merbon

SCADA

User guide - simple

Contents

06/2020 This document is current for Merbon SCADA installer 1.6.6.

1 Introduction

This user guide is a brief overview of Merbon SCADA functions. In several steps it describes the basic functionality for new users who intend to operate the system. Therefore this document is focused mainly on orientation in the environment and on basic user settings. The authors believe that the manual will be a useful guide for the first steps in the Merbon SCADA software.

1.1 Merbon SCADA

Merbon SCADA is used as a networked supervisory software using data communication networks as well as local communication buses. The system uses state-of-the-art technologies and communication standards, but also incorporates many proven standard technologies. The system modularity makes possible to create supervisory systems in different scales, from the simplest process visualisations to large integrated systems. The impact is put on high reliability, fast engineering and simple setup even for inexperienced users.

1.1.1 What is Merbon SCADA designed for

The SCADA software provides visualisation and easy control of data from different technologies (room sensors, heating controllers, operation and staus indicators, etc.).

Merbon SCADA displays these data as technology schemas, where real-time values of all peripherals and important variables can be monitored, and records the data in a history database. The history data provide trend displays of values such as temperatures, which helps to diagnose problems and optimize the system (fine tuning). This is done by setting of critical parameters, which maximizes sensitivity to alarms whike maintaining comfort conditions. It is also possible to control aggregates and plants from the graphics, change setpoints, set time schedules etc., according to the user-defined graphic pages and populating the pages with technology values and parameters. A very important function is also alarm messaging, optionally using alarm pop-up windows and voice messages over the sound card of the PC.

2 Login and logout

Merbon SCADA is accessed using a web browser. Enter the URL of Merbon SCADA server into the browser address bar. This page displays the login screen:
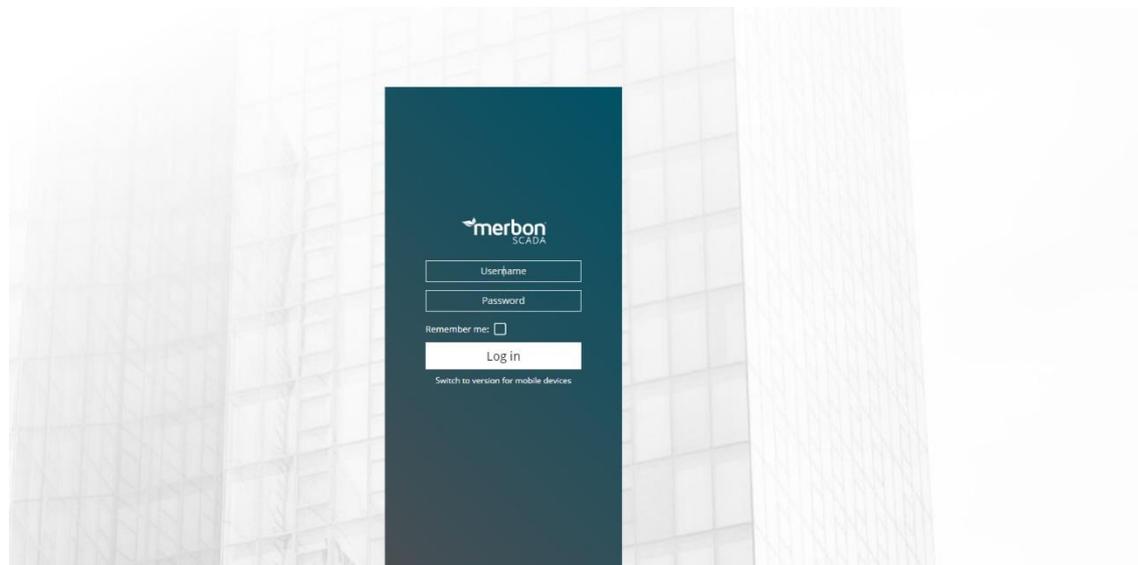

Fig.: Merbon SCADA Login

Enter the user name and password and click the *Login* button. User name and password are defined by system administrators, who are mostly engineers of the supplier. The functionality described below may be limited for particular user based on their user rights.

„*Permanent login*" saves the login data for the current browser instance (which is the opened tab or window).

After successfull login, the main screen is displayed:

Fig.: Main screen

To log out, click the logout icon in the upper right corner ⏏ .

3 Projects

After the first login, select a project. Open the list of available projects by clicking the list icon ≡ in the upper left corner . If there are more projects in the list, filter can be applied.

Fig. Filter

The filter searches according to project names. Another click opens the selected project. The project opens as a new tab in the upper bar. If there are more opened projects at the same time, they can be switched between using tabs. Close a project by clicking the cross icon next to the project name.
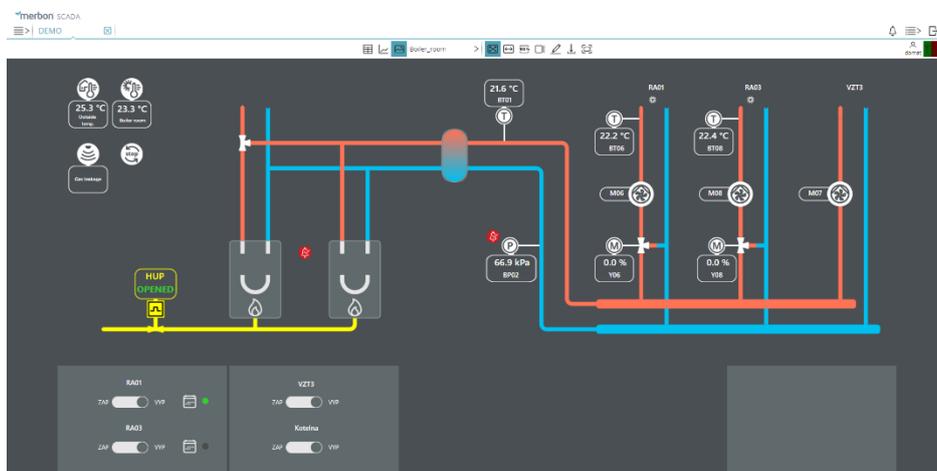
3.1   Selection of display

Fig. Selection of display

According to the user rights, it may be possible to display Table view, ▦ , Charts 〜 or Schemas 🖼 for a project. The active display has a light blue background.

06/2020 This document is current for Merbon SCADA installer 1.6.6.

3.2   Schemas

A project contains one or more technology schemas. Select a schema from the list of schemas of a project:
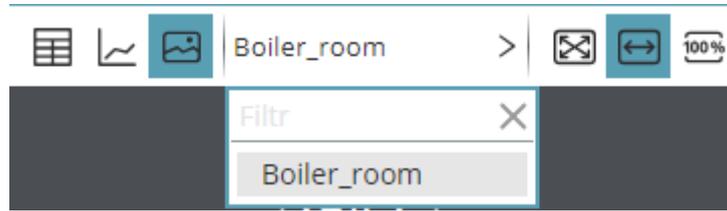

Fig. List of schemas

Based on how the schemas have been engineered, it may be possible to jump between schemas directly using reference buttons.

Schemas may be displayed in three modes: Schema size is adapted to the browser window size ⊠, Schema fits to window width ↔, or Schema displays in its original size 100%. The active option is undercoloured.

The value display fields may be tagged by holding the CTRL key and clicking the fields, or just by clicking a field and ticking the checkbox. The tagged fields are marked by a black dashed line, see below.
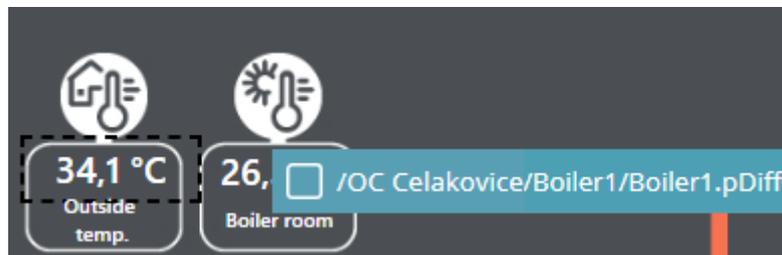

Fig. Selected data point

To unselect all fields, click the ⬚⋮ button in the upper tab bar. Individual fields can also be unmarked in the same way as they were marked.

By clicking the ✎ symbol in the upper bar, a text note in a schema can be entered. The note is then displayed as 🛈› and it can be unfolded by clicking. It can be moved to another place in the schema by dragging and dropping.

3.3   Charts

After values are selected in the schemas (see previous part), they can be displayed in a time-based chart. The recorded values are retrieved from trend files or from a database. Click the ⟋⟍ button to display the trend chart:
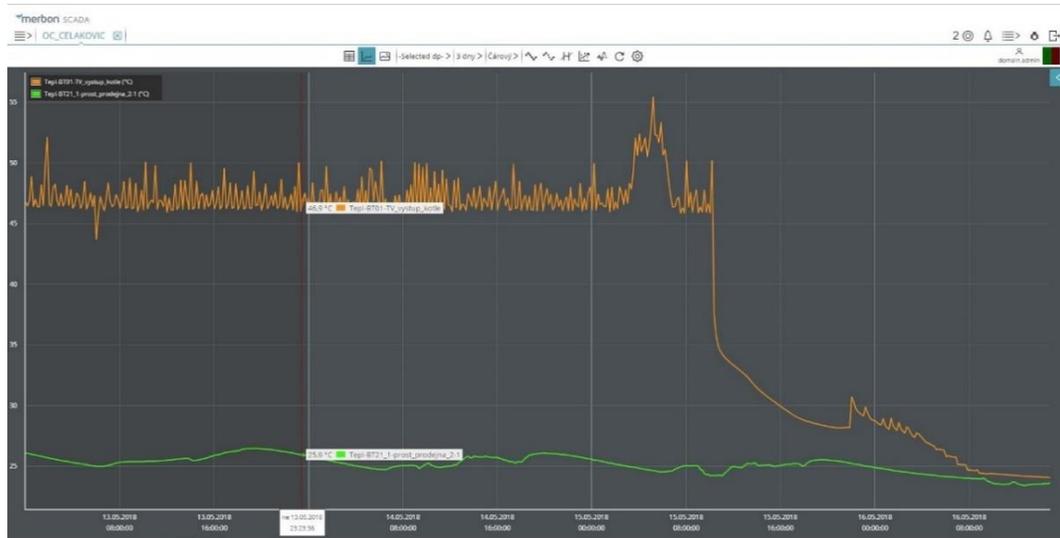

Fig. Chart

The -Selected dp- > symbol indicates that the tagged data points are displayed in the trend. Apart from this, a predefined template can be selected from the list of templates. The templates must be edited at project engineering. The time span to display is selected by clicking the 1 minuta > button. Select the required chart type by clicking the Čárový > button.

If the measured values have to be displayed rather than the connecting lines only, click the ⋀⋁ symbol. To cut the loaded data from the server to the current view only, click ˑH˙ . If there are data with different ranges displayed in the same chart, it may be useful to set the optimized display ⟋, which recalculates the measured values and correlations among the variables can be found better. If the trend view shall be updated in real time, click the ⋀⋁˙˙ symbol and the trend will be displayed as an oscilloscope view. The symbols shown above are active when displayed as undercoloured.

A one-time update of trend values can be invoked by the ↻ button. Use the ⚙ button for extended trend plot settings.

In a plotted trend view, all data points can be hidden and enabled. Click the data point description to hide / display its trend line.

Fig. Data point descriptions

Click the ❮ symbol in the upper right corner of the trend to display the extended functions menu.

Set different data descriptions by clicking the buttons ⯗ ⯗ ⯗ ⯗ *No legend, Short legend, Complete legend* and *Hide description*. The active setting is undercolored. podbarveno.

To zoom or unzoom the view, use buttons 🔍 and 🔍. The required area also can be zoomed by dragging the mouse cursor over the area of interest. Click the ‹ › buttons to move the X (time) axis.

4   System

System informations are displayed in the upper right corner of the SCADA window.

Fig. System information

The logged-in user name is displayed below the person icon: domain.admin. The communication indicator shows data communicated to/from the Merbon SCADA server. The values should be up-to-date, otherwise the symbol goes active. A communication error between a particular device and process station (PLC data are of

bad quality, but are communicated to SCADA) is indicated by orange arrows with exclamation mark in the schema: -11,90 °C ⚠.

If the communication dropout lasts for longer than about 10 minutes, check the connectivity to PLC with your network administrator.

The ◎ icon gives number of tagged data points across all schemas. Click it to list all tagged datapoints.

The alarm symbol 🔔 gives number of active unacknowledged alarms. Click it to list all active unacknowledged alarms.

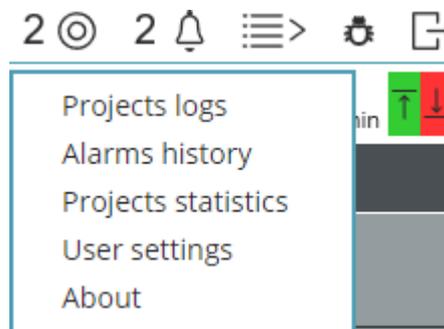The basic user settings can be changed in the Settings menu: ☰
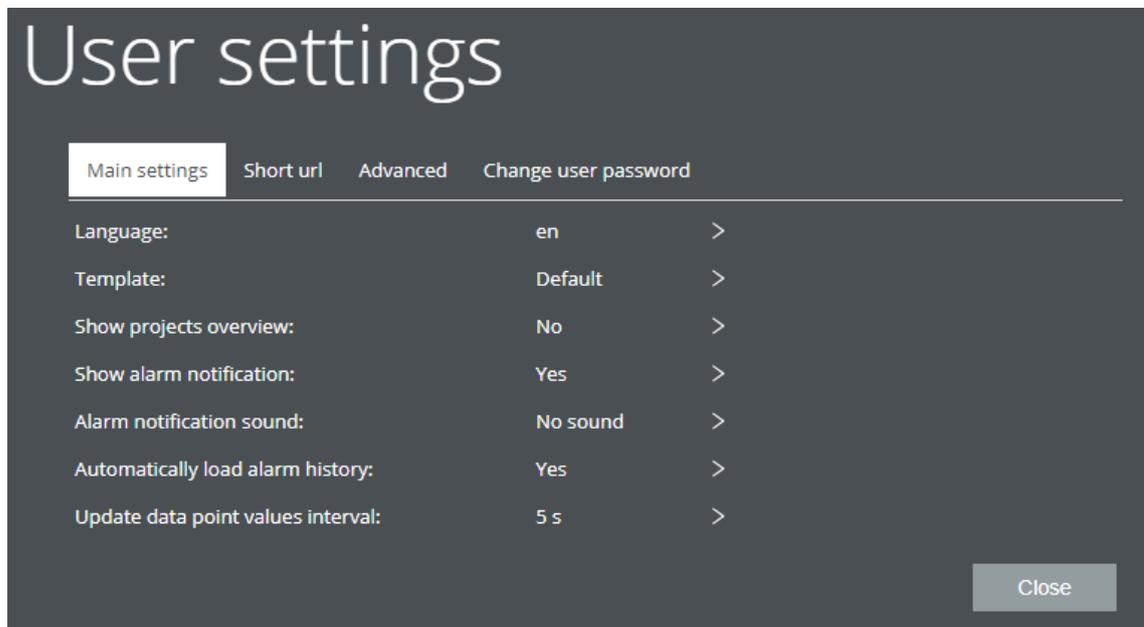

Fig.: Menu

Fig. User settings

It is not necessary to change any settings in default settings here. These function are optional and users are fully responsible for changes they make here.