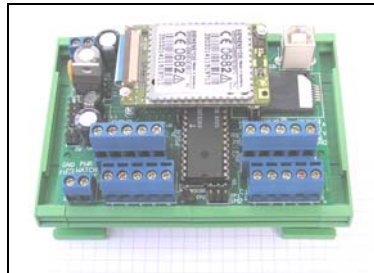


SP6

Brief Operating Instructions



You have purchased the device for monitoring and control of remote input and output statuses using SMS text messages. The device is highly versatile and must be configured before use by means of software supplied on CD. The program requires Windows 98 or above.

1

SP Init

Install program **SP Init** from the provided CD into your PC. Insert CD into the unit and wait till the introductory screen pops up. In the menu, select installation of program **SP Init** and follow the wizard instructions. Then on the introductory screen select installation of **USB driver** and install it. (Typically to folder "C:\Cygnal\CP2101".)

2

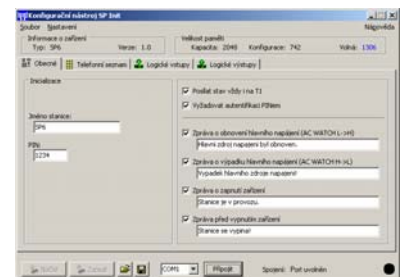
USB Cable

Interconnect your PC with the device using the USB cable supplied with the delivery. After the first connection, the computer prompts you to install the USB port drivers. Files of this driver were installed into your PC during step 1 and typically can be found in folder "C:\Cygnal\CP2101". The driver creates a new virtual serial port on your PC.

3

Setting Up The Configuration

Start program **SP Init**. (Start ⇒ Programs ⇒ SEA ⇒ SP Init ⇒ SP Init x.x.x). The program includes a sample configuration. Click on tab **General** and change item **PIN** to match the PIN of your SIM card and enter your mobile number into field for No. **T1** on the **Phone book** tab you want to use to control the device.



4

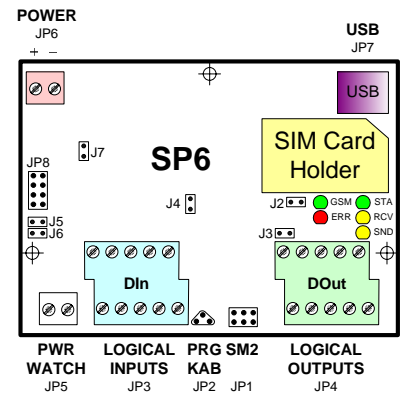
Saving The Configuration

Click button **Connect** in the bottom part of the screen. Allow a while for the program to locate the device and enable button **Save**. Click this button and wait till the configuration is saved. Then click button **Disconnect**. The SP6 device is power supplied during the configuration from the USB port and the main power supply unit needs not be connected.

5

Power Supply

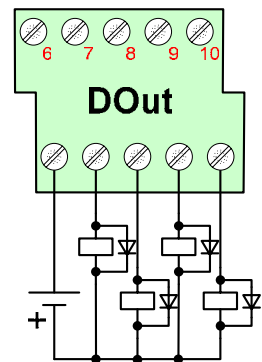
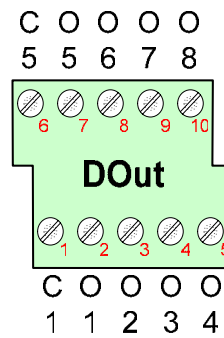
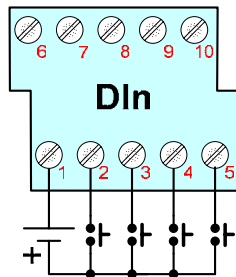
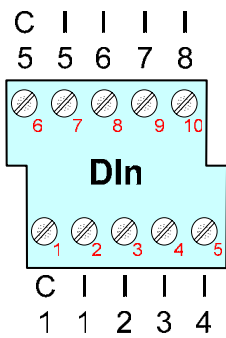
The SP6 device is power supplied from a **8 V to 30 V DC** power supply unit. This voltage is supplied to connector **JP6** in the upper left part of the device. The polarity is shown in the figure on the right.



6

Inputs and Outputs

Inputs (signals to SP6) are supplied to connector **JP3** and outputs (signals from SP6) are connected to connector **JP4**. See the diagrams below for recommended connections of these signals.



7

Startup

Before startup, place the SIM card into the SIM card reader and connect the GSM antenna.

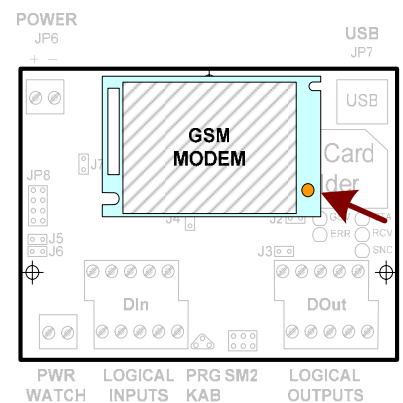
Then connect the power supply to connector **JP6**.

LED **STA** on the right starts flashing with 2 short subsequent flashes (●● ●●). When flashing changes to 1 short flash (● ●) the device is ready for operation.

Now, send a SMS text message from your mobile in the form „**STATE**“ to the telephone device number **SP6**. The device will respond with a message describing its status „**SP6: Input1=Off, Input2=Off, ...**“

If the status of any input is changed, the device sends a SMS text message to your mobile in the form „**Input1 is On**“.

Red LED **ERR** changing its status to On during startup indicates that an error occurred. Check that **PIN** was specified correctly in the **SP Init** configuration program and that the antenna is connected. For more information see the User Manual to device **SP6**, chapter Function – Errors During Startup Sequence.



Tip:
Yellow LED **RCV** indicates a SMS text message is received and yellow LED **SND** on the right hand side of the device indicates a SMS text message is sent.

Tip:
Connector **JP1** is designed to connect service module **SM2** that displays status details of the device and can be used to run detail diagnostics.

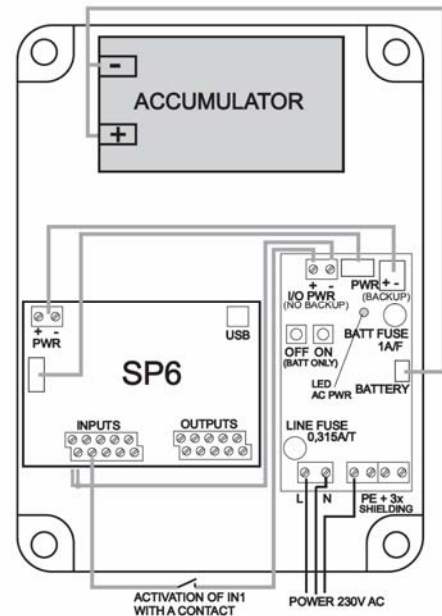
BOXPWR

Power supply in SP6 BOX

- BOXPWR board contains 2 mutually insulated power supplies 12V DC working with common transformer from 230V AC power input. *External power supply* is only the rectifier + capacitor and produces voltage for external circuits of input optocouplers, the connector is blue screw terminals **I/O PWR**. This power supply is there to be connected with external wires with input or output SP6 signals. *Main power supply* for SP-6 has backup battery 12V/1.2Ah and provides power on after mains fails – PWR connector internal connection type. **THIS IS INTERNAL POWER SUPPLY FOR SP-6 ONLY AND NO CONNECTION WITH EXTERNAL CABLES IS ALLOWED (NOISE SEPARATION REASONS) !!!**

- *Yellow LED* signalizes, that power 230V AC is present, that switch power supply EVER to ON state. Pressing OFF or ON pushbuttons has NO effect.

- If 230V AC power is not present, the power supply can be switched ON with ON pushbutton and switched OFF with OFF pushbutton. There is no signalization in this case at BOXPWR board, use LEDs at SP6 to recognize power status.



- If the battery is discharged, the power supply will go automatically OFF. There is about 20 sec delay after low voltage is detected and the signal is given to SP-6, that gives SP-6 to send SMS about low power & switching OFF.
- Connect 230V AC power to gray screw terminals, it may be L and N wire in 230/400V system or L1, L2 wires in 120/230V AC systems. Connect also ground – protection earth to any of 4 blue screws terminals. The other blue ground terminals might be used for shielding connection, if shielded wires are used for signals to and from SP-6.
- Flat 8 pole cable between SP-6 and BOXPWR transfer the signals AC POWER ON and LOW BATTERY to SP-6 and so connection “POWER WATCH” terminals at SP-6 is not necessary and this input might be used as general purpose 9th input with future SW versions...
- If you need to activate inputs from dry contacts, connect common terminal of SP-6 inputs with negative terminal I/O PWR and the contact connect between corresponding input terminal and positive terminal of I/O PWR. Note, that optocouplers in SP-6 are any polarity type and so you can reverse the polarity, if needed. *You can use only I/O PWR power supply for optocouplers external circuits.*
- Outputs are equipped with photo MOS relays, that can switch AC or DC of any polarity. If you connect some relays or contactors on them, you can do it with long wires, but these must stay insulated from power supply for SP-6, otherwise the device may be unreliable due to noise coming into these wires. You can use only I/O PWR power supply for relay coils.
- If you need to use for input optocouplers or output relays the power supply with backup, that powers SP-6 electronics, you must install additional DC/DC converter into SP-6 BOX to get separated power. **DO NOT USE DIRECT CONNECTION, OTHERWISE NOISE PROBLEMS MAY OCCUR !**