PLC-ANALYZER pro 6

PLC-Logic analysis in no time

Driver Addendum

PLC-driver

Selectron

Ethernet TCP/IP

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PLC-ANALYZER pro 6 - Driver Addendum

Selectron - Ethernet TCP/IP

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Signal source

Selectron

This driver addendum describes the particularities of the following PLC drivers and gives you hints on using them.

- Selectron - Ethernet TCP/IP

It is important that you read through the driver addendum before using a PLC driver. Please pay attention to the WARNINGS that advise you on possible dangers when using PLC-ANALYZER pro.

> **!**
>
> **WARNING**
>
> Errors that may occur in the automated facility, endangering humans or causing large-scale material damage, must be prevented by additional precautions. These precautions (e.g. independent limit monitors, mechanical interlocks) must guarantee safe operation, even in case of dangerous errors.

Installation

The PLC driver can be added to the project as a new signal source. If the driver you want is not yet in the list of available signal sources, you must first activate the license for the PLC-driver with the AUTEM LicenseManager on your computer.

Installing additional hardware

If you have already connected your programming unit (or your PC) for programming under „Selectron CAP1131" via TCP/IP you normally must do nothing else.

Otherwise connect your programming unit (or PC) with Ethernet interface of the automation device.

Installing additional software

Aside from the PLC-ANALYZER pro base module and PLC driver you must install either the programming software „Selectron CAP1131" or alternatively the Software „SysComPC Standalone". Please refer to the licensing terms of the respective software.

Configuration

Open driver settings to set important parameters for data recording. If you have added the driver to the project several times, you can set the properties individually for each individual driver.
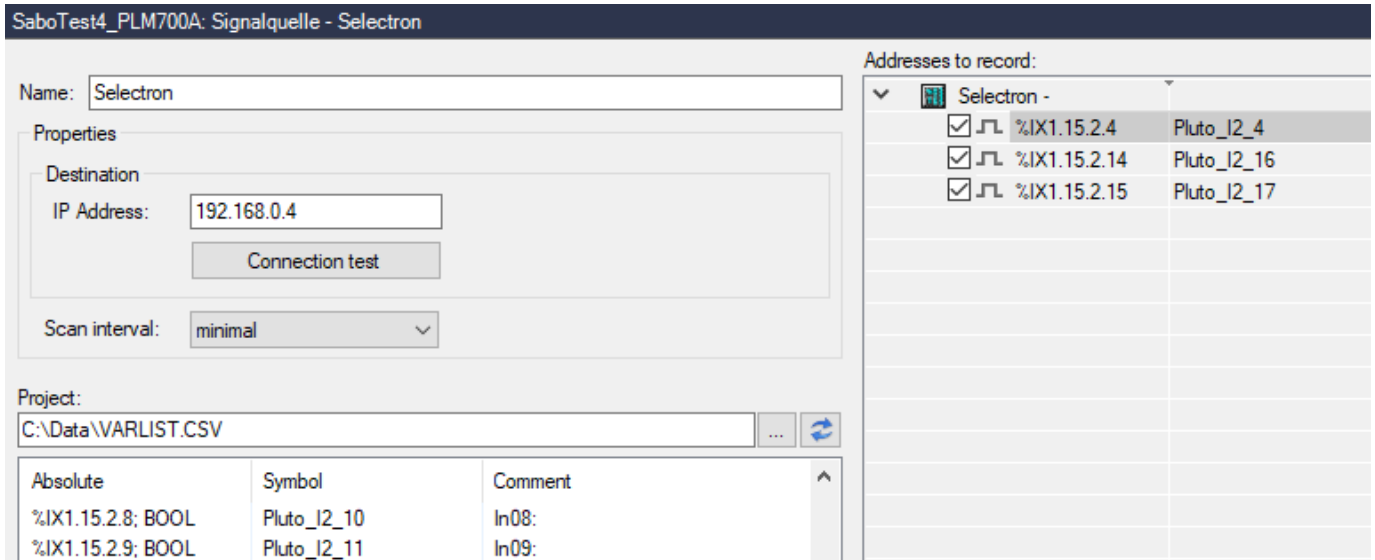

Fig. 1-1 Settings Selectron

First enter a meaningful name. Then enter the *IP-Adresse* of the CPU. Press *Connection test* to check, whether a connection to the PLC can be established.

Under *Scan interval* you specify the time interval at which measured values are read out from the PLC. A longer sampling interval can be selected for signal paths that are not time-critical, e. g. temperature. As a result, the generated signal files become smaller.

Under *Symbols you* select a symbol file, to make the symbols of this file available for address selection. A selected symbol file makes it possible to use symbolic identifiers when entering addresses. In addition to the absolute address, the symbolic identifier and comment are also displayed and stored in a signal- or project file. After setting the communication properties, add the PLC signals to be recorded.

Data acquistion

Supported PLC models and CPUs

All Seletron PLCs with the operation system „MOS" are supported by this driver:

CPU 831 TG, CPU 832 TG, CPU 833 TG, CPU 834 TG, CPU 835-T/SIL

Other automation devices and CPUs from the Selectron family are generally compatible with PLC-ANALYZER pro, but have not been explicitly tested.

Recordable PLC addresses

You can record all variables, which are located in the loaded symbol file (s. Chapter 2.2.3 Use of name lists (symbols)). In addition to the variables from the symbol file also fixed memory addresses of Selectron can be recorded. The following table shows the addresses possible and the appropriate syntax:

Syntax	Type of Address	Example
%IX z.n.m.o	Input bit o, Modul m, Node n, Net z	%IX 1.2.1.0
%IB z.n.m.o	Input byte o, Modul m, Node n, Net z	%IB 2.20.8.4
%IW z.n.m.o	Input word o, Modul m, Node n, Net z	%IW 1.5.7.1
%ID z.n.m.o	Input double word o, Modul m, Node n, Net z	%ID 1.4.4.0
%QX z.n.m.o	Output bit o, Modul m, Node n, Net z	%QX 1.2.1.0
%QB z.n.m.o	Output byte o, Modul m, Node n, Net z	%QB 2.5.8.4
%QW z.n.m.o	Output word o, Modul m, Node n, Net z	%QW 1.1.7.1
%QD z.n.m.o	Output double word o, Modul m, Node n, Net z	%QD 1.6.3.0
%MX n.m.o	Flag bit o, Modul m, Node n	%MX 1.2.0
%MB n.m.o	Flag byte o, Modul m, Node n	%MB 1.8.4
%MW n.m.o	Flag word o, Modul m, Node n	%MW 0.7.1
%MD n.m.o	Flag double word o, Modul m, Node n	%MD 0.6.0

Table 1-1 Address syntax Selectron

Number of recordable addresses

A maximum of 16 million addresses can be acquired from up to 250 signal sources.

Time behaviour and particularities

The intervals between scan transfers from the Selectron PLC to the computer are dependent on the cycle time of the PLC, the number of recorded signals and the traffic on the network.

You can record one byte with a scan interval of approximately 1 ms. Recording more data increase the scanning distance only slightly.

For a scan interval of e.g. 3 ms and an equal cycle time of the CPU there is one scan for each cycle. For a shorter cycle time the computer does not obtain a scan for each cycle, resulting in a partial loss of information. This loss can be made up by repeated measurement of the signals in question.

The acquisition affects the cycle time of the controller. The more addresses are recorded, the more increases the cycle time. This is a normal behavior and occurs in monitor mode of the programming software "Selectron CPA1131", too.