PROFIBUS®-Tester V5

Test of bus physics, communication and cabling with one device only. PROFIBUS Tester the 5th generation: „All-in-one“



The **PROFIBUS-Tester V5** is a powerful diagnostic and troubleshooting tool for testing the cables, measuring the signals and analyzing the communication of PROFIBUS networks. Battery-powered and with an integrated graphical display it allows direct display of measurement results in stand-alone mode. In addition, the **PROFIBUS-Tester V5** supports the export of test results for advanced analysis.

Fields of application

- Installation, commissioning and inspection
- Troubleshooting and field device testing
- Analysing sporadic errors
- Optimization and protocol analysis
- Preventive maintenance, service
- Documentation and acceptance testing

Measuring functions

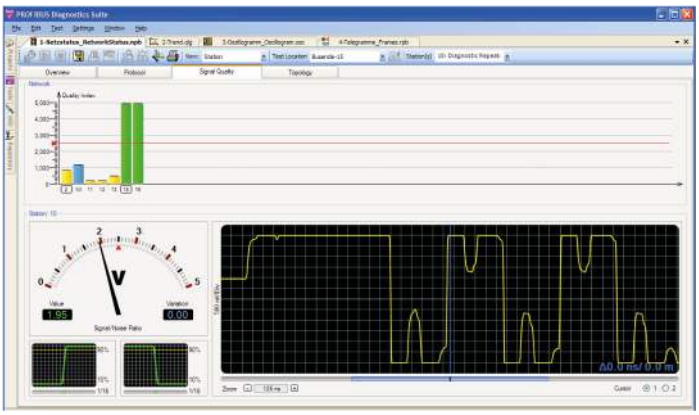
- Cable- and signal test
- Analysis of bus physics, communication
- Protocol and frame analysis
- Live-Status of all bus devices
- Storage oscilloscope
- Topology-Scan
- Long-term trend
- Master simulator

Operating in stand-alone mode the **PROFIBUS-Tester V5** immediately gives an overview of the cable (segment length, unwanted reflections, bus termination...), the bus status and the signal quality. The cable test provides a detailed failure description and an estimation of the distance between failure and test location.

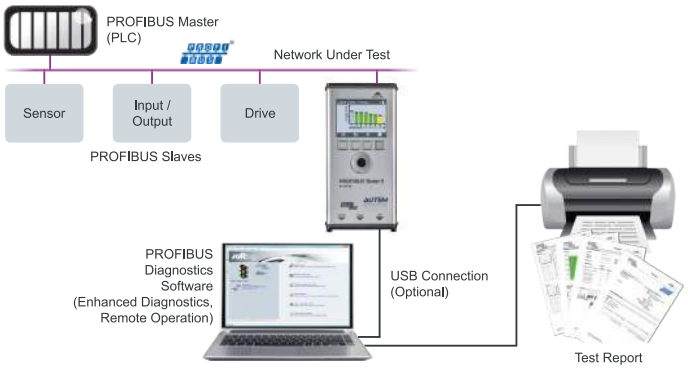
Special features

- Graphical display
- Built-in battery for stand-alone operation
- Network status assessment at the push of a button (also continuous measurement)
- Extended PC-based diagnostics
- Generation of detailed test reports describing the actual status of the PROFIBUS network
- Easy to use for less experienced users as well as for specialists

The included software “PROFIBUS Diagnostics Suite” allows the visualising and detailed analysis of measurement results on the PC.



Device and software are easy to operate. So even less experienced users can achieve excellent measuring results.



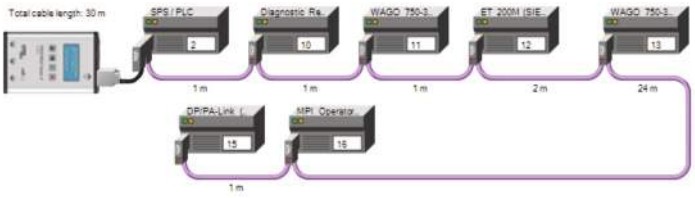
The **PROFIBUS-Tester V5** helps to save commissioning time. In addition, regular preventive tests ensure continuous reliable operation and increase plant availability. However, if a problem occurs, **PROFIBUS-Tester V5** will locate the reason quickly and reliably. Unplanned system downtimes will be minimized. The included software “PROFIBUS Diagnostics Suite” creates test reports of the current status of the PROFIBUS system in no time.

The “oscilloscope function” allows an informative oscilloscope display even in stand-alone mode without a PC.

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Technical features

- **Diagnosis**
  Protocol- and Frame-Analysis: PROFIBUS DP-V0 and DP-V1, automatic baudrate detection in the range of 9.6 kBit/s .. 12 MBit/s
  Signal-Analysis: PROFIBUS DP-V0, DP-V1, FMS and MPI; signal quality index 0 .. 5,000, determined from signal waveform, signal/noise ratio and rise time; signal sampling with 8/16 samples per bit
  Oscilloscope: 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: Active, maximum distance:
  230 m, accuracy: ±2 m
  KCable Test: 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)
- **Connectors**
  PROFIBUS D-sub connector, 9 pins, power supply for external bus termination, USB V 2.0, high speed 480 Mbit/s, galvanically isolated
- **Power Supply**
  Built-in battery or 24 VDC or external AC adapter 100 VAC .. 240 VAC, 50/60 Hz with mains cable Europa / USA
- **Dimensions** H x B x T: 35 x 220 x 110 mm
- **Weight**
  Tester w/o cable: approximately 0.75 kg;
  complete carrying case: approximately 4.2 kg
- **Operating/Storage Temperature**
  Operating temperature 0 .. 50 °C
  Storage temperature -20 .. 70 °C
  Air humidity 10 .. 90 % without condensation
- **Conformity** CE, FCC, VCCI

Scope of delivery (APT5005E)

PROFIBUS-Tester V5 supplied in a practical aluminum case: Wide-range power supply for Europe + USA, D-sub PROFIBUS adapter cable, USB cable, terminal block for trigger input/output, PC-Software „PROFIBUS-Diagnostics Suite“, user manual, “getting started” guide. Oscilloscope-function in stand-alone mode w/o PC included.



Optional accessories

APT5010E **PROFIBUS-PA Adapter** enables the measurement of PROFIBUS-PA networks with PROFIBUS-Tester V5

APT5020E **Reaction optimized PROFIBUS D-Sub adapter cable** especially for measurement during operation

APT5050E **Adapterset for M12-connection technology** for connecting field devices with M12-connectors, incl. terminating resistor

APT5070E **Digital Leakage Current Clamp** for detection of improper shield currents resulting from earthing, equipotential bonding or EMC problems, 40 – 1,000 Hz, MIN/MAX, DATA HOLD, ever-ready case, measuring cables (fits in empty compartment of alumi-num case for PROFIBUS-Tester V5)

APT5085E **5 pcs. D-Sub-service adapter PROFIBUS-DP**
The D-sub service interface provides an access point for testing PROFIBUS networks if the existing D-sub connectors have no service socket or if bus stations are connected via a terminal block. It is rail mounted like a terminal block and supplied with 24 VDC by an external power source, 90° angled PROFIBUS connector with screw terminal technology and a switchable terminating resistor included

APT5095E **1 pc. M12-service adapter PROFIBUS-DP**
M12 T-connector (IP68), sealing cap for service jack of T-piece and 1 m PROFIBUS-DP cable with M12-jack/plug

Order

PROFIBUS-Tester V5 (Part.-No. APT5005E) with oscilloscope-function and optional accessories ⇨ please refer to current price list.

Errors and omissions except

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