

# ARIAN



## RPS

### PC Instrument configuration

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## Introduction

This document explains how to configure instruments manufactured by ARIAN from a compatible computer PC, by means of:

- 1) Programming Software RPS. (available in [www.arian.cl](http://www.arian.cl))
- 2) Cable for connecting to the instrument (# part: RPS-C) or if the instrument has installed the RS485 communications then, can be used the insulating interface RS232 to RS485 (# part: ISO-485)

This system of interface and software is called system RPS. When using RPS the menus are the same described for the configuration from the frontal keyboard of the instruments but using the keyboard and screen of the PC

## PC Hardware

PC compatible computer with color VGA color screen and serial communications port RS232.

It does not need or use mouse.

## Operating system

Our intention in the development of this software was to be light for downloading quickly from the Web, do not require complex installation nor registry in the system that can interfere with other programs.

But the most important thing is that it can run in any compatible computer PC, without concerning the operating system.

The compiled program this for X86 DOS so it can run in any operating system that has DOS console. For example W95, W98, W2000... XP or Linux.

If your operating system does not have DOS console or simply the console does not work, then the PC can be boot from a diskette with DOS (Microsoft DOS or FreeDOS).

## Glossary

Previously to explain how the program operates, it is important to explain some terms.

**Device** Refers to an instrument, for example indicating id20, controller model cl20, etc...

**Configuration** This is the configuration set to an instrument, by e.g. in id20, contains, the information of the type of thermocouple selected (e.g.. K), alarms ranks, control types (PID), etc.

The configurations created in this program (or read from an instrument) can be saved as files \*.cfg in the directory "files\ ", to be used later.

Remember that the configuration created in the screen will lost when you exit the program unless it is saved with Menu\File\Save or discharged (written) to into the device.

**Driver** This are the files in the Drivers directory \, they contain the detailed description of each type of instrument , by e.g. driver of the ID20-BAS, is the ID20I006.CDV  
The driver for the instrument that you wish to configure must be present in that directory.

## **RPS software Install**

Download the software from our Web site ([www.arian.cl](http://www.arian.cl)),

Copy the file `rps_zip.exe` in some directory and execute it to unzip.

The executable program is `rps_v1a.exe`, this it is a DOS program for but it can run under Windows and other operating systems within a DOS console.

### **Use in Linux or Windows**

If Windows is the OS, simply execute `rps_v1a.exe` but take care to close all the other tasks and applications so that it is the only program in execution.

DOS is not multitasking, but a program done for DOS can run in a multitasking OS (Linux, Windows) whenever he is the only one and it does not have to share resources (CPU time, ports, etc)

RPS software does not require registry in the Windows system, so for uninstall simply delete it.

### **Use in systems without DOS console.**

If the operating system does not have a DOS console, then the computer can be boot from a diskette with DOS.

Transfer to a diskette the RPS software, preserving the directories structure.

Create another diskette with bootable DOS system. Microsoft DOS is ok, if you don't have it use FreeDOS, download it from [www.freedos.org](http://www.freedos.org), is compatible with Microsoft DOS but with open license.

Enter to computer setup to enable diskette boot.

Start up the computer with the DOS diskette introduced and change by the diskette with the RPS software once the DOS is loaded.

## Configuration with cable/interface # part RPS-C

With deactivated instrument, remove its upper cover (only pressure, do not need to take screws).

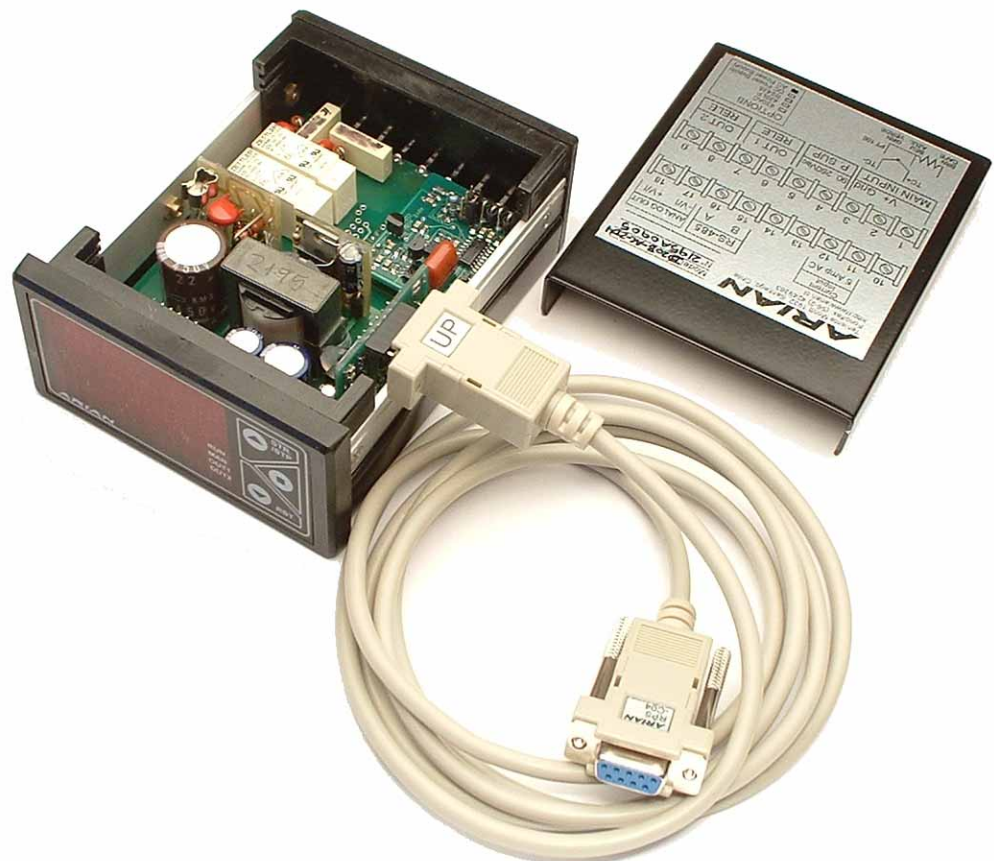
Now plug the cable/interface to the connector inside the instrument as indicated in the photo.

The other cable end goes to PC RS232 serial port .

Once the connection is made, the instrument can be energized and the RPS program executed in the PC.

The interface isolates optically the PC and the Instrument.

Concluded the programming, the instrument must be deactivated and the interface cable unplugged.



## Use with interface part #ISO-485

If you are using the ISO-485 interface it is because the instrument has installed the RS485 option and are connected in a communications bus, probably along with other instruments.

In this case software RPS must be placed in the PC that arbitrates the communications bus. The device will be identified by his slave number.

## Starting up

Now you can execute Rps\_v1a.exe.  
In order to move in the menus use the keys:

<enter>	to accept
< esc >	go back
<up> , <down> ,	to select.

Probably the first time you see will obtain an error message, but continue ahead and it verify the following

- 1) Go to "Menu / Settings/ Port Echo ", and set one of this options:

= 0,	if used the cable (part#: RPS-C)
= 1,	if is used interface RS232 to RS485 (part: ISO-485)

- 2) If interface ISO-485 is used, verify that the cables A and B in the RS485 bus are not interchanged. This it is a very common error.
- 3) In "Menu / Settings /Port ", verify that is specified the port to what the cable or interface is connected (COM1,COM2,COM3 o COM4)

If you are not sure, use "Menu / Settings / Port Detect", this routine looks for the port where this connected the cable by an internal loop of the programming interface.

- 4) If the device you are configuring has frontal keyboard, go to configuration menu (code 2736) and search for baud rate and slave number of the device.  
Factory default values are:

"slave # "	= 31
"Baud"	= 2400

If this values were modified, you can set new values in

"Menu /Settings/Device"	new slave number
"Menu /Settings/Baud"	new baud rate.

If the instrument does not have frontal keyboard for examining it, then in "Menu/Device/Scan" make a scan detecting all the instrument that are connected.

The program makes a scan within the range of slave number and baud rates that you specify.  
Once found the connected devices, then in "Menu/Device/Select" can be selected the one you will work.

- 5) Finally don't forget to do "Menu / Settings / Save" to save the new settings.



## Operation

The program operates of the following way:

On start, program searches for the device connected to port RS232 with slave number and parameters specified in "Menu / Settings " (stored in the file rps.ini)

### The device is connected and detected

Automatically requests to the device for it's identification, then looks for corresponding driver file and reads device EEPROM memory with the information stored in it.

At this moment you can:

- 1) Save as a file the actual configuration of the device with "Menu \ Files \ Save" (very recommended)
- 2) Modify configuration in memory. "Menu/Configure".
- 3) Write on the device the modified configuration. "Menu/Device/Write" Remember that all modifications done in "Menu/Configure", are simple on PC ram memory and will lost when leaving the program unless you down load it in the instrument ("Menu/DeviceWrite") or write it in a file ("Menu/Files/Save")

### A device is connected but not detected

Verify the following:

- 1) The device is energized.
- 2) Verify points 1 to 5 of chapter "starting up".

### There is no device connected

You can create configurations and save it in the directory \files for later use.

Go to "Menu/Files/New". Specify the device type of the configuration. Finally don't forget to save it with "Menu \ Files \ Save".