresponds to the maximum feedback reference signal given to SC6006.

5- AVG Volt.
This option changes the number of samples received from SC6006 for averaging voltage reference which is represented on screen. By default set to 8.

6- I Format

This option permits to choose where to represent the decimal point on the voltage magnitude taking in account that 4 significant digits would be represented. There are 3 options, no decimal point ranging 0 to 9999 V. 1 decimal digit 0.0 to 999.9 V and 2 decimal digits: 0.00 to 99.99 V. By default 000.0 (1 decimal digit).

7- Max. Curr.

The maximum current value (in A) which corresponds to the maximum feedback reference signal given to SC6006. By default 100.0.

8- AVG Curr.

This option changes the number of samples received from SC6006 for averaging current reference which is represented on screen. By default set to 8.

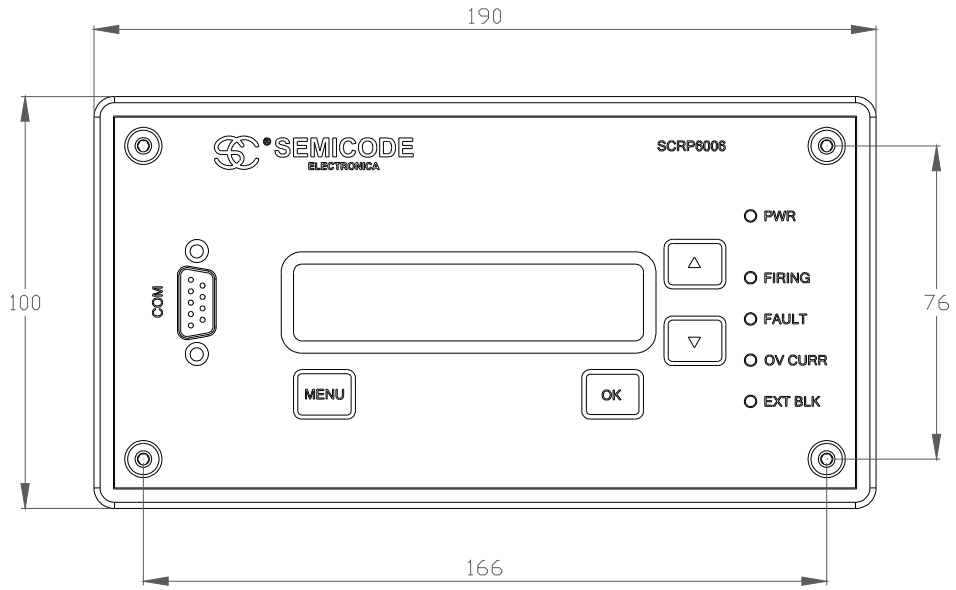
APPLICATION EXAMPLE:

e.g.: On an AC/DC converter the voltage feedback is made through an input signal of 0-5 V on SC6006 J16[20]:U_SENSE and the 5 V correnspponds to the maximum output converter of 30 V_{DC} and the current feedback signal is 0-5 V which corresponds to an output of 1-2000 A_{DC}.

- We set Main scr. To Fdbk in order to show the converter's set voltage and current.
- We adjust the `V. Format.` to 2 decimal digits mode (99.99 V_{DC} full scale):
  `V. Format: [00.00]`
- We set the maximum output voltage `Max. Volt.` which gives the full scale value (5 V) of feedback signal:
  `Max. Volt. :30.00`
- We left `AVG Volt.` at 8 samples.
  `AVG Volt. : 08`
- We adjust the I. Format to no decimal digits mode (9999 A_{DC} full scale):
  `I. Format: [0000.]`
- We set the maximum output voltage `Max. Curr.` wich gives the full scale value (5 V) of feedback signal:
  `Max. Curr: [30.00]`
- We left `AVG Curr.` at 8 samples.
  `AVG Curr. : 08`

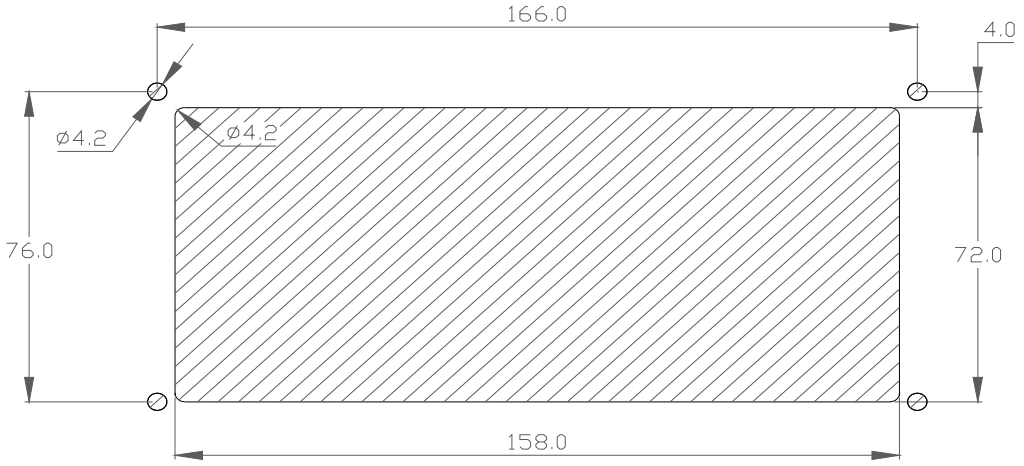
MECHANICAL DIMENSIONS

Description	Notes / Test Conditions		Units
Panel		190 x 100 x 24	mm
Fixations	*fixation holes diameter*	4.2	mm
Weight (aprox)		185	gr



(All dimensions in mm)

RECOMMENDED PANEL DRILLING



(All dimensions in mm)

CONNECTORS OVERVIEW

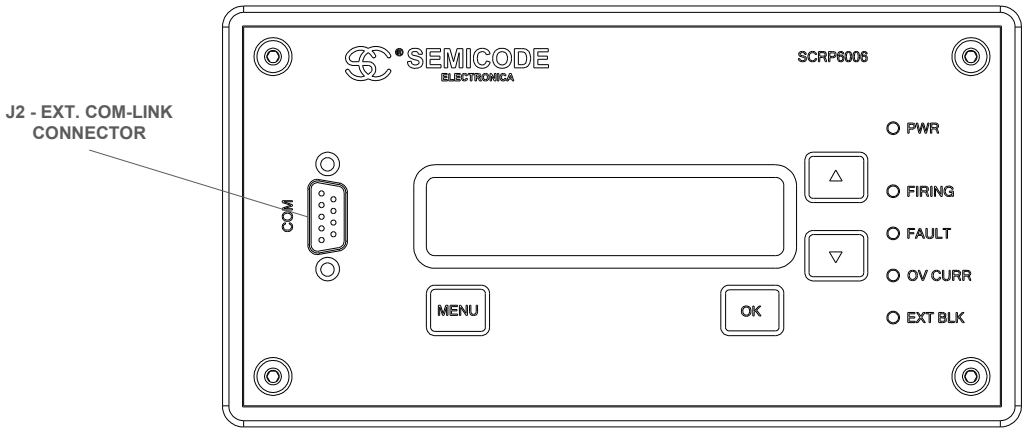


Image 2: Front side detail.

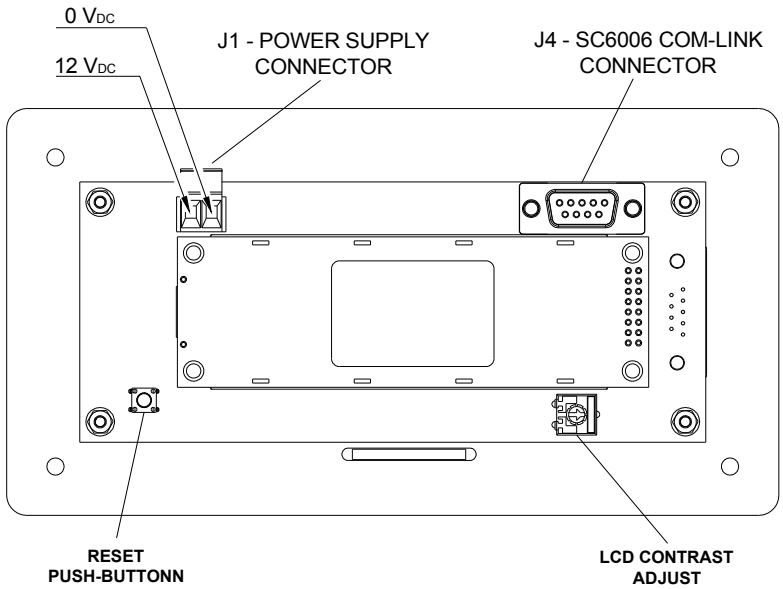


Image 3: Back side detail.

Cost Effective Products

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No Annotation: The product parameters are fixed and the product is available to datasheet specification.