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Validity Note
The present documentation is intended for qualified technical personnel responsible for the implementation, operation and maintenance of the products described. It contains information necessary for the proper use of the products. However, those who wish to make a more “advanced” use of our products may find it necessary to consult our nearest distributor in order to obtain additional information.
The contents of this documentation are not contractual and in no way constitute an extension to, or restriction of, the contractual warranty clauses.

Contact Schneider Electric today at www.schneider-electric.com/vijeocitect
Safety Information

Hazard categories and special symbols

The following symbols and special messages may appear in this manual or on the product to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
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<tbody>
<tr>
<td>⚡️ ⚡️</td>
<td>The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.</td>
</tr>
<tr>
<td>⚠️</td>
<td>This is the safety alert symbol. It is used to alert you to personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.</td>
</tr>
</tbody>
</table>

⚠️ DANGER

DANGER indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.

⚠️ WARNING

WARNING indicates a potentially hazardous situation, which, if not avoided, can result in death or serious injury.

⚠️ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.

NOTICE

NOTICE used without a safety alert symbol, indicates a potentially hazardous situation which, if not avoided, can result in property or equipment damage.

Please Note
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Before You Begin

Vijeo Citect is a Supervisory Control and Data Acquisition (SCADA) solution. It facilitates the creation of software to manage and monitor industrial systems and processes. Due to Vijeo Citect's central role in controlling systems and processes, you must appropriately design, commission, and test your Vijeo Citect project before implementing it in an operational setting. Observe the following:

### WARNING

**UNINTENDED EQUIPMENT OPERATION**

Do not use Vijeo Citect or other SCADA software as a replacement for PLC-based control programs. SCADA software is not designed for direct, high-speed system control.

*Failure to follow these instructions can result in death, serious injury, or equipment damage.*

### WARNING

**LOSS OF CONTROL**

- The designer of any control scheme must consider the potential failure modes of control paths and, for certain critical control functions, provide a means to achieve a safe state during and after a path failure. Examples of critical control functions are emergency stop and overtravel stop, power outage and restart.
- Separate or redundant control paths must be provided for critical control functions.
- System control paths may include communication links. Consideration must be given to the implications of unanticipated transmission delays or failures of the link.
- Observe all accident prevention regulations and local safety guidelines.  

*Failure to follow these instructions can result in death, serious injury, or equipment damage.*

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Vijeo Citect +PowerConnect Installation

Thank you for purchasing Vijeo Citect +PowerConnect.
+PowerConnect is a licensed addition for Vijeo Citect. An authorization code is required to license the additional drivers and product extension.

Package Software

The components of +PowerConnect are available via download from our website:
These components support the following:
- drivers
- libraries
- equipment templates
- an update for Vijeo Citect

Requirements

+PowerConnect has been designed to work with Vijeo Citect 7.20 Service Pack 3.

**Note:** +PowerConnect has been designed to work with Vijeo Citect 7.20 Service Pack 3. If this version is not installed, +PowerConnect may not work properly.

Drivers

The +PowerConnect web site contains links to the drivers that are included with +PowerConnect.
The drivers are stored on the DriverWeb, a web site that hosts every available driver for a Vijeo Citect system. Located in the Support section of www.citect.schneider-electric.com, the DriverWeb is updated with the latest version of each driver, which means you will have access to the latest release of the associated drivers when you set up +PowerConnect.

Once a driver pack has been downloaded from the DriverWeb, it needs to be installed on any computers that are run as an I/O server. These computers need to have the authorization codes added/updated as provided when you purchase +PowerConnect.

The driver installation package offers access to multiple drivers. It is recommended that you install all the included drivers, as a driver that is installed and not used will have little impact on your system.

Once the drivers are installed, you will find the PwrModbus and PLogic help file in the Vijeo Citect BIN folder and is named "PwrModbus.chm". Note that this is a generic help file with references to SEPAM™ and MICROLOGIC™ devices, however these drivers are not supplied as part of +PowerConnect and are shown as examples only.

The driver help file for IEC 61850 can also be found in the Vijeo Citect BIN folder and is named IEC61850N.chm

![WARNING]

**INCOMPATIBLE DRIVER**

Do not ignore alerts during driver installation. If you choose to ignore such alerts, the driver will be installed but may operate incorrectly.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

**Libraries**

The +PowerConnect web site contains a library project designed to assist with the development of your Vijeo Citect system.

This library project contains additional symbol libraries that have been specifically defined to meet the standards of the power industry. It also contains equipment templates that can be used to easily configure communication for specific power devices.

The library is provided in .zip compressed format. It contains the Library_PowerConnect.ctz project, as well an update that needs to be applied to Vijeo Citect (see the topic below).

Once the library is downloaded and extracted, it needs to be restored into your Vijeo Citect system.
Add the library project as an “included project” to make the contained libraries available for use in your project development and runtime.

**Vijeo Citect Update**

The .zip file that contains the Library_PowerConnect.ctz project also includes an update that needs to be applied to Vijeo Citect.

To apply the update, follow the instructions included in the ReadMe file found inside the .zip download.

**Equipment Types**

Equipment types were introduced in Vijeo Citect 7.20 Service Pack 3. The definition of the available types can be found under the **System** menu with other equipment settings.

You need to define equipment in any projects where a piece of equipment will be implemented. Be aware that equipment types will not automatically flow into a project from an included project.

It is recommended that you copy the required templates from the Equipment folder in the Library_PowerConnect project to the project(s) where the equipment will be defined.

**Equipment Templates**

Equipment templates are configuration files that are linked with equipment types. Each definition for an equipment type will specify an associated template file.

The **Update Equipment** tool is available under the **Tools** menu of Project Editor. It will process the template for each piece of equipment to manage the associated configuration records. When updating the equipment configuration, the associated records are modified, added or deleted as required.

For example, a set of associated records defined by the template may consist of a set of variable tags, alarms and trends. When an equipment record is added, the update tool will create the associated records. If the template is modified, the update tool will modify the associated records. If the equipment record is deleted, the update tool will delete the associated records.

**Note:** Deleting records from equipment templates will not delete associated data for existing equipment.

**TagGen Syntax Rules**
The template files are XML files that use the existing TagGen syntax rules.
The online help in Vijeo Citect 7.20 Service Pack 3 has a section on *TagGen XML Template* which describes the structure of the XML template.

**Design Guide**
There is also an equipment design guide available at the [www.citect.schneider-electric.com](http://www.citect.schneider-electric.com) web site. Please note that a support agreement is required to access the Design Guides section of the web site.

Once you have logged in, access the MyCitectSupport section and select Design Guides > Equipment.

The +PowerConnect library project contains templates to assist in connecting to multiple Schneider-Electric power meters. These templates configure a sample set of tags, alarms and trends for each of the meters. The templates are XML files and can be modified to meet the needs of most projects.

**+PowerConnect Example**

An equipment type is configured by adding an entry for the required equipment templates. The name of the equipment type needs to match the name defined in the XML file and is case sensitive.

The templates included in +PowerConnect are named after the file name, as shown in the example below.

![Equipment Types](image)

With the equipment types defined within the project, you can now define as many devices of this type as are required. Every device will receive the same tags, alarms and trends within the system.

To add a specific power meter to the system, you first need to add the device (using the I/O Device Communication Wizard).

You then need to add the meter as a piece of equipment within the equipment database. The key entries in this database are the Type (which selects an item from the equipment types) and the I/O device (which will link to the communication device defined).
With these configured, select the **Update Equipment** entry in the **Tools** menu of Project Editor to generate the tags, alarms and trends within the project.

**Device Support**

For devices that do not have native support for the IEC61850 protocol, a gateway device that converts IEC61850 to Modbus will be required. Please contact your local Schneider Electric sales representative to discuss the solutions available.

For example, when using the PM800.iec61850.xml template, the PM800 meter would require a gateway device. Alternatively, the Modbus version of the template can be used (i.e. PM800.PLogic870.xml).

**Scheduler**

Scheduler is a new feature of Vijeo Citect that was introduced with the version 7.20 Service Pack 3. Scheduler operates as a component of the report server with an ActiveX control that enables you to link your Vijeo Citect system to a calendar, offering significant operational benefits when implementing +PowerConnect.

Please refer to the **Scheduler User Guide** under the Help menu for more information.

**Maintaining System Currency**

It is very important that you keep your software up to date. Schneider Electric will periodically publish updates in the form of Service Packs, Hot Fixes, Driver Updates or Advisories relating to safety, security and functionality of Vijeo Citect.
These updates are available from the SCADA & MES Support web site www.citect.schneider-electric.com. We especially recommend that you nominate a person in your organization to refer, and subscribe, to the RSS feeds for Safety and Security, as well as the latest articles on the web site.