

# PROFIBUS Tester PB-T3

## Precise Analysis of Signal Quality and Configuration

### Application

The PB-T3 PROFIBUS Tester is a universal measuring instrument for analysis, monitoring, error finding and maintenance of PROFIBUS systems. Typical operating faults for plants running PROFIBUS, such as station failure, communication errors or even plant shutdowns, are frequently due to the bus electrics and cabling. PB-T3 provides an overview of the signal conditions on the bus, thus helping users to quickly find and correct errors.

### Find Errors Easily

PB-T3 is quickly connected to any PC via USB. Besides automatically detecting the baud rate and the individual devices of the system to be analyzed, it determines the signal quality of each device on the bus. Thereby it also shows the signal shape with



PB-T3 determines signal quality and network topology

## Product Information



its built-in storage oscilloscope. PB-T3 also provides a master simulator which permits checking the PROFIBUS installation even without having the actual bus master in operation. The detection of multiple identical station addresses and the determination of the bus cycle times help to ensure the correct configuration of the system.

In addition, PB-T3 can determine the topology of a plant, thereby localizing sources of error with exact position information. Other convenient features include the comprehensive, automatically generated test report and the possibility to export the measurement results as CSV files and graphics for further processing, for example in MS Office programs.



Everything is always  
at hand in the  
practical service case

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## Product Information

### PROFIBUS Tester PB-T3: Precise Analysis of Signal Quality and Configuration

## Measured Data/Functions

Disturbance-free voltage range	Overview measurement, logger measurement
Signal shape	Station-specific measurement with built-in oscilloscope
Signal edges	Quality of rising and falling edges
Bus status	Detection of bus activity, measurement of differential voltage when idle
Bus cycle time	Token rotation time of a master
Error counter	Detection of erroneous frames
Topology scan	Measurement of the line lengths between stations
Multiple address detection	Detection of multiple identical PROFIBUS addresses
Master simulator	Permits measurement without bus master, automatic station scan
Trigger output	Station-specific trigger signal for controlling an oscilloscope
Report generator	Creates a user-configurable test report

## PROFIBUS Interface

Connection	PROFIBUS 2 x 9-pin female D-sub connector (also M12, via supplied adapter cable)
Protocols	PROFIBUS DP and FMS
Data transfer rates	9.6 - 12000 kbits/s incl. 45.45 kbits/s, automatic recognition
Measuring range	Typ. 0.4 ... 5 V, resolution: 50 mV, Signal sampling with 16 samples per bit

## Additional Connections

PC	USB 1.1
Oscilloscope	Trigger output galvanically isolated, BNC jack

## Miscellaneous

Power supply	Via supplied wide-range power supply
Ambient temperature	5°C ... +40°C
Storage temperature	-20°C ... +60°C
Housing	Aluminum, IP20 protection
Dimensions in (W x H x D):	109 x 35 x 143 mm (4.3" x 1.4" x 5.6")
Approvals	CE

## Scope of Delivery

PB-T3 hardware, wide-range power supply, tester software on CD,  
user manual and a comprehensive range of accessories in a handy carrying case

## System Requirements

PC with Windows XP, Windows Server 2003, Windows 2000 or Windows ME/98

## Order No.

PB-T3

