

5. Installation

This chapter describes the installation of the SPA-ZC 402 module and the Communication Engineering Tool (CET) for SPA-ZC 40x. For additional information, such as technical data, maintenance and service, refer to Section 8. Technical data and Section 9. Maintenance and service.

5.1. Mechanical installation

Screw the SPA-ZC 402 module on the cubicle's bottom or wall near the protection relay. Pay attention to the length of the fibre-optic SPA cable when you are installing the SPA-ZC 402 module.

5.2. Installing communication cable

Connect the fibre-optic SPA bus cable between IED and SPA-ZC 402. Connect the LAN cable to the LAN connector of SPA-ZC 402. The other end of the cable is connected to the IEC 61850-8 station bus through the Ethernet switch.

5.2.1. Auxiliary power connection

Voltage range for the external power connection (U_{aux}) is

- 110-220 VDC, 100-240 VAC or
- 24-60 VDC

Table 5.2.1.-1 Screw terminal of U_{aux} connection

Screw terminal	AC	DC
1	L	+
2	N	-

In addition there is an earthing screw for the protective earth conductor beside the screw terminals in the casing.

5.3. Communication Engineering Tool for SPA-ZC 40x

5.3.1. System requirements

Communication Engineering Tool (CET) for SPA-ZC 40x runs on Windows 2000, Windows XP and Windows Server 2003 operating systems. A PC capable of running one of these operating systems is sufficient also for CET for SPA-ZC 40x. For more information, refer to Section 1.4. Product documentation. The detailed system requirements can be seen below.

- 20 MB free hard disk space if Microsoft .NET Framework 1.1, which is required for running CET for SPA-ZC 40x, has already been installed.
- 100 MB free hard disk space, if the Microsoft .NET Framework 1.1 is not installed. It is installed automatically if it is not found.

5.3.2.**Installing Communication Engineering Tool for SPA-ZC 40x**

1. Uninstall the previous version.
2. Close all the open programs and insert the Communication Engineering Tool (CET) for SPA-ZC 40x installation CD to the CD-ROM drive of your PC.
3. The Installation program starts automatically. If this is not the case, open the program by starting setup.exe on the CD drive.
4. The installation wizard extracts the installation files to your local computer.
5. The CET for SPA-ZC 40x Installation program starts. In this dialog, click **Next**.
 - With the **Back** button you can return to the previous dialog, and with the **Cancel** button, exit the installation wizard. This applies to all the dialogs in the installation wizard.
6. Read the License Agreement, select the option **I accept the license agreement** and click **Next** to continue the installation.
 - If the option **I do not accept the license agreement** is selected, the **Next** button is not available and you cannot continue the installation.
7. Select the folder in which the application is to be installed.
 - To select the default folder shown at the bottom of the dialog, click **Next**.
 - To select another folder, click **Browse**, choose the folder you want and click **Next**.
8. Both manuals are installed by default on your local hard drive. Click **Next** to continue the installation.
 - To install a manual, click the respective manual and select **Will be installed on local hard drive**.
 - To install the documentation feature, click the respective manual and select **Entire feature will be installed on local hard drive**.
 - To install the manual when required, click the respective manual and select **Feature will be installed when required**.
 - Not to install the manual, click the respective manual and select **Entire feature will be unavailable**.
9. Click **Next** to begin the installation.
10. Follow the progress of the installation in a dialog that also shows the directory path where the files are copied. At this point, you can still cancel the installation by clicking **Cancel**.
11. A dialog opens to show that the tool has been successfully installed. Close the dialog and finish the installation by clicking **Finish**.
12. When clicking **Finish**, the wizard also installs the Microsoft SQL Server automatically, if it is not installed already.
13. Start CET for SPA-ZC 40x by selecting **Start > Programs > Communication Engineering Tool for SPA-ZC 40x > Communication Engineering Tool**.



After installing a new CET for SPA-ZC 40x version or new Connectivity Packages, always activate the correct Connectivity Package version again by using the Connectivity Package Manager.

5.3.3.**Uninstalling Communication Engineering Tool for SPA-ZC 40x**

1. Open the Add or Remove Programs dialog by selecting **Start > Settings > Control Panel > Add or Remove Programs**.
2. Select Communication Engineering Tool (CET) for SPA-ZC 40x and click **Remove**.



Uninstall CET for SPA-ZC 40x in order to install a new version and to update the software. Uninstallation does not remove the Microsoft SQL Server and .NET Framework. Removing these programs can affect the functionality of the other ABB applications.



Detailed instructions for upgrading the software are provided when the upgrade is available.

5.4.**Installing Connectivity Packages**

1. Close all the open programs and insert the SPA-ZC 402 configuration CD to the CD-ROM drive of your PC.



The Connectivity Packages can be downloaded on the ABB web site <http://www.abb.com/substationautomation>.

Contact ABB to check the connectivity package's status for the Intelligent Electronic Device (IED) in question.

2. Double-click the Connectivity Package installation program and select the relevant IED (.msi) to start the installation.



Install the Connectivity Package after installing the Communication Engineering Tool (CET) for SPA-ZC 40x, see Section 5.3.2. Installing Communication Engineering Tool for SPA-ZC 40x. If this is not the case, re-install the Connectivity Package after installing the CET for SPA-ZC 40x.

3. The installation wizard extracts the installation files to your local computer.

4. The Connectivity Package Installation program starts. In this dialog, click **Next**.
 - With the **Back** button return to the previous dialog, and with the **Cancel** button, exit the installation wizard. This applies to all the dialogs in the installation wizard.
5. Read the License Agreement, select the option **I accept the license agreement** and click **Next** to continue the installation.
 - If the option **I do not accept the license agreement** is selected, the **Next** button is not available and you cannot continue the installation.
6. Select the folder in which the application is to be installed.
 - To select the default folder shown at the bottom of the dialog, click **Next**.
 - To select another folder, click **Browse**, choose the folder you want and click **Next**.
7. Click **Next** to begin the installation.
8. Follow the progress of the installation in a dialog, which also shows the directory path where the files are copied to. At this point, you can still cancel the installation by clicking **Cancel**.
9. A dialog opens to show that the Connectivity Package has been successfully installed. Close the dialog and finish the installation by clicking **Finish**.



After installing a new CET for SPA-ZC 40x version or new Connectivity Packages, always activate the correct Connectivity Package version again by using the Connectivity Package Manager.

5.4.1.

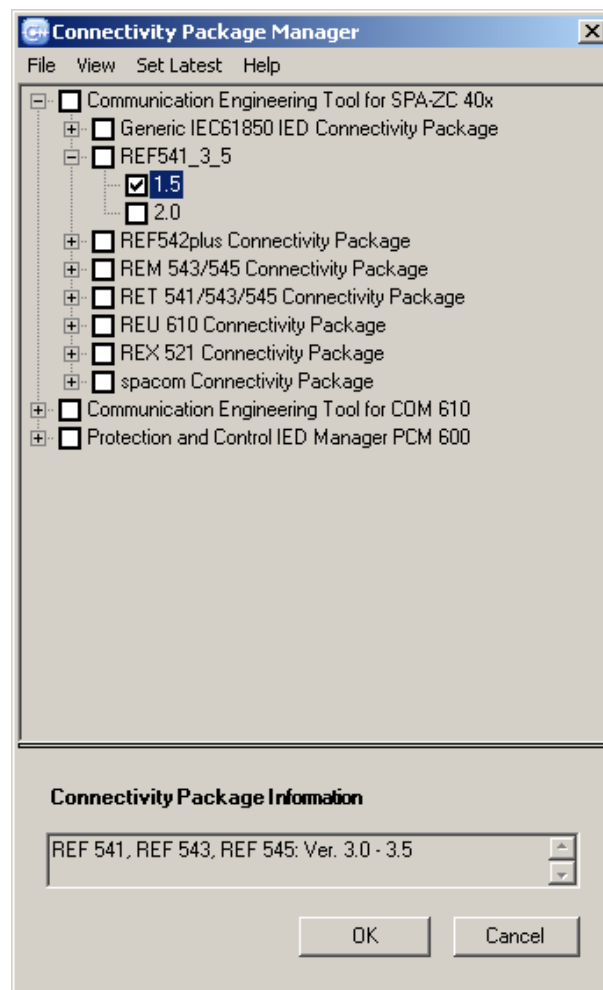
Enabling Connectivity Packages

Use Connectivity Package Manager to enable the Connectivity Packages for SPA-ZC 402.



Only one version of each Connectivity Package can be enabled at a time.

1. Double-click the icon on the computer's desktop to start the Connectivity Package Manager.
2. Select the corresponding Connectivity Package to enable it for SPA-ZC 402.
3. Click **OK** to apply the selection, see Fig. 5.4.1.-1.



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Fig. 5.4.1.-1 Connectivity Package Manager

5.4.2. Uninstalling Connectivity Packages

1. Open the Add or Remove Programs dialog by selecting **Start > Settings > Control Panel > Add or Remove Programs**.
2. Select the relevant Connectivity Package and click **Remove**.

5.5. Connecting to SPA-ZC 402

The Sections 5.5.1. and 5.5.2. describe how to connect to SPA-ZC 402 from the Communication Engineering Tool (CET) for SPA-ZC 40x.

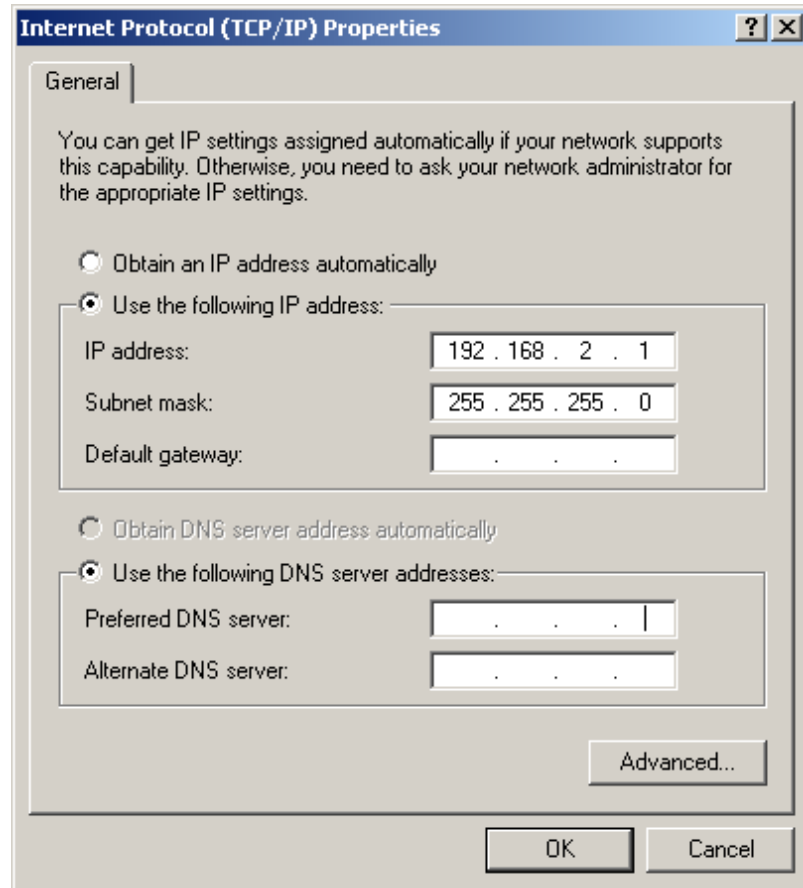
5.5.1. Changing computer's IP address

To connect SPA-ZC 402, the used computer and SPA-ZC 402 must use the same address space.

To change the computer's IP address space to be the same as in SPA-ZC 402:

1. Open the Network Connections in Control Panel.
2. Type, for example, the following IP address to the IP address box: 192.168.2.1.
See Fig. 5.5.1.-1.

You must have system administration rights to perform the task.



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Fig. 5.5.1.-1 Changing IP address

5.5.2.

Checking connection to SPA-ZC 402

Check the connection to SPA-ZC 402 by using the ping command:

1. Open the Run dialog.
2. Type cmd to the Open box, see Fig. 5.5.2.-1.