

Quick Setup Guide

WILOG-CP

CATHODIC PROTECTION MONITOR



Wireless Technologies USA
Witech USA Corp

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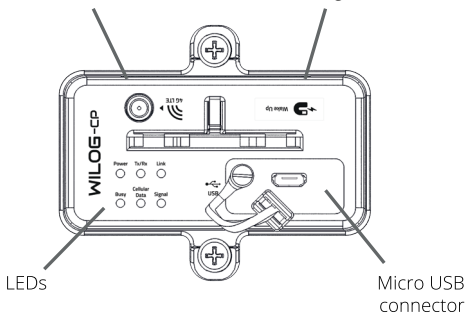
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Quick look at WILOG-CP

Top view

SMA Connector
for Cellular Antenna

Magnetic sensor



LEDs

Micro USB
connector

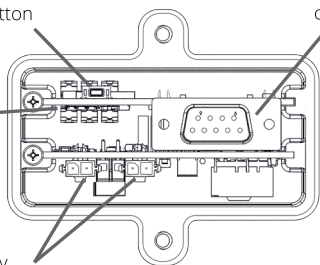
Internal View

Reboot button

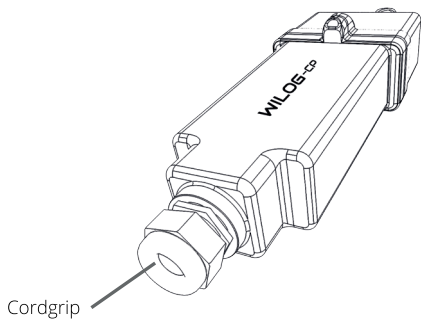
Serial DB9
connector

Micro SIM
connector

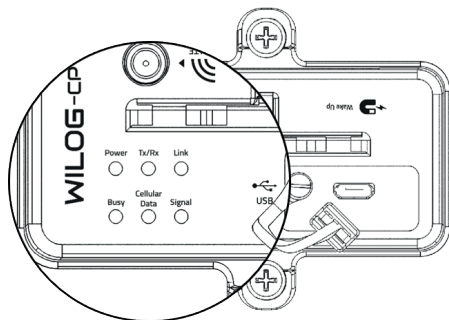
Battery
connectors



Bottom view



LED indicators and signals



Power (Red):
Indicates if the device is ON.

Tx/Rx (Blue):
Indicates data flow through USB or DB9.

Link (Green):
Indicates the device's connection status.

Busy (Red):
Indicates if the device is busy.

Cellular Data (Blue):
Indicates data flow from/to the network.

Signal (Green):
Indicates the device's signal strength.

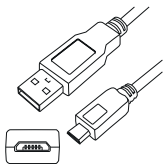
What comes in the box

The following accessories are included in the WILOG-CP box:



Cellular Antenna

Using this antenna will allow connection with 3G and 4G LTE networks in the area.

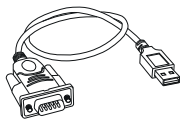


USB to Micro USB cable

Cable that allows to connect the WILOG-CP to any computer via USB for all configurations, and/or update firmware.

Additional accessories

USB - Serial cable



This cable is not included in the WILOG-CP box. Using this cable allows the WILOG-CP to connect with any computer via DB9 connector to access all configurations and/or history or other stored variables.

SIM Card



SIM Card supported is 3FF type also known as Micro SIM.

Note: The user must validate the supported bands at the moment to choose the SIM Card network provider.

Operational ratings

Power supply:

Pack x 4 Batteries Type C (6 - 7.2Vdc)

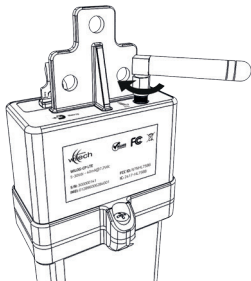
Temperature:

-22°F to + 140°F ambient (-30°C to +60°C)

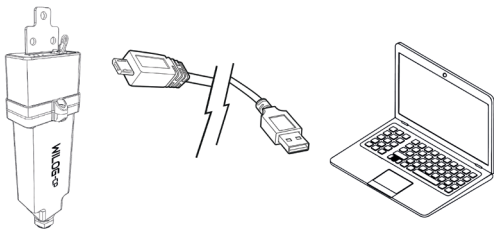
Starting the WILOG-CP

To begin using the WILOG-CP follow the next steps:

- 1.** Connect the cellular antenna to the SMA connector. The correct way to install it is by screwing it clockwise.

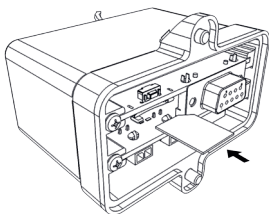


- 2.** With the device on and using the USB to Micro USB cable included in the box, connect the WILOG-CP to the computer in an available USB port.

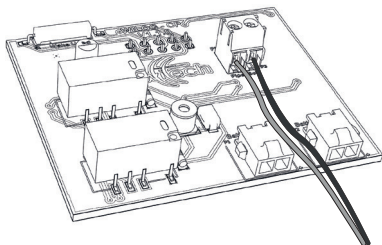


Important: To configure your WILOG-CP, go to the *Setting up the WILOG-CP* before proceeding with the next steps.

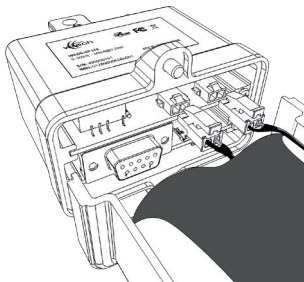
3. After set up your WILOG-CP, insert the Micro SIM Card in the provided slot. Follow the guide to correctly insert it. To access the SIM Card holder, it is necessary to unscrew the top part of the WILOG-CP.



4. With the board outside the enclosure, connect both cables for the potential measure in the term block **Pipe to Soil** in the matching slots.

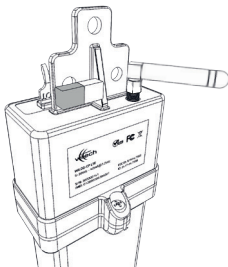


5. Once the SIM card is secured along with the potential measurement cables, install the batteries while making sure to connect the right cables to its counterpart on the WLOG-CP.

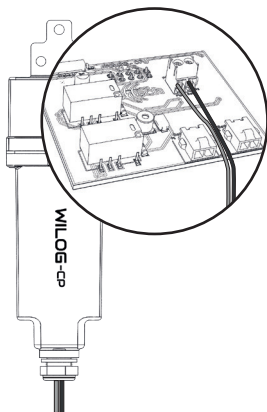


6. With the batteries in, the WLOG-CP will turn on and try to automatically connect to the network. When this is complete, it will go into ultra-low power consumption or sleep mode.

In order to configure all parameters again, you must deactivate ultra-low power consumption or sleep mode by using a magnet as show in the image.



7. With these configuration and installations, your WILOG-CP is ready for work in field. Go to *Installing the WILOG-CP*.



Setting up the WILOG-CP

1. Run the desktop application WT-Config 1.4.1 or higher. This can be downloaded from www.witechusa.com.

If you do not have this software installed, follow the instructions below to download it:

Once you have entered the Witech USA website, select the **DOWNLOAD** Tab.

If you already have a user and password with Witech USA, you must select the **Login** option, otherwise, please click on the **Register** button.



To download an application or firmware please sign in on our website

Login

Register

With the successful registration of your account, a message like the one below will appear. You must access your email account with which you register and click the activation link received.

Message



Your account has been created and an activation link has been sent to the email address you entered. Note that you must activate the account by selecting the activation link when you get the email before you can login.

Now, with your **Username** and **Password** you can register by clicking on the **Register** button. Please enter your information and click on **LOG IN**.

Once inside, you will see that you have the option to download Software and/or Firmware, in this case, please select **Software**.

DOWNLOAD

SOFTWARE

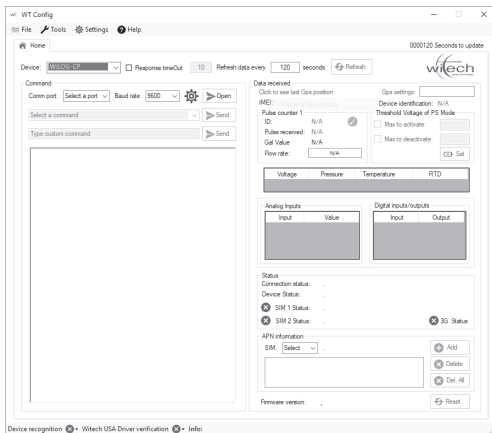


Select the **WT – Config** and click the **Download** button. The application will start downloading immediately. The installation process is user-friendly and will guide you through the entire process.

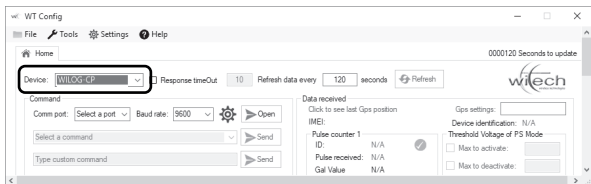
SOFTWARE	
<input type="checkbox"/> Field Manager	Details Download
<input type="checkbox"/> WT Config	Details Download
<input type="checkbox"/> SISTEGO-v1 0.9 apk	Details Download
<input type="checkbox"/> Gateway	Details Download
<input type="checkbox"/> NOVO Mobile	Details Download

By using this application, you can access the WILOG-CP settings; update device firmware, establish connections, among other functions.

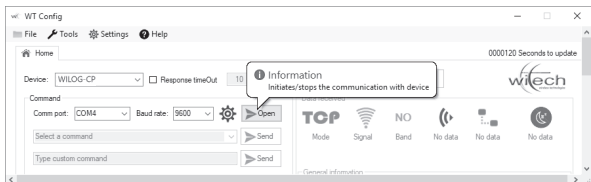
2. When you run the application on your computer you will see a window like the one shown below:



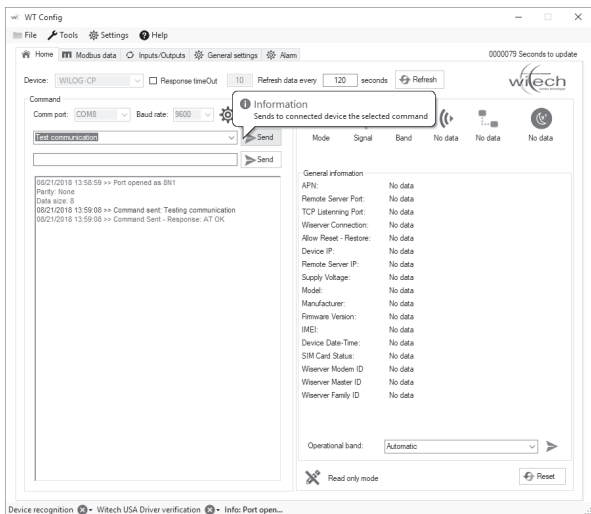
3. In the **Device** section select the **WILOG-CP** (this corresponds to the control and communications module of the WILOG-CP).



4. At this point, you should know the COMM Port (**Comm port**) that the computer assigns to the device when it connects via USB. With this data, in the **Command** section, the corresponding port is selected and regardless of the **Baud Rate** value (since the connection is via USB) click the **OPEN** button to access the device.

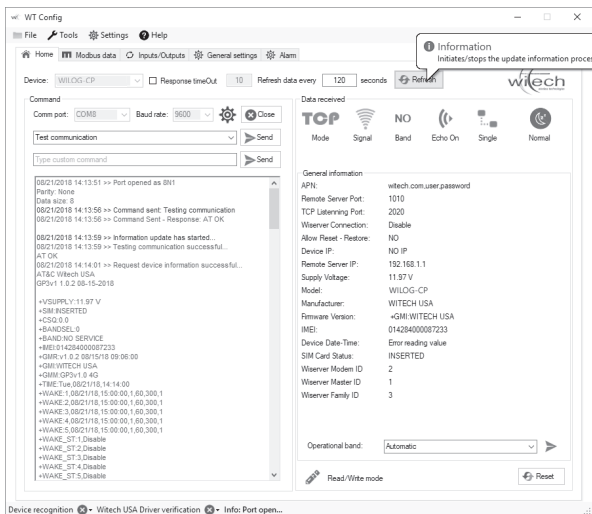


5. Once the corresponding port has been opened (in this case COM8), if everything is correct, the parity type will be notified on the screen; the size of the data and the confirmation of this.



It is recommended to send the **Test communication** command to verify that there are successful communications with the device.

6. Clicking the **Refresh** button located in the upper right area will update the data displayed in the **General Information** box. With this information you will have a general view of the device's configuration.



WILOG-CP as Server TCP

By default, the operating mode of the WILOG-CP is as Server TCP.

Under this configuration you will allow the SCADA software to connect to your device to access configurations; variable readings, history, and event management.

To start, you must configure some settings for this process to run correctly: APN and TCP Listening Port.

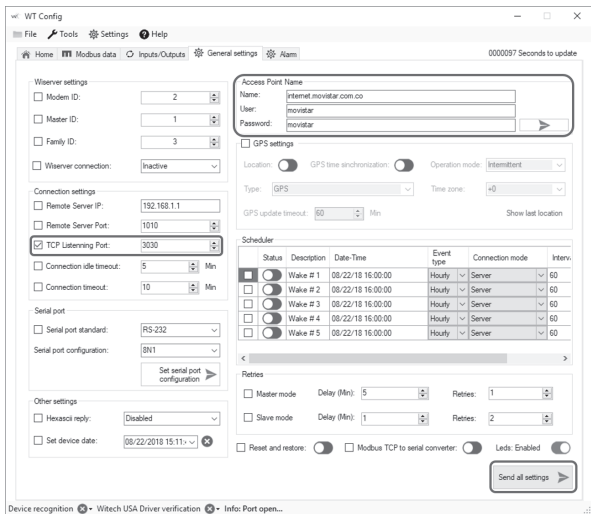
These types of parameters are configured in the **General Settings** tab.

1. In the **Access point name** section, the corresponding APN is configured for the SIM Card provider installed in the device. You must make sure to correctly enter the Name (**Name**), User (**User**) and Password (**Password**).

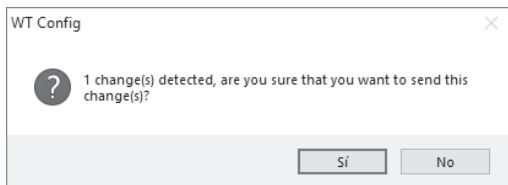
To set this parameter you can send the changes by clicking on the button with the Green triangle.

2. To configure the TCP Listening Port, go to the **Connection Settings** tab and select the **TCP Listening Port** parameter, enter or using the arrows set the corresponding value (in this case 3030).

To send the changes, in the lower right part of the window you will find the **Send all settings** button. By clicking this button, all parameters that have been selected will be sent to the device.



A notification window will be displayed giving notice about the changes made in the configuration parameters, it is your decision if you want to send them or not.



Back to the **Home** tab, you can verify that the changes were successful, and that the device immediately manages the Server's listening configuration.

```
08/22/2018 15:09:45 >> Command sent: Set device APN
08/22/2018 15:09:45 >> Command Sent - Response: AT+APN=
1,"internet.movistar.com.co","movistar","movistar" +APN:
1,"internet.movistar.com.co","movistar","movistar"
```

OK

Please Wait: Setting Server...

LISTEN:100.69.222.213/3030:TCP

-- AT Command Ready --

WILOG-CP as Client TCP

For your WILOG-CP to report to the SCADA alarms, events, and system variables you must configure it as Client TCP.

The first step for your WILOG-CP to work as Client TCP is to configure it as a Server TCP; as described in the previous section.

Once you have configured the APN and TCP Listening Port, and with this, a successful registration to the network provider corresponding to the SIM Card installed in the device.

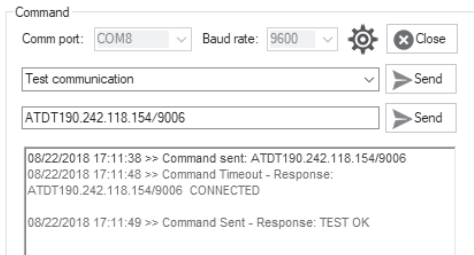
You will need two parameters to make a call/connection as a Client TCP and validate the operation this way: The IP address of the server (**Remote Server IP**) to which the connection is to be routed and the (**Remote Server Port**) of this.

As the goal of this guide is to explain you briefly how to start using your WLOG-CP, follow these steps to establish a connection as a Client TCP quickly:

1. Go to the **Home** tab and locate the **Type custom command** box. In this box you can enter valid commands from your device.

2. Write the command **ATDTRemoteServerIP/RemoteServerPort** and click the **Send** button.

If the Remote Server is listening and the validations between IP addresses are enabled by the network, a successful connection will be achieved. You can see this when the message **CONNECTED** appears.



The screenshot shows a software window titled "Command". At the top, there are two dropdown menus: "Comm port:" set to "COM8" and "Baud rate:" set to "9600". To the right of these are a gear icon for settings and a "Close" button with an 'X' icon. Below the settings is a dropdown menu containing "Test communication" and a "Send" button with a right-pointing arrow. Underneath that is a text input field containing the command "ATDT190.242.118.154/9006" and another "Send" button. At the bottom of the window is a log area with a white background and a black border, containing the following text:
08/22/2018 17:11:38 >> Command sent: ATDT190.242.118.154/9006
08/22/2018 17:11:48 >> Command Timeout - Response:
ATDT190.242.118.154/9006 CONNECTED
08/22/2018 17:11:49 >> Command Sent - Response: TEST OK

Note: The WILOG-CP has been designed under the premise of offering multiple features that are not included within the scope of this quick guide.

For other type of connections as Client TCP; calls by alarms, events and/or automatic reports, configure the values of the Listening Port and the IP of the Remote Server in the **General settings** tab, **Connection settings** section, **Remote Server Port** parameters and **Remote Server IP**, respectively.

The screenshot shows the 'WT Config' application window. The 'General settings' tab is selected. The 'Connection settings' section is highlighted with a red box. The 'Remote Server IP' is set to '192.168.1.1' and the 'Remote Server Port' is set to '1010'. Other settings include 'Modem ID' (2), 'Master ID' (1), 'Family ID' (3), and 'Wiserver connection' (Inactive). The 'GPS settings' section is also visible, with 'GPS update time' set to 'GPS'.

WT Config

File Tools Settings Help

Home Modbus data Inputs/Outputs General settings Alarm

Wiserver settings

- Modem ID: 2
- Master ID: 1
- Family ID: 3
- Wiserver connection: Inactive

Connection settings

- Remote Server IP: 192.168.1.1
- Remote Server Port: 1010
- TCP Listening Port: 3030
- Connection idle timeout: 5 Min
- Connection timeout: 10 Min

Access Point Name

Name: inter

User: mov

Password: mov

GPS settings

Location:

Type: GPS

GPS update time

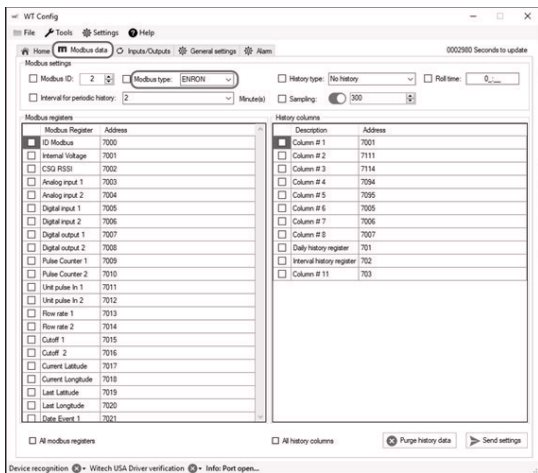
Scheduler

	Status	De
<input type="checkbox"/>	<input type="checkbox"/>	Wa
<input type="checkbox"/>	<input type="checkbox"/>	Wa
<input type="checkbox"/>	<input type="checkbox"/>	Wa

From factory, your WILOG-CP device has been configured with default parameters for immediate use. These configurations include alarm notifications, automatic call events as a Client TCP to SCADA systems, configuration parameters for Instant-Off detection, SPAN and ZERO values among other variables that you can expand on in the User Manual of your WILOG-CP.

Configuring the WILOG-CP Modbus registers

To configure the Modbus registers of your WILOG-CP, go to the **Modbus Data** tab. In the **Modbus type** box select **ENRON**.



Now, in the **Modbus registers** section you can see all the Modbus variables available in your WILOG-CP.

In the **Modbus Registers** column, the names of the registers corresponding to the Modbus variables will appear. This field is not editable. As of the date of update of this quick guide there are 119 Modbus Registers enabled in your WILOG-CP.

In the **Address** column you can configure/edit the addresses corresponding to each Modbus variable that the SCADA system will read/write.

Next, you will be able to visualize all the Modbus registers that you can use in the configuration of your WILOG-CP according to the scope of your application.

Note: For more information about each of the Modbus registers, refer to the User Manual of your WILOG-CP.

List of Modbus registers

Add	Modbus Register
------------	------------------------

7000	Modbus ID
7001	Internal Voltage
7021	Date Event 1
7022	Hour Event 1
7023	Date Event 2
7024	Hour Event 2
7025	Date Event 3
7026	Hour Event 3
7027	Date Event 4

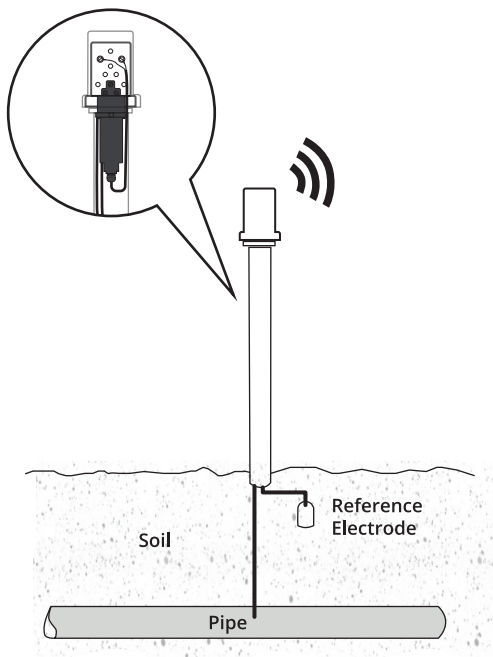
Add	Modbus Register
7028	Hour Event 4
7029	Date Event 5
7030	Hour Event 5
7031	Events connection mode
7032	Events interval mode
7033	Interval value event 1
7034	Interval value event 2
7035	Interval value event 3
7036	Interval value event 4
7037	Interval value event 5
7038	Awake Time event 1
7039	Awake Time event 2
7040	Awake Time event 3
7041	Awake Time event 4
7042	Awake Time event 5
7043	Events status
7044	Retries and time between retries Master
7045	Retries and time between retries Slave
7046	Power mode
7047	Leds status
7049	Current date
7050	Current hour
7051	Roll Time
7052	Interval history period
7053	Purge history
7054	Daily history register
7055	Interval history register
7056	Histories status
7057	Index interval history
7058	Total index interval history
7059	Index daily history

Add Modbus Register

7060	Total index daily history
7061	Column Register 1
7062	Column Register 2
7063	Column Register 3
7064	Column Register 4
7065	Column Register 5
7066	Column Register 6
7067	Column Register 7
7068	Column Register 8
7093	Sampling setting
7094	Analog Input average 1
7095	Analog Input average 2
7098	Internal voltage average
7099	Detailed history register
7100	Detailed history maximum index
7101	Detailed history currently index
7102	Detailed history sampling interval (ms)
7103	Instant-off event duration Detailed history (ms)
7104	Time to wait Instant-off event Detailed history (s)
7105	Delta voltage to Instant-off event Detailed history
7106	not used
7107	Detailed history event time (mm/dd/yy)
7108	Detailed history event hour (mm:ss)
7109	Interval type and event interval Detailed history
7110	Previous lag time to Instant-off event Detailed history
7111	Value last potential sample
7112	Date last potential sample
7113	Hour last potential sample
7114	Value last AC Component sample
7115	Date last AC Component sample
7116	Hour last AC Component sample

Installing the WILOG-CP

For installing your WILOG-CP to the test pole, connect the pipe and soil lines to the potential testing point and reference electrode, respectively.



We want to help!

Our team is available for all technical support. Please visit our website or call us at any time:



Phone: +1 561 883 8130



Business Hours: 8:00 a 17:00 (UTC-06:00)



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Notes

Notes



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