

mySCADA Mobile Android version



User's Manual version July 2014

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Thank you for using mySCADA Mobile on your Android device. mySCADA is a full featured HMI/SCADA system with advanced options such as vector graphics views, advanced trending, complex alarming, data-logging and user access options.

General Information

Purpose of This Manual

This manual is a reference guide for **mySCADA Mobile for Android** which:

- explains how to register your device
- operate mySCADA Application

Who Should Use This Manual

This manual is intended for end user. If you need to create project for your device please read “Getting Started” manual for myPROJECT Designer.

Important Information

The examples and diagrams in this manual are included solely for illustrative purposes. In no event will mySCADA technologies. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment. Reproduction of the contents of this manual, in whole or in part, without written permission of mySCADA Technologies, is prohibited. mySCADA Technologies reserves the right to change this manual at any time without notification.

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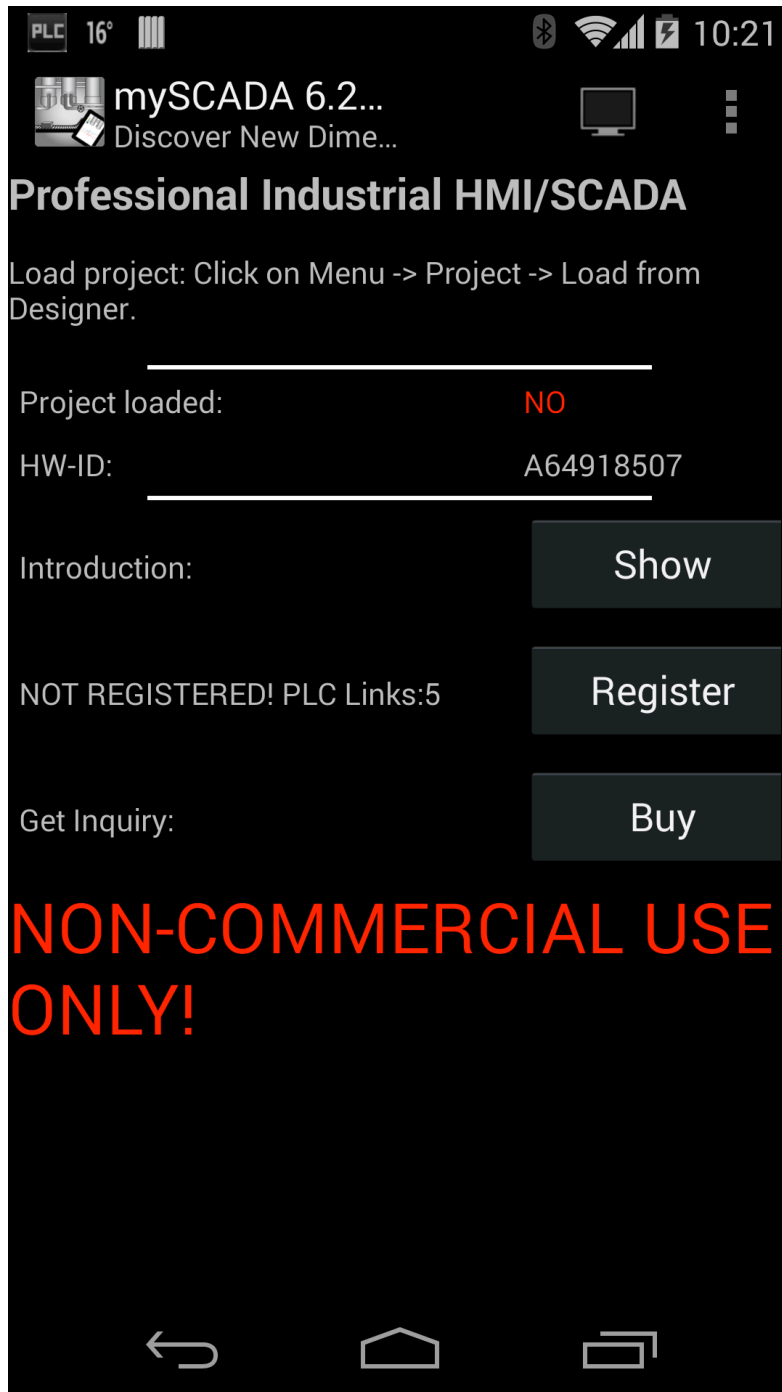
Getting help

For technical support, please, go to the www.myscada.org section SUPPORT. Here you can submit a ticket.

You can also use e-mail support@myscada.org to get support. If using e-mail, please, write product name into subject. Also provide as much detail as possible so we can best assist you.

First Screen – Help

When is mySCADA loaded, you are navigated to the main screen called help.



On this page, you can see basic information about your application. To get started, you can look at the Introduction by pressing **Show**. You can purchase a license by pressing a **Buy** button, or if you have your license code, you can register application by pressing **Register** button.

Free Usage

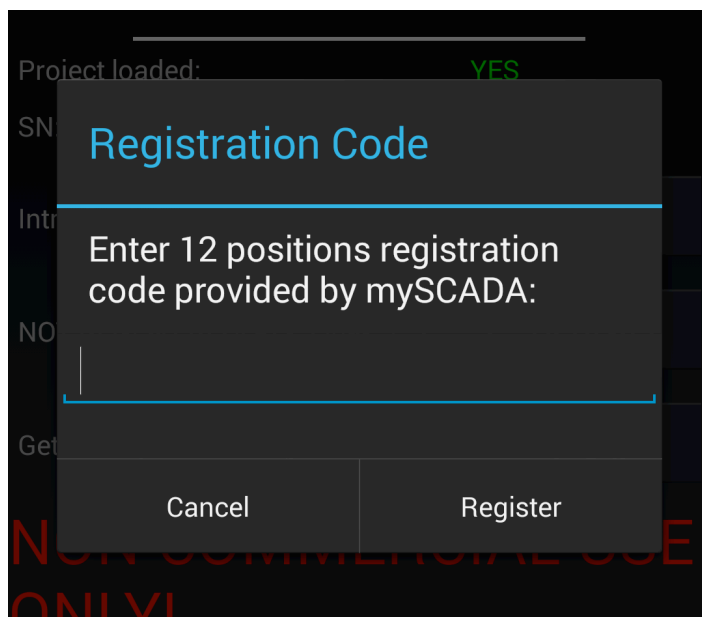
Application is FREE for non-commercial use. In this version you can freely use this application for home use. Application is limited to 5 PLC Links. If you need more, you must purchase a commercial license at our web page www.myscada.org.

PLC-Link: Each view which is reads data from PLC takes one link. If you connect your view with two PLCs, it will take two links. This way if you have one PLC in your project, you can create up to 5 views all communicating with your PLC.

Commercial Usage – Registration

To use mySCADA on commercial base, you must purchase a license. To purchase a license, either buy the license online from our web pages www.myscada.org, or contact our sales department on email sales@myscada.org.

When buying a license, you will need an HW-ID of your device. HW-ID is unique number identifying your device. This number is shown on the main screen under HW-ID. Based on this HW-ID, your license is generated. Once you have a license key, you can register your device by pressing register button. New popup dialog is presented; here you should enter your license key.

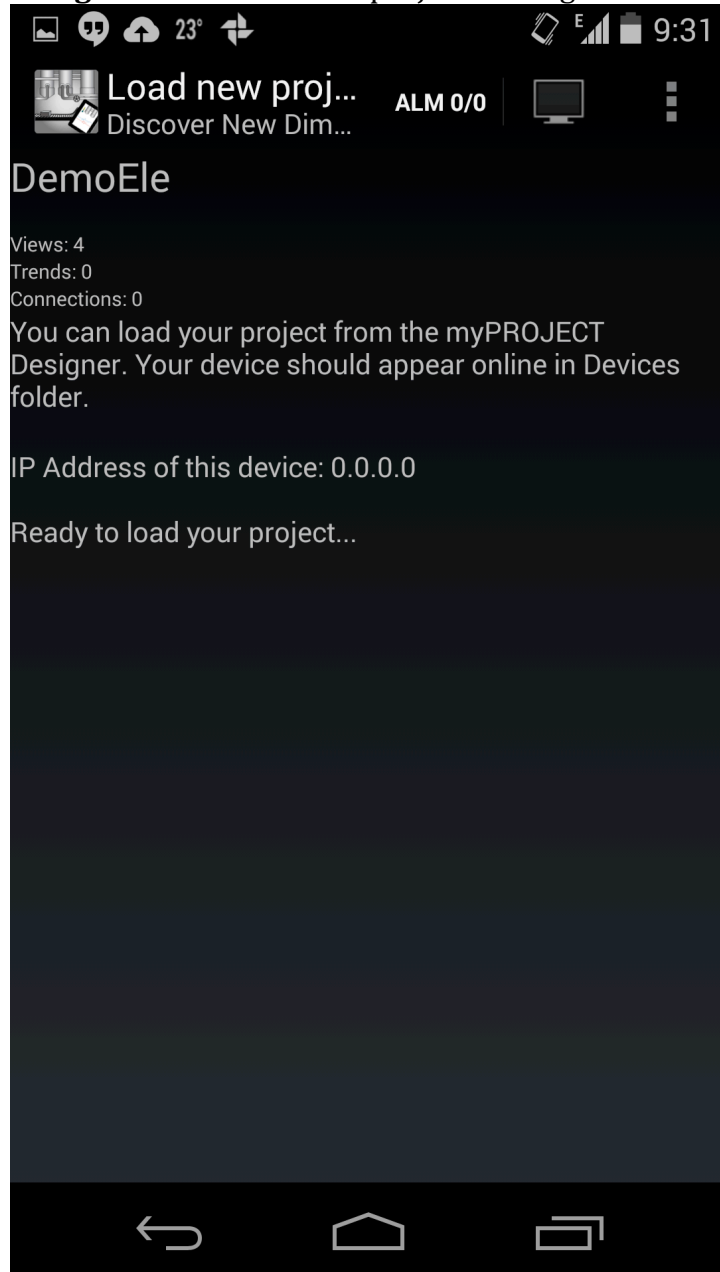


Once the license key is entered, your application should change to Registered state with corresponding PLC-Links shown.

Loading Project

To be able to use mySCADA Mobile application, you must load your project into the device. If you do not have your project yet, you should download a myPROJECT Designer from our [www](#) pages. Once you create a project in myPROJECT Designer, you can download it to the device:

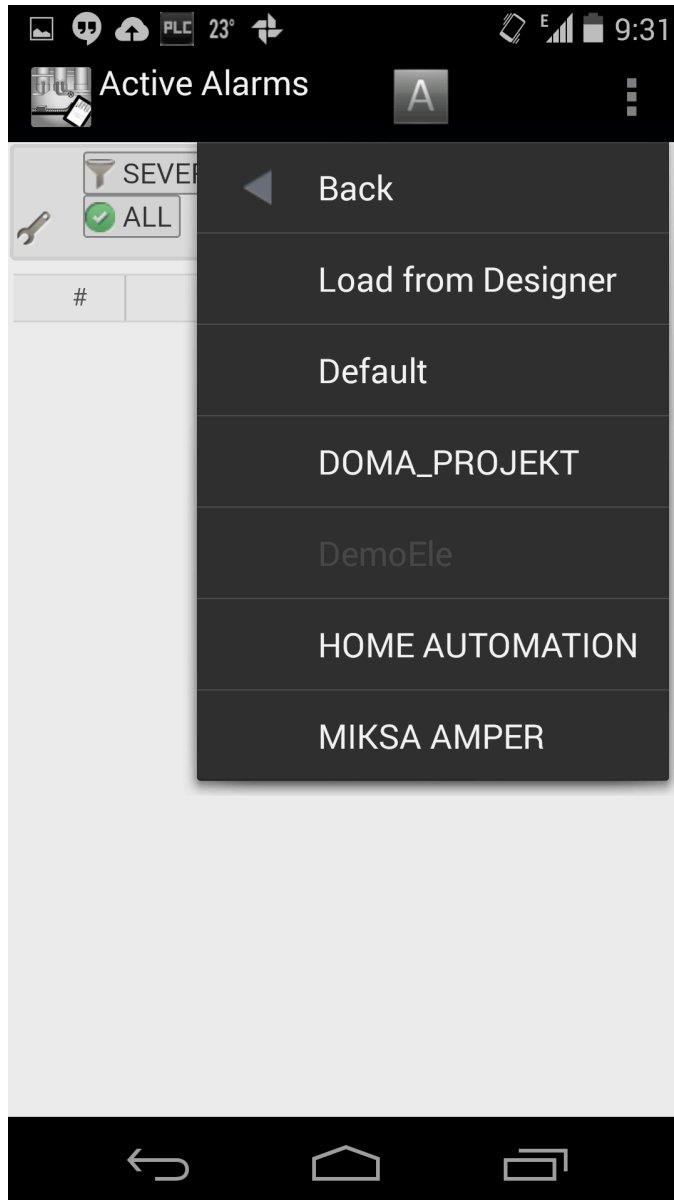
Click on main application menu in upper right corner, select **Project** and then **Download from Designer**. New screen for project loading is shown:



When this screen is visible, you can download prepared project to your device. Once the project is in device, it is automatically loaded and you can start to use it right away.

Switching Projects

Your device can hold multiple projects. If you download a new project, it is automatically saved under its name. To switch among projects go to main menu and click on Project, list of available projects is shown. Select the desired project.

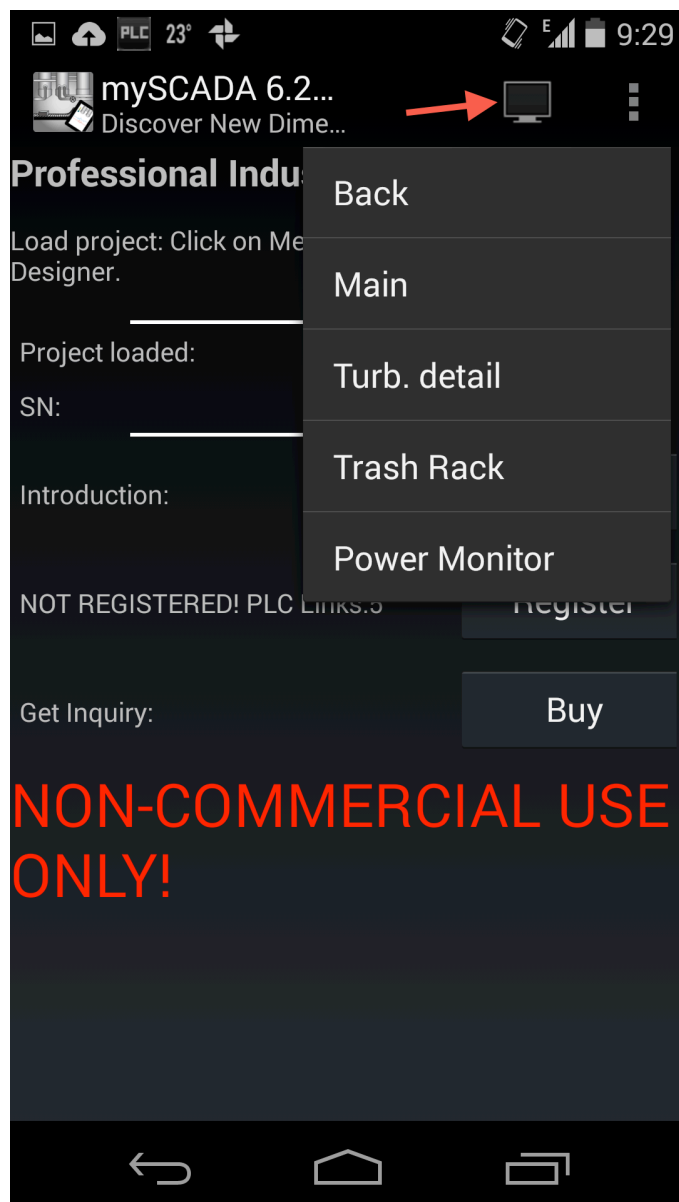


Showing Views

The possibilities are virtually endless when choosing how you would like to represent the overall design of your system. Simple page elements are incorporated into the complete design and depending on the amount of effort put into the fabrication of the representation, a very detailed system imitation can be achieved.

Such detailed visualization screens can be easily created by a powerful software tool **myPROJECT Designer** which is available for downloading at www.myscada.org free of charge.

Views represent your controlled technology. Pressing the View icon shows all available views. Click on a desired view to show it.



View Options:

In settings you can specify if you want to show your views in regular view or in full screen view:

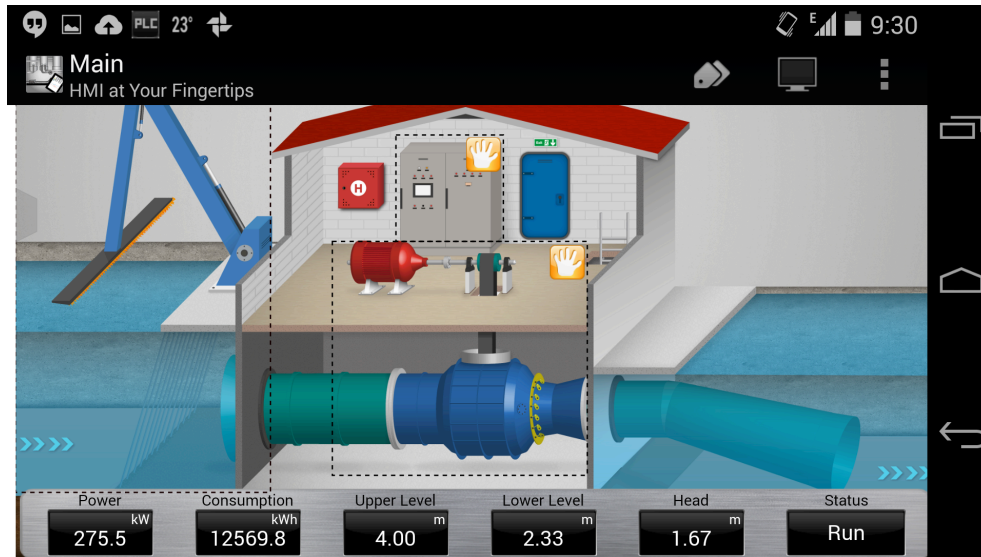


Figure 1 Regular view with controls

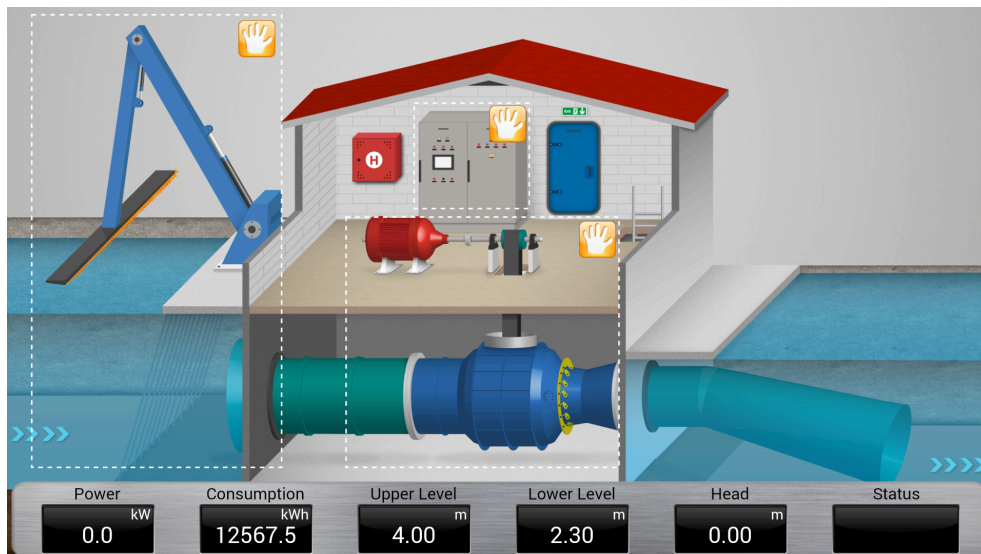


Figure 2 Fullscreen mode, your view is shown over whole screen

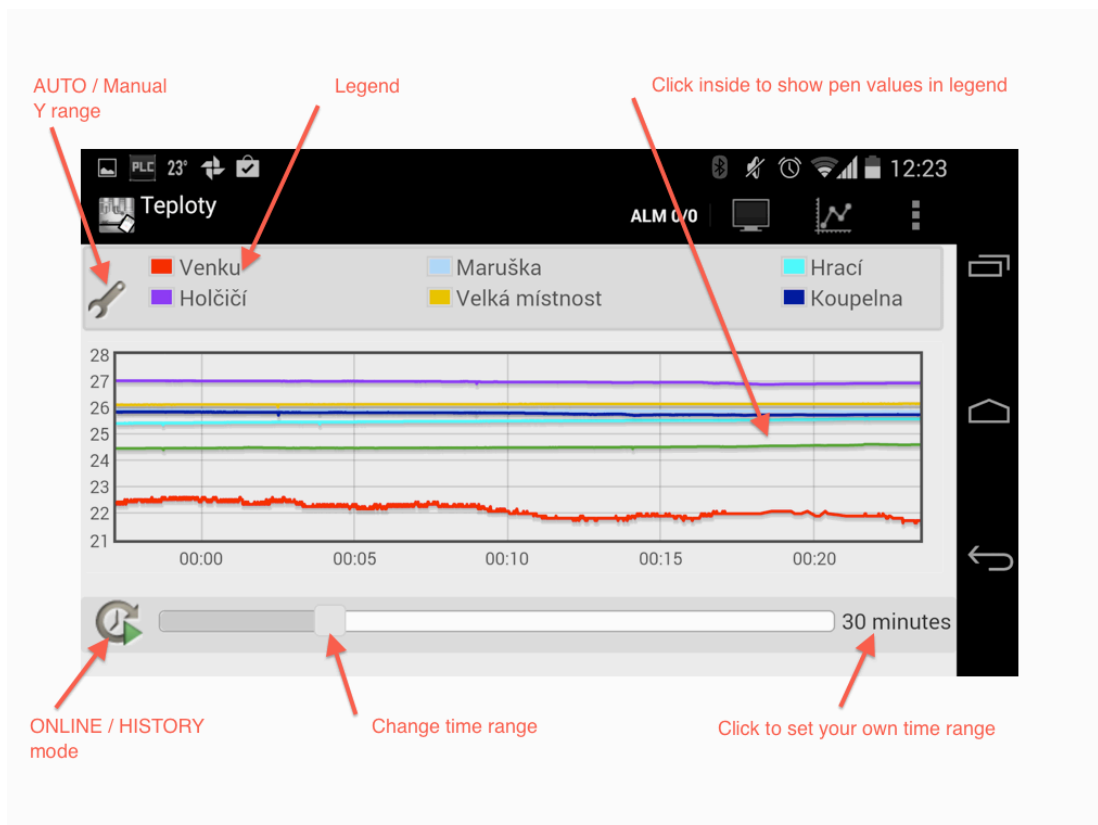
When in full screen mode, use **long-press** to show toolbars and menu:



Figure 3 Use long press to show toolbars in full screen mode.

Advanced Trends

Visualization of trends can be vital when monitoring your system. Trends allow tag values to depict certain patterns that may be dangerous. For trend correct operation, the recording of current and previous values is needed. The displayed data are loaded from the inner memory of your device. You can easily present your online or historical data in the form of a time trend. All defined trends can be found in menu Trends.



There are two possible ways how to visualize trends:

1. **Online** - data is shown starting from the current value
2. **History** - data is shown from a certain entered date

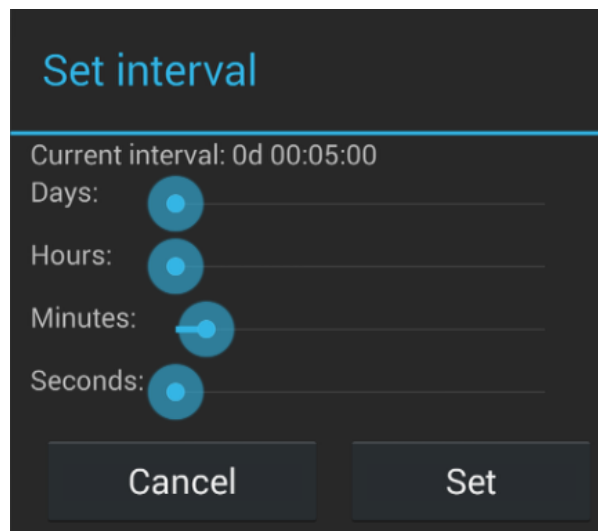
Online Mode:

Time range showed in a trend can be easily changed in the bar bellow the actual graph. Drag the slider to change the time range shown (from 1 minute up to 1 year)



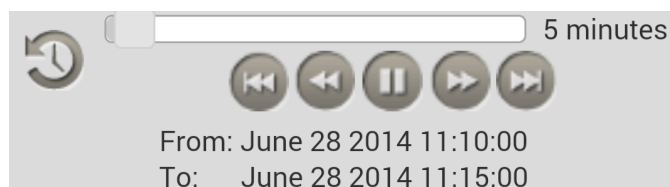
Setting custom time interval:

When you click on a time interval on the right, you will be presented with a dialog enabling you to set up custom time interval for viewing.



History Mode:

Switch to history mode is done by clicking on the timer icon in the lower left corner.



In this mode, you can specify a date range in which data will be shown - click on a date to set:

Start time

FROM

TO

Set date

Set time

10

09

11

:

10

AM

12

11

PM

OK

Reset

Cancel



By clicking on the left and right arrows , it is possible to change the date in accordance with already set Time range. Clicking on a left most arrow will show first records available, clicking on a right most icon will show latest records available. Again by clicking on a time interval on the right, you will be presented with a dialog enabling you to set up custom time interval for viewing.

Info: Maximum of 10 000 values can be shown in one trend at one time. If there is more than 10 000 values in selected Time range, the system will ask you to reduce the actual Time range.

Manual Y Axis Range

In regular operation, Y axis range is set to autoscale. You can set limits of Y axis range by enabling manual mode. To do so, click on a wrench icon located at top left corner, you will be presented with following dialog:

Y axis range

Autoscale: ☐ OFF

Min:

Max:

Alarms

A crucial part of monitoring your system is being notified immediately when something unusual occurs. A tag reaching an undesired status will trigger an alarm. The information regarding this dangerous and/or important status will be delivered immediately to the device for timely and appropriate actions to take place. An alarm can signal that a device or process has ceased operating within acceptable, predefined limits, or it can indicate breakdown, wear, or a process malfunction. Often, it is also important to have a record of alarms and whether they have been acknowledged. You can also set an acousting warning indicating that the alarm reached its severity level.

You have global overview of number of active/unacknowledged alarms always visible in a top bar of your application:



Online alarms

The alarm window allows the operator to perform a complete management of the technology alarms. The window allows you to visualize the alarms present in the technology or in a restricted area of the technology. An alarm window can display all the alarms of a technology or only a set of them, arranged by areas defined by the programmer. If necessary, the operator can select the desired area, by clicking on the filter button and filling the area name.

#	MESSAGE	STATUS	SEV	ACT TIME
1	Down Empty	ACT	0	June 28 2014 11:05:39 919
2	Down Low	ACT	0	June 28 2014 11:05:39 919

Setting View Options

You can control what columns will be visible in this window. To change settings, press the wrench tool icon in a top left corner. You will be presented with dialog enabling you to change the visibility of every column:

#	☒
MESSAGE	☒
STATUS	☒
SEV	☒
AREA	☐
DEVICE	☐
ACT TIME	☒
DEACT TIME	☒
ACK TIME	☒
VAL	☒
Cancel	
OK	

Alarm Acknowledgement

An operator can acknowledge HMI alarms displayed in an alarm window. Acknowledging an alarm does not correct the condition causing the alarm, but indicates that the operator is aware of the alarm.

To acknowledge concrete alarm/alarms, select it by clicking on desired row and press



button. To acknowledge all alarms press the



button.

Sorting and filtering at run time

By default, alarm information in an alarm summary is sorted first by date and time, then by severity, then by area name. This means that alarms are presented in chronological order: if two or more alarms have the same time and date, they are presented in order of severity. You can filter visible alarm by enabling severity or text filter. To do so, press these buttons:



History of alarms

mySCADA engine automatically logs your alarms into history. Every alarm action is logged with all relevant data such as current time (with precision to 1 millisecond). You can browse through alarm history in Alarm History Window. Aside of direct data browsing, you can also filter your data based on criteria.

Severity

- Alarms can range in severity from 0 (most severe) up to 4 byte unsigned integer value (least severe), to indicate different levels of importance. For example, a severity 10 alarm might warn that a tank is half full of liquid, while a severity 5 alarm indicates that the tank is about to overflow. Both alarms monitor the same tag but have different severity levels.
- When you set up alarm severity, you specify what the severity levels mean and what actions they will trigger. Severity determines the order in which alarms are displayed in an alarm banner.

Alarm Areas

The alarms can be grouped in different areas so that they can be displayed in the alarm window based on the area they belong to. This may be helpful to enable you to divide the alarms according to the different plant zones they come from.

Message

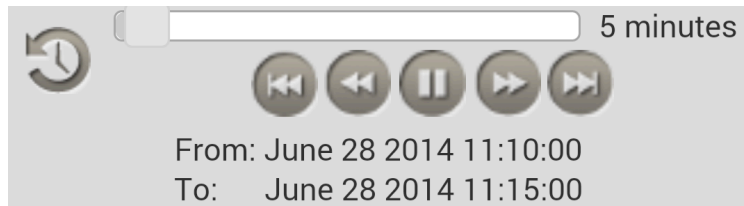
Alarm messages report information about alarms.

Device

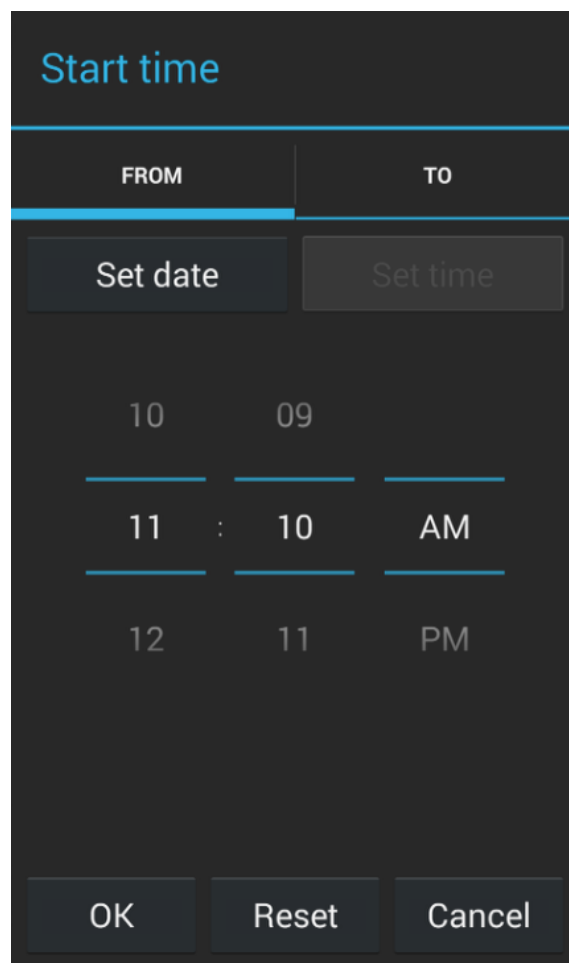
You can define multiple alarms for a single device. In live alarm view or during a browsing of alarm history, you can filter your data based on device value.

Changing date and time:

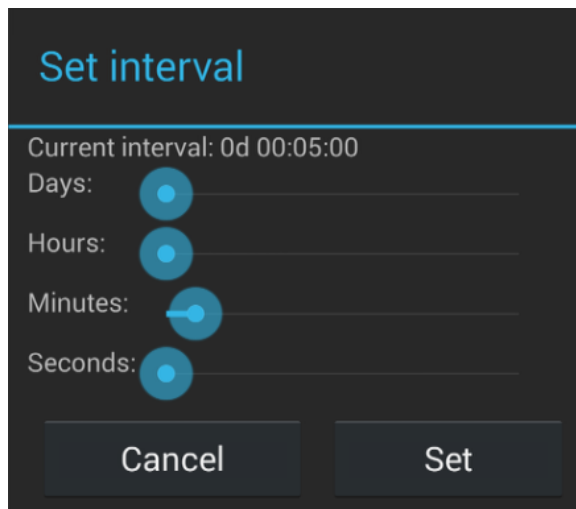
To change a date or interval of shown results, use a bottom time toolbar.



You can specify a date range in which data will be shown - click on a date to set:



By clicking on the left and right arrows , it is possible to change the date in accordance with already set Time range. Clicking on a left most arrow will show first records available, clicking on a right most icon will show latest records available. By clicking on a time interval on the right, you will be presented with a dialog enabling you to set up custom time interval for viewing.



Set interval

Current interval: 0d 00:05:00

Days:

Hours:

Minutes:

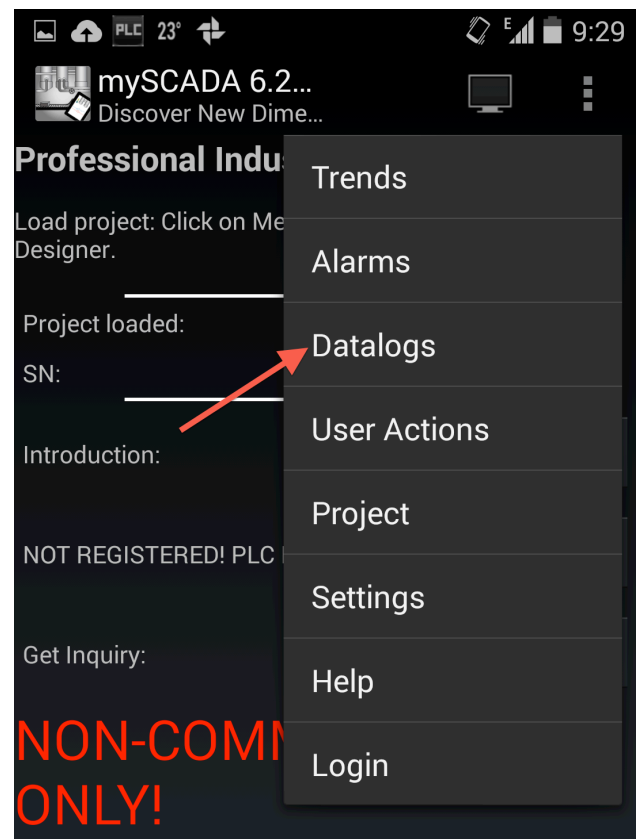
Seconds:

Info: Maximum number of shown rows is limited by a LIMIT button located at the top bar. You can change this value any time during viewing a data.

Data-Log Views

You can log eventually any data or information available in mySCADA. For user convenience and easy access the data are grouped into so called "Data Logs". You can think of data log as a collection of similar data. It can be for example a set of temperatures read each second from a PLC, a motor start up voltage and current logged each 100 milliseconds, run hours of machinery, operators' actions, or computed production statistics.

Each data log can have defined multiple Data-Log Views. Data-Logs are thus viewed in a tabular form represented by one or multiple Data-Log Views. Data-Log Views are accessible from the main menu by clicking on "Datalogs".





There are two possible ways how to operate Data-Log views:

1. **Online** - data is shown starting from the current value
2. **History** - data is shown from a certain entered date

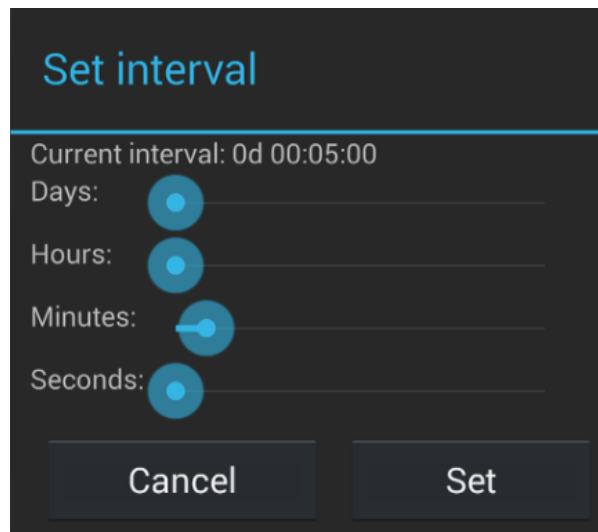
Online Mode:

Time range showed in a data-log can be easily changed in the bar bellow the actual graph. Drag the slider to change the time range shown (from 1 minute up to 1 year)



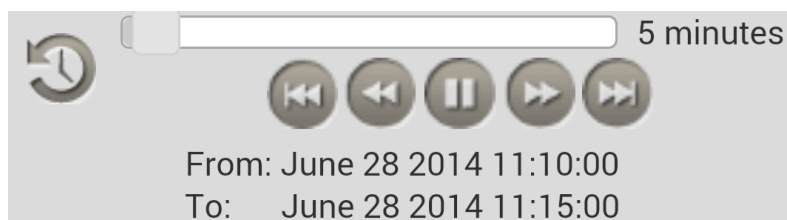
Setting custom time interval:

When you click on a time interval on the right, you will be presented with a dialog enabling you to set up custom time interval for viewing.



History Mode:

Switch to history mode is done by clicking on the timer icon in the lower left corner.



In this mode, you can specify a date range in which data will be shown - click on a date to set:

Start time

FROM

TO

Set date

Set time

10

09

11

:

10

AM

12

11

PM

OK

Reset

Cancel

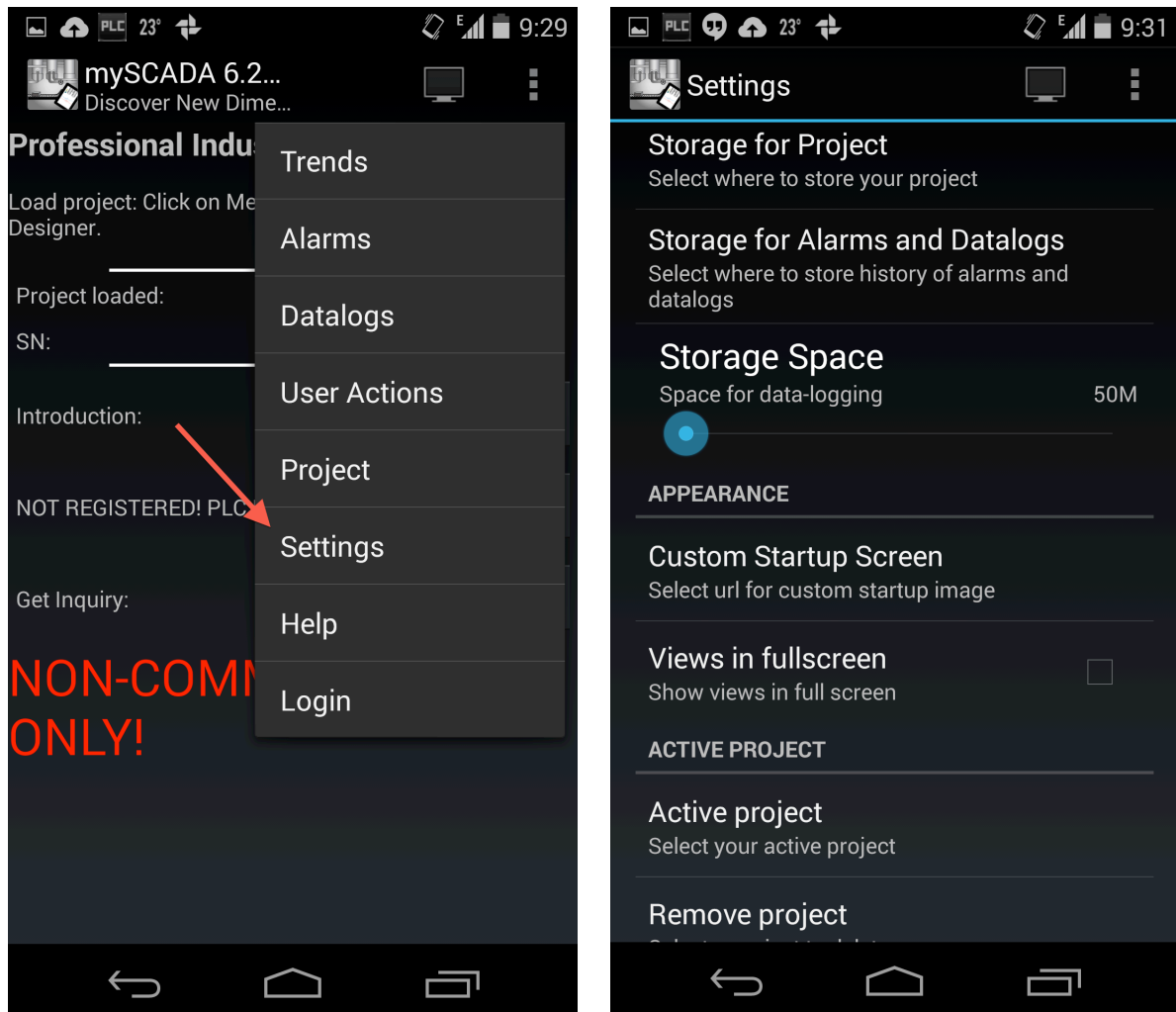


By clicking on the left and right arrows  , it is possible to change the date in accordance with already set Time range. Clicking on a left most arrow will show first records available, clicking on a right most icon will show latest records available. Again by clicking on a time interval on the right, you will be presented with a dialog enabling you to set up custom time interval for viewing.

Info: Maximum number of shown rows is limited by a LIMIT button located at the top bar. You can change this value any time during viewing a data.

Application Specific Settings

In this view, you can change behavior of data reading, logging, visual appearance and other. To access settings, go to main menu and press settings:



Available options:

COMMUNICATION AND DATALOGGING	
Run in background	In normal condition run in background is enabled. In this mode reading data from PLC is done in independent service which runs in background. This way, you can be notified of new Alarms and system can log all required data from PLCs. If you disable run in background, service for communication with PLCs is started when mySCADA App becomes visible and is ended when you hide the App or your device go to sleep. This mode is feasible if you need to save some battery time or you do not need data-logging and alarming.
Enable Alarming	If disabled, alarms will not be read and shown.
Log Alarms	Whether log history of alarms into database.

Log User Actions	When enabled, all user actions specified in your project will be logged into database.
Enable datalogging	If you disable this option, no historical data will be logged into database.
Remote Communication Server	By default, all communications in mySCADA App is done in device. This means runtime for communications with PLCs is embedded directly into the device. If you communicate with your PLC, your device is connected directly with this PLC. You can however used other mySCADA Device (such as mySCADA Desktop or mySCADA Box) to use it as communication gateway. This way, your android device is sending all communication requests to other mySCADA Device which is then communicating with your PLCs. Use runtime in your device: enter 127.0.0.1 Use other mySCADA device as communication gateway: enter IP address of this device
STORAGE	
Storage for Project	You can store your projects either in internal memory of your device, or on a SD card. Choose location.
Storage for Alarms and Datalogs	Choose where to store logged data such as alarms, data-logs, user events, etc. Options: internal device memory or SD card
Storage Space	You can define maximum storage space your logged data will occupy. Default settings is 50 Mbytes
APPEARANCE	
Custom Startup Screen	You can display custom image from network instead of default Help screen. This option is useful for rebranding of application. To use this option, enter url of your image on network.
Views in fullscreen	If enabled, your view will be shown over whole screen of your device. When in fullscreen mode, use long-press to show toolbars and menu.
ACTIVE PROJECT	
Active Project	If you have multiple projects loaded, you can switch among them using this option.
Remove Project	Remove loaded project from device