PRODUCT REGISTRATION

Please register on www.tmatlantic.com before the software installation and the device configuration for remote control mode operation.
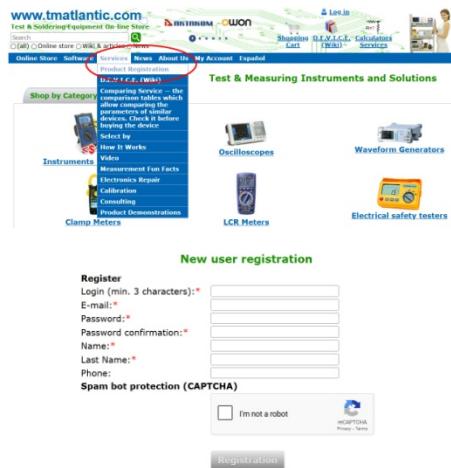
And then download the program installer following the recommendations on the web site www.tmatlantic.com. For detailed information on the operating modes of the instrument, please refer to the User's Manual.

Software Aktakom Power Manager Express

SCAN ME

Software Aktakom Power Manager Express Pro

SCAN ME

APS-7306 More info

SCAN ME

User's Manual

SCAN ME

AKTAKOM

User's manual

PROGRAMMABLE DC POWER SUPPLY
APS-7306

Thank you for choosing AKTAKOM Power Supply.

www.tmatlantic.com

BRIEF PRODUCT INTRODUCTION

APS-730X series single-channel programmable power supplies are designed to supply wireless devices with stabilized voltage or current, while used in debugging processes, repair and laboratory research in normal climate conditions.

Power Supply APS-7306 is a highly accurate, DC-regulated power supply with an adjustable output. This output can be used for constant voltage (C.V.) and constant current (C.C.).

The output voltage can be adjusted between 0V and 30V when the device is in the constant voltage mode. The current-limiting point can be set arbitrarily in this mode.

The output current can be adjusted continuously between 0A and 5A in the constant current mode. The output current and voltage are indicated on the LED displays

INSTRUCTIONS

• Never put the heavy objects on this equipment;
• Never crash or damage the machine due to improper operation;
• Never make the equipment be static discharge;
• Don't block the cooling exit;
• Don't make the equipment power on when it is connected to the power;
• Never disassemble it unless getting the confirmation of the professionals.

WARNING

• Output voltage 110V 60Hz
• The power cord must be with reliable grounding to avoid the electronic shock

The **Measurement** box shows the current state of the device – switching on outputs, output voltage and current, stabilization mode – by voltage or current.

Remarks
The APS-7306 device in the basic configuration has some features of operation:
- there is no command to turn off remote operation;
- to switch to local control, turn off and then turn on the power supply of the device;
- display of the current parameters on the screen of the device may not coincide with the readings of the program in the absence of a load connected to the device.

4. Service
4.1 Terms of Use
Supply and input voltages, storage and operating temperatures in accordance with the general section of technical data.
• Relative humidity not more than 90% at 25°C.
• Atmospheric pressure from 495 to 795 mm.
• Storage and operation rooms must be free of dust, acid vapors, alkalis, and corrosive gases.
• Do not drop or vibrate.
• After staying under extreme conditions (storage, transportation), the exposure time of the device in normal (operational) conditions is at least 2 hours.
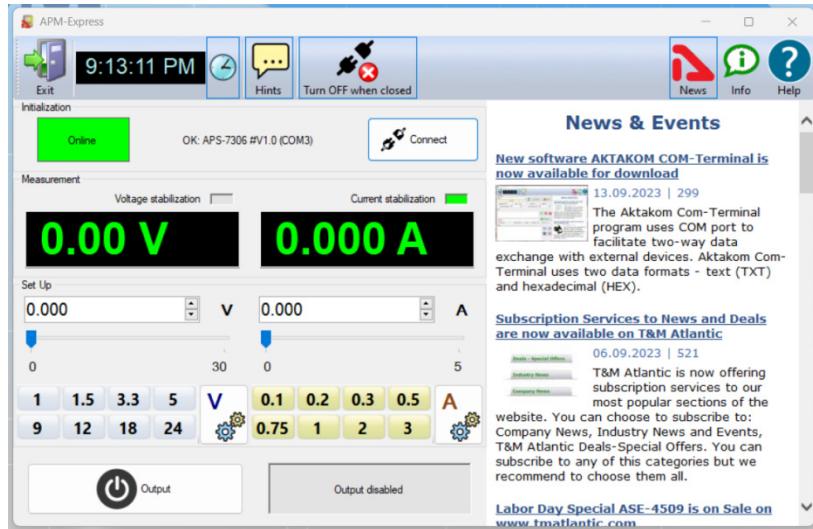
Upper panel buttons of the main window:

"**Exit**" button terminates the program operation.

The button with a **clock icon** shows or hides the clock display on the keypad.

"**Hints**" button shows or hides the keys caption text.

Button **"Turn OFF when closed"** – enables/disables the mode of automatic switching

off of the outputs of the device at the end of the program.

"**News**" button shows or hides Aktakom news feed.

"**Info**" button displays the information about the program and connected device.

"**Help**" button recalls this help file.

The **Initialization** box is used to connect the device to the program. If the device was already connected to the PC via USB when the program was started, the program will connect it automatically. If you connected the device later, click the **Connect** button.

After successful connection of the device, the name and serial number of the device will be displayed in the initialization block. Otherwise, an error message will be displayed there.

The **Set Up** box allows you to control the parameters of the device.

Panels with shortcut buttons are configured using the dialog Preset settings.

Button **Output** - turns on / off the outputs of the device.

Model	APS-7306

Output voltage	0-30V
Output current	0-5A
Output power	150W

TECHNICAL PARAMETERS

These parameters are tested under 25±5°C and after 2s power on.

Power effect:		CV≤0.01%+3mV (AC±5%)
Load effect:		CV≤0.01%+2mV
Ripple and noise:		≤2.0mVrms
Output accuracy:	V:	0.5%+20mV
	I:	0.5%+10mA
Read-back accuracy:	V:	10mV
	I:	1mA

Types of protection: over current, over voltage, over temperature

Working environment: 0~40°C

Humidity: less than 80%

ATTENTION

• Kindly use the rated input voltage;

• Never operate at a high temperature and the cooling exit mustn't be blocked;

• Please make the fuse with rated parameters equipped.

DIAGRAMS OF PANELS

Front Panel

1. Power: on/off button
2. Off/On: output on/off
3. MEN: memory save
4. M1-M3: memory recall
5. Voltage/Current: select
   between voltage or current
6. OCP: over current protection
7. CC indicator: constant
   current mode
8. CV indicator: constant
   voltage mode
9. Voltage display (volt)
10. Current display (ampere)

Fig. 1

11. Voltage/Current: select between voltage or current for
    adjustment
12. Output terminals-
13. Earth (ground) terminal
14. Output terminals+
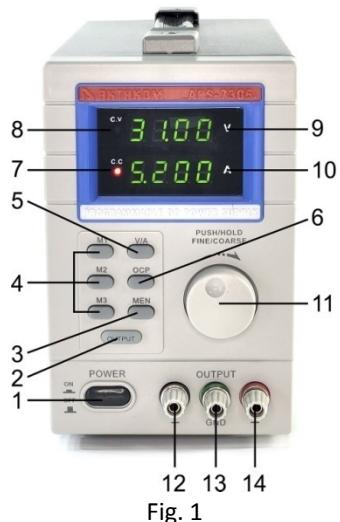
Rear Panel

15. Cooling Fan
16. Power cable connection plug
17. USB port

Fig. 2

All necessary files are located in the program working directory, for example:
C:\Program Files\AKTAKOM\AKTAKOM Power Manager Express\Driver

INSTALLATION:
Prompted install

If Windows prompts you to install a driver for a CP210x device (for example, if you plug a CP210x into your computer):
1. Use the dialog to browse for the driver location
2. Locate the driver folder (that you previously unzipped)
3. Follow the instructions

Manual install

1. Using Windows File Explorer, locate the driver folder (that you previously unzipped)
2. Right click on the silabser.inf file and select Install
3. Follow the instructions
2.3.3 Checking device readiness

If you correctly installed the hardware and software components of the system, when you start the program, it will detect the operating device itself and inform you about t successful connection. Otherwise, the program will report that the device cannot be found and will work offline. This may be due to the fact that you have not connected the device to the computer port correctly or have not installed the necessary drivers, as described in the sections above.

3. Operating procedure
3.1 How to work with the program
After starting the application, its main window will open:

REMOTE CONTROL VIA PC

1. Introduction

The Aktakom Power Manager Express application is designed to manage AKTAKOM APS-7306 power supplies.

2. Getting Started

2.1 Minimum computer requirements

Computer used for the device work should meet the following minimal requirements:

- USB-port;
- Installed Windows 2000 or Windows XP operating systems;
- VGA video system (640*480 resolution, 256 colors), the recommended resolution is 800*600 or more, 24-bit color;

2.2 Preparation for use

2.3.1 Hardware installation

To install the device it's necessary to:

Connect the device to the PC USB-port by "A-B" type cable subject to the connection with the USB-port Switch on the PC.

2.3.2 Software installation

Insert the media with the software distributive into the disk drive, find setup program, run it and then follow the program installation instruction.

After the installation process is completed there will be a program group created with shortcuts for the program and for its Help. You may start them using "Start" menu.

Before using the device it's necessary to install a USB interface driver. All necessary files will be put into the program working folder, System subfolder, at the software installation.

Silicon Labs Virtual COM Port (VCP) Universal Driver

The virtual COM port driver is installed automatically when you install the application, but you can also install it manually later.

OPERATION

Switching the Power Supply On or Off

1. Connect the included power cord to the back of the device **[16]** and plug the other end into a suitable, earthed power socket.

Always connect the device to an earthed power socket.

2. Press the **Power** button **[1]** to switch the power supply on.
   At this moment, there is no output voltage or current on the output terminals.
3. Press the **Power** button **[1]** to switch the power supply off.

Using the Power Supply in Constant Voltage Mode

If you want to use the power supply in constant voltage mode, you set up the desired output voltage between 0V and 30V. You also set up the desired current limit.
If the output current exceeds the limit, the power supply automatically goes into constant current mode.

Using the Power Supply in Constant Current Mode

If you want to use the power supply in constant current mode: you set up the desired output current between 0A and 3A/5A. You also set up the desired voltage limit.

Setting Voltage and Current

You can save 3 different voltage/current settings using the memory keys M1~M3.

1. Press the **Voltage/Current** key **[5]** to set the voltage. The voltage readout flashes.
   o For use in constant voltage mode: this is the desired constant voltage.

2. Turn the adjustment knob **[11]** until you reach approximately the desired voltage. Press **[11]** to select a digit in the voltage readout **[9]** and turn the adjustment knob to fine-tune.

3. Press the **Voltage/Current** key **[5]** again to set the current. The current readout flashes.

o For use in constant voltage mode: this is the desired current limit.

o For use in constant current mode: this is the desired constant current.

o If you enable overcurrent protection, the output switches off automatically if the current exceeds this value.

4. Turn the adjustment knob **[11]** until you reach approximately the desired current. Press **[11]** to select a digit in the current readout **[10]** and turn the adjustment knob to fine-tune.

5. Press the memory key **[3]** again (or wait until the display to start flashing). Then press the m1-m3 button The settings are saved in the selected memory.(the display stops flashing)

Recalling Settings

To recall one of the saved settings, press the corresponding memory key M1~M3 **[4]**. the corresponding voltage/current settings appear on the display.

Note: the output is switched off automatically when you press a memory key to recall a setup.

Using Memory 3

To use memory 3, proceed as follows:

1. Set the voltage and current as desired Press memory key **[3],**Wait until the display start to flashing. Then Press key **[4]** the settings are automatically stored in memory, and until the display stops to flashing.

2. To recall the settings, press key 4.

Connecting a Load

1. Connect the load's positive terminal to the red + terminal **[14]** of the power supply.

2. Connect the load's negative terminal to the black – terminal **[12]** of the power supply.

3. You can connect the + or – terminal to the green earth terminal **[13]** of the power supply to pin the voltage to 0V (earth potential) at that terminal.

If you leave the earth terminal unconnected, the output floats with respect to the ground.

Applying Voltage to the Load

1. Press the **Off/On** key **[1]** to apply the voltage to the load.
The **OUT [2]** and **C.V.** indicators **[8]** light. The power supply works in constant voltage (CV) mode; the display now shows the actual output voltage and current.
If the current exceeds the set current limit, the power supply automatically goes into constant current (CC) mode. The **C.V.** indicator goes out and the **C.C.** indicator **[7]** lights.

2. Press the **Off/On** key **[1]** to switch the output off.

PROTECTION

Using Overcurrent Protection

1. To protect against overcurrent, set up the maximum current and then press the **OCP** button.

2. Press **Off/On** to apply the output to the load.
If the output current becomes higher than the set value, the power supply cuts off the output and the **OCP** indicator flashes.

3. Disconnect the load. To recover, press the **OCP** key.