

PROFIBUS Protocol Analyzer

Universal Tool for Analyzing PROFIBUS Networks

Application

The **bus✓check** PROFIBUS Protocol Analyzer is an indispensable tool for analyzing and optimizing communication in PROFIBUS networks. It is ideally suited for continuously monitoring a network, detecting hidden errors early on, optimizing data throughput and analyzing configuration errors.

The tool is connected to the PROFIBUS network via the PROFIBUS Probe USB interface, which guarantees easy mobile use as well. An optional second connector for MBP physics enables a direct link to PROFIBUS PA networks. This means that both sides of a segment coupler can be analyzed and monitored at the same time. A receiver circuit which has been optimized for diagnostic purposes allows errors to be detected on the level of bits, bytes and telegrams.

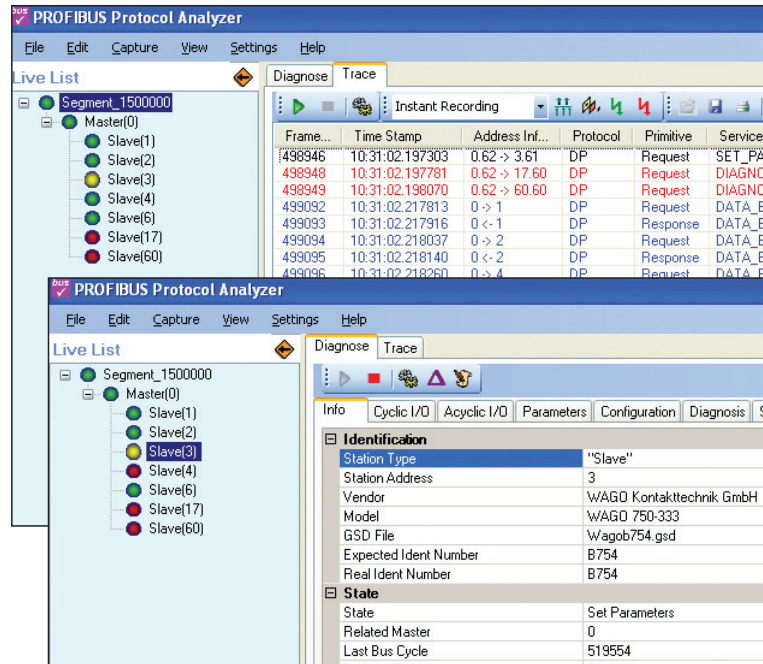


Online Diagnosis

A live list (list of all active stations on the bus) in the form of a tree structure displays the communication status of each device on PROFIBUS using a status indicator (traffic light with red/yellow/green) so that **the bus state can be evaluated at a glance**. An expanded live list in matrix form displays a selectable parameter for every single device.

The extensive online diagnosis function continually records all the significant parameters of a PROFIBUS DP system and displays them for each device. Important events are recorded in a log and displayed for the entire bus or individual devices.

Product Information



Telegram Logging

Of course, the Protocol Analyzer also offers "traditional" telegram logging and display in two different modes of operation. With "immediate logging", the logged telegrams are managed in the memory as a circular buffer so it is possible to interact with them rapidly. With "long-term logging", the telegrams are continuously stored in files to be analyzed later.

Benefits for you

- Status indicator shows bus state at a glance
- Extensive online analysis of all key parameters of a PROFIBUS DP network
- Log function for the entire bus or individual devices
- Logging and display filters
- Trigger function with hardware input and output
- Telegram decoding for FDL, DP, DP-V1, DP-V2
- USB interface in stable aluminum casing for mobile use
- Optional MBP connector for direct link to PROFIBUS PA networks
- Future-proof: additional functions can be downloaded



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Product Information

PROFIBUS Protocol Analyzer: Universal Tool for Analyzing PROFIBUS Networks

bus✓check PROFIBUS Protocol Analyzer

Live List	Live list displayed as tree with master-slave assignment, status indicator (traffic light) for clear view of communication status, matrix for displaying relevant parameters (e.g., repeat telegrams) for all devices
Online diagnosis	On the bus level: target rotation time, errors in bits, bytes and telegrams For each master: duration of cyclic data exchange, idle time 1, idle time 2, slot time For each slave: communication status, assigned master, identification number, station delay time, I/O data with configured and actual length, parameterization data, configuration data, diagnosis messages (circular buffer), statistics on DP-V0 services, negative and faulty responses, repeat telegrams for each polling cycle and overall
Telegram logging	Immediate logging in circular buffer with storage capability, long-term logging in files
Logging filters, display filters	Filtering by station addresses, FDL telegram formats, faulty telegrams, repeat telegrams, FDL services, DP, DP-V1 and DP-V2 services
Triggers	Triggering by station addresses, FDL telegram formats, faulty telegrams, repeat telegrams, FDL services, DP, DP-V1 and DP-V2 services; hardware trigger input and trigger output (in preparation)
Telegram display	Decoding for FDL, DP, DP-V1, DP-V2; display color can be freely selected for each service; time stamp, either absolute or time since start of measurement, as well as telegram intervals and telegram pauses
Languages	English, German

bus✓check PROFIBUS Probe

PROFIBUS RS485 interface	9-pin D-sub connector, galvanic isolation, supply for active cable 9.6, 19.2, 45.45, 93.75, 187.5, 500, 750 KBit/s, 1.5, 3, 6, 12 MBit/s
PROFIBUS MBP interface (BC-450-PB only)	3-pin screw terminal, galvanic isolation, bus-powered Medium Attachment Unit 31,25 KBit/s
USB interface	Version 2.0, high-speed (480 Mbit/s) and full-speed (12 Mbit/s) with automatic detection Connector: USB Type B and USB cable A-B; Functionality: USB device
External trigger interface	Output: OpenCollector (active low); input: TTL, voltage-proof to 24 V
Displays (LEDs)	USB status, PROFIBUS status, MBP bus power (only with BC-450-PB)
Power supply	5 V (from USB), < 300 mA
Temperature range	Operation: 0 °C ... +55 °C (storage: -20 °C ... +70 °C)
Casing, dimensions in mm, weight	Aluminum, 69 x 24 x 124 (W x H x D), approx. 200 g
Certifications	CE, FCC
Protection class	IP20

System Requirements

PC/notebook with Windows 2000 or Windows XP, at least 1 GHz, USB interface

Included in Package

bus✓check PROFIBUS Probe with RS485 interface and optional MBP interface, USB cable (3 m), CD with bus✓check PROFIBUS Protocol Analyzer and manual

Order Number

BC-400-PB (RS485 interface); BC-450-PB (RS485 and MBP interface)