

MANUAL

Bootloader program

MATRIX II

1. Description

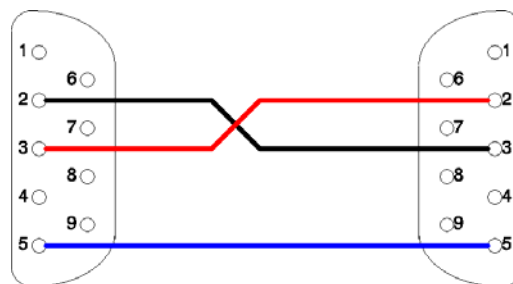
This program permits to update the firmware of the Matrix II indicator using a PC with serial port RS-232.

For updating the firmware first you have to enter in the configuration, section `SW.UPDATE` using the correct PIN.

It is very important not to interrupt the update process; do not switch OFF the indicator or the PC before finishing the update, as the indicator would not have a valid firmware and would not start up. In this case the indicator should be send to factory in order to record a valid firmware using special tools.

2. Connection PC-Matrix II

You have to connect the COM1 port of the Matrix II with a free RS232 port of the PC using a crossover serial cable. This cable should have two D-sub female DE-9F connectors with the following connections:



3. Configuration of the Bootloader program

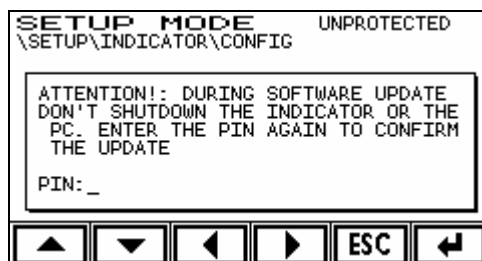
In the installation directory of the bootloader you can find the configuration file *BootLoaderMatrixII.ini*. This file is used to select the serial port of the PC which is used for communication with the indicator. For example if you want to use the COM1 of the PC the configuration file looks like this:

```
[ SERIAL ]  
CommNum = 1
```

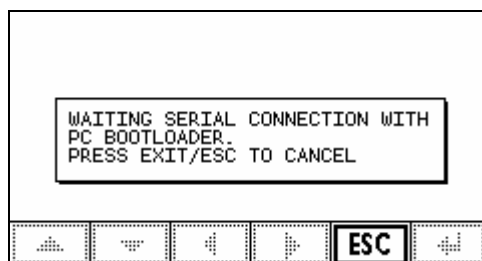
You must assign the correct serial port number to the variable `CommNum`. Default is 1, this means COM1. In the case of using a different serial port of the PC, you must edit the file with an ASCII file editor (eg Windows Notepad) and enter the port. For this change to take effect Bootloader program must be run after editing *BootLoaderMatrixII.ini*

4. Switch Matrix II to boot loader mode

To update the firmware we have to enter in the update menu of the setup mode of the indicator. This menu is found in paragraph INDICATOR\CONFIG\SW.UPDATE. The correct PIN must be entered each time the indicator asks for it. Consult manual for any doubt regarding how to enter in this mode. The following screen will be displayed:



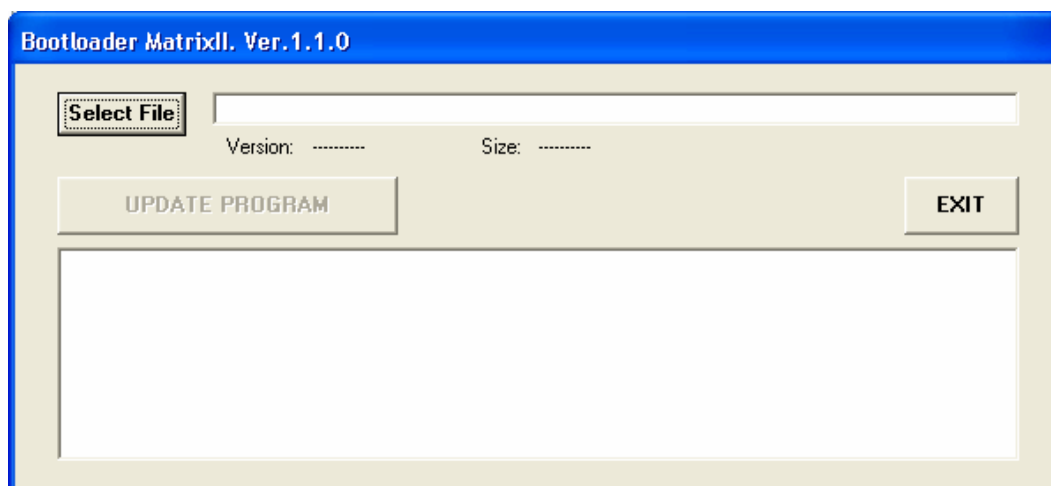
The indicator asks again for the PIN before entering in the firmware update mode. After introducing the PIN and pressing ENTER the following message will be displayed:



Now the indicator will wait for connection to the PC.

5. Download the firmware

Run the program BootLoader-MatrixII.exe .
You will see the following window:



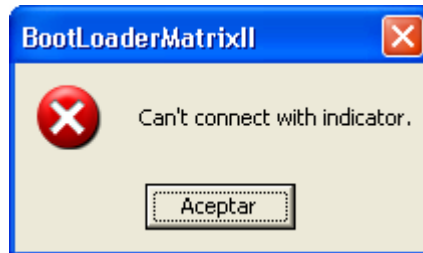
Select the binary file by pressing the **Select File** button and access to the directory where it was copied. Binary file has the extension “.bin”. The program checks the file and if the check is successful its version and size in bytes will be displayed.

UPDATE PROGRAM

After selecting the file the button will be enabled. On pressing it will start the erasing of the FLASH memory and downloading of the new firmware. In the program window the updating process will be displayed. The different steps are: erasing flash memory, downloading and programming of the new firmware and resetting the indicator.

You will get the following error in the case of:

- the indicator is not in update mode: enter in update mode
- communication error: check connection and cable
- wrong selection of the serial port: edit configuration – file



IMPORTANT NOTE:

- If the update process is not successfully finished **do not switch off** the indicator. Start again the update process by pressing the **UPDATE PROGRAMM** button again. If for any reason the indicator has been switched off before finishing the update process it will be necessary to send it to the technical service.

6. Compatibility

This program was tested with Microsoft Windows XP. We do not guarantee its operation on Windows Vista, Windows 7.

Técnicas de electrónica y automatismos, S.A.
C/ ESPRONCEDA 176-180, 08018 BARCELONA-SPAIN
TEL.: (+34) 93 498 44 65 FAX: (+34) 93 308 69 93