Diag+ diagnostics tool for INTERBUS, PROFINET and Ethernet networks

Diag+ is a special diagnostics tool adapted to PROFINET IO and INTERBUS that signals both network errors and the current states of controllers and devices. Preventive diagnostic functions such as the monitoring of transmission quality of FO paths (INTERBUS) increase the plant availability. The tool can be operated independently or integrated as an ActiveX control directly in other Windows applications (e.g. visualization systems). Via a programming interface, the diagnostics data can be further processed in the visualization.

Familiar functionalities for INTERBUS systems, such as the display of status information, operating functions, plain language error messages with debugging tips or detailed information about device types and states have been added with PROFINET I/O-specific diagnostic functions. The PROFINET topology is represented analogous to the INTERBUS structure. Color symbols on the devices, modules and submodules indicate the current status or certain errors of the devices/modules. All state and error messages are read out from the retentive diagnostic messages archive of the controller. With the help of filter functions, certain message types can be simply determined in the archive view of the software. In a graphical view of the Ethernet device topology, the differences between the set and actual configuration are also displayed.

The network configuration data created with CMD, Config+ or PC WorX during the configuration, e.g. your own comments, equipment identification codes or station names, are read and displayed with Diag+ from the parameterization memory of the controller board. This greatly simplifies orientation within the plant.

Fast startup

During startup, installed buses can be tested very easily: Commands are available to start the bus, to acknowledge error messages, to switch INTERBUS devices on and off, to bridge the devices and to stop the bus using an alarm stop. The bus cabling can therefore be checked very quickly. Access to lower-level subordinate bus systems, using system couplers for example, is also possible using Diag+.

Diag+ Netscan Software for cyclical diagnostics of INTERBUS networks

Diag+ NetScan enables simultaneous monitoring of INTERBUS networks with several controller boards/controllers. The transmission quality of all FO paths in an entire system is thus monitored permanently. Even lower-level buses connected using system couplers can be included in monitoring.

Ordering example 1:

Diag+ software is to be installed on 10 different PCs in a system for INTERBUS network diagnostics and linked from each one to the existing visualization system as an ActiveX control. The diagnostic data delivered by Diag+ will be processed further in the visualization system itself.

- 1x DIAG+
- 9x DIAG+ CPY

Ordering example 2:

From a control room, INTERBUS controller boards (x 60) with lower level subnetworks connected via INTERBUS system couplers (only possible with PCP ID code) are to be monitored via Ethernet. When a fault occurs, the detailed diagnostic data will be read out and displayed manually.

- 1x DIAG+ NETSCAN
<table>
<thead>
<tr>
<th>Description</th>
<th>Type</th>
<th>Order No.</th>
<th>Pcs. / Pkt.</th>
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<tbody>
<tr>
<td><strong>Diag+ demo</strong>, limited scope of functions (only valid for the first five stations)</td>
<td>DIAG+ DEMO</td>
<td>2730734</td>
<td>1</td>
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<tr>
<td><strong>Diag+ full version</strong>, for INTERBUS diagnostics (ActiveX control with programming interface)</td>
<td>IBS DIAG+ SWT</td>
<td>2730307</td>
<td>1</td>
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<tr>
<td><strong>Diag+ copy license</strong>, allows you to install Diag+ software more than once. A Diag+ full version is necessary as well. When ordering, please state the number of licenses you need.</td>
<td>DIAG+ CPY</td>
<td>2730404</td>
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<tr>
<td><strong>Diag+ NetScan-Demo</strong>, limited scope of functions (cannot open or save projects)</td>
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<td><strong>Diag+ NetScan full version</strong>, for cyclic and simultaneous network diagnostics (ActiveX control)</td>
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**Technical data**

**Hardware requirements**

- CPU: Pentium 4/Celeron, 1 GHz
- Main memory: Min. 512 Mbyte (1 GB for Windows Vista)
- Hard disk memory: Min. 2048 Mbyte
- Optical drive: DVD-ROM
- Interfaces: Serial interface, Ethernet, ISA bus, PCI

**Supported interface connections**

- INTERBUS controller board of the 4th generation, PROFINET I/O Controller (Phoenix Contact only)
- INTERBUS Generation 4 controller board

**Software requirements**

- Operating systems: MS Windows 2000 SP4, MS Windows XP SP2 (recommended), MS Windows Vista Business

**Basic functionality**

- Executing important commands (start/stop/...)
- Reading in the installed bus structure
- Detecting/representing error states (plain text from knowledge database)
- Saving diagnostics data in flash memory or parameterization memory of the controller board
- Diagnostics of INTERBUS FO paths (transmission quality)
- Can be integrated into other 32-bit applications as ActiveX control including programming interface for further processing of all diagnostic data
- Configuration comparison of Ethernet topologies (parameterized with real topology)
- Reading out the controller diagnose archive

**Expanded functionality**

- Cylical readout of diagnostic data from all INTERBUS controller boards/controllers in the network overview (the number of controller boards is not limited)
- Network overview: All INTERBUS controller boards/controllers in a system are clearly shown in a tree view; detailed diagnostics can be called up by clicking on the corresponding item
- Monitoring function: Simultaneous monitoring of up to max. 10 INTERBUS controller boards/controllers is possible

**Languages supported**

- German, English, French, Spanish, Portuguese (Brazilian), Italian, Chinese