E+HMI150 Panel Configuration

The E+HMI150 panels are intended for use with the E+PLC400 precision PLC.

From time to time upgrades may be available, these may be downloaded from Eurotherm.com website. (To search, select SUPPORT > Downloads > Software > use the *Search downloads* field, enter *E+PLC* to search).

Configuration means:

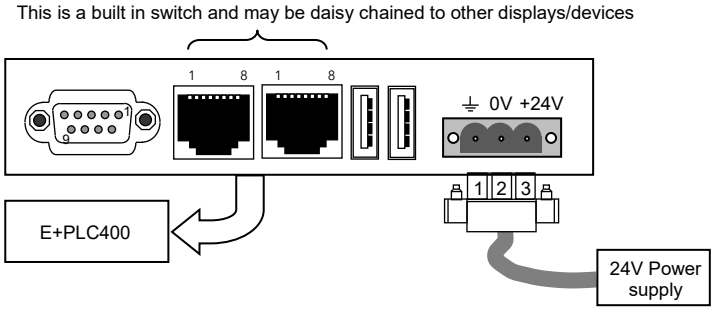
- Setting the IP address
- Loading the settings for the E+HMI

For related information please refer to the E+PLC400 Hardware Reference Guide part number HA031923. This may be downloaded from Eurotherm.com website, SUPPORT > Downloads > use the *Search downloads* field, enter *HA031923* to search).

1. Connections

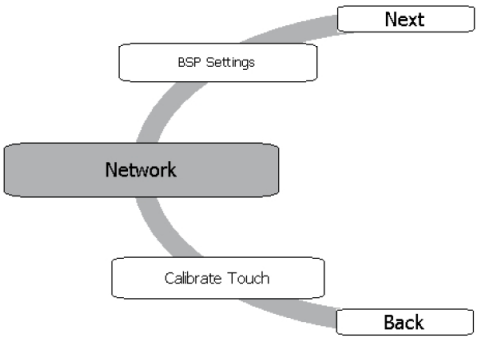
Connect the panel to external equipment in accordance with your requirements.

An example is shown for a local connection between E+HMI and E+PLC400. A PC may also be connected for example for configuration or SCADA.



2. Procedure

1. Switch on
2. The panel will normally boot up into the 'Main OS', however, network configuration needs to be carried out in the 'Configuration OS'. To enter this mode, at the instant of power up, tap the E+HMI screen rapidly and repeatedly until a message '`Tap Tap is Detected Going to Config Mode`' appears. This is followed by the Systems Settings tool shown - this may take several seconds.
3. Tap 'Next' (or' Back') until 'Network' is shown.



3. Set up the IP address

1. Tap on' Network'. A window appears which allows an IP address to be entered.
2. The default is 'Obtain an IP address via DHCP'. For the network example shown here select 'Specify an IP Address'.
3. Tap into the IP address field, this opens a keyboard on the E+HMI screen. Enter a valid IP address either through the E+HMI screen or it may be found more convenient to use an external USB keyboard.
4. It may only be necessary to enter a Gateway address if an external router is used in your particular system.
5. Tap 'OK'. A message, 'Invalid IP Address', may appear if a Gateway address has not been entered. This may be accepted by pressing 'OK'.
6. Press 'Back' (or 'Next') to select 'Restart'. A 'Restart pop up' window gives the choice to restart 'Main OS', 'Configuration OS or 'Force Restart'. Select 'Main OS' and click OK.

SETUP OPTIONS:

- **E+HMI Remote TargetVisu (RTV) application**

  A CODESYS application called Remote TargetVisu (RTV), which is preinstalled and runs on the E+HMI panel and assists with initial configuration i.e. connecting an E+HMI to E+PLC device.

  To configure the following steps are required*: Install/Update RTV > Configure E+PLC connection*.

  See E+HMI application (RTV), for further details.

- **E+HMI Import/Export 'RemoteVisu' Configuration file**

  A manual method, where the configuration file is copied to a memory stick, from the E+HMI for editing and then copied back to the E+HMI panel.

  To configure the following steps are required*: Preparing a USB memory stick > Carrying out the Import/export process*

  See E+HMI Import/Export 'RemoteVisu' Configuration file.

4. E+HMI application (RTV)

The following procedure is used to update or reinstall RTV application that runs on E+HMI.

Note: The RTV application version must match both E+PLC devices and E+PLC software suite (CODESYS). Download the latest version from Eurotherm.com website. (To search, select SUPPORT > Downloads > Software > use the *Search downloads* field, enter *E+PLC* to search).

4.1 Install/Update RTV

1. Power on E+HMI panel.

Uninstall RTV

2. Using TAP TAP procedure enter into System Mode – see Procedure, step 2 (above).
3. Navigate to and select *Restore Factory Settings* > *Uninstall HMI* > *Ok*.

Note: Ensure only the *Uninstall HMI* tick box is selected.

The E+HMI panel uninstalls the current version of RTV and returns to the *Home* screen.

Installing RTV

4. Power cycle E+HMI.
5. Insert a USB memory stick containing the RTV Installation update into E+HMI USB port.
   - Access to the rear of the E+HMI will be required
   - The USB memory stick must be FAT32 formatted and inserted into a USB Port, on the rear of the E+HMI

   The *E+HMI Loader* dialog appears.
6. Load the Codesys RTV runtime installation file from the installed USB stick.
   - Select *HMI Browser* > *USB Memory Stick* > Select *Codesys Remote Visu* zip file
   - Select *OK* to continue

   The *Installation* dialogue appears, displaying the % progress of installation.
7. Once the installation completes power cycle the E+HMI.

   On start up the E+HMI will automatically load and start the RTV application.

4.2 Configure E+PLC connection

Attention: The following should be observed before configuring an E+PLC connection and where applicable applied, during configuration;

- You will require both access to the rear of the E+HMI and a connected USB keyboard
- The *Save persistently* checkbox default is ON, checked. Do not use the *Save persistently* checkbox until configuration has been verified
- *Selecting the Cancel option at Certification Verification* cancels the connection, the configuration setup and will require the RTV application to be reinstalled

E+HMI RTV Application at Start-up

The *Select Device* dialog appears at start-up, see Fig 1.

Note: Providing the E+HMI has not previously had an E+PLC connection added, it will automatically run the RTV configuration setup to assist with adding an E+PLC device.

1. To find a device, click *Scan network*.

   The *Select Device* dialogue displays the devices located on the network.
2. Pick the relevant E+PLC device from the list, that you want the E+HMI to connect to.

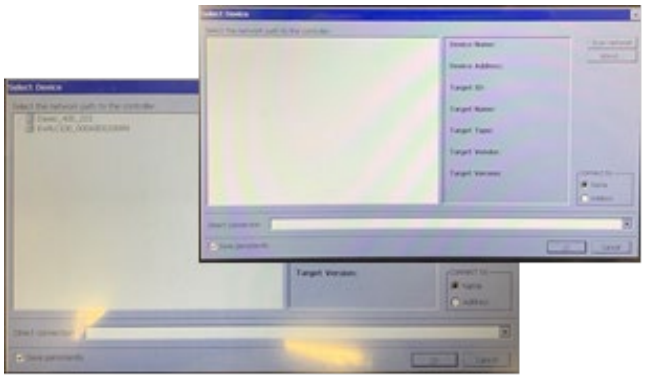


Fig.1: RTV application at Start-up and Select device dialogs

Note: The *Save persistently* checkbox if checked, instructs the E+HMI to store the connection details for the selected E+PLC device once configured.

The RTV configuration will not run again unless 'reset'. (For further details see E+HMI RTV Application – Reset).

3. Check and set the *Save persistently* checkbox;
   - Checked = Stores select E+PLC device connection details
   - Unchecked = No E+PLC device connections details stored, RTV configuration automatically runs at every start up.
4. Continue, click *OK* to connect to the selected E+PLC.

   The E+HMI establishes a connection with the selected E+PLC. The *Certification Verification* dialog appears.
5. Select one of the below options from the *Certification Verification* dialog;
   - *Yes* = use default encrypted communications certificate
   - *No* = do not use default encrypted communications certificate (use non-default, specific certificate)
   - *Cancel* = cancels the default encrypted communications certificate option and the RTV configuration setup

     Attention: Selecting *Cancel* will require the RTV application installation to be restarted, see Install/Update RTV.

The *Login* dialog appears, see Fig 2.

Note: If the E+PLC uses Device User Management, you will be prompted for a username and password. All E+PLC's from version 1.3.0.0 onwards (CODESYS version 3.5.15) require this.

6. Connect a USB keyboard to the rear of the E+HMI via USB Port – nearest the Ethernet port.
7. Enter the following *Login* connection details for the selected E+PLC;
   - *User Name*
   - *Password*

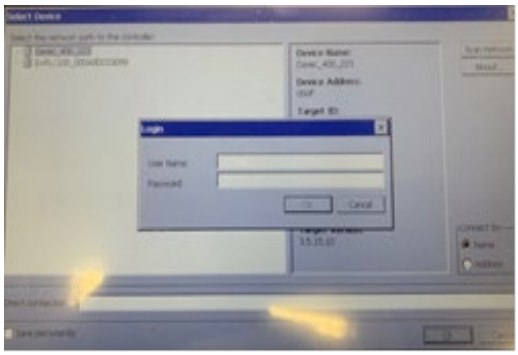


Fig.2: RTV application, Login dialog for selected E+PLC device.

Attention: The correct *Login* details must be entered, especially when the *Save persistently* option is checked! An incorrect E+PLC password entered will 'lock out' the E+PLC device and will also require the RTV application to be reinstalled again. Verify the Login details are correct or configure the E+HMI connection with *Save persistently* off (unchecked), then repeat with *Save persistently* on, see Configure E+PLC connection.

8. Select *OK*.

If the correct details are entered the E+HMI should find the E+PLC400 in the network and display the application's visualisation.

Note: The settings configured, along with the E+PLC connection credentials to connect are stored in *CODESYSControl.cfg* file.

4.2.1 E+HMI RTV Application – Reset

To reset and run RTV configuration, when the *Save persistently* checkbox has been checked and in turn hidden the application, export the *CODESYControl.cfg* file. See Carrying out the Import/export process and comment out the communication settings and credentials lines as shown.

```
;Communication.PlcNameDest=
;Credentials.UserName=
   ;Credentials.Obfuscated=
```

5. E+HMI Import/Export 'RemoteVisu' Configuration file

The configuration file is copied to a memory stick, from the E+HMI for editing and then copied back to the E+HMI panel.

5.1 Preparing a USB memory stick.

Attention: Do not use, insert compromised or unknown USB memory devices! USB memory devices are a Security Risk that can contain Security Threats such as, Viruses and Malware. Scan all USB memory devices with the appropriate security software before use.

The following steps are carried out on a PC.

1. Select a USB memory stick with FAT32 format.
2. Using a text editor such as Notepad create the following line:

   ```
   cmd /C \Flash\RemoteVisu\import_export.bat
   ```

3. Save the text file with the name "autoexec.bat" on the root directory of the USB memory stick. (Make sure that system files can be viewed). The memory stick may now be safely unplugged.

Note: The memory stick must not contain any other configuration files in the RemoteVisu folder.

5.2 Carrying out the Import/export process.

1. Start E+HMI panel and wait until it is booted into the E+HMI application, for example, CODESYSRemoteVisuWinCEV3. Note: messages will be shown if the panel is not configured/connected to the E+PLC400.
2. Plug the USB memory stick into the E+HMI panel. The import/export process will start automatically.

   Since no configuration file is found, the current configuration is copied from the E+HMI to the memory stick. The message shown here is displayed.

   Version 1.0
   RemoteVisu Import/Export utility ……..
   ……
   ……
   ……..

   Exporting RemoteVisu configuration file...
   RemoteVisu configuration file exported correctly to \USBMemory\RemoteVisu\CodesysControl.cfg.
   Please unplug the USB stick and close window to return to RemoteVisu application
   Press any key to continue…

3. Close the window. Use File → Close or X in the top right hand corner of the E+HMI or any key on the keyboard.
4. The configuration file ("CodesysControl.cfg") is now exported to the USB memory stick, which can now be safely unplugged. The file can be modified on a PC using a text editor. This file is stored in the following location of the USB memory stick.

   "`\RemoteVisu\CodesysControl.cfg`"

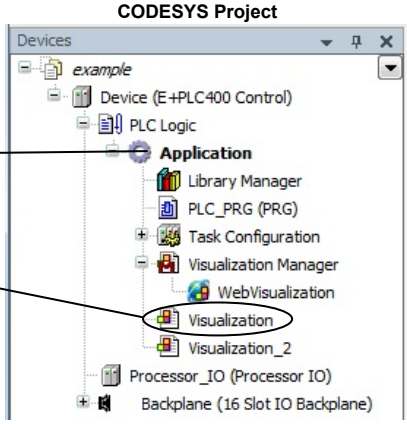
5. Using the text editor, open the file to edit the three lines shown here.

   "Communication.TcpAddressDest" set the ip address of the E+PLC400.
   "VisuClient.VisuAppName" set the application name of the CoDeSys project.
   "VisuClient.StartVisu" set the specific visualisation screen which is displayed on start up.

Example:

```
[CmpVisuHandlerRemote]
Communication.TcpAddressDest=192.168.111.222
Communication.TcpAddressDestPort=-1
;Communication.AddressDest=
;Communication.PlcNameDest=N01H0001
VisuClient.VisuAppName=Application
VisuClient.StartVisu=Visualization
;VisuClient.BestFit=1
;Credentials.UserName=
;Credentials.Password=
;VisuClient.AntiAliasing=
[SysFile]
FilePath.1=\Flash\RemoteVisu
[CmpBitmapPool]
;BitMapPath=
```

CODESYS Project



Note: The configuration file is saved in the exact same location of the USB memory stick as below.

"\RemoteVisu\CodesysControl.cfg"

1. Make sure that the E+HMI panel is running the RemoteVisu application.
2. Plug the USB memory stick back into the E+HMI panel. The import/export process of the configuration file is started automatically.
3. This utility executes the following:
   a) Backs up the current configuration file found on the E+HMI onto the memory stick.
   b) Copies the new configuration file from memory stick to the of the E+HMI.

This message is displayed:

```
A new RemoteVisu config file has been detected...
- Backing-up current config file to
  \USBMemory\RemoteVisu\CodesysControl.cfg.bak
- Importing the new RemoteVisu configuration file...
- Copy completed.
- Please unplug the USB stick and restart the HMI panel to start RemoteVisu with
  the new config file.
Press any key to continue
```

4. Once the import is complete, close the window and safely unplug the memory stick.
5. Close the RemoteVisu application, using the 'Commands' → ' Shutdown' menu or power cycle the panel. The application will then restart with the new configuration file.
6. If the settings are correct, then RemoteVisu should find the E+PLC400 in the network and display the correct visualisation.

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