

PROFIBUS Tester 4

All-in-one tester for bus physics and bus communication

Product Information

Areas of Application

The PROFIBUS Tester 4 is a powerful tool that allows full testing of PROFIBUS segments. The tool reliably detects even transient faults that occur only sporadically.

Using the integrated master simulator, either the bus can even be tested if the PLC is currently not in operation, or "suspicious" bus devices can be checked individually.

The PROFIBUS Tester 4 is a universal tool for:

- Setup and commissioning
- Documentation, acceptance testing
- Optimization
- Preventive maintenance
- Troubleshooting and field device testing

Features

On connection to a PROFIBUS DP segment, the PROFIBUS Tester 4 automatically detects the baud rate or open circuit voltage.

Standard tests with **simultaneous analysis of both bus physics and bus communication**:

- Quick test
- User-controlled test
- Long-term trend

Special features:

- Master simulator
- Topology scan

Expert tests:

- Frame analysis
- Oscillogram analysis
- Trigger input/output



Operating Modes

The PROFIBUS Tester 4 can be connected to a PC/notebook, or run in stand-alone mode. The PC mode provides all standard and expert tests and also allows selecting individual devices to be tested.

The stand-alone mode provides the master simulator feature and a live status of all bus devices. It is planned to soon make also the quick test and long-term trend functions available in stand-alone mode through a future software update.

Analysis of Test Results

The PROFIBUS Diagnostics Suite allows the display and detail analysis of test results on the PC.

Advantages and Benefits

The PROFIBUS Tester 4 delivers highly reliable results that make it easy to identify, locate and correct fieldbus problems. It is the first test tool that can clearly distinguish whether a problem relates to a physical fault or defect, e.g. at cables or connectors, or to a communication problem with the PLC or bus devices. The PROFIBUS Tester 4 also helps to save commissioning time. In addition, regular preventive tests on the live bus ensure continuous reliable operation and increase plant availability. Should a problem occur, the PROFIBUS Tester 4 will quickly and reliably locate it so that unplanned system downtimes can be reduced or even avoided altogether.



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Product Information

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Specifications

Power supply	Via external AC adapter 100 V .. 240 VAC 50/60 Hz (galvanically isolated) or direct connection to 24 VDC \pm 20%, approx. 0.5 A (without galvanic isolation)
RS485 (DP)	PROFIBUS D-sub connector, 9-pin, power supply for external bus termination Protocol and frame analysis: PROFIBUS DP and DPV1, automatic baud rate detection 9.6 kbit/s .. 12 Mbit/s Signal analysis: PROFIBUS DP, DPV1, FMS and MPI; signal quality index 0 .. 5000 determined from signal waveform as well as signal/noise ratio and rise time; signal sampling with 8/16 samples per bit Oscillogram display: Test range \pm 5V, resolution 40 mV, sampling rate 192 MSamples/s, for signal details: 2,400 sampled points, for oscillogram analysis: 8,192 sampled points Topology scan: Active, maximum distance 230 m, accuracy \pm 2 m
USB	V 2.0, high speed 480 Mbit/s, galvanically isolated
Trigger	IN (in preparation): L=0 .. 0.8 V; H=2.4 .. 24 V; pulse > 10 μ s, active high OUT: approx. 5 V, active low (connection to storage oscilloscope)
Dimensions	HxWxD: 35 x 170 x 110 mm
Weight	Test tool without cable: approx. 0.45 kg, complete with carrying case: approx. 3.9 kg
Ambient conditions	Operating temperature: 0 .. 50 °C, Storage temperature: -20 .. 70 °C, Air humidity: 10 .. 90% without condensation
Certification	CE, FCC, VCCI
Operation	Via PC/notebook or alternatively in stand- alone mode via four-line display and four function keys
Test results	Display and detail analysis using the PROFIBUS Diagnostics Suite PC software application (separate product information)

Order No.

BC-600-PB	PROFIBUS Tester 4, all-in-one test tool for DP bus physics and communication, supplied in carrying case, including wide-range power supply with European and US mains power cables, connecting cable for direct power supply with 24 VDC, D-sub PROFIBUS adapter cable, USB cable, terminal block for trigger input/output, user manual, PB-DIAG-SUITE PC software on CD-ROM with Getting Started manual Available expert test functions: Frame analysis, oscillogram analysis, trigger input and output
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Optional Accessories

BC-600-PB-CB-DSUB-1	D-sub adapter cable for testing of live PROFIBUS segments with reduced influence on their operation
BC-600-PB-CB-M12	Adapter set for M12 connection technology
BC-MOST-PB	External power supply kit, including 24 VDC/1.5 Ah AC adapter, 230 VAC battery charger and carrying case
PB-LSZ-CHB3	Digital fieldbus leakage current clamp, 40 .. 1.000 Hz, MIN/MAX, data hold, measuring cables, supplied in a handy case (fits in empty compartment of carrying case)

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