

PROFIBUS-Inspektor®

Continuous Bus Monitoring,
Condition-based Maintenance

Product Information

Areas of Application

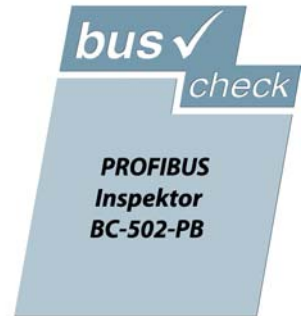
The PROFIBUS Inspektor® BC-502-PB is a powerful tool for early detection of developing problems on PROFIBUS networks. By continuously monitoring all traffic on the bus, it reliably detects even slow, initially uncritical deteriorations in the bus communication. If maintenance action is required, the tool automatically alerts the operational staff. This allows implementing a condition-based maintenance strategy that reduces operator intervention to when it is needed.

Features

Based on protocol analyses, the BC-502-PB determines the bus cycle time and detects the following error events:

- Device drop & add
- Device errors/diagnostics
- Error frames
- Retransmissions

When the number of error events exceeds the configured maximum limit per measuring period, the PROFIBUS Inspektor® sends an alarm to the PLC via signaling contact, or to a central server via network. Users can select specific error events for which they want to record snapshots of the entire frame traffic. The diagnostic details can be viewed either locally at the unit or remotely via network using a web browser. Thresholds are also configured in the same way.



The BC-502-PB optionally comes with all the functionality of a full featured protocol analyzer. An optional network version is also available. Installed on the server, the PROmanage® software manages all the alarms and events from up to 80 Inspektors in a central database and offers comprehensive analysis functions.

Advantages and Benefits

One Inspektor per bus line is all that is needed – no matter how many physical segments are to be monitored. The tool can be used on the live PROFIBUS without interfering with its operation. It can thus be installed anytime, even temporarily, without undesirable side effects. No bus address or changes to the PLC program are required. In addition, the tool's open functionality allows use across all controller and bus station types.

The PROFIBUS Inspektor® BC-502-PB supports a condition-based maintenance strategy, improving staff utilization and effectiveness. Action is only taken when it is actually needed. By enhancing the operational reliability, the tool increases plant availability while making best use of the often scarce maintenance resources. It helps maximize productivity and minimize downtimes by permitting planned maintenance action.

Events			
Event / Time Period	Last Minute	Last Period 24h	History 1.4h
Drop-Outs	1	3	6
Internal Diagnostics	0	1	1
External Diagnostics	1	2	2
Error Frames	0	0	0
Max Retries per Bus Cycle	0	0	0
Total Retries	0	0	0
Bus Cycle Time Min/Mean/Max [ms]	1.41/1.41/1.56	1.19/1.41/2.17	1.19/1.41/2.17
Last SNMP Request			

PROFIBUS Devices (Most Critical State is Displayed)	
Time Period	Events
Last Minute	Please Select
Possible States: Inactive / Not Connected, Active Error, Active State, Event Diagnostic, Drop-Out, Retries, No Data	
0	1
2	3
4	5
6	7
8	9
10	11
12	13
14	15
16	17
18	19
20	21
22	23
24	25
26	27
28	29
30	31
32	33
34	35
36	37
38	39
40	41
42	43
44	45
46	47
48	49
50	51
52	53
54	55
56	57
58	59
60	61
62	63
64	65
66	67
68	69
70	71
72	73
74	75
76	77
78	79
80	81
82	83
84	85
86	87
88	89
90	91
92	93
94	95
96	97
98	99

Device 13 - Wago 750-333 - Location 13			
Event / Time Period	Minute	Period	History
State	0	2	4
Drop-Out	0	1	1
Internal Diagnostics	0	0	0
External Diagnostics	1	2	2
Error Frames	0	0	0
Max Retries per Bus Cycle	0	0	0
Total Retries	0	0	0

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Product Information

**PROFIBUS-Inspektor®: Continuous Bus Monitoring,
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Specifications

Power supply	24 V DC +/-20%, typ. 0.3 A, max. 1 A
PROFIBUS	Protocols: DP, DPV1, FMS, MPI Connection: 9-pin D-sub Baud rates: 9.6 kbps – 12 Mbps
Ethernet	100BASE-TX, 10BASE-T Connection: RJ45 IP address: manual or automatic (DHCP)
RS232	Reserved
USB	Only available with optional Comfort Line license
Control signals	Potential-free contact 3 inputs DC 24 V, active-high
Dimensions	H x W x D: 131 x 47 x 111 mm
Weight	approx. 0,4 kg
Mounting	35 mm DIN top hat rail
Degree of protection	IP 20
Operating temperature	5 °C to 55 °C
Storage temperature	-20 °C to 70 °C
Certifications	CE, FCC, VCCI

Order No.

BC-502-PB	„Basic“ version incl. manual
BC-502-PB/CL	Software option „Comfort Line“: full featured DP protocol analyzer via USB incl. PC software on CD-ROM and manual
BC-502-PB/SNMP	Software option „Premium Line“: SNMP network interface for measurement data
BC-131-PB	Optional activ connection cable for hassle-free integration into existing or running installations: spur cable length 3 m, internal repeater bus powered
BC-502-PB-START	Start package consisting of BC-502-PB, BC-131-PB, power supply, patch/crossover cable and carrying case
BC-502-PB-PMxx	Central diagnosis management and data analysis for up to 80 Inspektors comprising “Premium Line” licenses, PROmanage® server license for xx=5/10/20/40/80 Inspektors, SW installation and commissioning at site and possibly network data server, cables, cabling etc. as to be agreed in detail

System Requirements

For diagnostics and parameterization (basic version)

PC/Notebook with network adapter and up-to-date web browser,
local connection using RJ45 patch cable or access via LAN

For protocol analysis (option)

PC/Notebook with either Windows 2000, XP or VISTA (32 Bit)
and at least 1 GHz/500 MB RAM, USB 2.0 port

For network version (option)

SNMP manager or separate network data server with the
ProManage® software