

PLC-ANALYZER pro 5

NEW

DATASHEET

DIAGNOSTIC FOR
PROCESS AUTOMATION
PLC CONTROL TECHNOLOGY

PLC-Logic analysis in no time

Yet more amazing features
and analysing options!

SIMATIC S7

ALLEN-BRADLEY

SCHNEIDER
MODICON

SIMATIC S5

SINUMERIK
BOSCH
PILZ

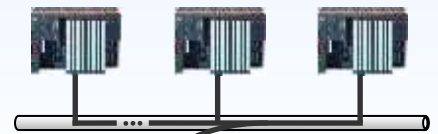
MITSUBISHI
GE FANUC
OMRON



PG interface



MPI/PPI + PROFIBUS



Industrial Ethernet (TCP/IP)

◆ cycle precise ◆

AD_USB-Box®



External
measured values
via USB

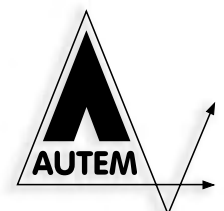
BLACKBOX
for PLC-ANALYZER pro 5



PLC long term process data
recording & remote service

- Failure diagnosis
- Long term recording
- Cycle-time optimisation
- Installation / Service
- System documentation (QA)
- Training

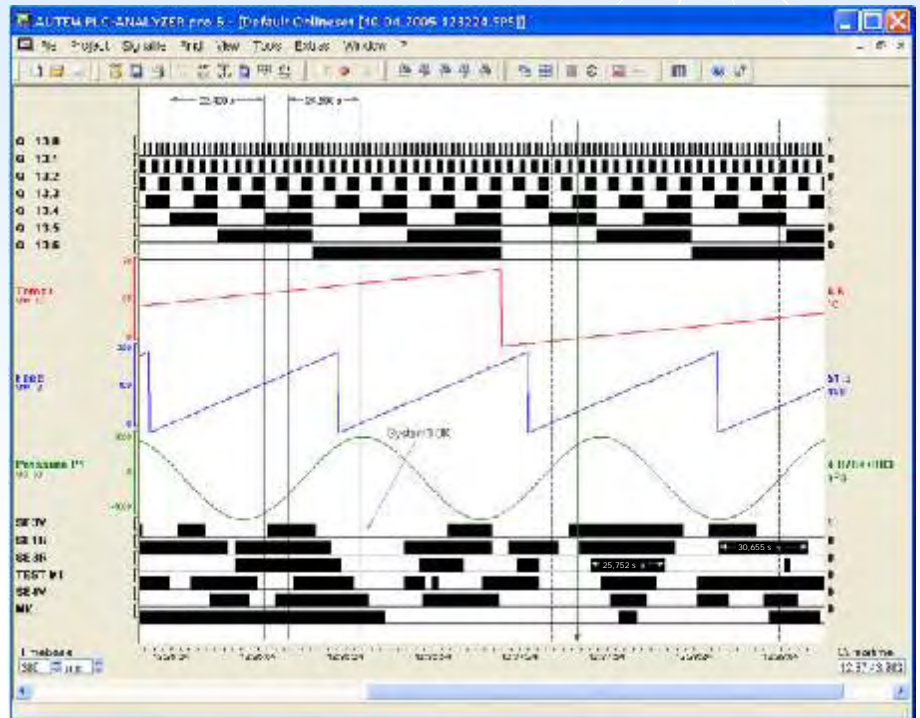
Using existing PLC connection ✓



PLC-ANALYZER pro 5

PLC-Logic analysis in no time

- Logic analysis
- System analysis
- Failure diagnosis
- Facility optimization
- Signal file comparison
- Data acquisition
- Facility optimization



Fields of application

Failure diagnosis in PLC systems
Detecting and localizing of sporadic errors
Analysis and optimisation / cycle time reduction
Long-term recording of measured values
Documentation + support of QA, TPM/OEE
Installation, maintenance and construction

System requirements

Intel® Pentium®-Processor
Microsoft® Windows
9x/NT/2000/XP
128 MB RAM
Graphic adapter 800 x 600 Pixel

To order

Please refer to our current price list

PLC-ANALYZER pro 5 is a software system for logic analysis and acquisition of recorded data on PLC-controlled facilities. Acquisition, representation, and evaluation of PLC signals such as inputs, outputs, flags, data words, etc. is now very easy.

Online display makes possible observation of the signal waveform in real time.

In addition to long-term recording, trigger conditions can be specified for the acquisition of particular events. This allows rarely occurring sporadic errors to be recorded for later analysis.

In contrast to traditional logic analyzers, the PLC-ANALYZER pro 5 has the decisive advantage of recording process data through standardized PLC interfaces (e. g. SIMATIC S5 - programming unit interface), or by automation networks (e. g. SIMATIC S7 - MPI/PPPI, PROFIBUS or Industrial Ethernet). A computer that is connected for the purpose of programming the PLC can be used for recording process data without hardware modifications. The tiresome process of hooking up monitoring cables is now a thing of the past. Cycle-precise recording is attractive because of the complete acquisition of measured values in each PLC cycle. By using the measurement interface AD_USB-Box® external voltage and current signals, which are not available in the PLC, can also be recorded. Project files make it possible to automate frequently recurring acquisition sessions for various facilities.

Together with the terraLink® remote maintenance system, data can be acquired at every PLC directly from PLC-ANALYZER pro 5 over the public telephone network.

For integration in a switchgear case AUTEM offers the BLACKBOX ultra-compact Mini-PC for long-term PLC process data recording.

PLC-ANALYZER pro 5 is an indispensable tool for PLC software development, construction, installation, technical service and training.

AUTEM offers an inexpensive licensing model with primary and additional licenses for one or more than one workstations.

PLC-ANALYZER pro 5

PLC-Logic analysis in no time

Technical Features

Data acquisition through the programming unit interface of the PLC, or through the automation network
Acquisition of input, output, flag, counter, timer, data word, data block, etc.
Signal display in bit, byte, word and double-word formats
Creating of pseudo signals
Adding of additional addresses or trigger conditions while recording
Simultaneous acquisition on several PLC systems (e. g. SIMATIC S5 + S7 or SIMATIC S7 + Allen-Bradley ...)
Software solution, no additional hardware necessary
Modification of PLC program not necessary
Cycle precise acquisition for SIMATIC-PLCs
Storage of the signal waveform on hard disk
Trigger-controlled signal file creation or long-term recording
Time controlled signal recording
Online signal display (similar to a line printer or an oscilloscope)
Comfortable definition of triggers by Drag & Drop
Substantial trigger features with AND-/OR logic and cascading
Pretrigger and posttrigger time can be set by user
Start- and Stoptrigger
Trigger on binary values and register values
Automatic alarm in case of trigger event (E-mail or sms, acoustic announcement)
Comparing of signal files
Search for trigger, edge, bit pattern, time and notices parallel in more than one signal file
Measuring of periods of time and measuring of bits
Relative and absolute data time
Flexible register scaling and conversion to physical units
Use of symbolic address names and commentaries of the PLC-programming software
Project files for pre-configuring and automating data acquisition runs
Print/Storage of complete project settings for documentation of test sequence and measurements
S7-PLCSIM supporting
Printing of signal files
Export from signal files as image format, text (csv-file) or HTML file
Import of measured values in text format (csv-file)
Multilingual
AD_USB-Box®: Recording of external voltage and current possible, connection via USB-port
BLACKBOX: ultra compact Mini-PC for installation in switching cabinet, long-term recording of measured values over several years (optional)

DATASHEET

DIAGNOSTIC FOR
PROCESS AUTOMATION
PLC CONTROL TECHNOLOGY

PLC-Driver

SIMATIC S7*
MPI/PPI + PROFIBUS (cycle precise)

SIMATIC S7
Industrial Ethernet TCP/IP (cycle precise)

SIMATIC S5
Programming interface (cycle precise)

SINUMERIK
Programming interface (cycle precise)

FESTO
Programming interface (only with integrated SIMATIC-PLC)

BOSCH CL-series
Programming interface (BUPE19E)

PILZ PSS-series
Programming interface

Allen-Bradley ControlLogix/PLC/ SLC-series
RS232 / DH + / DH 485

Allen-Bradley ControlLogix/PLC/ SLC-series
Ethernet TCP/IP

GE Fanuc Serie 90/VersaMax/Nano/Micro
Programming interface (SNP)

OMRON C/CV/CS1
Programming interface (Host Link)

mitsubishi MELSEC A + FX-series
AJ71-Modul / programming interface

Schneider TSX Quantum/Modicon 984
Modbus Plus (ISA, PCI, PCMCIA)

Schneider TSX Quantum/Modicon 984
Modbus TCP/IP

Schneider TSX Quantum/Modicon 984
Modbus I

Schneider TSX Premium/Micro/Nano
XWAY TCP/IP / Uni-Telway

Schneider AEG TSX A250/A120/Micro
Programming interface (KS)

Beckhoff TwinCat I/O
Recording of all TwinCAT-Variables

AD_USB-Box
USB-Port (recording of external voltage and current signals)

*also suitable for SIMATIC C7, M7, SAIA xx7 and VIPA S7

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Typical fields of application



Failure diagnosis

Limit switch monitoring (detector control)
Detector control MK is triggered on the flag's falling edge (dashed line).

PLC-ANALYZER pro 5 makes the problem clear. There is something wrong at the end switch SR01 (see trigger), because it is active at the same time as SA01.

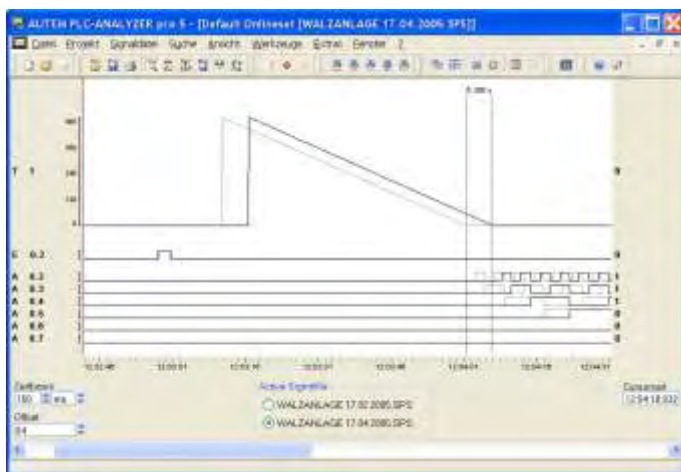
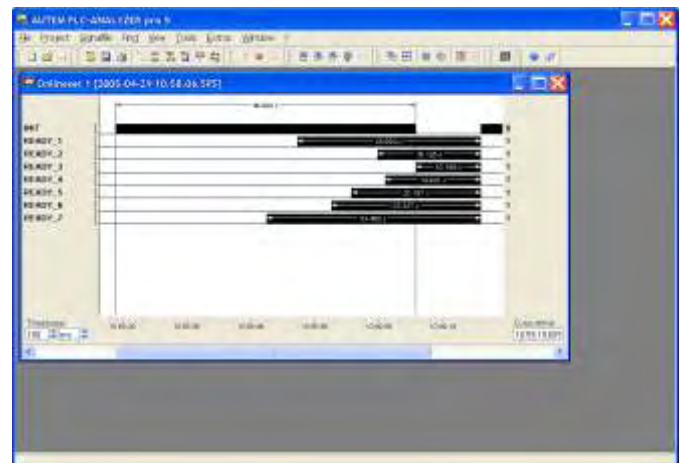
For clear documentation, every signal can be given free text as comment.

This type of data acquisition can be done within any desired recording time interval.

Cycle time optimization

Determination of dead time in a production facility in order to optimize run time

The acknowledgement signals READY_1 to READY_7 signal the end of certain subprocesses that have all been started together with INIT. With PLC-ANALYZER pro 5, you can see that station 3 (READY_3) was the last station to finish. The time measurement function determines the working time of station 3 to be 46,8 seconds. The measurement results show the design engineer that station 3 must be investigated further in order to increase system speed.



Signal-file comparison

Comparison of two signal files for a rolling mill
For the analysis the current recording from 17. April, 2005 is compared with an older recording from 17. February, 2005.

Visual comparison takes place by overlapping the signal files. Input bit E 32.2 serves as common reference point.

The time measurement function determines that the timer T1 started 5,100 s later. This strongly indicates slower running times in the system. PLC-ANALYZER pro 5 can be used in this way to analyse differences in signal files (runtime slow-downs, wear and tear ...).

