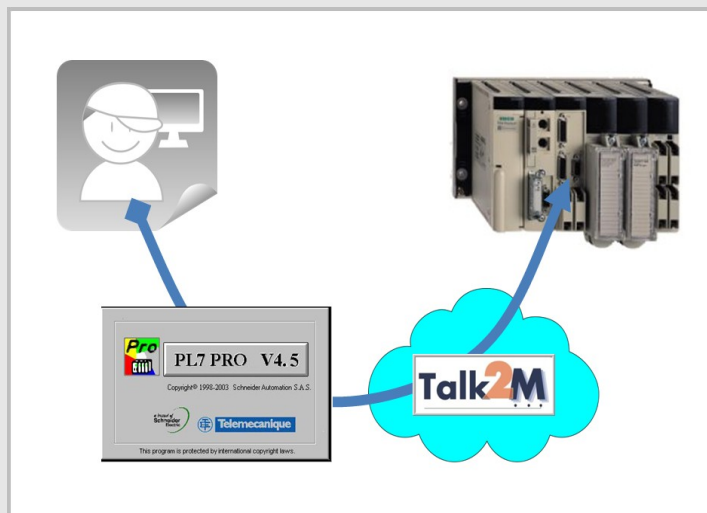


Access Schneider Electric PLCs through an existing Talk2M connection



Contents

This short guide explains how to access an Schneider Electric PLC remotely through Talk2M and a pre-configured eWON. Applications include remote servicing of PLC-controlled equipment.

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1. Hardware and software requirements

1.1 Hardware requirements

In order to follow this guide you'll need:

- ◆ 1 eWON with VPN capabilities (for example eWON 2101CD with integrated modem or a 2005CD with second Ethernet interface)
- ◆ 1 Schneider Electric PLC Modicon Micro or Premium Series or equivalent featuring Unitelway and/or Ethernet interface
- ◆ PC suitable to set the eWON and the PLC parameters

1.2 Software requirements

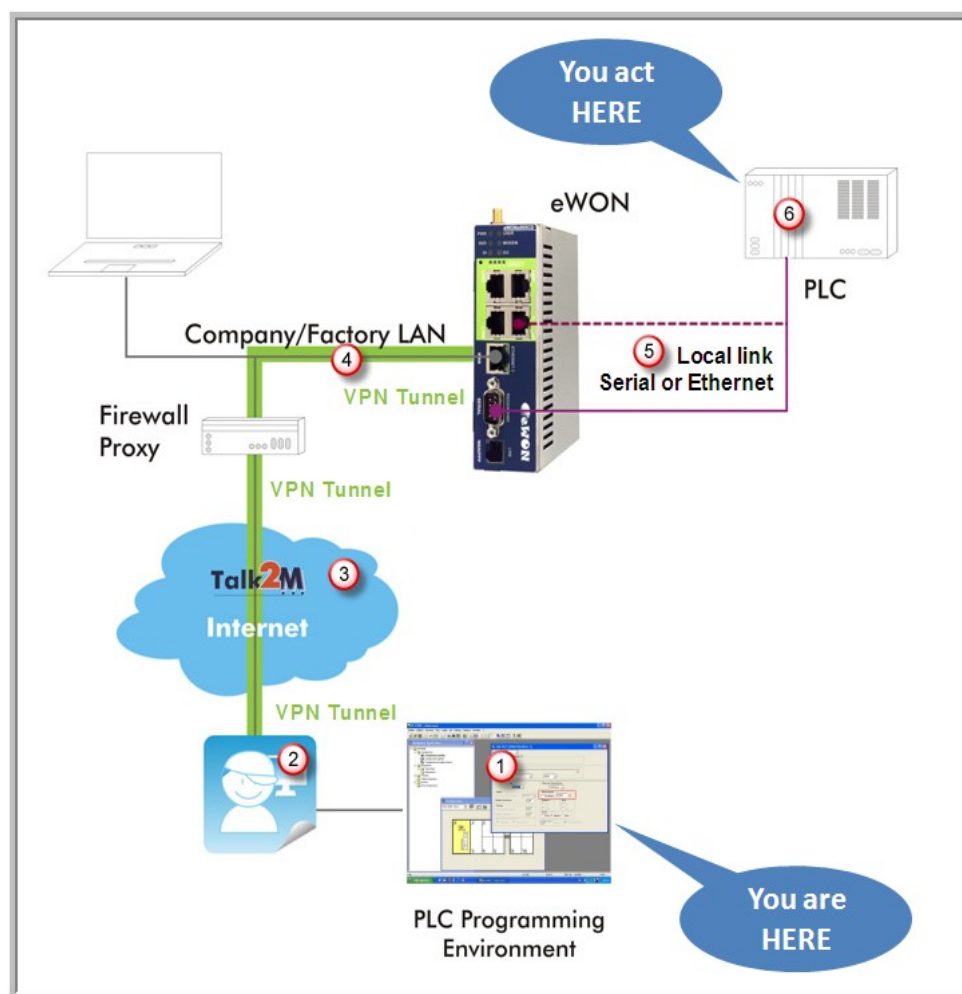
1.2.1 eWON related software

- ◆ **eCatcher** – VPN tunneling utility
<http://support.ewon.biz/software.htm>
Note: this utility will be used to create the Talk2M account and to connect to your eWON remotely.
- ◆ **Talk2M** – have a valid user account at disposal

1.2.2 Schneider Electric related software

PL7 PRO® i software including the **XIP Driver** and/or **XWAY Drivers Manager**. The version of the PL7 PRO® software must allow the use of the TCP/IP interface (version 4.1 or higher).

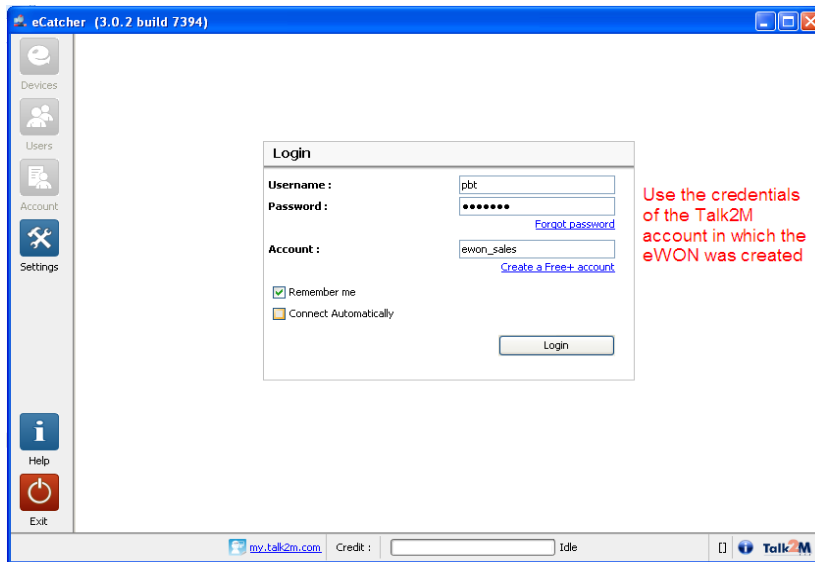
2. Network diagram



1. From a computer running your PLC programming software you will interact with a PLC in the field just as if you were using a point-to-point connection
2. Using the local gateway to Internet and the eCatcher software, you will “see” the eWON as part of your local network
3. You will create your VPN tunnel on the Internet using your Talk2M account
4. This will allow you to seamlessly pass the remote firewall and safely reach the eWON using the local LAN
5. The eWON will allow you to access the PLC transparently, indifferently whether it is hooked using the serial or the Ethernet link
6. You take control over the remote PLC

3. Opening the VPN tunnel

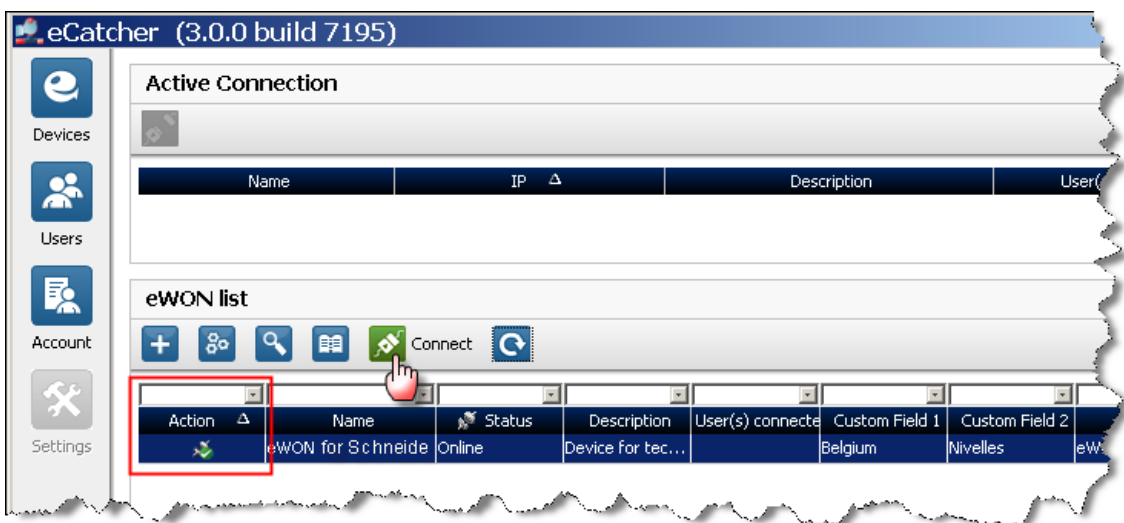
1. Make sure you have installed the eCatcher application from <http://support.ewon.biz/softwares.htm>.
2. Start your eCatcher application, login using the credentials of the Talk2M account in which the eWON was created:



3. The application shows the eWON available for tunneling (*). At this point you only “see” the ones available on your account but you do not yet have the VPN connection required to access the PLC.

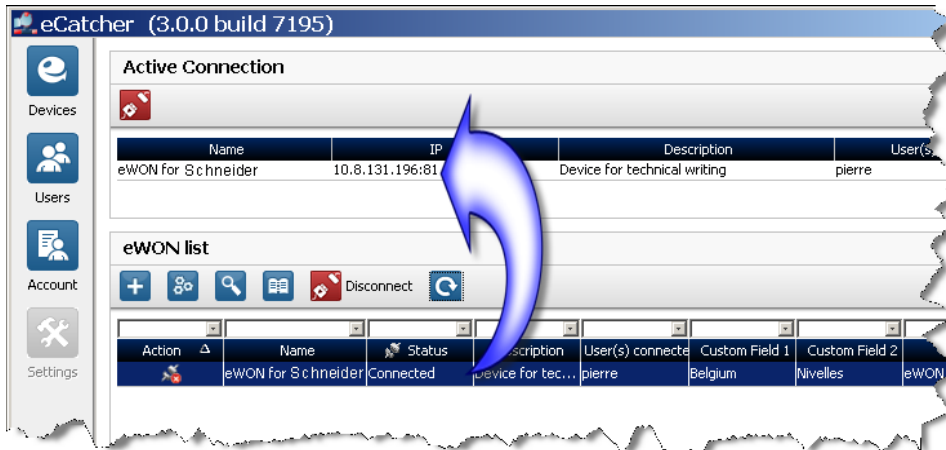
(*) Only eWON that are “online” (green icon) are “ready” for tunneling. An eWON with no icon or with red icon is not online. It can be either a GPRS/EDGE device that first needs to be waked up or a device that is simply not available for the moment.

4. Make sure your eWON is “online”, select it and click **Connect** to create the VPN tunnel:



3. Opening the VPN tunnel

5. ...wait a couple of seconds for Talk2M to create the route. As soon as the route is created, the connected eWON appears in the upper part of the window:



6. You are now connected to the eWON through the VPN tunnel.

4. PLC software mapping configuration

4.1 Understanding XIP

The next step in the configuration is to set up the PL7 PRO software to use XIP.

XIP is one of the Ethernet protocols used by Schneider. The eWON provides XIP to Unitelway Gateway.

The routing flow can be described as follows:

both in serial and in Ethernet mode:

- the PL7 PRO software is configured to address the PLC as if it is connected by Ethernet, even when it is connected in serial link, and sends a request through the XIP driver installed on the PC
- the PLC replies to the eWON request in the corresponding format (XIP or Unitelway depending on the local interface) which forwards the answer to the address of the XIP driver on the PC.

in serial link only:

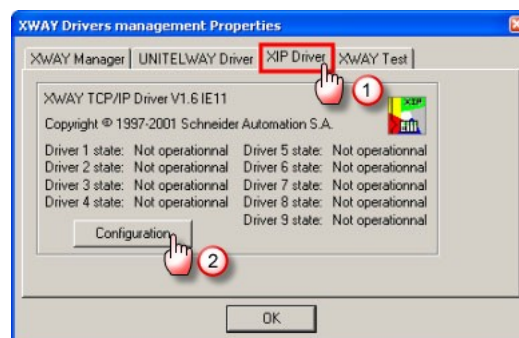
- the eWON picks the packet from this address and converts it in Unitelway before forwarding it
- from the PC-side (XIP driver), the eWON is seen as an XWAY master. From the PLC-side, the eWON is seen as an Unitelway client.

4.2 XIP Driver Configuration for serial connection

1. If it is still connected, temporarily disconnect the VPN link with the eWON. If you discard doing so, you might face routing issues with the XWAY Drivers Manager.
2. Start **XWAY Drivers Manager**



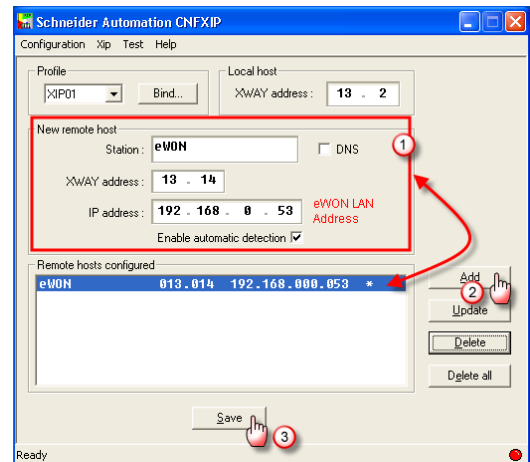
3. Select the XIP Driver tab from the Drivers Management Properties window and click on **Configuration**



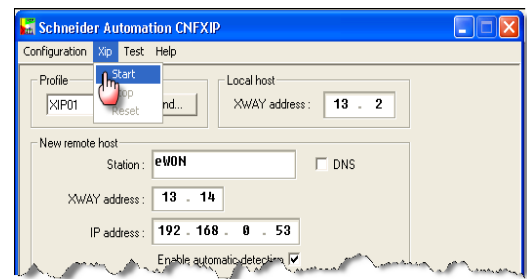
4. PLC software mapping configuration

4. In our example, the defined **Profile** is XP01 and the **Local Host** 13.2 is the **XWAY address** is the address the PC (XIP driver). This XWAY address is not that important, it just needs to be in the same range as the as the XWAY address of the eWON.
In **New remote host** set the **XWAY address** as defined in the IO Server of the eWON and the eWON LAN **IP address** (1).

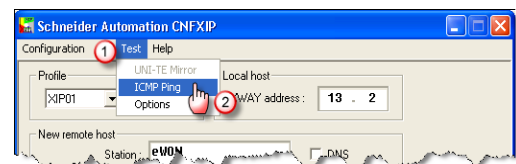
Click on **Add** (2) and then on **Save** (3).



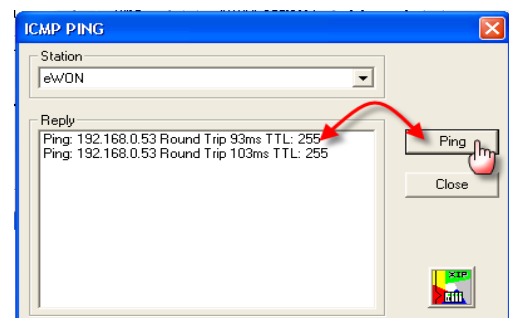
5. Then click on **Start** from the **XIP** menu



6. Select **ICMP Ping** in the **Test** menu:



7. Then click on **Ping**, you should get the following screen confirming that the eWON is physically responding.



4. PLC software mapping configuration

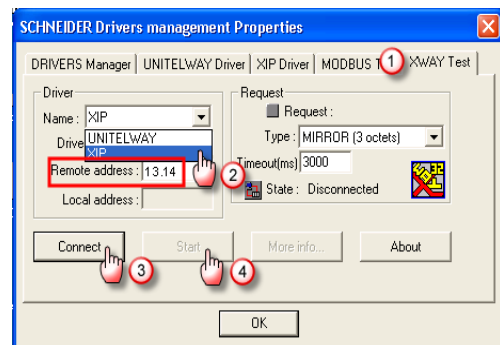
8. The XIP protocol connection is tested by sending a mirror request to the PLC. To do this, close the **ICMP Ping** window and the **CNFXIP** window to return to the **XWAY Drivers Management** window.

Select the **XWAY Test** Tab (1), select XIP01 in the driver name drop down box:

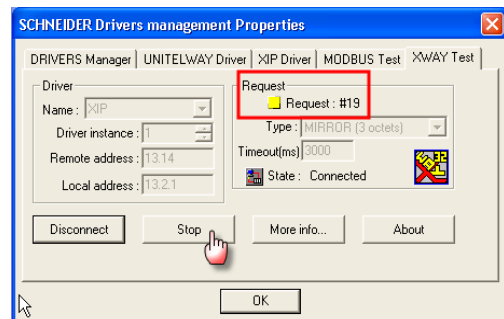
set the **Remote Address** the eWON XWAY address (2) – 13.14 in our example

Click on **Connect** (3)

Click on **Start** (4)



9. You should see the Request counter increasing quickly
Click on **Stop**.
10. End of serial PLC software mapping configuration

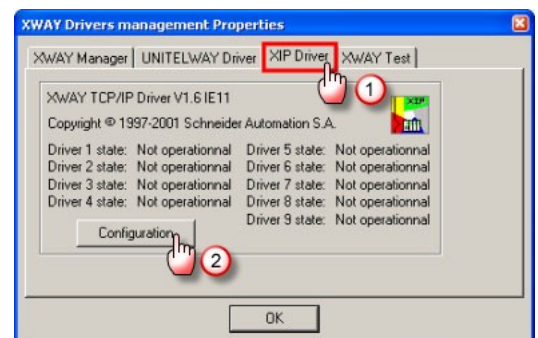


4.3 XIP Driver Configuration for Ethernet connection

1. If it is still connected, temporarily disconnect the VPN link with the eWON. If you discard doing so, you might face routing issues with the Xway Drivers Manager.
2. Start **XWAY Drivers Manager**



3. Select the XIP Driver tab from the Drivers Management Properties window and click on **Configuration**



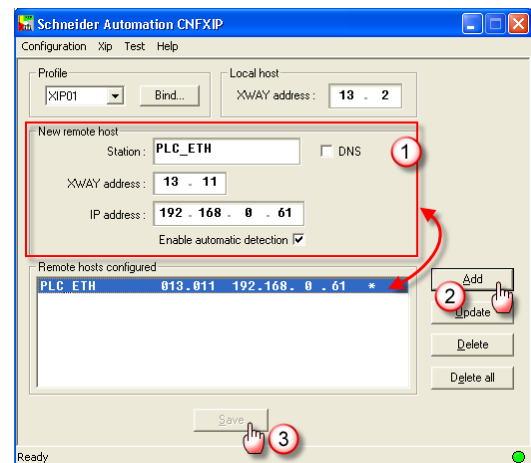
4. PLC software mapping configuration

4. In our example, the defined **Profile** is XP01 and the **Local Host** 13.2 is the **XWAY address** of the PC (XIP driver). *This XWAY address is not that important, it just needs to be in the same range as the XWAY address of the eWON.*

5. In **New remote host** set the **XWAY address** and the **IP address** (1) of the PLC.

Click on **Add** (2) and then on **Save** (3).

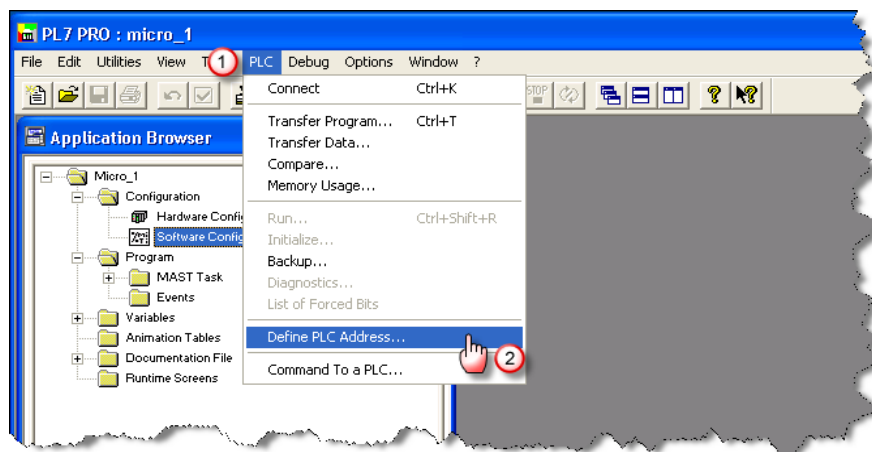
6. End of Ethernet PLC software mapping configuration



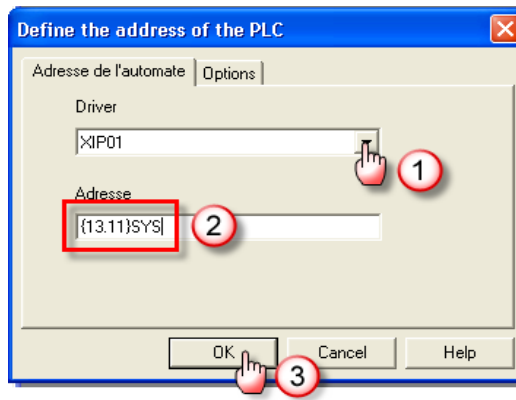
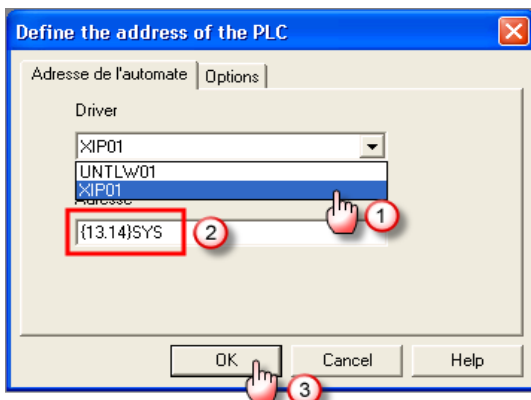
5. Accessing your PLC through PL7 PRO

Your PLC and the eWON are physically connected either by Unitelway or by Ethernet connection. The steps below are the same for both connection type.

1. Establish the VPN connection with the eWON. Once the Talk2M VPN tunnel towards the eWON is established by eCatcher, start PL7 PRO®
2. Open your project and select **Define PLC Address...** (2) from the **PLC** (1) entry in the menu :



3. Configure the sub-window for XIP, set the **Remote Address** depending on the type of connection you are using:



For a **serial** connection:

- Select the driver profile corresponding to the one defined in XIP configuration (1) in our example XP01
- set the XWAY address of the **eWON** (2) see § 4.2 XIP Driver Configuration for serial connection

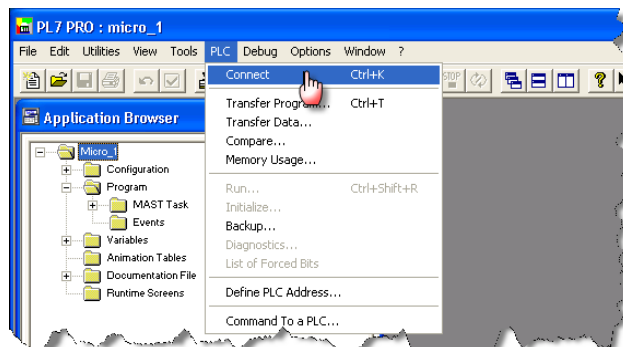
For an **Ethernet** connection:

- Select the driver profile corresponding to the one defined in XIP configuration (1) in our example XP01
- set the XWAY address of the **PLC** (2) see § 4.3 XIP Driver Configuration for Ethernet connection

Click on **OK** (3)

5. Accessing your PLC through PL7 PRO

- Click on the  icon from the toolbar or on **Connect** from the **PLC** entry of the main menu



- If the communication is OK, you should see **ONLINE** in status bar and a progress bar if you download/upload your project file.



- Your setup is now connected and ready to work in remote programming mode.
- Once you finished your work with PL7 PRO®...
- ...terminate the PL7 PRO® connection through **PLC > Disconnect** and close the application.
- ...terminate the Talk2M connection of the eWON.
- End of PLC remote access.

Revision history

Revision Level	Date	Description
1.0	16/02/12	First issue

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