

PROFIBUS[®]-Tester V3

➔ **Prompt overview of signal conditions (bus physics) on PROFIBUS and fault localization in the network**



The **PROFIBUS-Tester** is a testing tool which supplies an immediate overview of the signal conditions along the line and which enables fault localization in Profibus networks.

Most field buses use a twisted-pair cable according to RS485 specifications as their physical medium. Bugs in the application software are often suspected when field bus systems are set into operation. However, experience shows that an incorrect design and incorrect parameters of the bus cabling system can be blamed for the majority of all practical problems.

Typical errors of bus cabling systems are:

- Incorrect bus termination
- Excessive high contact resistance due to aging/corrosion
- Inadequate transmission levels (pre-damaged bus drivers)
- Poor signal quality (excessive length of stub lines)
- Use of incorrect lines
- Cable routing in environments subject to substantial interference

With **PROFIBUS-Tester** it is possible to record and show the signal conditions of each PROFIBUS station - even if the machines are running. From the results of the signal quality (signal to noise and edge steepness) it is possible to draw conclusions of problems which are caused by these stations or by the BUS cabling.

In addition an online control monitors and checks the complete BUS traffic, incl. the time of circulation of the token bus and the telegram error counter.

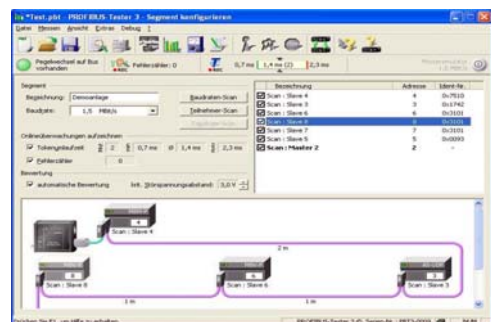
A master simulator makes it possible to check the BUS during the installation already. The topology detection knows the distances of the individual PROFIBUS stations (conduit lengths) and does accomplish the automatic assortment according to the distance as well.

Fields of application

- Trouble shooting and analysis of PROFIBUS bus physics
- Installation of PROFIBUS-DP networks
- Check and periodic maintenance of PROFIBUS-networks (DP and FMS)
- Creation of station-, time- and location-statistics
- PROFIBUS data logger

Technical features

- automatic baud rate detection (supports all PROFIBUS data)
- comfortable station scan (live list) incl. recognition of double addressing)
- integrated master simulator (PROFIBUS-DP)
- identification of all stations (classification of master file of instrumentation)
- opt. filtering of incorrect telegrams
- Passive connection to the bus
- easy connection via USB
- Trigger output for oscilloscope electrically isolated
- Topology detection
- Measuring of signal to noise
 - 16 bit scanning rate
 - advanced measurement range (0,4 to 5 V)
 - high solution of 50mV
- Edge measurement
- Display of bus status and measurement of differential voltages (while rest period)
- Bus cycle time (token rotation time bus of a master)
- Error counter (check of incorrect telegrams)
- Aluminum enclosure (h=35mm, w=109mm, l=143mm)



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Connecting the PROFIBUS-Tester

- In the simplest case, the PROFIBUS-Tester PBT2 is connected to a free Profibus connector (diagnosis plug).
- Another option is to loop the tester into a spur line.
- Contacting via a diagnosis connection (tee) or a PU interface module is also possible.
- The bus cable is looped through on a 1:1 basis in the PROFIBUS-Tester.
- Either a PC (notebook) or a hand-held terminal is connected via USB interface.
- The plug-in power supply unit is used for the power supply of the tester.

PC diagnosis

The following evaluation options are available in conjunction with the diagnosis software functionality:

- Standard measurement – Measurement via one station
- Station measurement – Measurement via all stations
- Logger measurement
- Time stamp for current, minimum and maximum measured value
- detailed test log
- automatic evaluation of measured values
- Export function

- clearly and intuitive operating surface
- Archiving of measuring results in files
- Help system

System requirements

PC or PG with processor Pentium III or higher, 128 MB RAM, Harddisk, CD-ROM. USB-Port, Windows 98(SE)/ME/2000/XP

Scope of delivery

- PROFIBUS-Tester V3
- PROFIBUS-Adapter (2 x 9 pol. Sub-D outlet)
- PROFIBUS-Adapter M12
- Terminating resistor M12
- T-adapter M12
- Measuring adapter for oscilloscope connection
- Bus isolator 9 pol. Sub-D
- 100 - 240 VAC AC/DC adapter
- Using and analyzing software, CD
- user's manual
- Complete service package

To order

Art.-No. APT1100E - please refer to current price list.

