DCS800

DC Drives

**CoDeSys Exercise
Sampling Trace
G562e_a_b Part 14**

eLearning

Note:
This module is an exercise without a speaker!

ABB

Welcome to the [Module title] training module for the [Product name], ABB [Product family].

If you need help navigating this module, please click the Help button in the top right-hand corner. To view the presenter notes as text, please click the Notes button in the bottom right corner.
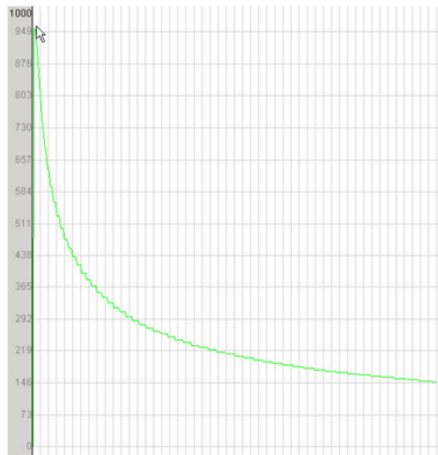
Objectives

After completing this module, you will be able to

- Record signals and variables
- Evaluate the results

ABB

After completing this module, you will be able to

What is a "Sampling Trace"?

- In some cases it's helpful to record signals to test the application or check variables

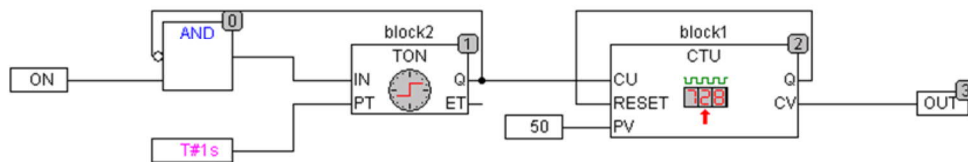- The result will be shown in a graph which can be configured

ABB

Sampling Trace benefits

- With the tool "Sampling Trace" you have the possibility to record dynamic processes

- To use this tool it's necessary to have a running program and a connection between drive and pc

- All variables inside CoDeSys can be selected to make a record

- It's possible to record up to 7 signals

- During the record the program must be in „Run Mode"

ABB

Exercise: Record a variable

- Open a new program

- Create a PLC_PRG as CFC

- Construct the program like in the
  picture below
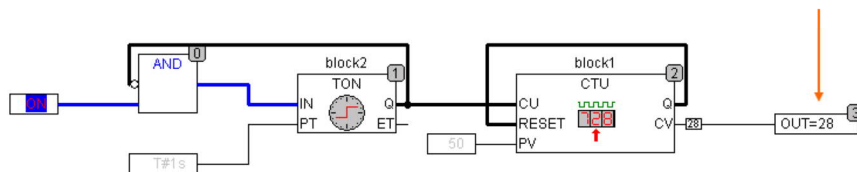
- This program counts up from 0…50
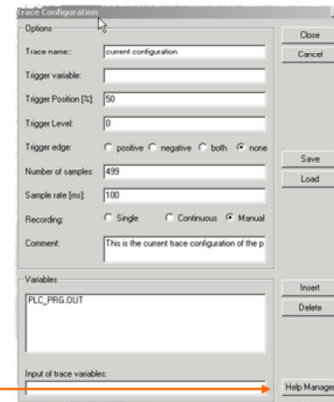 and begins once again

ABB

Configure the communication

- Configure the communication to the DCS800

- Configure the „Task settings"

- Login and Run the system
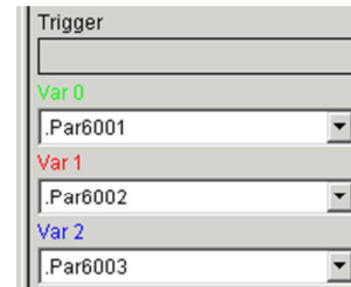
- Set the variable „ON" TRUE
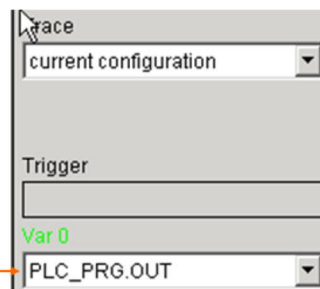
- Now the program runs

Trace configuration

- **Change to window „Sampling Trace"**
  → Resources → Sampling Trace

- **Configure the "Trace configuration"**

  → Extras → Trace configuration

- **Then you see the several configuration settings**

- **Select variables from the list which should be recorded**

  → Help Manager

- **To finish the settings click to *Close*, please**
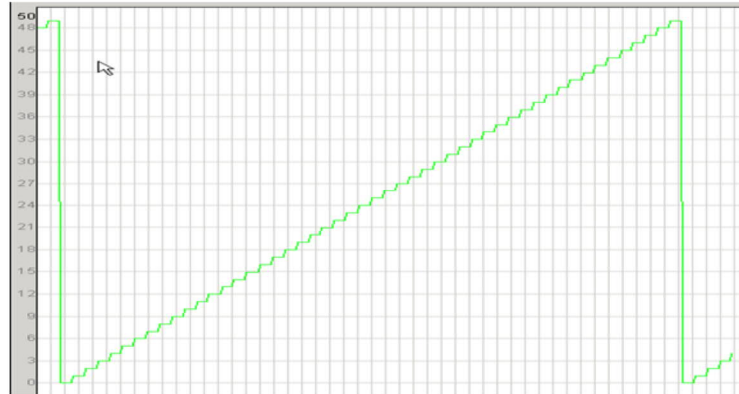
ABB

Allocate the colors

- Now it's necessary to allocate the variables with the colors of the graphical window

- The variables which are selected in the "*Trace configuration*" are available in the pull down menu

- Select PLC_PRG.OUT variable

Trace

current configuration ▼

Trigger

Var 0

PLC_PRG.OUT ▼

Trigger

Var 0

.Par6001 ▼

Var 1

.Par6002 ▼

Var 2

.Par6003 ▼

ABB

Start recording

- Enable the record
  - → Extras → Start Trace AND Auto Read Trace
- Now the record is running
- The result should looks like the picture below

ABB

Summary

Key points of this module

- Record the values of variables

ABB

Here are the key points of this module.

Additional information

- Links to related information
  - 3S-software.com
  - DC-Drive-News (Intranet)

- Additional references
  - Application Manual   (3ADW 000 199)
  - Firmware Manual   (3ADW 000 193)
  - Hardware Manual   (3ADW 000 194)
  - Training Material

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Glossary

- **CoDeSys**
  Controller Development System (software tool)

- **Memory Card**
  Flash memory

- **DriveWindow Light**
  Software Tool for commissioning and maintenance using AC/DC

- **Target**
  Interface between Drive and CoDeSys tool

- **Control Builder**
  Whole system with software and hardware

- **PLC_PRG**
  Main program which is used in all applications

- **POU**
  Program Organization Unit

- **Library**
  It includes function blocks which are given or designed by other users

ABB

Thank you for your attention. You may now go ahead and move on to the next unit.