

PROCONTROL[®]

 **IP Stecker**[®]

Plug-in socket from the Internet

User and Installation Manual

IP Stecker V12

August 2018

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PROCONTROL ELECTRONICS LTD.

IP Stecker

Welcome

Thank you for choosing a Procontrol product.

Procontrol Electronics Ltd has grown to an important national company of developing and manufacturing software, hardware, electronic devices, access control, time-attendance systems, queue control, client caller and access protection systems since 1981.

Thousands of satisfied customers have experienced the security ensured by our long time period planning, reliable work and the world trademarks standing behind us. Our qualified staff does its best to satisfy your requirements in the electrical development.

Safety Precautions

Please read this guide before installing and using the device. Please use the device properly and as described in the following manual.

The authors are NOT liable for any claim, damages or other liability out of:

using not the proper way
incorrect installation
connecting to inappropriate electronic network
incorrect maintenance
not approved modifications, interventions
using non-original elements

Do not attempt to disassemble or modify any part of this product.

Do not store at temperatures outside the specified range and do not operate in an environment outside the specified range as it will reduce the life of the product or cause product malfunction.

Maximum number of connectable devices using switching power supply is 2/socket!

Never allow water or any other foreign matter to get into the unit. The unit contains sensitive electronic parts, so water and foreign matter not only can cause malfunction, they also create the risk of overheating due to short circuiting and insulation failure, fire and smoke, combustion, and electric shock. Ne helyezze a terméket hőforrás közelébe, illetve ne tegye ki az eszközt közvetlen láng vagy hő hatásának, mivel az eszköz olyankor felrobbanhat.

Only use the product for it's intended purpose!

Safety

Keep the device in operation only from electric sources defined in this user manual. Do not open the device, there are no user serviceable parts inside!

Attention! Connect the product exclusively to a grounded power outlet with relay contact protection network.

To avoid fire and risk of electronic shock:

Beware that your children do not throw or push objects through the slots of the device.

Do not mount accessories or attachments on the device that are not designed for this device. If you do not use the device for longer time or in case of lightning, you shall unplug the power cord.

Risks at Installation

Do not store anything on the power cord. Do not place the device, where the power cord can be damaged. Do not use the device under wet circumstances or in humid premises.

Cleaning

Switch off the device before cleaning. Use slightly wet mop. Excessive humidity may cause electric shock

General rights and responsibility

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Procontrol Ltd. is not liable for using of this device and the consequences of the application.

Introduction

IP Stecker is an Ethernet plug-in bar, which can control 230V sockets on an Ethernet network.

Types:

- IPStecker 4 – indoor use



IPStecker 4

- IP Stecker 3 Industrial – IP54 casing



IP Stecker 3 Industrial

Plans for Product Enhancement

From the current R9D series, the above type is available with Ethernet and USB connectivity.

As advanced option you will be able to connect external thermometer sensors (TS-05 or THS-05) through the USB (I2C) port, for applications e.g. emergency stop at a certain temperature, i.e. the user sets a threshold value, when exceeded, the device stops operating. This „Smart Metering” will be available, when the manufacturing of next series has been launched, which is at present in the process of development.

A built in current and voltage meter function is planned, this „Smart Metering” will be available similarly, when the manufacturing of next series has been launched, which is at present in the process of development.

In case of any requested modification and enhancement please do not hesitate to contact us, any individual request is highly appreciated. Please contact our colleagues for details and prices!

Features

Type	IPStecker 4
Picture	
Revision	0802-03-R9C
Part number	141106
Number of remotable switched sockets	4 sockets
Ethernet interface	10/100BaseT
Remote abilities	<ul style="list-style-type: none"> o Web /internet browser o Telnet o Command prompt remote control, Perl script, PHP script o PCSW protokoll
Compatibility	Can be used in all operation system, with all browsers: Microsoft Internet Explorer, Opera, Mozilla Firefox, Netscape, Windows 98SE / 2000 / XP / XP SP1-SP2, Server 2003 / Vista / Linux / Me / Mac OS
Language	english, hungarian
Mounting	19 "rack mountable with included metal fixing brackets
Connectors	RJ45, USB B
Socket standard	F (Hungary)
Power supply	AC 230V, 50Hz
Power consumption	max: 3 VA
Capacity	max: 230V, Σ 16A total, max: 230V 8A / socket at continuous load. Maximum number of devices using switching power supply is 2/socket.
Needed cable type	CAT5, CAT6
Support / feedback on hardware	<ul style="list-style-type: none"> - 1 hidden reset button - 3+2 pcs status LED - Ethernet status leds for , a LINK signal and 10/100Mbit mode - Built-in clock, and memory protection batteries
Casing	Indoor durable case, compact, distinguished
Dimensions	Without fixing brackets: 430x60x45mm With fixing brackets: 480x60x45mm
Weight	Net 1000g, gross 1140g
Operating temperature	-25 - +50 °C
Storage temperature	-40 - +60 °C
Operating relative humidity	max. 80%
Storage relative humidity	max. 90%
Standards	Ethernet IEE802

USB (I2C) - prepared for later developments	x
Smart Metering: current and voltage measurement functions	under development

Types	IP Stecker 3 Industrial
	
Revision	0802-03-R9D
Part number	141010
Number of remotable switched sockets	3 sockets
Ethernet interface	10/100BaseT
Remote abilities	<ul style="list-style-type: none"> • Web /internet browser • Telnet • Command prompt remote control, Perl script, PHP script • PCSW* protocol
Compatibility	Can be used in all operation system, with all browsers: Microsoft Internet Explorer, Opera, Mozilla Firefox, Netscape, Windows 98SE / 2000 / XP / XP SP1-SP2, Server 2003 / Vista / Linux / Me / Mac OS etc.
Language	english, hungarian
Szerelhetőség	Wall mounted
Connectors	Swinging RJ45, Power 3x2.5 MT cabel
Socket standard	F (Hungary) (Swinging, stripped, with end ferrules)
Power supply:	AC 110..230V, 50Hz
Power consumption:	max: 3 VA
Capacity:	max: 230V, 16A total, max: 230V 8A / socket at continuous load. Maximum number of devices using switching power supply is 2/socket.
Supporting on hardware :	<ul style="list-style-type: none"> - 1 hidden reset button - 3 operating status LEDs - Built-in clock and memory protection
Housing	IP55
Sizes:	Net, without mounting ears: 430x60x45mm
Weight	Net 1995g
Operating temperature:	-25 - +50 °C
Storage temperature:	-40 - +60 °C
Operating relative humidity:	max. 80%
Storage relative humidity:	max. 90%
Standards	Ethernet IEE802
USB (I2C) - prepared for later developments	x
Smart Metering: current and voltage measurement functions	under development

* A Special communication protocol developed by Procontrol, which allows the implementation and communication of IPStecker with other Procontrol manufactured products and systems.

Attention! Maximum number of devices using switching power supply is 2/socket.

Factory reset

The device has a hidden reset button to reset the factory settings.

1. Reset factory settings for IPStecker4 type:

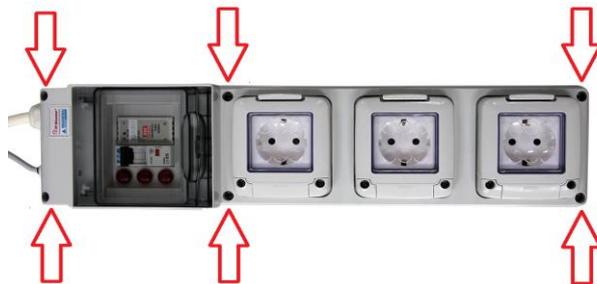
Located below the USB socket there is a tiny hole.



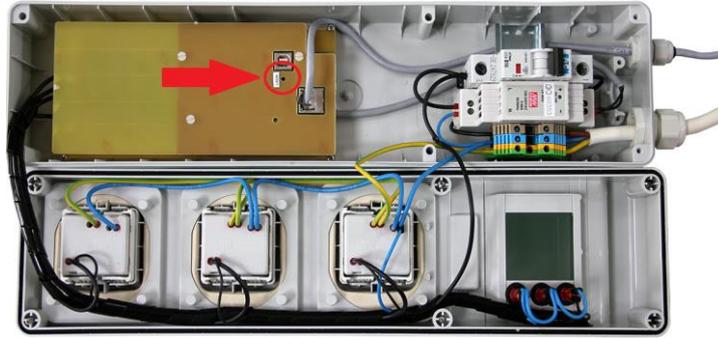
To reset to factory settings, press and hold the reset button for 5 seconds. The restarting is indicated with fast blinking of the red status led. If restart finished, the blinking became again the normal mode. The unit will restart with the factory settings.

2. Reset factory settings for IPStecker Industrial:

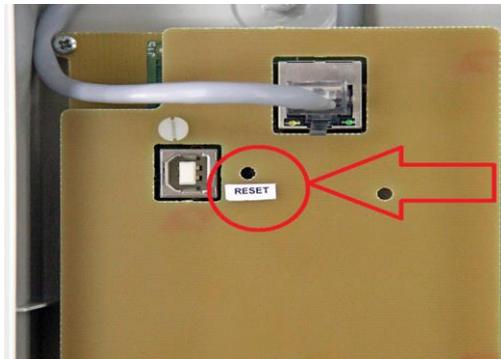
The following figure shows the position of the screws with an arrow:



Located next to the USB socket hidden behind a tiny hole.



Press and hold the button for at least 5 seconds. If this is done, you will be running the original factory settings after restarting the device.



To reset to factory settings, press and hold the reset button for 5 seconds. After restarting the unit will start with the factory settings.

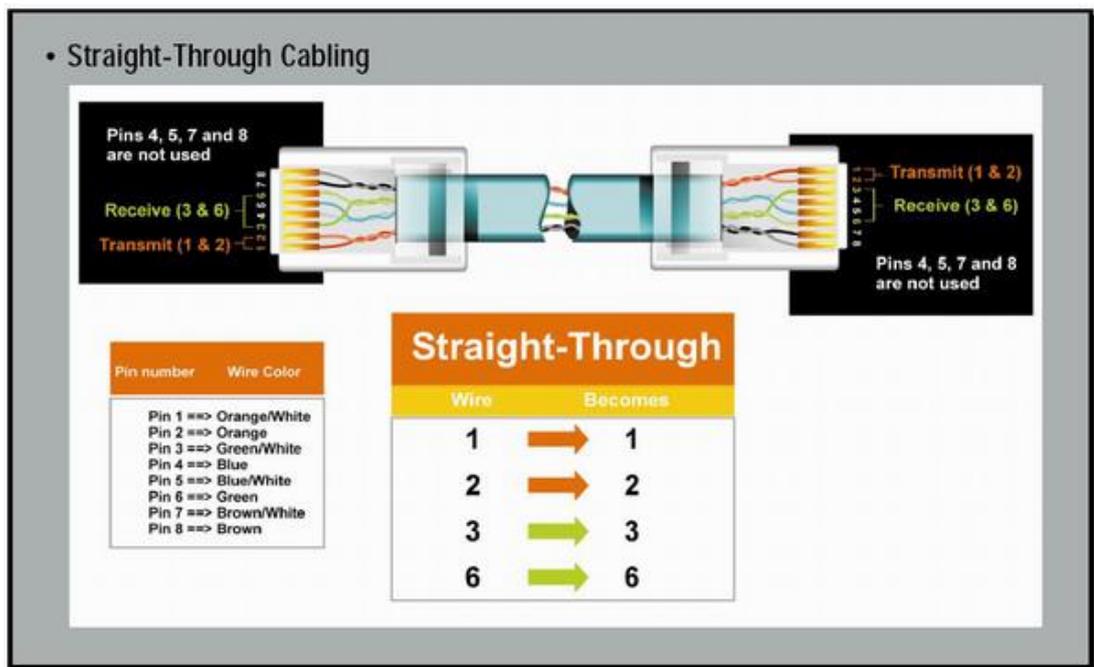
What kind of Ethernet network we have?

(Estimation of Ethernet network topology)

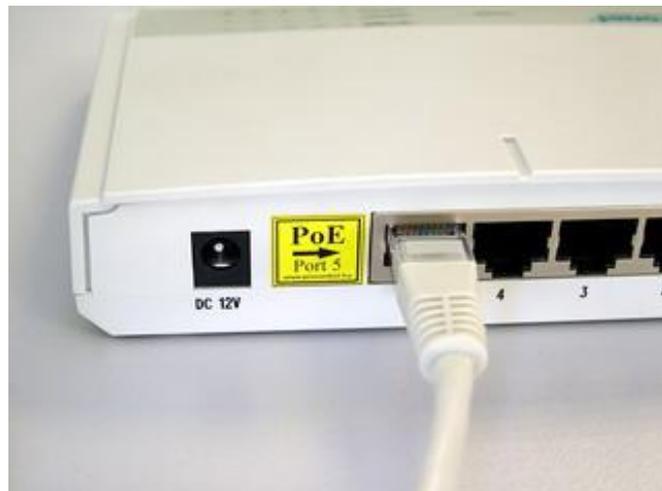
Connect the device to a free end point (or directly to your PC) of an established Ethernet network as following.

Ethernet on PC network is not everywhere accessible, therefore we suggest two solutions for testing your device:

1. In Case of Established Computer Network

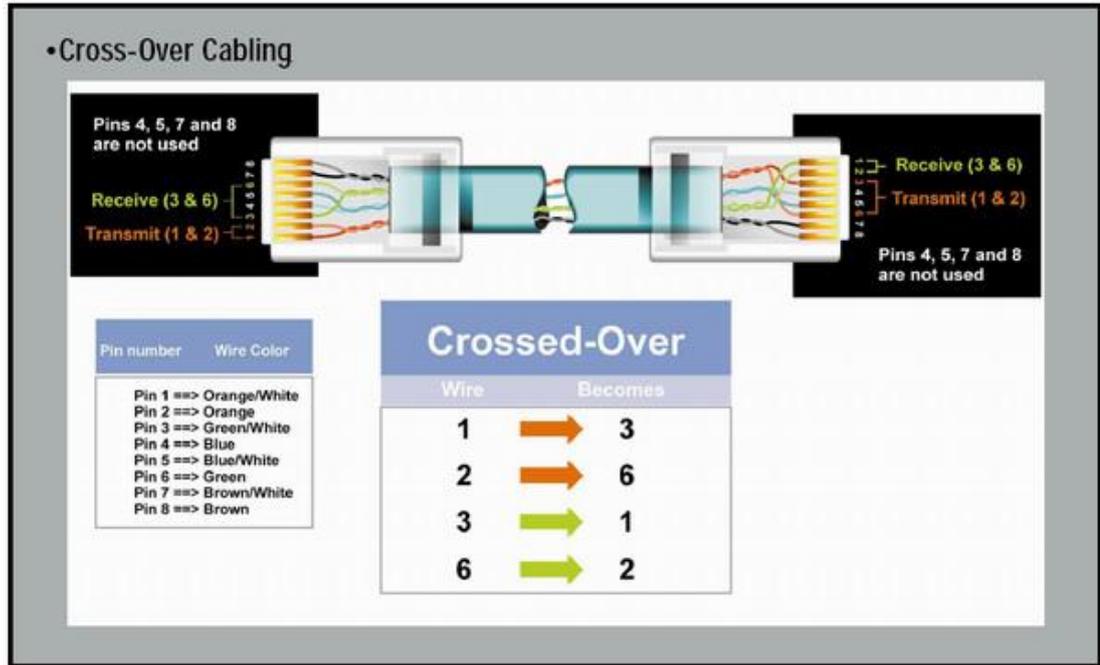


Connect a free end point of the PC network with a straight patch cable (Straight-Trough) to the device. We recommend this solution, if possible. Test the device with a patch cable (Straight-Trough, attached to the customer package) on an Ethernet socket of a network-connected PC. Connect the Ethernet cable to the SWITCH or HUB of your PC network (Ethernet).



2. Directly Wired Connection between Terminal and PC

If a network SWITCH is not available, but you want to connect it directly to the Ethernet socket of your PC, you need a special Cross-Over wire. Connect the device to your PC's built in connector through the Cross-Over patch cable.



Ethernet data connection establishment

Product setup

Connect the socket strip to a 230V mains socket outlet. Use a grounded outlet only. Connect the Ethernet network cable, then turn on the power switch of the device (I O labeled rocker switch). After about 10 seconds the device is available on the computer network with default connection settings.

IP address: 192.168.0.250

Subnet Mask: 255.255.255.0

Web port: 80

You can now connect the remotely switched 230V powered devices as you wish.

The product is supplied with the relays switched on, so after switching on the first time, all four sockets will be powered with 1-2-3-4 seconds delay.

IPStecker remote control function

The remote control modes of the IPStecker were developed according to different customer needs and requests. Controlling the power supply of the connected devices is available through the following channels:

- **Web browser** port 80 / internet browser (IPStecker Online)

Most of the user's choice, the simplest plausible method for remote control via an Internet Browser with graphic interface. Most parameters of the unit are accessible through this default interface. The following browsers were tested:

- a. Internet Explorer 5,6,7,8
- b. Mozilla
- c. Opera

- **Telnet** port 23 / command line

- a. Microsoft Telnet
- b. Debian linux – telnet

- **PCSW protocol**, port 1001

Secret internal protocol of Procontrol Ltd., used to edit system parameters and for firmware upgrades. Only for system administration purposes.

- Through web port 80 instead of web browser, even scheduled, or command line remote control, Perl script, PHP script. (sample script is available on the product's website)

Power supply control of the connected devices is even possible scheduled through web port 80 (instead of web browser), or controlled by program code. Tested under the following environment:

- Microsoft Windows 2000, Windows XP, Windows Vista, Windows 2003 Server, Windows 2008 Server, Windows 7

Testing the IPStecker connection

- Ping test: enter following command into the command line: **PING 192.168.0.250**
- If you receive a reply, you can try with your browser according to description below. If you do not receive any reply, check as follows.

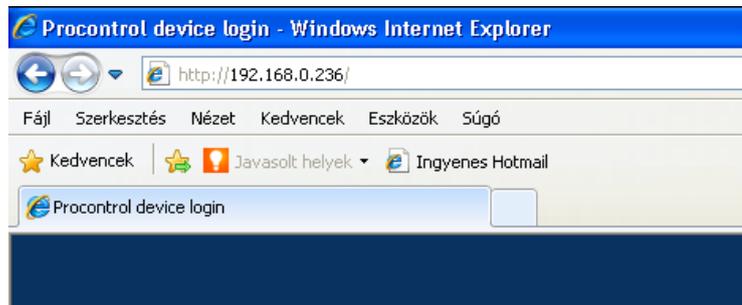
FIREWALL DIFFICULTIES: A well operating firewall may prevent the program from running correctly

1. Web browser / IP Stecker Online

Power of the IPStecker's sockets can be individually switched on and off through a web browser. Access to the control page can be password protected.

FIREWALL DIFFICULTIES: A well operating firewall may prevent the program from running correctly.

Enter the default IP address into the browser: **192.168.0.250**



If the user interface is not displayed, please check:

- Whether you established all connections properly?
- Whether at least one of the IPStecker's status LEDs is lit?
- Whether your PC's IP address is in the same network: 192.168.0.xxx?
- After displaying the user interface you can enter a new IP address into the IP field of connection preferences.

A belépéshez írja be a megfelelő jelszót:

Sections of the web interface:

1. Plugs – Remote access of powers sockets

- The first section of the IPStecker's user interface displays the **current status of power socket strip**. A powered plug is marked green (ON), an unpowered plug is marked red (OFF).

With a single click on the buttons in the On/Off column, power can be switched ON or OFF in each plug (R1, R2, R3).

Restarting of each plug is also possible, they remain unpowered till the **time delay** set in section Delays. After the time period expires, the plug automatically switches on, and the web page is being refreshed. Each plug can be renamed by the user for easier identification in the User section of the web interface. The names given there are displayed in the User name column.



ATTENTION! ALWAYS USE THE SAVE BUTTON AFTER SETTINGS MODIFICATION AND DATA ENTRY!

2. Events – User operations log

The device logs each user operation and stores the last 128 events

Procontrol IP Stecker v4.1
Build 00167 /IP Stecker
2008.01.01 01:05.59

:: Event log

Serial number	Time	IP address	Event
1824	2008.01.01.00:10:47	0.0.0.0	Plug 1 OFF (9)
1823	2008.01.01.00:10:45	0.0.0.0	Plug 1 ON (8)
1822	2008.01.01.00:10:39	0.0.0.0	Plug 1 OFF (9)
1821	2008.01.01.00:10:36	0.0.0.0	Plug 1 ON (8)
1820	2008.01.01.00:00:00	0.0.0.0	Plug 3 starting state OFF (7)
1819	2008.01.01.00:00:00	0.0.0.0	Plug 2 starting state OFF (5)
1818	2008.01.01.00:00:00	0.0.0.0	Plug 1 starting state OFF (3)
1817	2008.01.01.00:00:00	0.0.0.0	Device started (1)
1816	2008.01.01.01:20:17	0.0.0.0	Last still alive sign (19)
1815	2008.01.01.00:00:00	0.0.0.0	Plug 3 starting state OFF (7)
1814	2008.01.01.00:00:00	0.0.0.0	Plug 2 starting state OFF (5)
1813	2008.01.01.00:00:00	0.0.0.0	Plug 1 starting state OFF (3)
1812	2008.01.01.00:00:00	0.0.0.0	Device started (1)
1811	2008.01.01.01:20:17	0.0.0.0	Last still alive sign (19)
1810	2008.01.01.00:01:24	0.0.0.0	Plug 1 OFF (9)
1809	2008.01.01.00:01:23	0.0.0.0	Plug 1 ON (8)
1808	2008.01.01.00:01:22	0.0.0.0	Plug 1 OFF (9)
1807	2008.01.01.00:01:21	0.0.0.0	Plug 1 ON (8)
1806	2008.01.01.00:01:20	0.0.0.0	Plug 1 OFF (9)
1805	2008.01.01.00:01:16	0.0.0.0	Plug 1 ON (8)

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3. User – User settings

(Operation of the IPStecker is not affected by the settings in this section)

Each plug can be renamed (according to the connected devices e.g.) by the user for easier identification in this section. The names given here are displayed in the User name column of the first section. A maximum 10 characters long name can be given to each plug with contents of the English alphabet.

Procontrol IP Stecker v4.1
Build 00167 /IP Stecker
2008.01.01 01:05.04

:: User settings (It doesn't concern the operation of the device, supports the users' device identification)

Parameter	New settings	Current state	Default setting
Device name	<input type="text"/>	Stecker	Procontrol IP
1. Plug	<input type="text"/>	Dugalj 1	Plug 1
2. Plug	<input type="text"/>	Dugalj 2	Plug 2
3. Plug	<input type="text"/>	Dugalj 3	Plug 3

Save settings

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4. Connection – Connection settings

Parameters of the connection with the IPStecker can be changed here: IP address, default gateway, subnet mask, TCP/IP port.



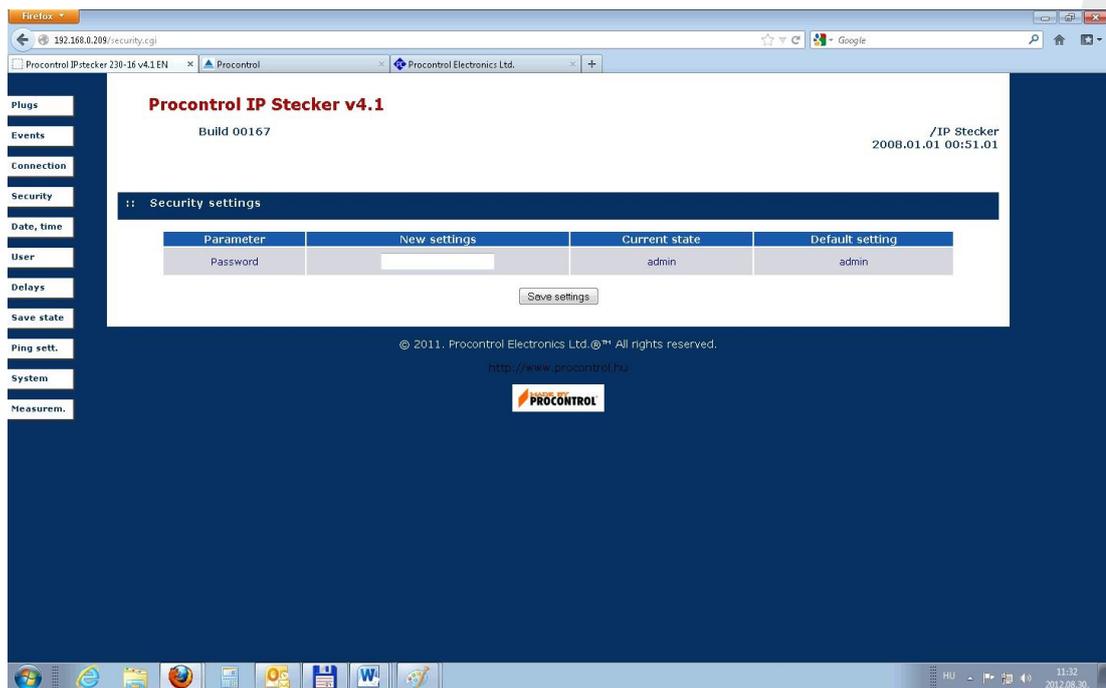
The screenshot shows the web interface of the Procontrol IP Stecker v4.1. The page title is "Procontrol IP Stecker v4.1" with "Build 00167" and "/IP Stecker 2008.01.01 00:47:48" displayed. The left sidebar contains navigation options: Plugs, Events, Connection, Security, Date, time, User, Delays, Save state, Ping sett., System, and Measuram. The main content area is titled "Connection settings" and contains a table with the following data:

Parameter	New settings	Current state	Default setting
DHCP	<input type="radio"/> On <input checked="" type="radio"/> Off	Off	On
IP address	<input type="text"/>	192.168.0.209	192.168.0.250
Default gateway	<input type="text"/>	192.168.0.001	192.168.0.1
Subnet mask	<input type="text"/>	255.255.255.000	255.255.255.0

Below the table is a "Save settings" button. At the bottom of the page, there is a copyright notice: "© 2011. Procontrol Electronics Ltd. All rights reserved." and the website URL "http://www.procontrol.hu". The Procontrol logo is also visible.

5. Security – Security settings

A password can be set here to access the IPStecker's web interface. The password can be changed any time inside the control page. If you set and save a password here, the device asks for it the next time you want to log in. The default password is "admin". (Recommended to change it after the first login)



The screenshot shows the web interface of the Procontrol IP Stecker v4.1. The page title is "Procontrol IP Stecker v4.1" with "Build 00167" and "/IP Stecker 2008.01.01 00:51:01" displayed. The left sidebar contains navigation options: Plugs, Events, Connection, Security, Date, time, User, Delays, Save state, Ping sett., System, and Measuram. The main content area is titled "Security settings" and contains a table with the following data:

Parameter	New settings	Current state	Default setting
Password	<input type="text"/>	admin	admin

Below the table is a "Save settings" button. At the bottom of the page, there is a copyright notice: "© 2011. Procontrol Electronics Ltd. All rights reserved." and the website URL "http://www.procontrol.hu". The Procontrol logo is also visible.

The Current state column gives information if a password is required to enter the web interface. If you do not wish to use a password, just leave the New settings field empty and click the Save setting button. The next login can be done without using a password. To restore password controlled access, it is only needed to type in a new password and click the Save setting button.

6. Date time – Date and time settings

The actual date and time can be set in this section. Certain types of IPStecker can automatically synchronize date and time data from an NTP server.



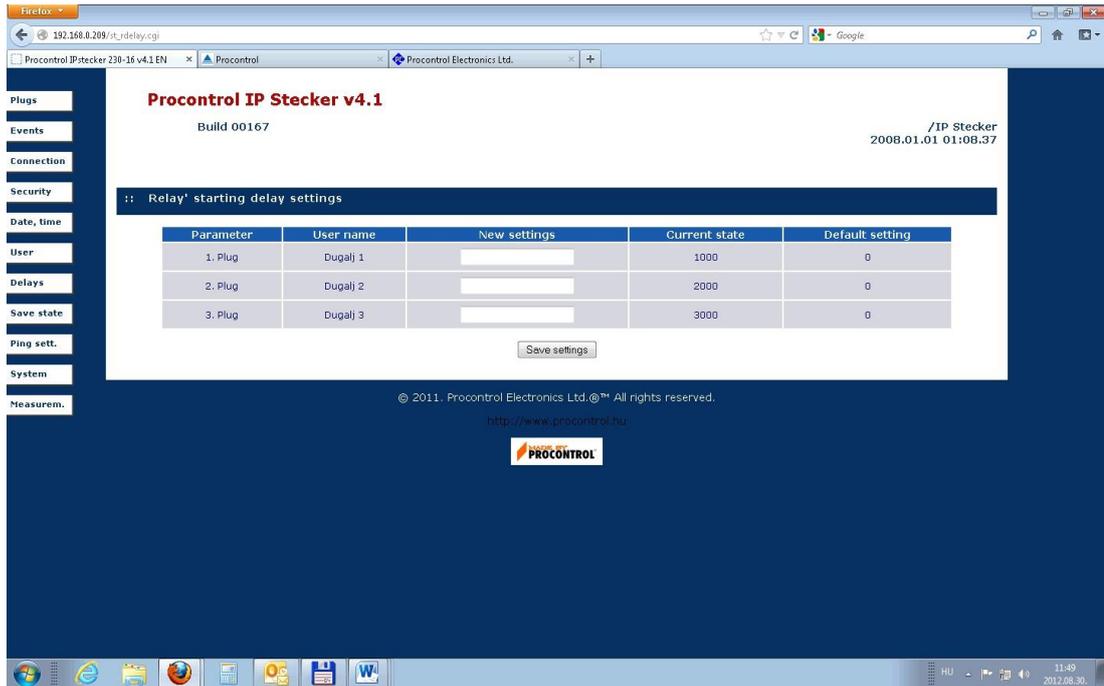
The screenshot shows the Procontrol IP Stecker v4.1 web interface. The page title is "Procontrol IP Stecker v4.1" with build number "00167". The current system time is displayed as "2008.01.01 01:01:40". The "Date, time" section is active, showing a table for system time settings.

Current system time					
2008.01.01 01:01:40					
Year	Month	Day	Hour	Minute	
2011	January	01	01	01	

Below the table is a "Save settings" button. The footer contains copyright information: "© 2011. Procontrol Electronics Ltd. All rights reserved." and the website URL "http://www.procontrol.hu".

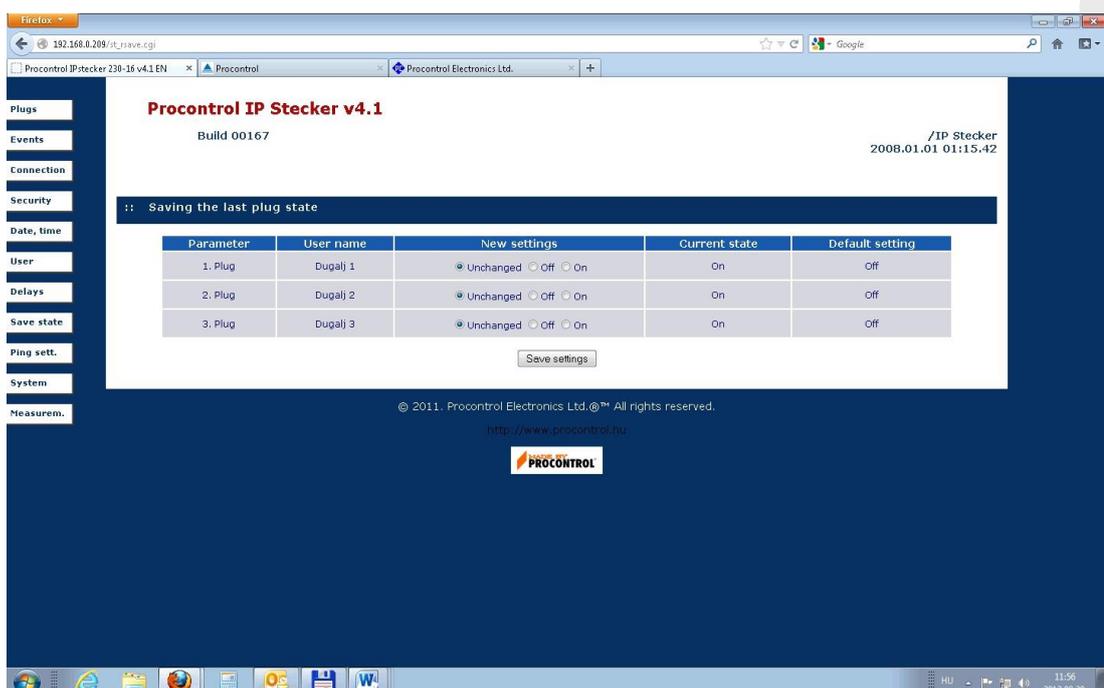
7. Delays – Plug power on delay settings

A power on time delay can be set to each plug, measured in milliseconds. Using this option a heavy startup load is avoidable in case of devices with high power consumption starting simultaneously.



8. Save settings – Saving settings of plugs

In this section the states of each plug can be set after a device restart or switching off. In the New settings column "Unchanged" leaves the plug in the current state, the "On" or "Off" changes the mode currently set. Currently stored state is displayed in the Current state column. During a power failure, or a blackout the IP Stecker's non-volatile memory "remembers" the latest switching states and settings and re-establishes them when the power supply is restored. So the IP Stecker operates unchanged until you give a new command. This function can be turned off.



9. Ping settings – Automatic plug restart (automatic restart of crashed systems e.g., RESET)

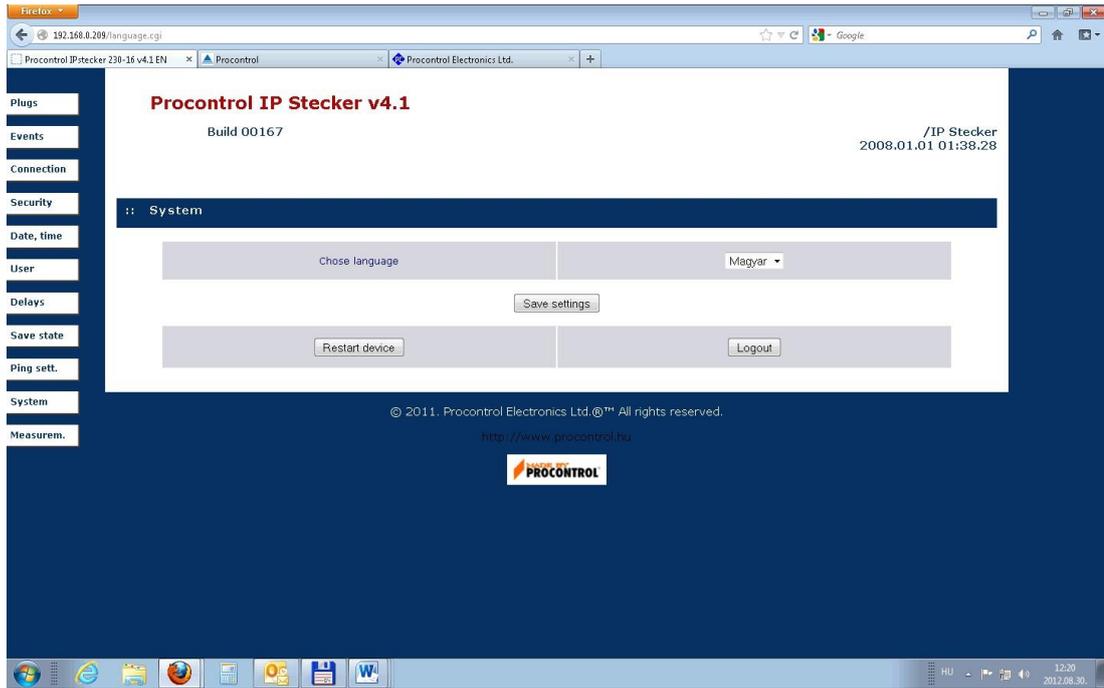
With this function any number of operations checking signal can be sent out at any time to devices connected to the network. A device crash or a network failure is easily detectable with this method, and the malfunctioning device connected to the specific plug can be restarted.

The pinger pings a given IP address at specified time intervals, and if there is no answer after 5 times, the appropriate plug will be switched off and after 5 seconds on again.

Ping parameters	1. Ping task	2. Ping task	3. Ping task
User name	Dugalj 1	Dugalj 2	Dugalj 3
Ping enable	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No
Time restriction enable	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No
Start of time restriction (hour:min)	00 : 00	00 : 00	00 : 00
End of time restriction (hour:min)	00 : 00	00 : 00	00 : 00
IP or DNS			
IP from DNS server	---	---	---
Last answer time	--- (0)	--- (0)	--- (0)
Time to next ping (sec)	00	00	00
Maximum error count	00	00	00
1. Plug restart	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No
2. Plug restart	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No
3. Plug restart	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No
4. Plug restart	<input type="button" value="Save settings"/>	<input type="button" value="Save settings"/>	<input type="button" value="Save settings"/>

10. System – Language settings and device restart/logout

Language of the web interface can be set to Hungarian or English.



ATTENTION! ALWAYS USE THE SAVE BUTTON AFTER SETTINGS MODIFICATION AND DATA ENTRY!!

2. Telnet

Some functions of the IPStecker is available via Telnet. If a password was set to access the device, it will be also required to establish a Telnet connection. To access the IPStecker this way, create a command prompt: type in Start menu / Run window "cmd"; in case of Windows 98: command; and enter OK. Into the appearing textbox type in "telnet (IP address of the device)"



```

C:\ Telnet 192.168.0.247
-----
| IPStecker telnet shell |
| Type '?' and return for help |
-----
IPStecker 802-03> switch
-----
| Switches |
-----
Available commands:
1on      - switch conn 1 on
1off     - switch conn 1 off
2on      - switch conn 2 on
2off     - switch conn 2 off
3on      - switch conn 3 on
3off     - switch conn 3 off
getstate - get switch states
?        - show help
x        - exit switches
IPStecker 802-03 / switches >

```

Accessing the plugs, modifying connection settings and changing password are also available via Telnet. The password set this way is the same to reach the web interface.

3. Command line remote control through user developed program (SDK)

Remote control of the IPStecker through command prompt is also possible by downloading a utility software (Perlscript), which is available free of charge from www.activeperl.com.

Perl script usage:

1. Install Perl interpreter to the computer. (interpreter / motor / engine)
2. Start the command line script: stecker.pl [IP address][settings]

The script can be accessed from a webpage or from a unique program

The following parameters can be specified for the script:

Pass: You can enter a login password

plg<x>: You can switch off and on the hook. Value Range: 0.1

Eg: stecker.pl 192.168.2.25 Pass=admin plg1=1 plg2=0 plg3=1
(this sample command switches on plug 1 and 3, and switches off plug 2.)

4. Command line control through USB connection

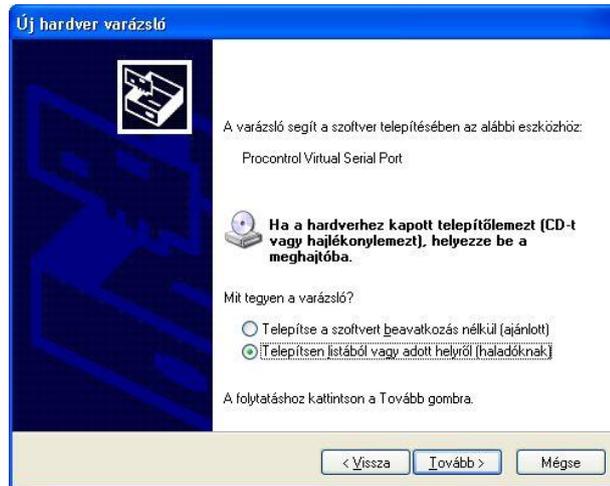
IPStecker is accessible not exclusively through Ethernet but it is connectible to your PC also through USB A-B wire and enables you to switch the sockets on a command line interface.

When you attach the device to your computer the first time, a dialogue box appear which guides you through the steps of driver setup. Once you click on „Not now” option you are enabled to give the path of the driver.

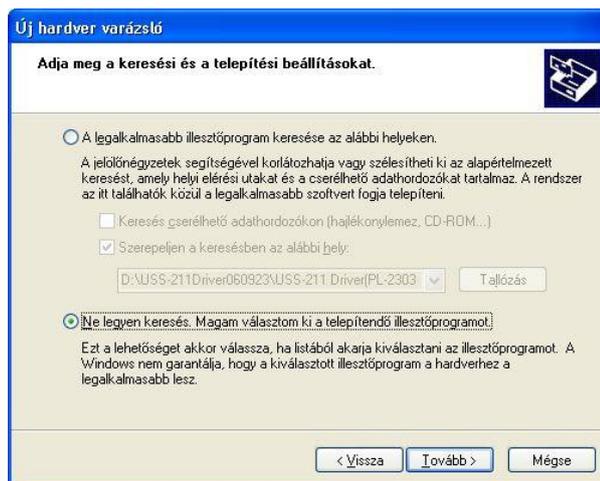
(The window below appears in the default language of Setup Wizard on your PC.)



Select the option of alternative setup path (advanced) and click „Continue”.



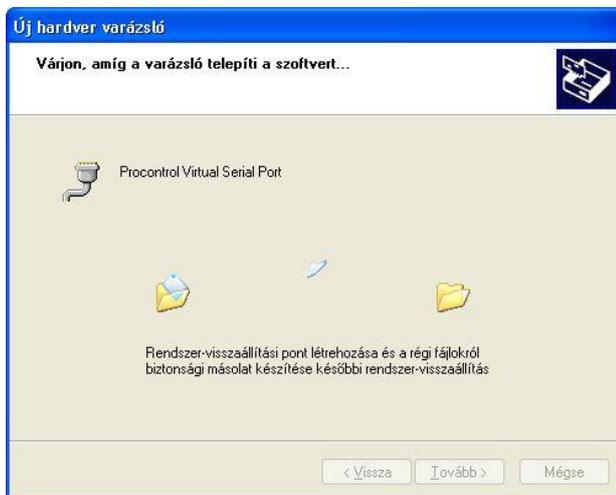
Select the option „No search. I select the setup driver”:



In the next window click on „My disc” and browse „usbser.info” file:



Click „Continue” and Windows executes the driver setup. The device is now available in your system as a serial port device.



Contact to the manufacturer

If any remark, question or request occurs to you contact us as follows:

Procontrol Electronics Ltd.

Internet: www.procontrol.hu

Email: info at procontrol dot hu

Hardware manufacturing/service:

6725 Szeged, Cserepes sor 9/b.

Tel: (62) 444-007

Fax: (62) 444-181

Email: service at procontrol dot hu

Please turn to us with your requests concerning the program in written form possibly, as obvious and detailed as possible.