

There are two versions of the VDE test system

Single-user solution

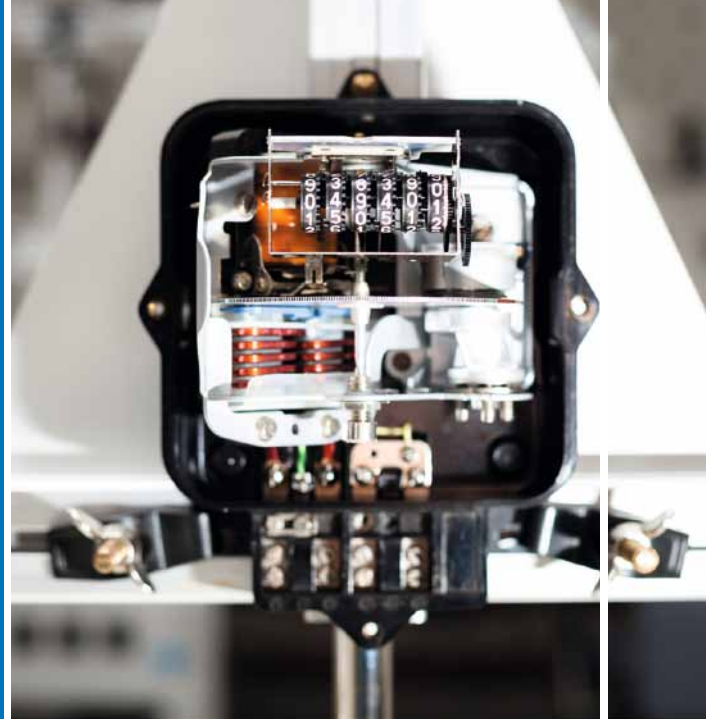
- Used for development, type, and certification tests
- Integrated control of external source systems from VDE test system
- Analysis by VDE test system software

Multi-user solution

- Focus on random sample and acceptance tests (keyword: bus mode)
- High automation level and user-friendly
- Integrates into meter testing equipment available on the market
- Control and analysis with meter testing equipment's software
- Optionally with separate, stand-alone software

Your benefits at a glance

- Modular test system
- Future-proof with update ability
- Powerful and expandable
- Transparent
- Integrates into common meter testing equipment



BASIC METER

INTERFACE

FNN

HDLC

SML TLS

GATEWAY

MS2020

LMN

CERTIFICATE

VDE

MEKO

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Smart metering at VDE
VDE test system
for FNN basic meter

VDE test system for FNN basic meter

The VDE Institute developed a test system that can be used to check the requirements from the FNN specifications for the basic meter. The target groups of the universal test system are measuring station operators, manufacturers, and testing laboratories.

The VDE test system is comprised of software and a hardware module for exchanging messages with the meter. The software is modular in design and utilizes proven TTCN-3 technology. It is flexible and future-proof due to its expandability. In addition to the test execution, analyzing and exchanging messages via the hardware module, the software also controls an electrical source system.

In order to check the high requirements for the basic meter's LMN communication interface, a special hardware module (HDLC bridge) was developed in cooperation with the company Exceeding Solutions. The hardware module facilitates the exchange of messages between the test system and meter with a guaranteed time resolution of 10 ns. At the same time, all participants connected to the LMN bus are logged.

Technical data

VDE test system software

- Uses proven technology TTCN-3 (Testing and Test Control Notation)
- Integrates and controls external electrical source systems (e.g. EMH)
- Can be expanded for company's own test cases
- Separate software interface to easily implement and analyze FNN test cases
- Detailed record of all exchanged data messages

HDLC bridge

- Based on Xilinx SoC and dual-core ARM-9 processor
- Controlled by VDE test system software via Ethernet interface
- BSI-compliant TLS-1.2 interface
- BUS connection to HDLC master in realtime core
- BUS connection to realtime stamp core
- Global meter with resolution of 10 ns

