

# IPI-USB

## USB INSULATED PROGRAMMING INTERFACE

### 1. DESCRIPTION

USB insulated programming interface, IPI-USB is used for connecting DC servo drive DCS-3010 to PC during the drive parameters tuning. Insulated interface has 2 connectors, USB for connecting to PC and IDC-10 connector for connecting to DC servo drives DCS-3010(-HV) or DC servo drive DCS-100-A.

Insulation of digital lines is done by special technology based on the application of air-core transformer. This insulated component has significantly better performances compared to the conventional opto-isolated devices. In that way, USB insulated programming interface IPI-USB simplifies programming of DC servo drive in difficult field conditions.



### 2. INSTALATION OF USB DRIVE

USB insulated programming interface IPI-USB is based on FTDI chip ([www.ftdichip.com](http://www.ftdichip.com)) which converts USB to serial UART interface. Before the first use of USB insulated programming interface it is necessary to perform the installation of Virtual COM Port (VCP) drive on your computer, i.e. take the following steps.

#### Step 1

Download latest version of VCP drive for Windows from the website of the manufacturer, on the page: <http://www.ftdichip.com/Drivers/VCP.htm>

i.e., directly from the link:

[http://www.ftdichip.com/Drivers/CDM/CDM\\_2.08.28\\_WHQL\\_Certified.zip](http://www.ftdichip.com/Drivers/CDM/CDM_2.08.28_WHQL_Certified.zip)

In the case that above mentioned links are not working, check directly to the manufacturer's website [www.ftdichip.com](http://www.ftdichip.com).

Downloaded ZIP file with drive extract in temporary folder (for example C:\Driver).

#### Step 2

At the first connection of USB connector of insulated programming interface IPI-USB to PC will appear **Found new hardware FT232R USB UART** pop-up wizard (Figure 2.1).

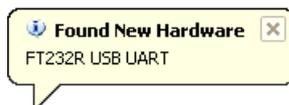


Figure 2.1

Windows will then offer finding drivers for new hardware (Figure 2.2). It is necessary to choose the option **No, not this time** and click on **Next**, after that opens dialog from Figure 2.3. Choose the option **Install from a list or specific location (Advanced)** and click on **Next**.



Figure 2.2

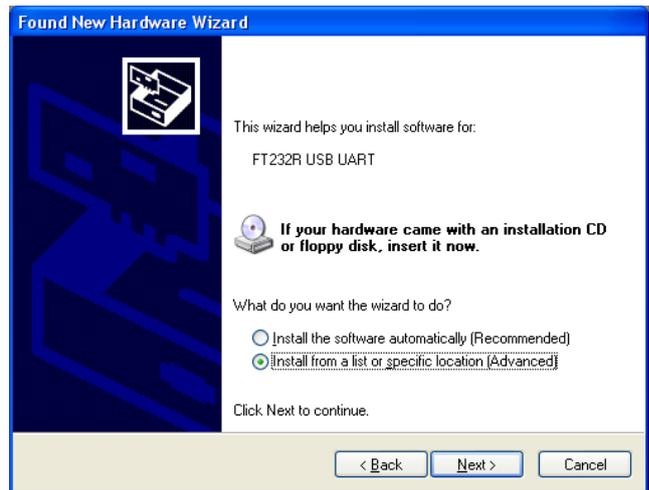


Figure 2.3

Dialog with the choice of the path where is the driver of new hardware device is shown in Figure 2.4. Choose the path of the folder where the ZIP file with driver is extracted (here it is C:\Driver\...). Clicking the **Next** button starts installation (shown in Figure 2.4 – 2.7).

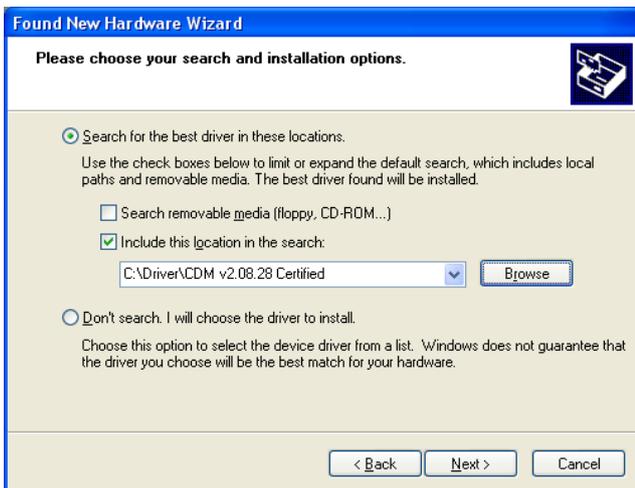


Figure 2.4

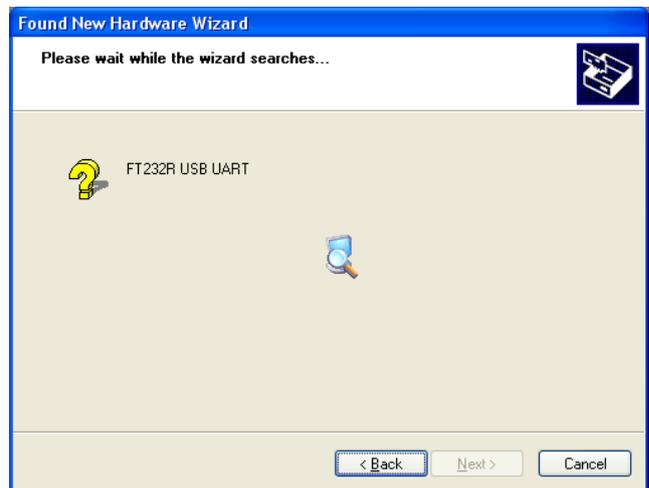


Figure 2.5

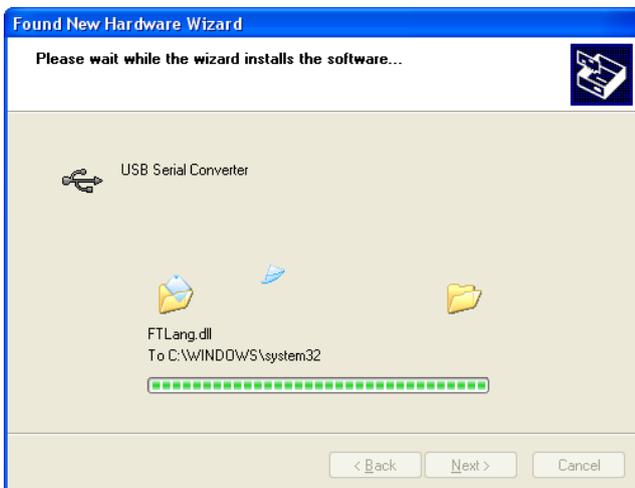


Figure 2.6



Figure 2.7

### Step 3

After finishing installation of **USB Serial Converter** (Figure 2.7), Windows pop-up wizard will find **USB serial Port**. Repeat the procedure as in step 2, followed by confirmation that installation of driver for **USB serial Port** is completed (Figure 2.8), and notice that the new hardware is installed and ready to use.



Figure 2.8



Figure 2.9

Checking the COM port number of newly installed hardware can be done in **Control Panel – System – Hardware – Device Manager**. In this case **USB serial Port** is on the COM5, that is shown by rectangle in Figure 2.10.

**NOTE: During this check it is necessary that USB connector of insulated programming interface IPI-USB be connected to PC.**

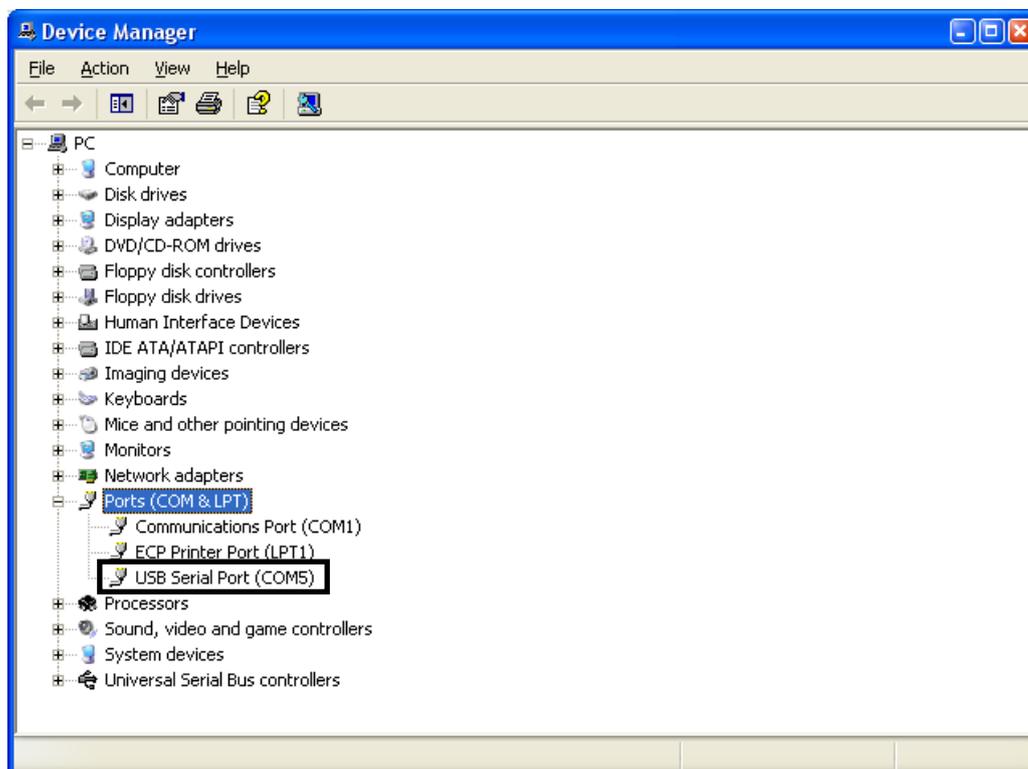


Figure 2.10

### 3. CONNECTION OF DC SERVO DRIVE TO PC

Connect USB connector of insulated programming interface IPI-USB to PC, and connect IDC-10 connector to **ServoTune Port** (Con.2) of DC servo drive DCS-3010, as it is shown in Figure 3.1. and 3.2.

Bring the power supply voltage of logic part of DC servo drive DCS-3010 (look the instructions of DC servo drive DCS-3010).

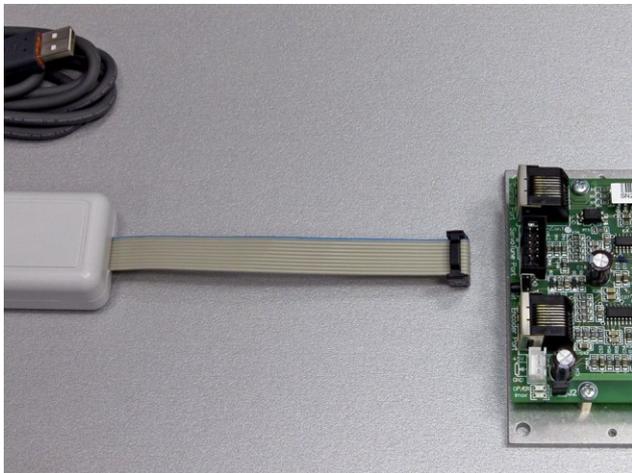


Figure 3.1

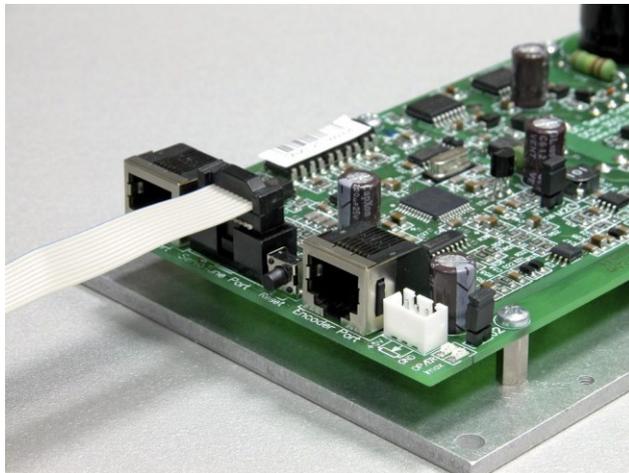


Figure 3.2

Start the configuration software ServoTune3. Choosing of the desired COM port is done by selecting **File –**



**Communication setup** or by pressing the icon, that opens dialog in Figure 3.3. It is necessary to press the **Rescan ports** button and to choose the desired port in drop-down menu (Figure 3.4). In this case it is COM5.

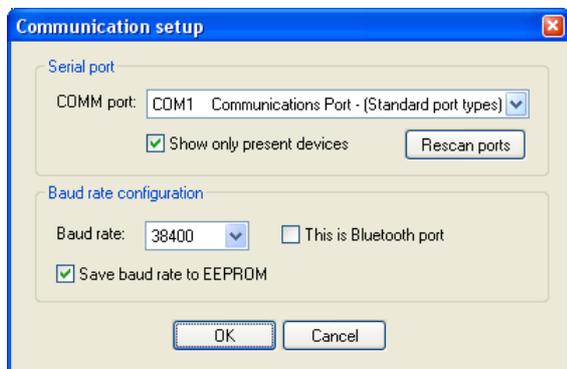


Figure 3.3

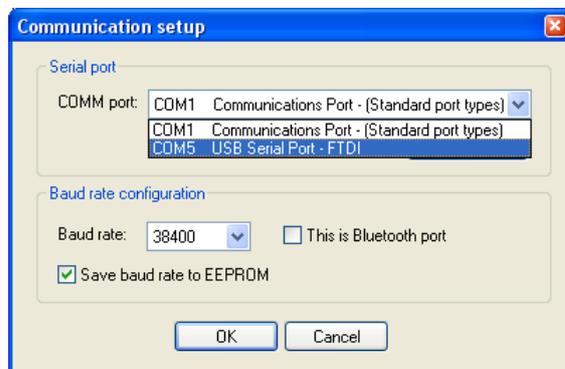


Figure 3.4

If everything is ok, connection between DC servo drive DCS-3010 and PC will be established. Caption on status bar of configuration ServoTune3 will change from **offline** (Figure 3.5), to **Connected: COM5, 38400bps** (Figure 3.6).

**NOTE: Detailed instructions of configuration software ServoTune3 is in instructions of DC servo drive DCS-3010(-HV), which can be downloaded from website [www.audiohms.com](http://www.audiohms.com).**

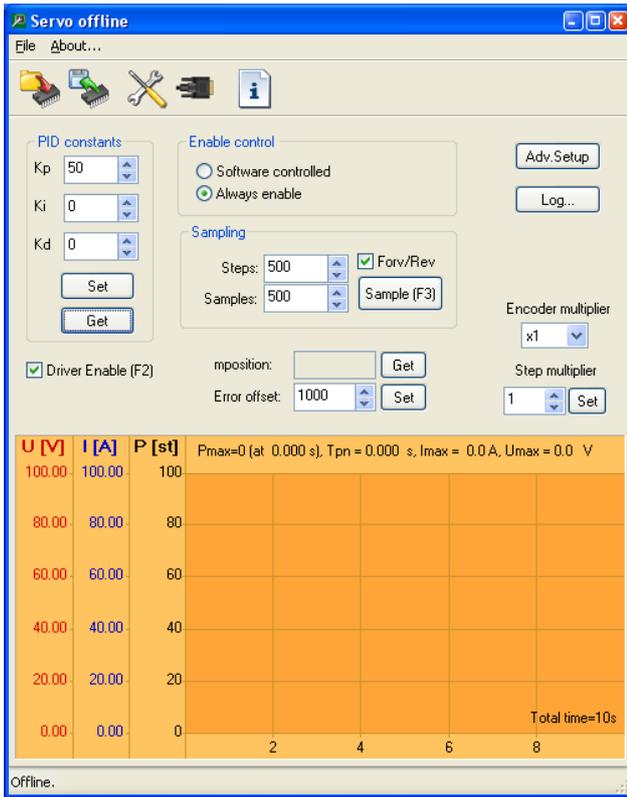


Figure 3.5

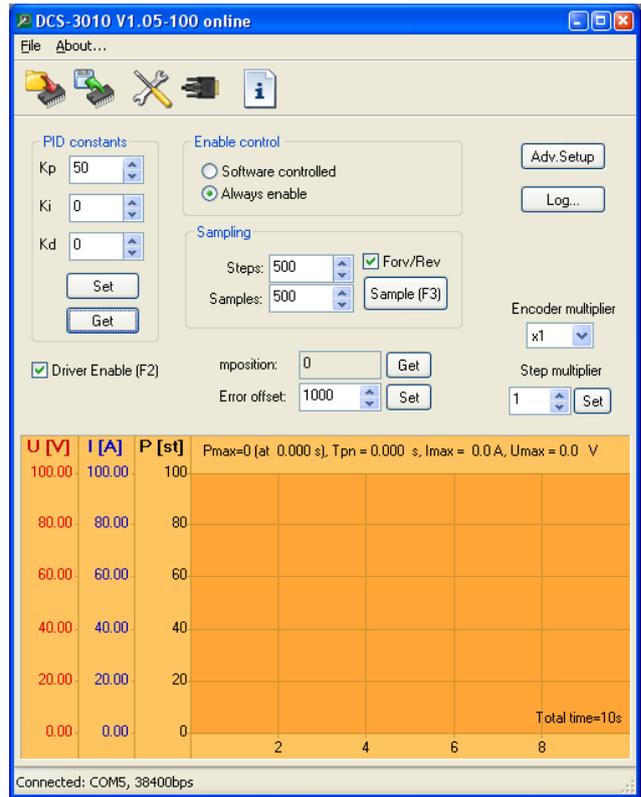


Figure 3.6

**Document revision:**

- Ver. 1, February 2014, English version
- Ver. 1.1, November 2020, Minor revision
- Ver. 1.21, August 2023, Updated products photo

