1SDH001277R0001 L8501

Ekip View – Ekip Control Panel

Quickstarter

Power and productivity
for a better world™

WARNING

HAZARDOUS VOLTAGE
CAN CAUSE SHOCKS, BURNS
OR DEATH.

Do not use this product in any way before having read this instruction manual

PLEASE READ THIS DOCUMENT CAREFULLY BEFORE INSTALLING OR USING THIS SOFTWARE WITH CIRCUIT BREAKER AND RELATED PROTECTION UNIT.

- Store these instructions in conjunction with any other instructions, drawings, and descriptive documents. Keep this document available for use.
- Follow the safety procedures specified by your Company.
- Do not remove covers, open doors, or work on the equipment monitored by the software, if you have not cut off the power to the switchboard, and before all the circuits are powered down.

DANGER! Before performing any operation on a circuit breaker, you must:

1. **Keep the circuit breaker in the open position, and make sure that springs are discharged (if applicable).**
2. **Disconnect power from the circuit breaker (main power and auxiliary power), and ground terminals in a visible way, both on the supply side and load side.**
3. **Disconnect the circuit breaker from the plant, removing it from the switchboard if allowed by the execution.**
4. **Secure according to the rules and laws.**

WARNING!

This software is ABB property and is guaranteed only for use with ABB devices.
Duplication and distribution, not previously authorized by ABB, are strictly forbidden.
Any action of disassembly, modification or handling of this software is forbidden.
Installation on Ekip Control Panel of any software application other than those provided by ABB is forbidden and can cause mulfunctioning of the system and void of warranty.

WARNING!

Ekip View has been designed to be connected and to communicate information and data via a network interface which should be connected to a secure network. It is your sole responsibility to provide and continuously guarantee a secure connection between the product and any network and to establish and maintain appropriate protection measures (such as firewalls, authentication measures, encryption of data, antivirus programs, etc.) against any kind of security breaches, unauthorized access, interference, intrusion, leakage and/or theft of data or information. ABB and its affiliates are not liable for such damages and/or data losses.

WARNING!

ABB reserves the right to modify the information in this document at any time and without any notice. The software or hardware described in this document are supplied under license and may be used, copied or disclosed only in accordance with its terms. All trademarks remain the property of their respective owners.

WARNING!

Detailed descriptions of standard procedures for installation, use, maintenance and principles for safe operation are not included in this document.

It is important to note that this document contains safety and precaution instructions, against certain methods (of installation, use and maintenance) that could cause harm to personnel, damage devices, or make them unsafe.

- These warnings and alarms do not include all conceivable ways to make installation, use and maintenance recommended by ABB or not, that may be made, or possible consequences and complications of each conceivable way, nor shall ABB investigate all those ways.
- Anyone using maintenance procedures or devices, recommended by ABB or not, must check thoroughly that neither personal safety nor the safety devices are endangered by mode of installation, use, maintenance or the instruments used. For more information, questions or specific problems contact your nearest ABB representative.
- This manual is written for qualified personnel only and is not intended as a substitute for a proper course, or experience about safety procedures for this device.
- The purchaser, installer or end user is responsible for ensuring that notices and safety signs are posted and that all access points and switching devices are locked securely when the switchgear is left unattended, even momentarily.

Index

1 Introduction

Premise

Ekip View is a control and supervision software for devices connected through communication networks using Modbus RTU or Modbus TCP protocol.

It has been developed for all applications requiring:

- remote control of the system,
- monitoring of power consumption,
- fault detection of the system,
- allocation of energy consumption to different processes and departments,
- preventive planning of maintenance.

The main characteristics of Ekip View are:

1) **Engineering free** and ready to use software which guides the user in the identification and configuration of the protection units without any additional engineering activities.

2) **Dynamic mimic panel:** after automatic scanning of the network and the identification of the devices, Ekip View suggests dynamic symbols that summarize the most important relevant information (status, electrical measurements, alarms). The extensive library of electrical symbols enables the whole electrical system to be represented in detail.

3) **Analysis of trends:** the real-time and historical trends of currents, power and power factors are represented graphically and can be exported into Microsoft Excel for detailed analysis.

4) **Reports:** advanced system reports and communication network diagnostics can be created. Moreover, by using the Alarm Dispatcher option, the user can receive the most important alarms via SMS or e-mail.

5) **Web access** to the plant information, thanks to the Web Server function included in Ekip View.

2 Requirement and compatibility

SW requirements	• OS: Microsoft Windows® XP, Microsoft Windows® Vista, Microsoft Windows® 7 • Database: Microsoft Windows® SQL Server 2008, SQL Server 2008 R2, SQL Server 2012.
HW requirements (Runtime Desktop)	• Celeron 1,6 GHz, 512 Mb RAM at the minimum. • Advised at least Pentium IV 3 GHz, 1 Gb RAM. • Nevertheless, these requisites depend on the number of device to monitor.
Environmental requirements (for Ekip control Panel only)	• Please refer to the Touch Panel Computer TPC-1X71H User manual

3 Installation and configuration

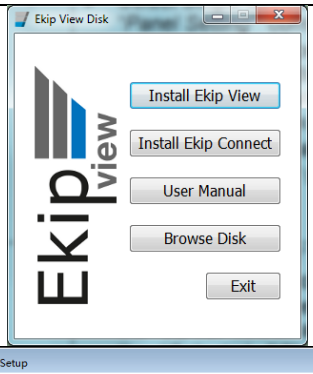
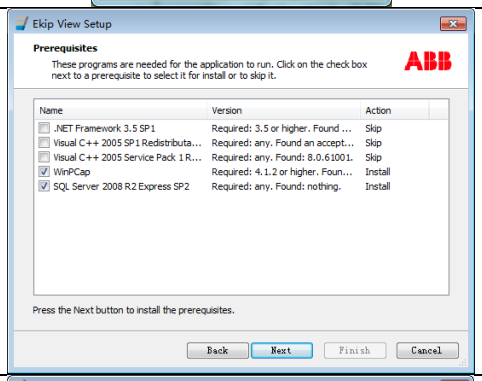
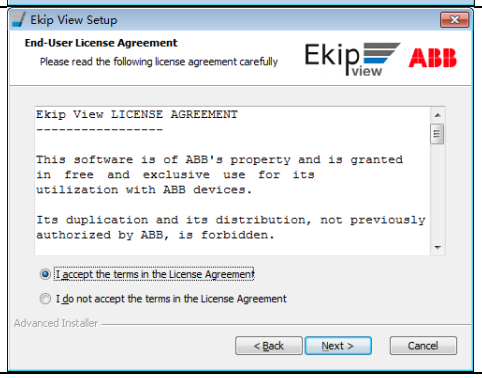
SW installation

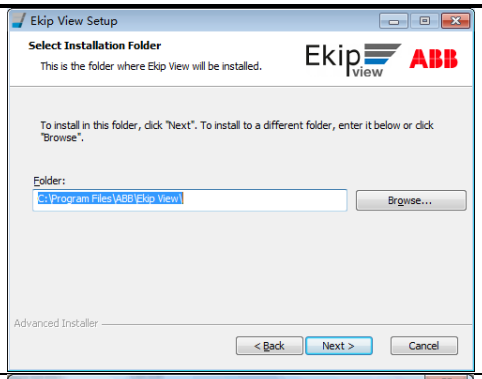
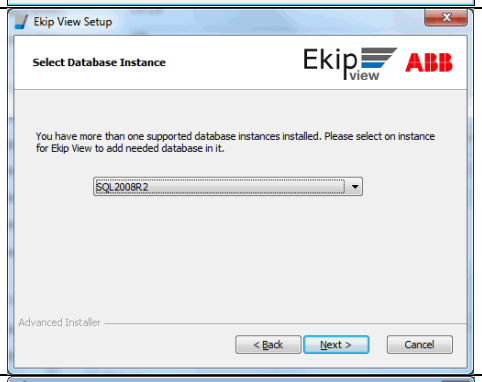
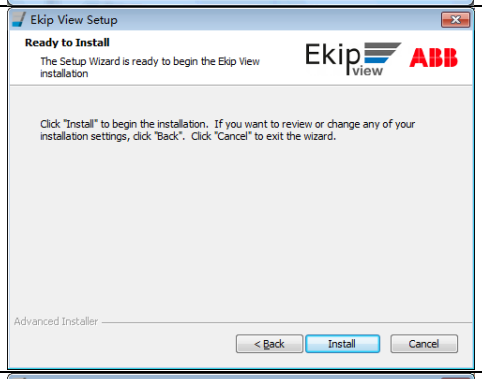
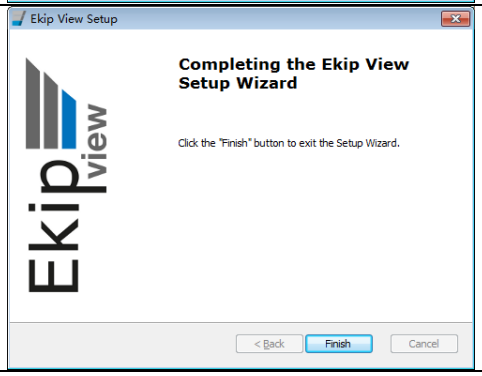
Guided installation of Ekip View after the insertion of the DVD.
If you wish to install Ekip View manually from the DVD, you can access the DVD's folder from the Windows Explorer and execute the "Setup.exe" file contained, for example:

D:\Ekip View\Setup.exe

The Setup will carry out the installation of both the Ekip View runtime environment (i.e. all the applications needed for correct working) and the Ekip View project (i.e. all the configuration files needed to manage monitoring of the customer plant).

During installation it is important to follow the instructions that appear on the screen (see steps below).

Step	***Action***	***Picture***
1	• Insert the DVD, you will automatically enter into the installation environment • Select Install Ekip View to start installing.	
2	Install the prerequisites. ***NOTE**: Ekip View will automatically detect which pre-requisites are needed for the installation according to your OS.*	
3	Accept the license	

4	Choose installation path (default C:\Program Files\ABB\Ekip View)	
5	If more than one compatible database instance are found on your OS, you have to select one instance for Ekip View.	
6	Press Install. Installer will automatically first install runtime and then Ekip View project.	
7	End of installation.	

NOTE: *System administrator privilege are required to install Ekip View, if the user running the installer does not belong to administrator group a popup window will appear asking for an administrator username and password.*

NOTE: *It is highly recommended to install ABB Ekip Connect (present on the DVD) in order to access to advanced functionality (Dataviewer). For the installation, run the setup file in D:\Ekip Connect on the DVD and follow the instructions on the screen.*

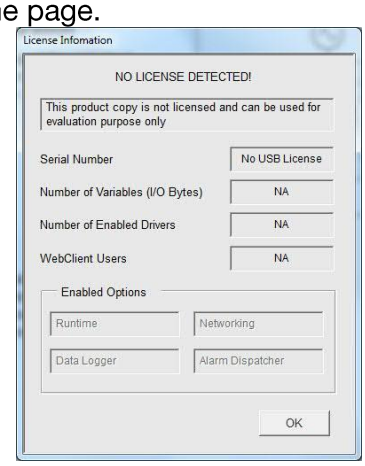
WARNING! *Running Ekip View with accounts other than the Windows user and the administrator (if different) used to install the software will cause database access deny.*

Installation (for Ekip control Panel only)

For wiring diagrams, I/O port arrangement, cut-out dimensions and mounting please refer to Touch Panel Computer TPC-1X71H User manual

License installation

Ekip View project execution requires a regular Runtime License.
Runtime licenses supported in Ekip View are USB dongle (included in the product) and are already activated.
To verify the option installed, click on the License information icon in the System management area of the Home page.



This window shows the options which have been enabled on the dongle inserted in the system.
In the absence of a license (hardware or software), a “NO LICENSE DETECTED” message is displayed at the top of the window.
In addition, in the absence of a hardware license, a “No USB Licence” message will appear in the “Serial Number” field.

NOTE: *"Enabled Options" for the license are in black. The options in grey are not enabled.*

NOTE: *The information about the license option are read during the startup phase, be sure to plug in the USB dongle before starting-up the application.*

WARNING! *Ekip View license is based on the total number of I/O bytes used by the application and exchanged with the field devices. Since this number can change during the runtime (depending either on the type of devices configured and on the graphical page used), the number of devices shown in your license information is a suggested value based on average calculation.*
Configuring of a larger number of devices than supported by your license is not recommended: if the total I/O bytes in use exceeds the limit of the license, Ekip View will run into the “demo mode”.
If the number of bytes in use returns under the limit allowed by the license within 2 hours, Ekip View will switch over from the “demo mode”; otherwise the application will be automatically shut down.

4 Starting Ekip View

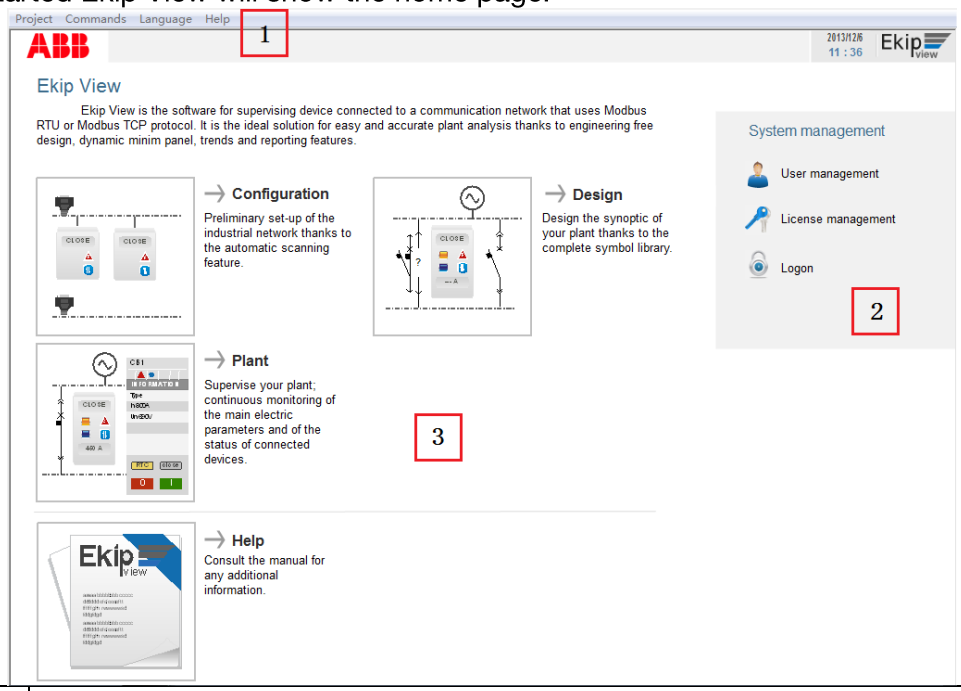
General

For starting Ekip View application double click on the Ekip View icon 

on the desktop or follow:
"Start⇒All Programs⇒ABB⇒Ekip View" (*"Start⇒Programs⇒ABB⇒Ekip View"* if using Windows XP) and click on Ekip View.

Home page user interface

Once started Ekip View will show the home page.



Area	*Description*
1	Menu bar
2	System management area
3	Desktop area

***NOTE**: once installed Ekip View automatically set up an Administrator User account with the following login information:*
User name: admin
Password: admin
It is recommended to change the password after the first login.

***WARNING!** It is recommended to read carefully the user manual (click on Help section in Desktop Area) after installation and before using the software.*

Desktop area

Icons / Menu	*Description*
Configure Plant	Go to plant configuration section
Design Synoptic	Go to synoptic design section
Monitor Plant	Go to plant monitoring section
Help Contents	Open user manual.

5 Configuration of the plant

General

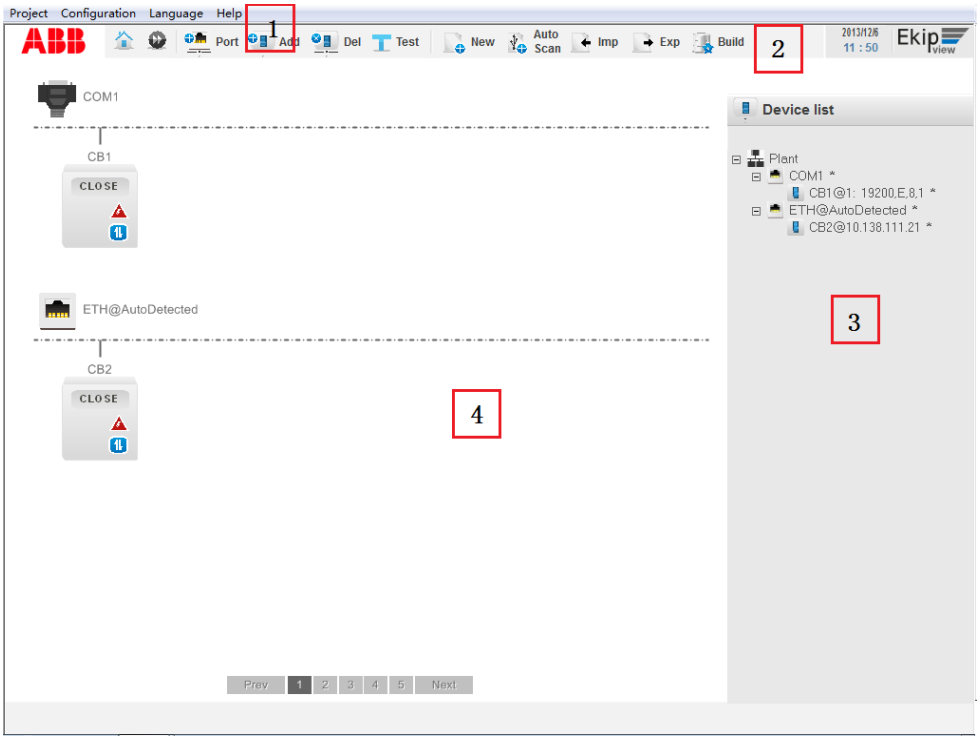
The configuration process of the plant is the first step for a correct use of Ekip View system. A wrong setting during the configuration process can compromise the communication with the configured units of the plant.
In order to start the configuration click on the configuration icons in the home page.

In the configuration section you can:
Add devices
Add communication interfaces
Delete devices or communication interfaces
Test the communication ports
Import or export configurations
Build the resources of configured devices in order to start monitoring

For a detail description about how to add/remove/edit ports or devices (off-line configuration) please refer to Ekip View user manual.

Configuration user interface

The user interface for all the configuration operations is shown in the following screenshot:

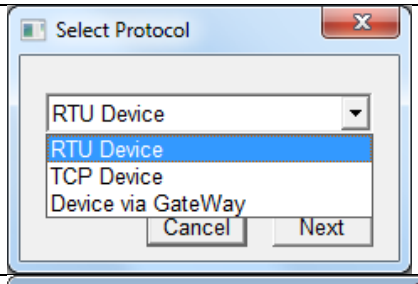
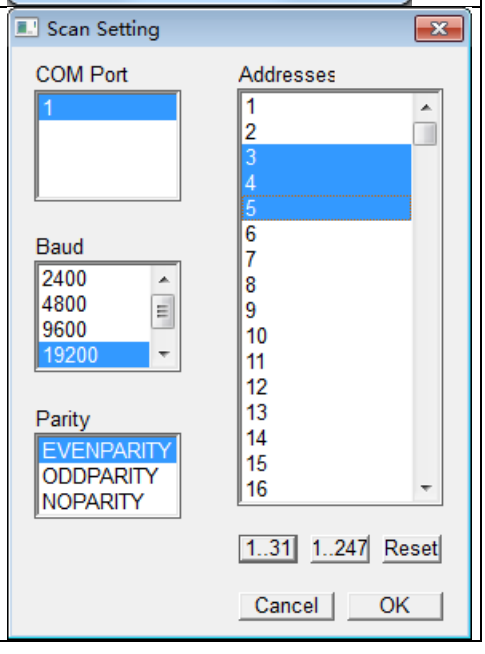


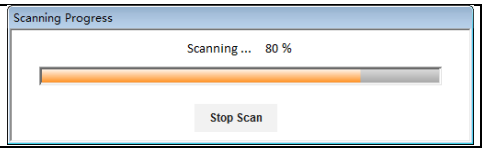
Area	*Description*
1	Menu bar
2	Toolbar
3	Plant graphic view, grouped by communication interface.
4	Plant menu tree view, grouped by communication interface.

Configuration toolbar

Icons / Menu	*Description*
New configuration	Create a new plant configuration
Import configuration	Import a previously saved configuration file
Export configuration	Export the current configuration
Auto scan	Allow the automatic scan and detection of the supported devices connected to the network
Build configuration	Build the devices resources start the monitoring and the recording of data of the configured plant.
Add port	Add a communication port to the plant
Add device	Add a new unit to the plant
Delete	Delete selected unit/port
Test	Test the communication of the selected unit
Home page	Return to home page
Design	Go to next section (synoptic design section)

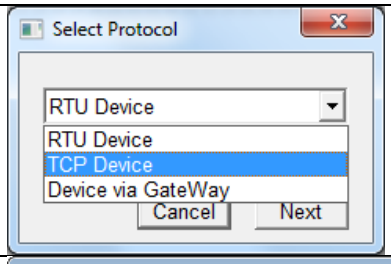
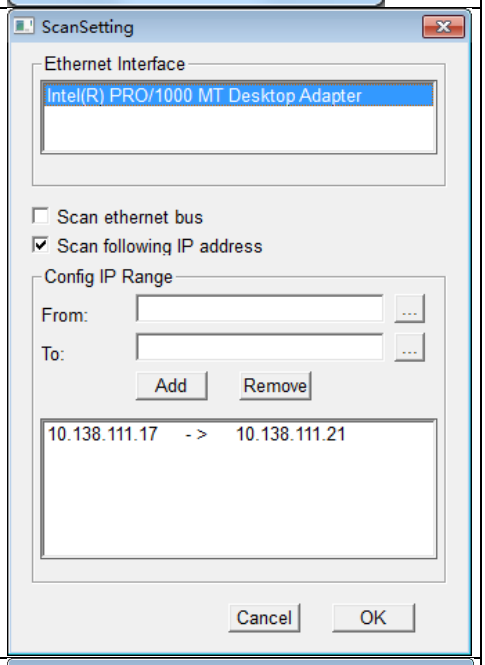
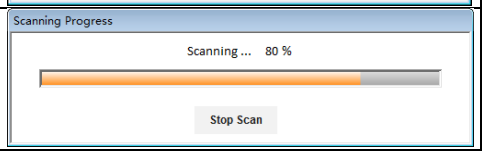
Automatic scan for Modbus RTU units on COM port

Step	*Action*	*Picture*
1	• Click on the Auto scan icon • Choose "*RTU Device*" to start scanning of the devices connected with protocol Modbus RTU.	
2	• Select port number from "*Com Port*" combobox • Select baud rate from "*Baud*" combobox • Select parity from "*Parity*" combobox • Select auto scan addresses from "*Addresses*" list box or click the 1..31 or 1..247 to select a group of continuous addresses. • Click Reset to clear address selection.	

3	Click OK to start automatic scan. A progress bar will show the status of scanning.	

***NOTE**: When variables are initializing, auto scan would be disabled.*

Automatic scan for Modbus TCP units on Ethernet port

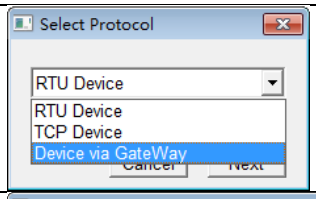
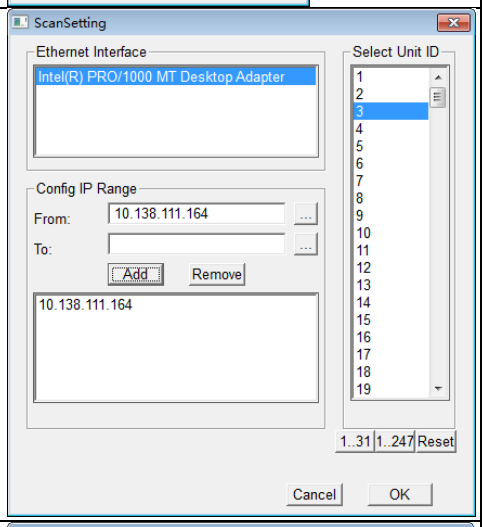
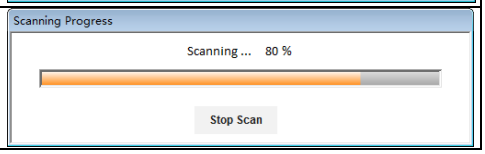
Step	Action	Picture
1	• Click on the Auto scan icon • Choose "*TCP Device*" to start scanning of the devices connected with protocol modbus TCP.	
2	• Select the "*Ethernet Interface*" you want to scan. • Select Scan Ethernet bus if you want to find the selected interface through ARP messages from the units. • Select Scan following IP address if you want to scan a defined range of IP addresses. Enter start IP address in "*From*" edit box and end IP address in "*To*" edit box. ***NOTE:** if you have a single IP address instead of a range, fill only the "From" edit box.*	
3	Click OK to start scan. A progress bar will show the status of scanning.	

***NOTE**: Only one Ethernet Interface at one time can be selected for scan.*

***NOTE**: Only IPv4 can be supported for IP addresses.*

***NOTE**: IP address range automatic scan is supported only on Windows Vista or later. For older version of Windows, if you need to use defined IP addresses, please make sure to add a single address to the IP list.*

Automatic scan for Modbus RTU units on Ethernet port (through gateway)

Step	Action	Picture
1	• Click on the Auto scan icon • Choose "*Device via GateWay*" to start scanning of RTU devices connected through Modbus RTU to TCP gateway.	
2	• Select the Ethernet interface from which to scan • Enter start IP address in "*From*" edit box and end IP address in "*To*" edit box. • Click Add button • Click Remove button to remove an IP address • Select the unit ID from "*Unit ID*" list ***NOTE:*** *if you have a single IP address instead of a range, fill only the "From" edit box.*	
3	Click OK to start auto scan. A progress bar will show the status of scanning.	

***NOTE**: Only one Ethernet Interface at one time can be selected for scan.*

***NOTE**: Communication parameter (baud rate, parity) must be configured in the gateway. Please refer to the user manual of the gateway used.*

6 Synoptic design

General

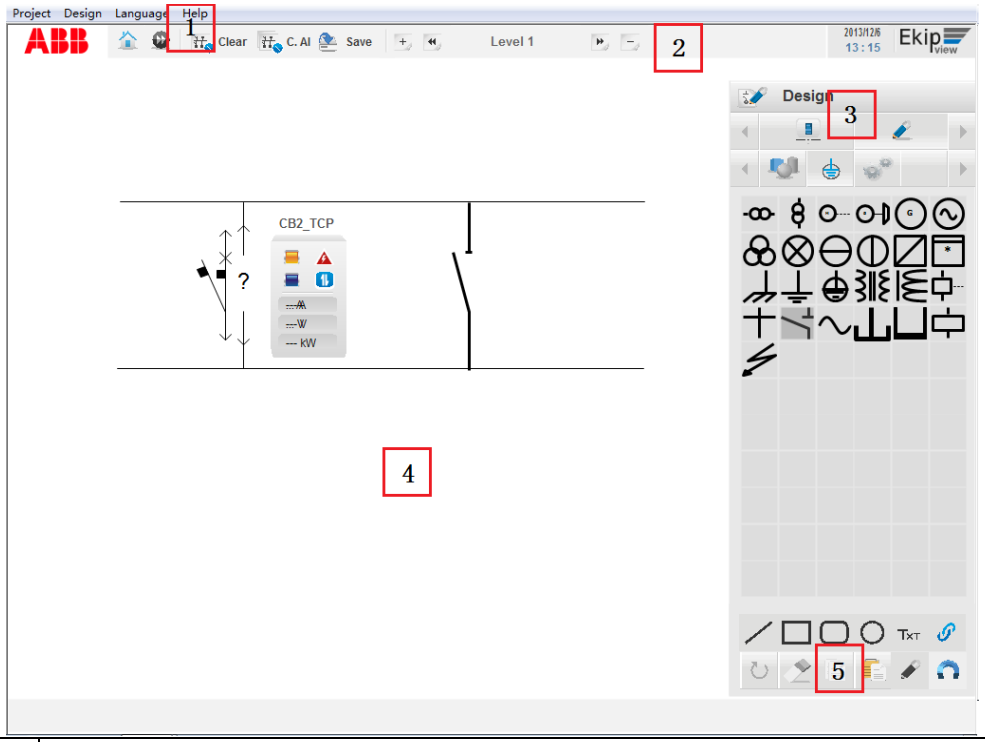
The synoptic design section allows the user to draw the schematic representation of plant.
Plant layout could be implemented according to the actually application. Plant containing a large number of devices could be sub-divided into different levels to enhance the management.
In order to start the synoptic design click on the Design icons in the home page.

In Synoptic design you can:
- Draw the schematic representation of the plant
- Clear the drawing schematic representation of the plant
- Add levels and edit level name
- Delete levels
- Save all the drawing schematic representation of the plants

***NOTE**: It is not mandatory to draw the synoptic of the plant. A default view (grid view) is always available in the "Plant section" showing all the configured devices with a default layout.*

Synoptic design user interface

The user interface for the synoptic design operations is shown in the following screenshot:

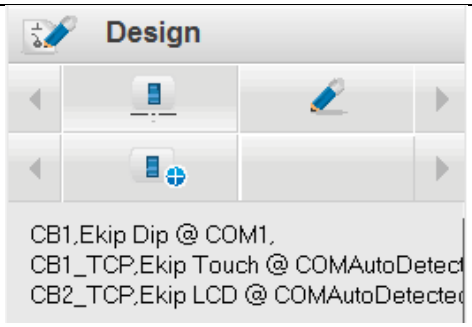


Area	*Description*
1	Menu bar
2	Toolbar
3	Symbol library: list of configured devices and library of various graphic objects
4	Synoptic area: area dedicated to the design of the synoptic diagrams
5	Tool box: tools for drawing basic shapes.

Synoptic toolbar

Icons / Menu	*Description*
Clear page	Clear the current level
Clear all	Clear all levels
Save Synoptic	Save all the edited levels
Home page	Return to home page
Monitor plant	Go to next section (monitor section)

Add symbols to Synoptic

Step	*Action*	*Picture*
1	Add configured device • Click on the Device list icon, all the configured devices will be listed • Double click on the device you need (or select at least one device, and click the Add device icon) • Selected devices will be added to the Synoptic area	
2	Add common symbols • Click on the Symbol lib icon, common Symbol library will be shown • Click the second level of icons • Select the symbol icon you need and draw a rectangle in the right position of synoptic area.	
3	Add basic shapes • Select one of the basic shapes • Draw a rectangle in the right position of the synoptic area. (If a text string is added, a property setting dialogue will popup)	

7 Monitoring of the plant

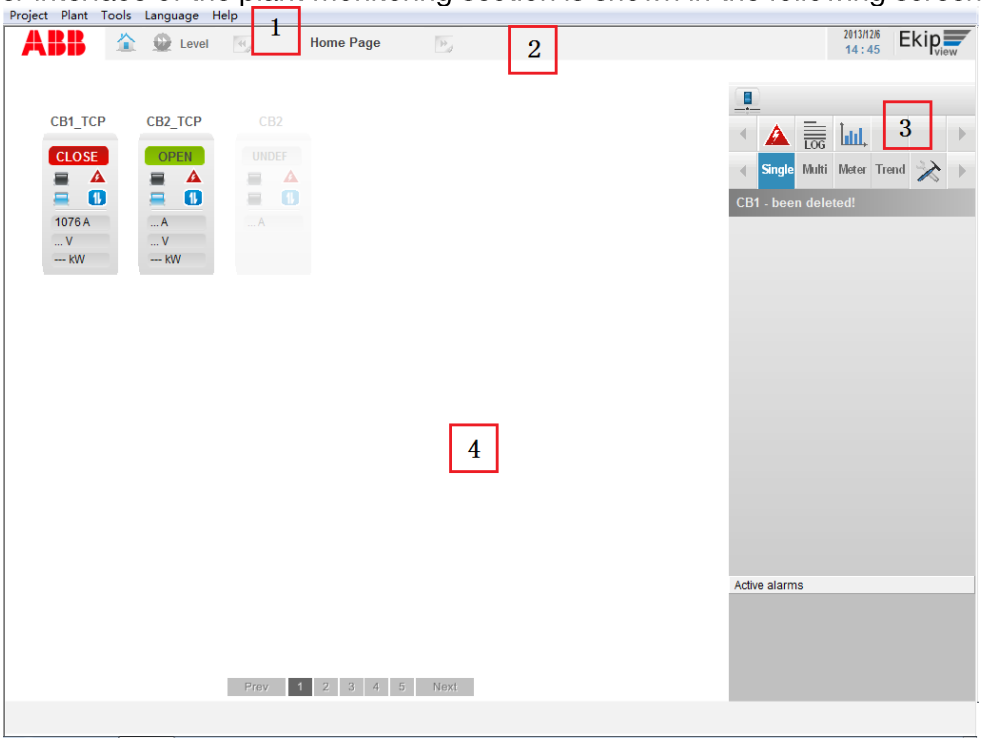
General

Ekip View can continuously monitor the main electrical parameters and the status of the connected devices.
Click on the plant icons in the home page to supervise the configured plant.

With the Plant monitor you can:
- Monitor configured devices
- Add communication interfaces
- Delete devices or communication interfaces
- Test the communication of the configured plant
- Import or export configurations
- Make reports

Monitoring user interface

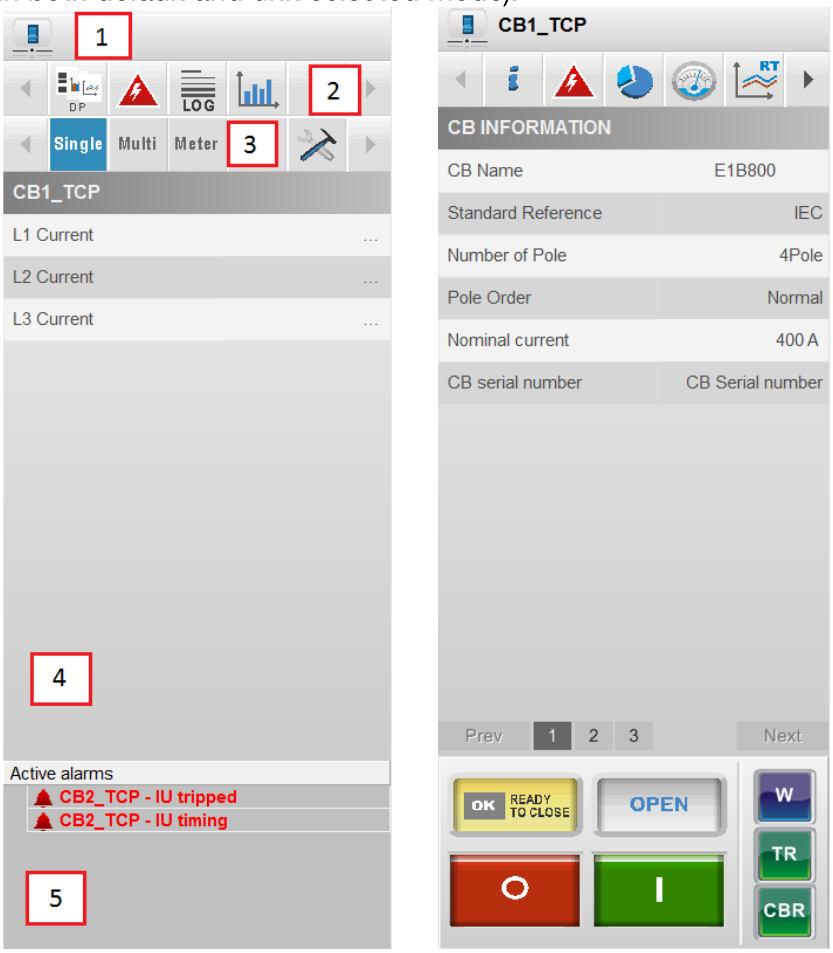
The user interface of the plant monitoring section is shown in the following screenshot:



Area	*Description*
1	Menu bar
2	Toolbar
3	Panel board section with detailed information about plant and devices. The content will change depending on whether a device is selected or not.
4	Plant view: this area will show the grid view or the Synoptic diagram (if created) of all the devices configured in the previous steps. Devices could be selected to show detailed information in the panel board.

Panelboard user interface

The panelboard section can be used to interact with the plant and to monitor the devices, the information shown will be different depending on the selection status of the devices in the plant area. The panel board screenshot is shown in the following screenshot (in both default and unit selected mode):



Area	*Description*
1	Device identification label: it shows the name of the selected device (empty if no device is selected).
2	First level icon toolbar: it gives access to information/configuration screens to be shown in the information/configuration area or pop up in a separate windows. The numbers and the type of icons in this area depend on the selected device. If no device is selected it gives access to the different section available for the default panel board.
3	Second level icon toolbar: it gives accesses to a sub set of information /configuration screens. Not always shown depending on the first level icons selected.
4	Information/configuration section.
5	Command/Alarm section.

Default view Panel board: navigation

The default view of the panel board is the view that is shown when no device is selected in the plant area.
The first level of icons allow the user to choose the section to show.

Icon	*Description*
	Alarm manager
	Log event manager
	Report manager

The second level of icons allow the user to switch between 4 different views and to configure the content.

Icon	*Description*
	Single device view: it shows up to 12 electrical quantities of one device. (user configurable)
	Multiple device view: it shows the sum of currents, power and energies of up to three devices (user configurable)
	Meter view: it shows the analog meter for three electrical quantities of one device (user configurable)
	Trend view**:** it shows the real time trend for three electrical quantities of one device (user configurable)
	Setting: a window will pop-up to allow the user to configure the default views.

LIMITATIONS OF WARRANTIES AND LIABILITY

- There are no agreements, understandings, statements of warranty, express or implied, including warranties of merchantability or fitness for a particular purpose, outside of those specifically prescribed by an existing contract between the parties. This type of contract establishes any obligation of the seller. The content of this document will not become part of or modify any prior or existing agreement, commitment or relationship.
- The information, recommendations, descriptions and safety notations in this document are based on ABB. This information should not be considered inclusive or covering all the possible cases.

ABB S.p.A
ABB SACE Division
Via Baioni, 35
24123 Bergamo Italy
Tel.: +39 035 395.111 - Telefax: +39 035 395.306-433

http://www.abb.com