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, PROFIBUS Tester 5 (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 ...Computer Optional**

- 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; no computer required

**Enhanced Diagnostic Features Through PC-Based Software (Included)**

- Many additional features for executing, analyzing and managing tests (Trend, Topology Scan, Master Simulator, Oscilloscope, Frame Analyzer)
- Quick Test and User-Controlled Test for easy network status at the push of a button
- Generation of test reports describing status of the PROFIBUS installation
- Suitable for range of user types: novice to 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**: PROFIBUS DP-V0, DP-V1, FMS and MPI
  - ... via EIA-485: 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: 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, 
    (requires optional adapter) bit rate divergence: ±1.2 % at 0.01 % resolution, signal sampling with 128 samples per bit
- **Oscilloscope Display**: 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

### Operation
- **Cable Test**: (not available for MBP)
  - Active, supported cable segment length: 5 m ... 1,500 m, accuracy: ±5 %

### 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 μs, 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)**
- **MBP (PROFIBUS PA)**
  - Connector, 3 pins, for screw terminals at optional measuring adapter, measuring cable set including 3 probes
  
### 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
- 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

### Software
- **PROFIBUS Diagnostics Suite (PC software for Windows on CD-ROM)**
- **PROFIBUS Tester 5 (BC-700-PB)** upgrade license (on CD-ROM, for PROFIBUS PA option)
- **Device manual**

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

### Additional Products and Services
- **ACA-NN-006031**: EIA-485 D-Sub adapter cable for testing operational networks with reduced influence on segment operation
- **ACA-NN-006033**: D-Sub to MBP adapter set with T-piece and MBP 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-PMBB-PS**: 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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**Optimize!**

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