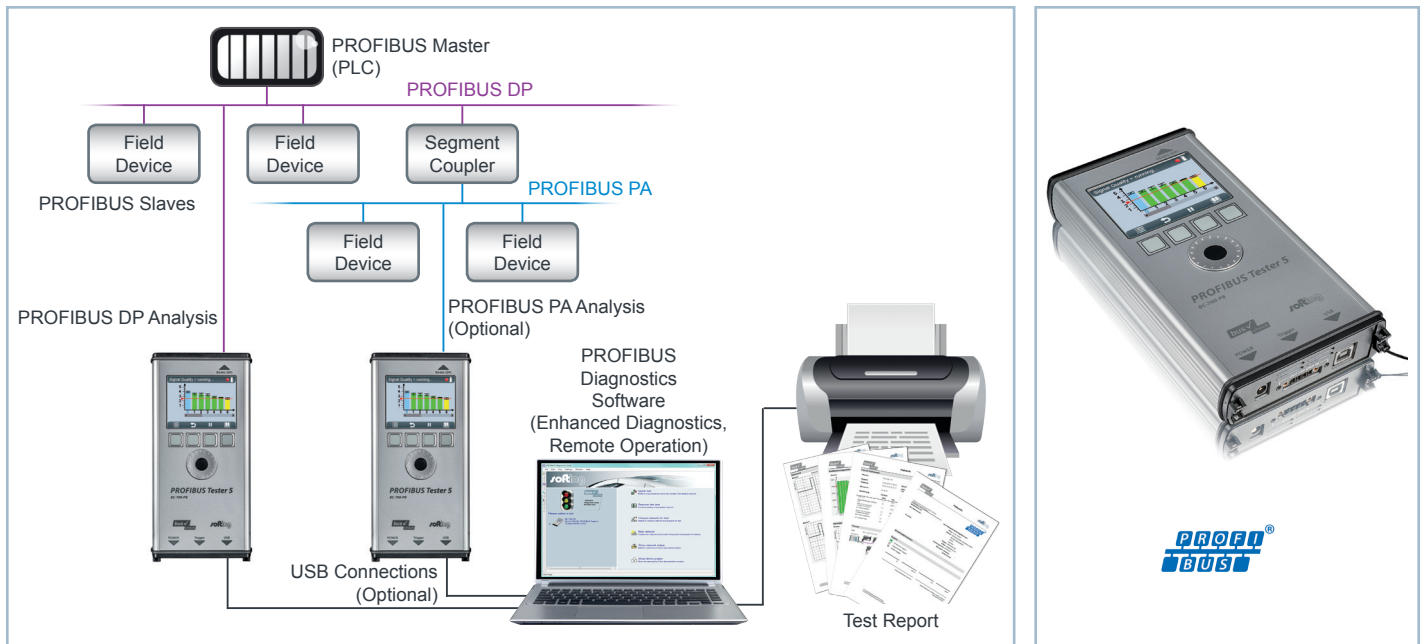


PROFIBUS Tester 5 BC-700-PB

Quick and Easy Testing of Bus Physics, Bus Communication and Cabling

The PROFIBUS Tester 5 BC-700-PB is a powerful diagnostic and troubleshooting tool for testing the cables, measuring the signals and analyzing the communication of PROFIBUS networks. It is battery-powered and provides a graphical display, allowing for quick results when working in stand-alone mode. Optionally, also PROFIBUS PA network can be analyzed. In addition, the BC-700-PB supports the export of test results for advanced analysis.



Testing Bus Cabling, Bus Physics and Bus Communication “All-In-One”

- > Combination of signal tester, storage oscilloscope, protocol analyzer, master simulator and cable tester functionality in a single diagnostics tool
- > Stand-alone mode plus extended PC-based diagnostics
- > Suited for installation, setup and commissioning, documentation, acceptance testing, network optimization, preventive maintenance, troubleshooting as well as laboratory tests

Highly Mobile Bus Tester for Testing Even Without a Notebook

- > Battery-powered operation without the need for additional power supply
- > Graphical display providing easy-to-understand presentation of test results
- > Comprehensive network tests in stand-alone mode without requiring a notebook

Enhanced Diagnostic Features Through Complementing PC-Based Software

- > Many additional features for executing, analyzing and managing bus tests in PC mode (Trend, Topology Scan, Master Simulator, Oscilloscope, Frame Analyzer)
- > Quick Test and User-Controlled Test for easy network status assessment at the push of a button
- > Generation of test reports describing the actual status of the PROFIBUS installation
- > Ideal for less experienced users as well as for fieldbus specialists

Optional Measuring Adapter for MBP (Manchester Coded Bus Powered) Physics

- > Specific signal analysis supporting MBP Physics (feeding voltage, signal deviation, signal polarity, bitrate divergence)
- > Complete protocol analysis directly at PROFIBUS PA segment

Technical Data

Diagnostics Functionality

Protocol and Frame Analysis	PROFIBUS DP-V0 and DP-V1, automatic baud rate detection in the range of 9.6 kbit/s ... 12 Mbit/s
Signal Analysis via EIA-485	PROFIBUS DP-V0, DP-V1, FMS and MPI Signal quality index: 0 ... 5,000, determined from signal level as well as signal/noise ratio and rise time; signal sampling with 8/16 samples per bit
... via MBP (requires optional adapter)	Fieldbus feeding voltage: 0 V ... 35 V at 0.1 V resolution, signal level: 100 mV ... 1,200 mV at 10 mV resolution, signal polarity, bitrate divergence: $\pm 1.2\%$ at 0.01 % resolution, signal sampling with 128 samples per bit
Oscilloscope Display (Not Available for MBP)	Test range: ± 5 V at 10 mV resolution (differential), 0 V ... 15 V at 15 mV resolution (A or B to DGND); sampling rate: up to 384 Msamples/s; sampled points: 2,400 (signal details), 8,192 (oscilloscope analysis)
Topology Scan (Not Available for MBP)	Active, maximum distance: 230 m, accuracy: ± 2 m
Cable Test (Not Available for MBP)	Active, supported cable segment length: 5 m ... 1,500 m, accuracy: 5 %

Operation	Via graphical colour display, four function keys and scrollwheel including central push-button or via PC/notebook
Internal Memory Capacity	3 user-definable network directories (segment and test location) for storing quick tests, trend logs and cable test results Trend logging: max. 99 hours
Trigger	IN: L = 0 V .. 0.8 V; H = 2.4 V .. 24 V; pulse > 10 μ s, active high OUT: approximately 5 V, active low (connection to storage oscilloscope)
PC Operating Software	PROFIBUS Diagnostics Suite, see separate datasheet for details

Connectors

EIA-485 (PROFIBUS DP)	PROFIBUS D-sub connector, 9 pins, power supply for external bus termination
MBP (PROFIBUS PA)	Connector, 3 pins, for screw terminals at optimal measuring adapter, measuring cable set including 3 probes (adapter for MBP measurement is attached to D-sub connector)
USB	V 2.0, high speed 480 Mbit/s, galvanically isolated

Dimensions (H x W x D)	35 mm x 220 mm x 110 mm
Power Supply	Built-in three-cell lithium-ion battery supporting 11.1 VDC or external AC adapter 100 VAC ... 240 VAC, 50/60 Hz (galvanically isolated) The rechargeable battery has a runtime of up to 5 hours (runtime depends on the performed test functionality and rate of wear of the rechargeable battery), battery is charged via external AC adapter
Operating/Storage Temperature	Operating temperature: 0 °C ... 50 °C, storage temperature: -20 °C ... 70 °C
Relative Humidity	Air humidity: 10 % ... 90 % without condensation
Weight	Test tool, no cable: approximately 0.75 kg; complete carrying case: approximately 4.2 kg
Conformity	CE, FCC, VCCI

Scope of Delivery

Hardware	PROFIBUS Tester 5 BC-700-PB, power supply unit 100 VAC ... 240 VAC, 50/60 Hz with connecting cables for Europe and USA, adaptor cables, carrying case Measuring adapter BC-700-H1, measuring cable set (for PROFIBUS PA option)
Software	PROFIBUS Diagnostics Suite (PC software for Windows on CD-ROM) BC-700-PB upgrade license (on CD-ROM, for PROFIBUS PA option)
Documentation	Device manual, "Getting Started" manual

Order Numbers

DDA-NN-006014	PROFIBUS Tester 5 BC-700-PB
DDL-NL-006010	PROFIBUS PA option for BC-700-PB (BC-700-PB serial number required for order placement)

Additional Products and Services

BC-600-PB-CB-M12	D-Sub to M12 adapter set with T-piece and M12 bus termination for PROFIBUS DP
PB-LSZ-CHB3	Digital fieldbus leakage current clamp for locating EMC problems, 40 Hz ... 1,000 Hz, Min/Max, Data Hold, measuring cables, supplied in handy case (fits into empty compartment of carrying case)
BC-PBMB-PB-S	D-Sub service interface with active bus termination and 90° angled connector for PROFIBUS DP
BC-M12DP-PB	M12 service interface for PROFIBUS DP, comprising M12 T-piece, end cap, M12 connection cable (1 m)
TRA-PB-TECH	Training „PROFIBUS Technology“, 2 days
TRA-PB-TS	Training „PROFIBUS Troubleshooting“, 3 days



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