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SEIDEL GROUP

eDrive Configurator

User manual

Contents

Introduction

About eDrive Configurator

eDrive Configurator is CANopen tool developed by EMSISO and it is designed both for internal use and for external customers. It can be used with any CANopen compatible device but it is specially designed to use with EMSISO eDrive devices.

Compatible CAN Interface

eDrive Configurator is designed to work with EMSISO USB-CAN Interface and will not support any other CAN Interface due to its special features.

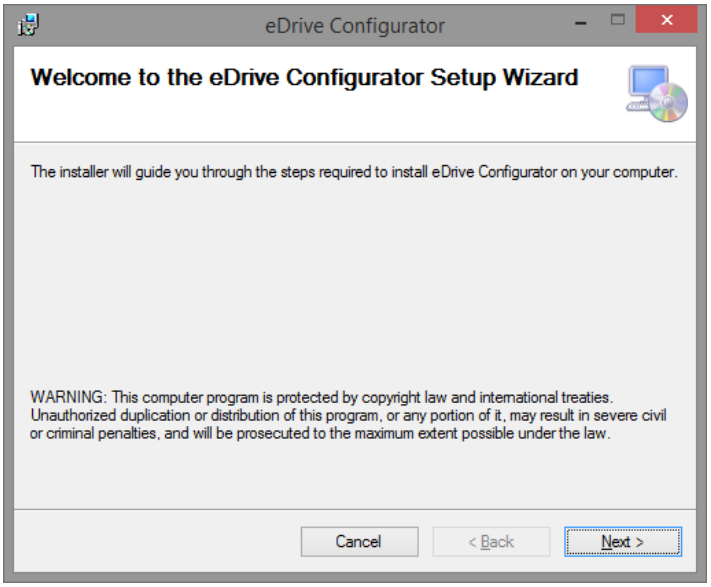
Requirements and installation

Requirements

- PC with Windows operating system XP or later
- Installed Microsoft .NET Framework version 4.0 or higher
- EMSISO USB-CAN Interface or any USB-RS232 Serial interface (not all features available)

Installation

1. Browse for eDrive_Configurator_Setup_V_x_x.msi on the given CD, USB memory stick or other
2. Run setup file and follow the instructions of the Install Shield Wizard.



3. After successful installation user can launch SW on desktop icon, Start menu or directly in the installation folder that user can chose through installation process (by default this is "C:\Program Files (x86)\EMSISO\eDrive Configurator\eDrive Configurator.exe")

Uninstall and repair

User can repair program or uninstall it completely in "*Control panel\Programs\Programs and Features*"

Quick start

This section will help user step by step connect eDrive Configurator software to EMSISO eDrive device and perform some basic actions.

1. **Connect device to PC**
   - For detailed description how to connect EMSISO eDrive see wiring diagrams provided by EMSISO

2. **Open port**
   - Select appropriate COM Port
   - Select Baud Rate 115200
   - Click ▶ to open port

3. **Import EDS file**
   - Open Network window (Main menu -> Network -> Nodes)
   - Click on EDS column for your Node-ID
   - Browse your PC for EDS file provided by EMSISO
   - Click “Update network description”

4. **Now you can try some basic actions**
   - **Read/Write object**
     - Open SDO Browser
     - Make sure you have suitable Node-ID selected
     - Select the required object from the list
     - Read or write it’s value

   - **Add object to Watch**
     - Right click object in the list
     - Click Add to watch
     - Set read period in Watch
     - Enable Watch (checkbox near period window)

   - **Add object to Graph (add some objects to Watch first)**
     - Select graph number in watch window for selected object
     - Click “Apply Charts”
     - Open Graph window
     - Check “Run” checkbox

   - **Save parameters to device memory**
     - Click Tools -> Save parameters

   - **Change NMT state or reset device**
     - Select Node-Id in NMT section
     - Click button with desired NMT action in NMT section

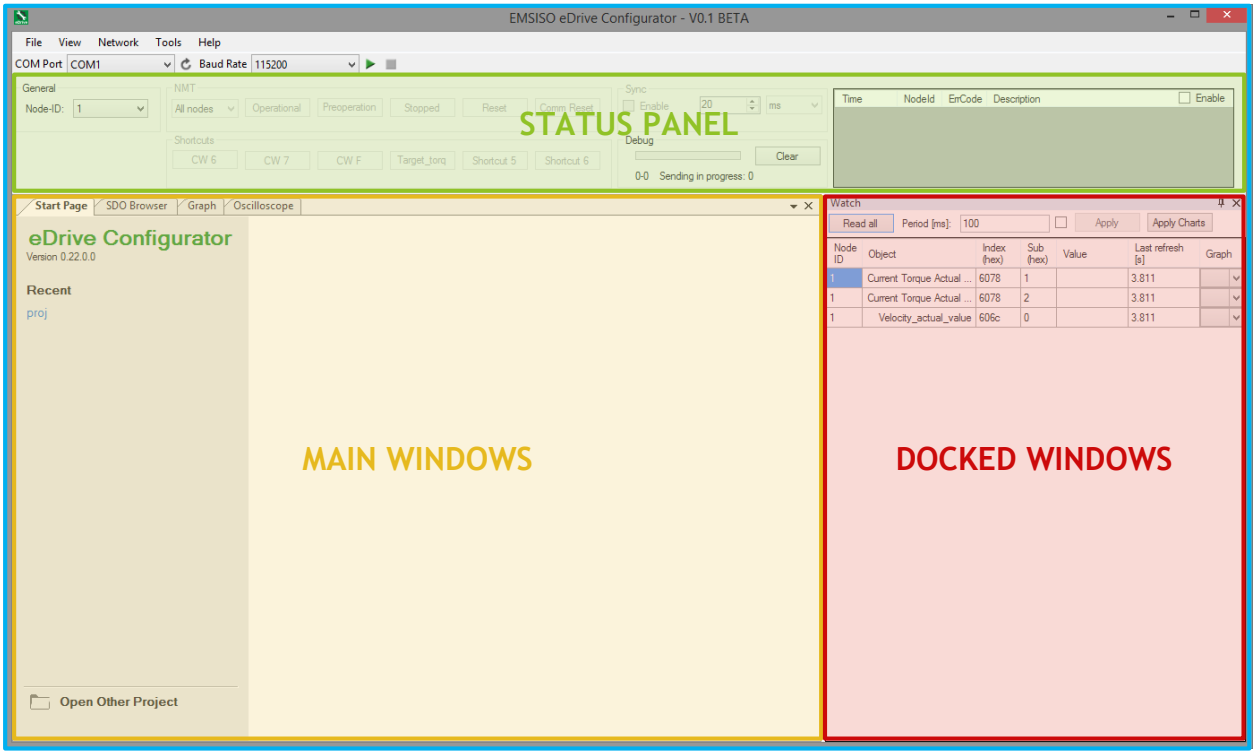
Software overview

eDrive Configurator is divided on main window with status panel and many feature windows.

All feature windows can be shown or hidden in View menu and they can be freely docked anywhere in main window or even floated separately.

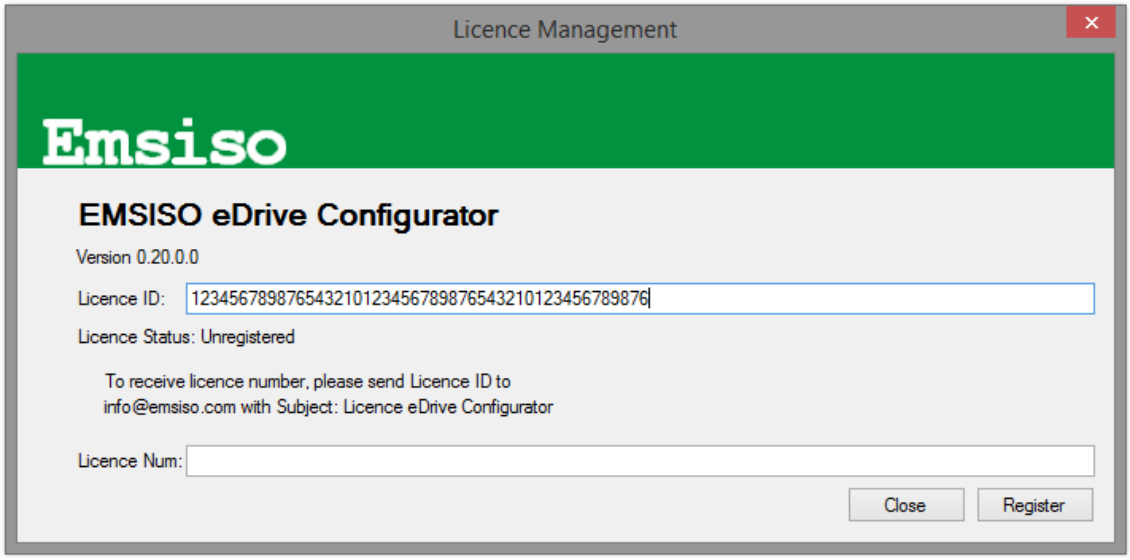
Software also includes some additional tools that that can be found in Tools menu.

All feature windows and tools are described in Features and tools chapter.

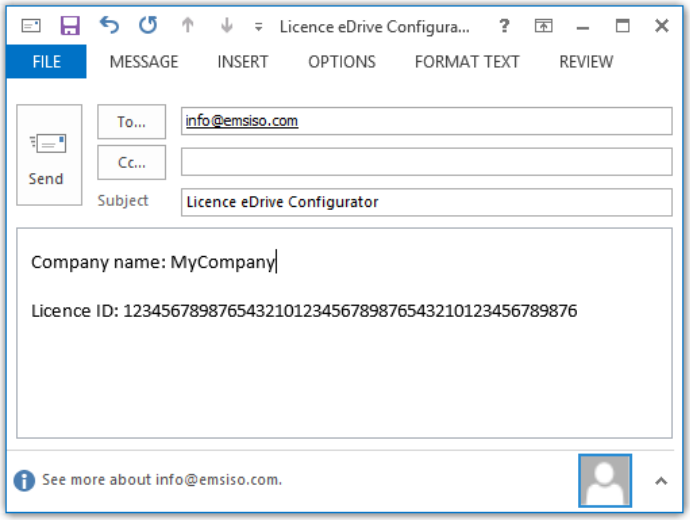


Licence management

This version of eDrive Configurator is locked to unique ID from your PC. When you start software for first time you will see Licence Management window.



To obtain Licence Number send your Licence ID to info@emsiso.com with subject Licence eDrive Configurator. After you receive Licence number copy it to Licence Num textbox and click Register.

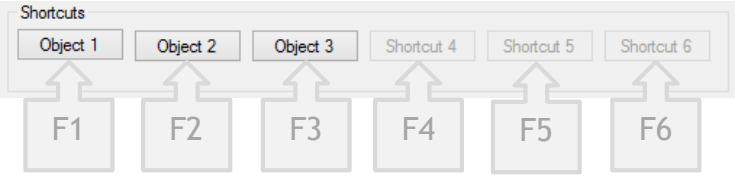


Features and tools

Shortcuts

Shortcut section is part of status panel and is designed to allow user easy and fast access to six predefined object writes. Shortcuts offers user six ready to be customized buttons.

Shortcuts are also triggered with keyboard hotkeys F1 to F6.

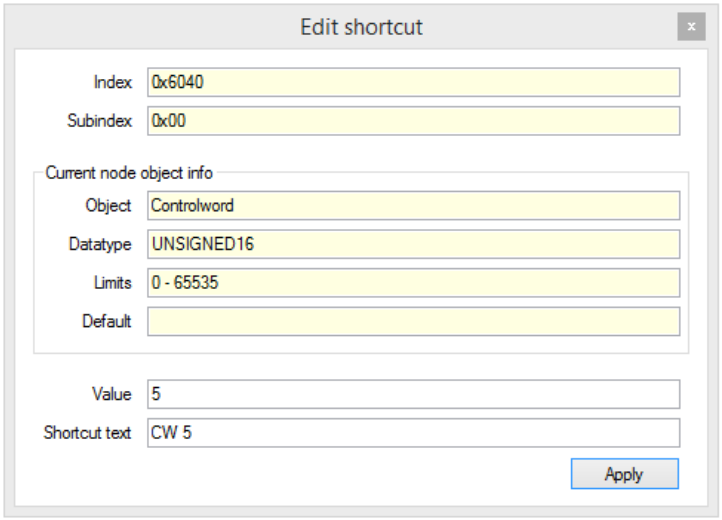


Add object to shortcut:

- Browse for object in SDO Browser
- Right click object
- Chose shortcut from Add to shortcut menu

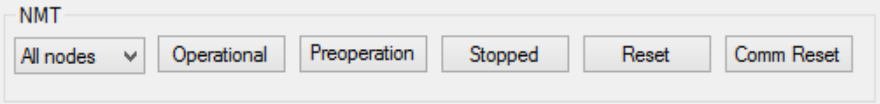
Edit shortcut:

- Right click shortcut you want to edit
- Click edit
- Edit Value and Shortcut text
- Click Apply



NMT

Network Management (NMT) section allow user to set NMT state of one or all devices in CAN network.



Sync

Sync section is used to produce Sync messages with EMSISO USB-CAN interface.

Note: This time is not guaranteed fixed!

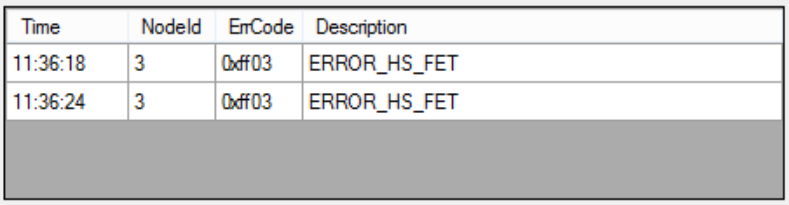
Note: To use this feature it is necessary to use EMSISO USB-CAN interface!

Error history

In Error history section are logged all emergency messages produced by eDrive devices with their Error Code and Description.

For detailed error description, see newest *eDrive_Error_Code_and_Error_Description* file.

Note: To use this feature it is necessary to use EMSISO USB-CAN interface!



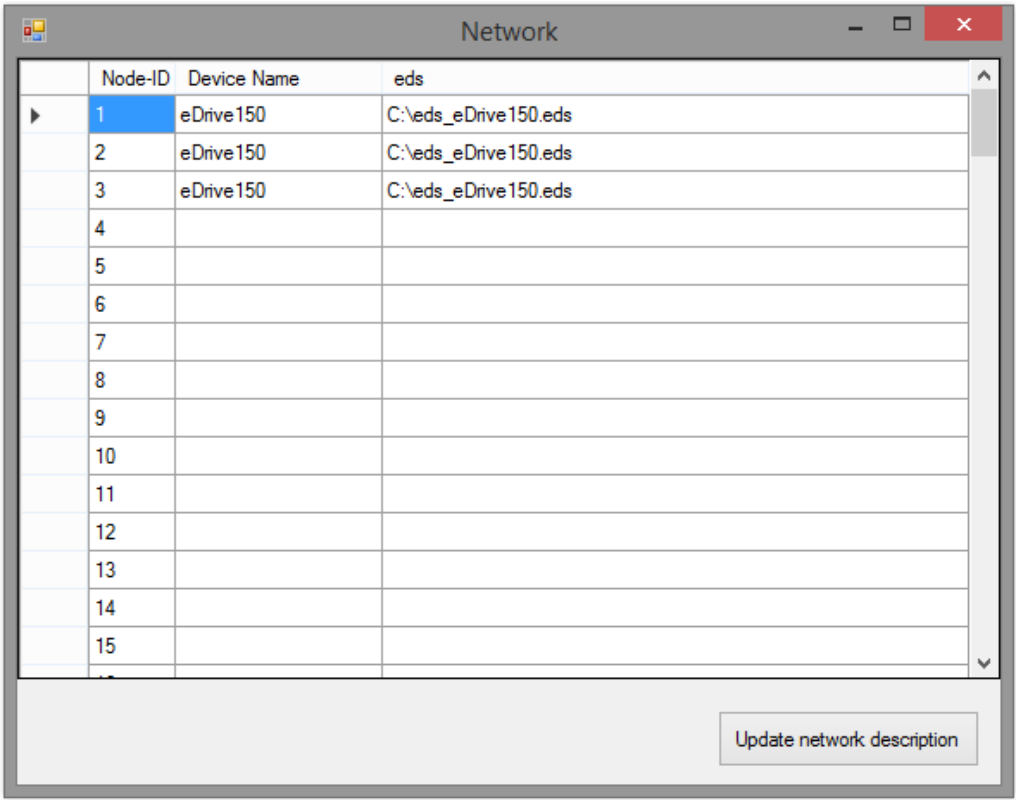
Time	NodeId	ErrCode	Description
11:36:18	3	0xff03	ERROR_HS_FET
11:36:24	3	0xff03	ERROR_HS_FET

Network

To open this window chose **Nodes** from **Network** menu

This window is used to import EDS files that suits your devices.

Electronic Data Sheet (EDS) is standard CANopen file that contains list of all objects supported by device with their parameters.

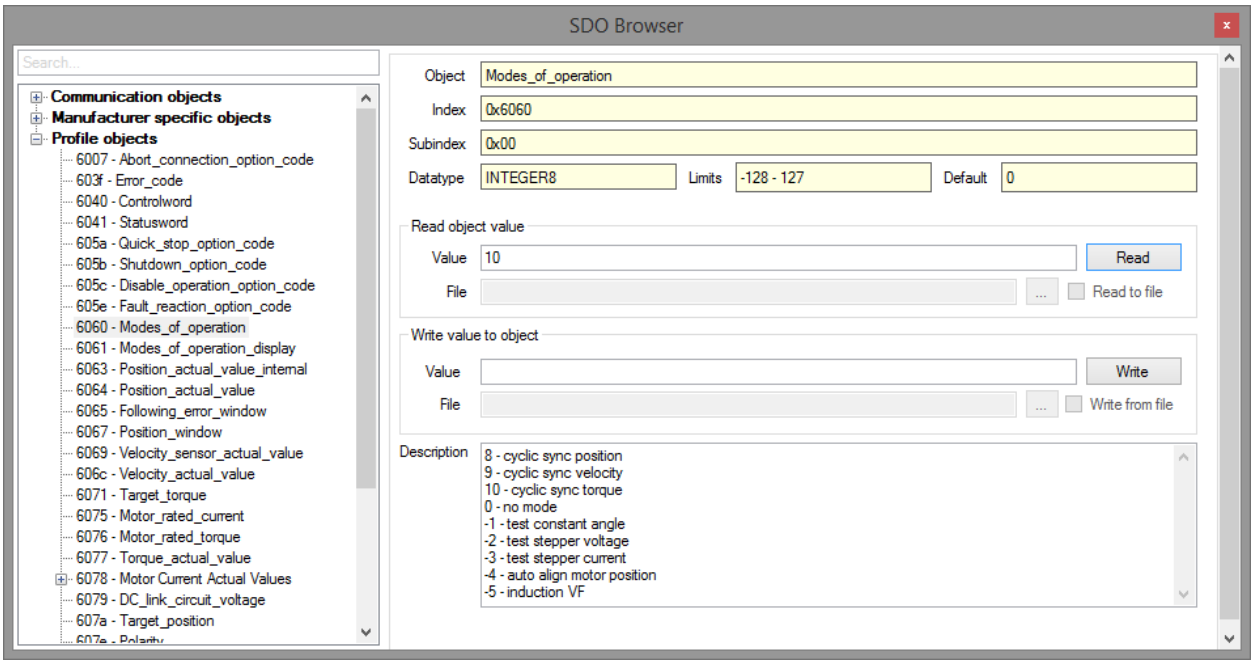


SDO Browser

To open this window chose **SDO Browser** from **View** menu

SDO Browser is used to Read or Write value to any object that is supported in device dictionary.

SDO Browser is also used to **Add objects to** Watch, Oscilloscope and Shortcuts.

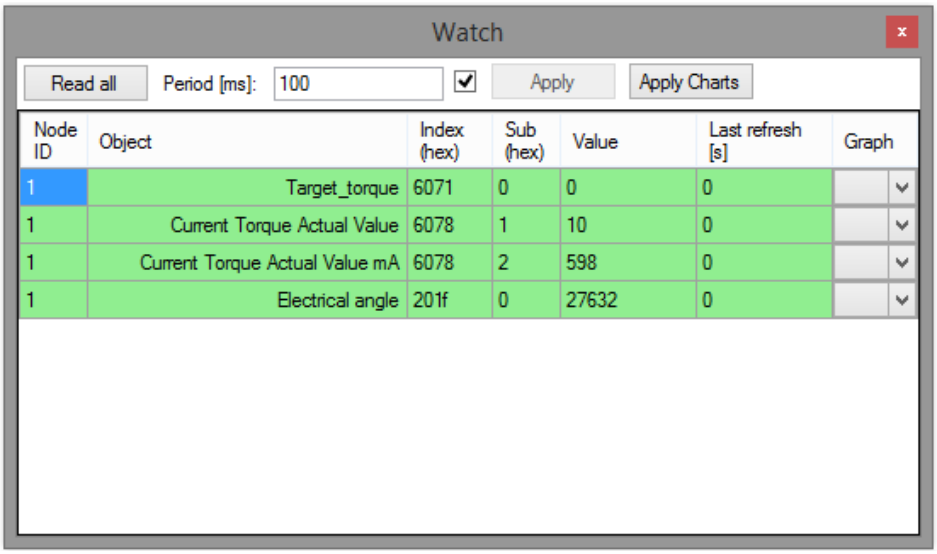


Watch

To open Watch window chose **Watch** from **View** menu.

Watch window can be used to periodically read multiple values from device, it also allow us to write value to an object.

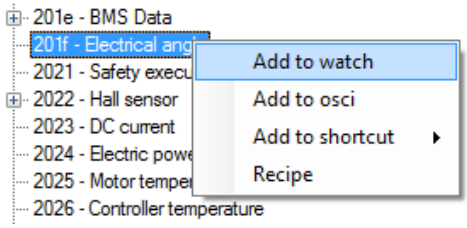
Watch window is also used to link object to Graph. For more information, see Graphs section in this document.



Add objects to Watch

- Find object in SDO Browser object list
- Right click on selected object
- Click Add to watch

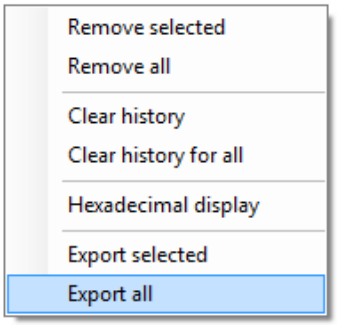
Note: Only objects with simple numerical value can be added to watch.



Exporting object history

To export object history right click on an object and click **Export all** or **Export selected** if you want to export only selected objects.

Exported file can be later opened in History viewer (Tools -> History viewer).



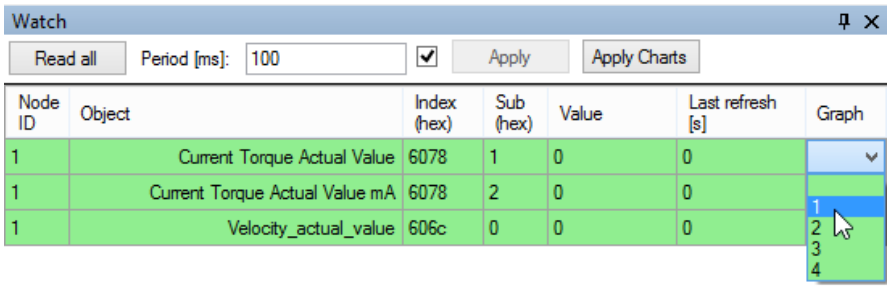
Graphs

To open Graph window chose **Graph** from **View** menu.

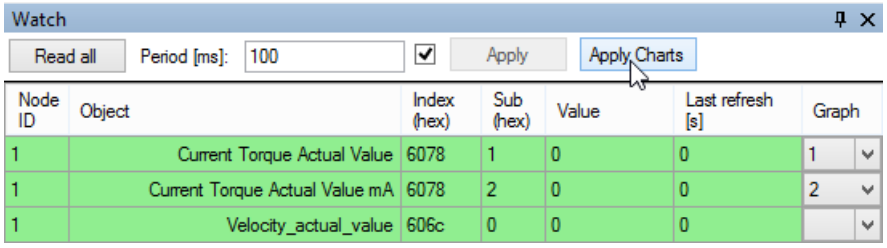
Add objects to graphs

Any object in watch can be added to graph.

- Select graph number



- Click Apply charts



Oscilloscope

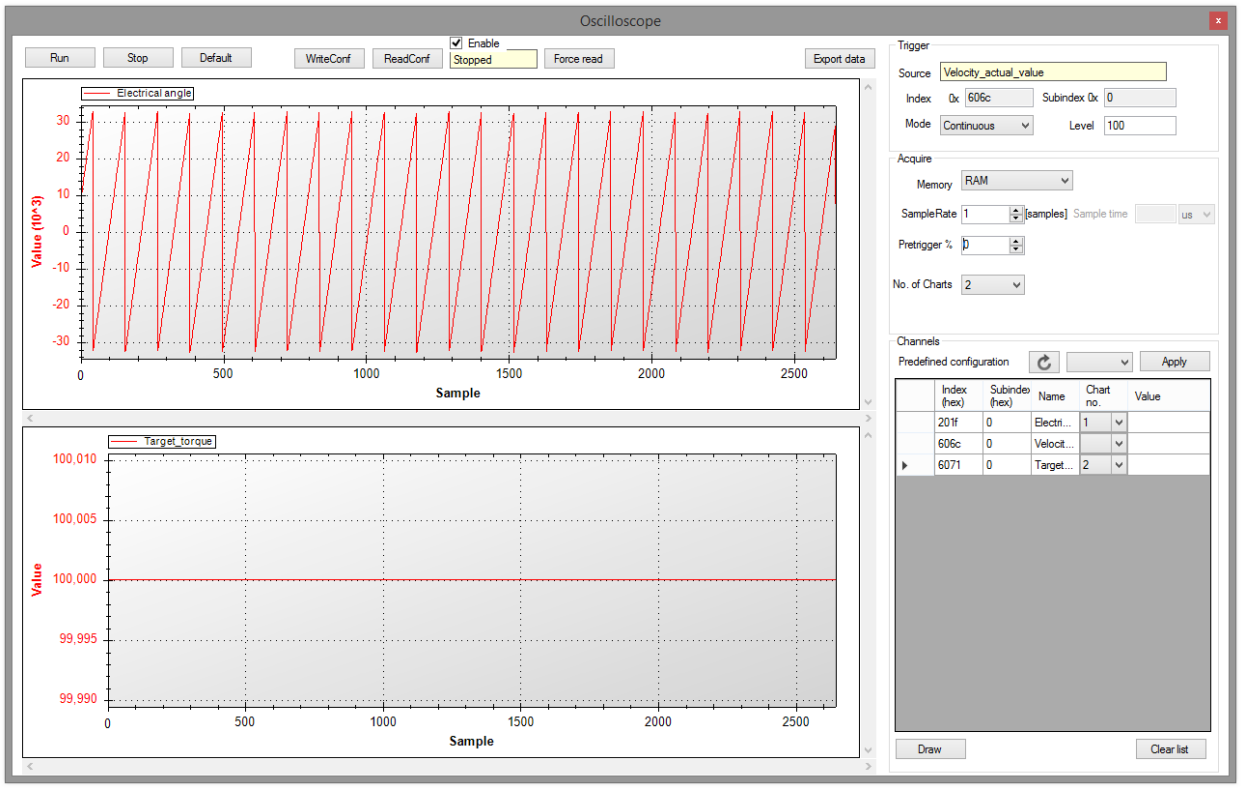
To open Oscilloscope window chose **Oscilloscope** from **View** menu.

Oscilloscope is EMSISO special functionality for advanced analysis of device behavior.

With oscilloscope user can set device to record any object values in real time and save them to internal RAM or EEPROM memory. Records can be later transferred to PC and even exported to CSV file.

Detailed description of oscilloscope functionality and its use is described in separate document.
See: eDrive_Oscilloscope_V_xx.pdf

Interface description



Main oscilloscope buttons

Run – Start recording

Stop – Stop recording

Default -

Write Conf - Write Trigger settings, Acquire settings and Channel list to device

Read Conf - Read current configuration from device

Oscilloscope status – Shows current status of oscilloscope

Force read – Read recorded data

Export data – Export data to CSV file (This file can be later loaded to History viewer)

Trigger settings

- Trigger source - **right click** object in Channel list and chose **Set trigger**
- Trigger mode - select from dropdown menu
- Trigger level - decimal value

Acquire settings

- Target memory – select from dropdown menu
- Sample Rate – set decimal value
- Pretrigger % - set decimal value

Channel list

- Browse for object in SDO Browser
- **Right click** object and chose **Add to osci**
- Select Chart number for every object in channel list
- Click Draw to apply chart numbers
- Set No. of Charts to see all objects

Predefined configuration

- Click ↻ (refresh) button to obtain predefined configuration list
- Select predefined configuration from dropdown list
- Click “Apply”

Project

eDrive Configurator allows user to save project file for later use on PC drive.

Project file includes:

- Network description (EDS files)
- Watch
- Shortcuts

EDS Download

What is EDS

> *Electronic Data Sheet (EDS) is standard CANopen file that contains list of all objects supported by device with their parameters.*

With this command user can download EDS file directly from EMSISO eDrive device. Downloaded EDS file is packet in standard ZIP file.

Save/Load DCF file

Device Configuration File (DCF) is standard CANopen file that contains list of objects with values in moment that was saved. DCF can be saved and loaded with any CANopen software that supports this functionality.

To save or load DCF file make sure that you are connected to the device, your communication port is opened and you have right Node-ID selected.

Chose **Save DCF** or **Load DCF** from **Tools** menu and browse your computer for file path.

Save/Clear parameters

Save parameters

Save parameter values to device internal memory (EEPROM).

Note: To see what parameters are stored in memory check eDrive firmware specifications document (look for Stored in EEPROM).

Clear parameters

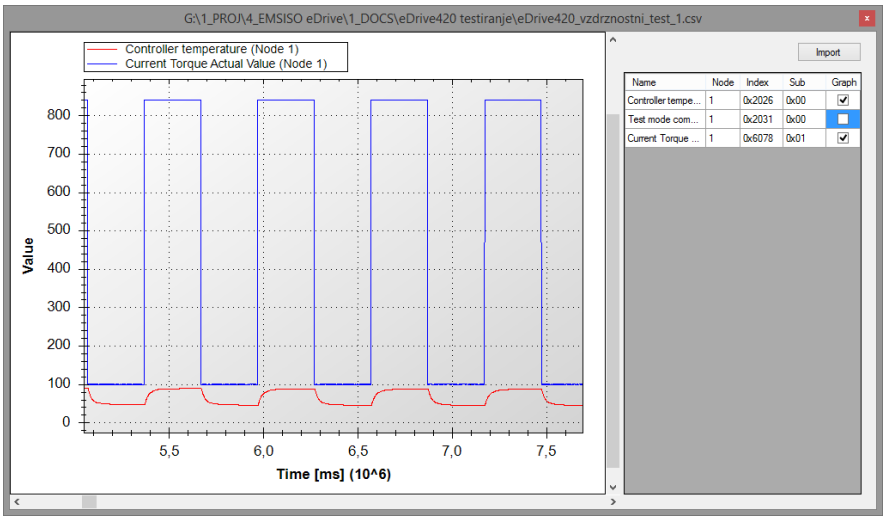
Reset all parameters to its default values.

History viewer

To open History viewer chose **History viewer** from **Tools** menu.

History viewer allow user to import CSV file exported from Watch window or Oscilloscope.

When file is imported user can hide, zoom and scroll charts.



Versions

Version	Description	Commend