

Fieldbus Diagnostic Handheld FDH-1

Function

The **Fieldbus Diagnostic Handheld FDH-1** is a comprehensive measurement and commissioning tool for PROFIBUS PA and FOUNDATION Fieldbus H1. The handheld can be connected to any point of a segment. Via display and push buttons, the device guides the user through many scenarios of testing. The handheld can record and store data for up to 32 segments with maximum device count without requiring a connection to a PC.

The handheld supports inexperienced and expert users alike through different operating modes. Failure margin checks and device coupler tests help set up the optimum condition of the fieldbus infrastructure and find weak spots in the installation. The expert system and wizards enable easy handling and require little or no training.

FDH-1 Manager Software Premium can operate the handheld with enhanced visualization. The software loads data from FDH-1 and saves data back, to allow for comparisons between actual and planned physical layer attributes.

Measuring results - Fault alarms

- Ground faults and unbalance
- Signal level
- Jitter
- Signal polarity
- Noise
- Communication error statistics

Approvals

- Conformance statement: TÜV 05 ATEX 2923 X
- Type of protection, temperature class: → II 3G EEx nA [nL] IIC T4
- Guideline conformity: RL 94/9 - EG IEC 60079-15

Technical data

- Rated voltage: 8,5 to 35 V
- Rated current: Up to 10 mA, if bus powered
- Electromagnetic compatibility: NE 21
- Protective system: IEC 60529
- Shock/Vibration resistance: EN 60068-2-27 / 60068-2-6
- Ambient temperature: -20°C to 50°C
- Storage temperature: -40°C to 70°C
- Relative air humidity: < 95 % non-condensing
- Shock resistance: 15 g, 11 ms
- Vibration resistance: 1 g, 10 to 150 Hz
- Dimensions (H x W x D): 138,3 x 197 x 40,7 mm

Scope of delivery

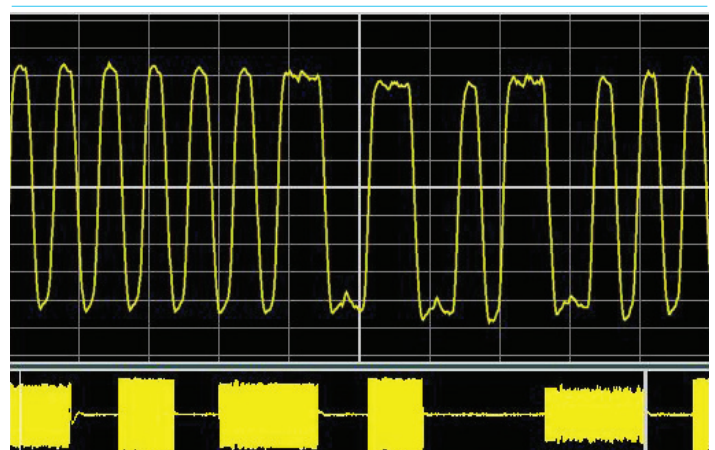
- Fieldbus Diagnostic Handheld FDH-1 incl. Transport case
- Measuring adapter with 3 pin test plugs
- Measuring adapter with 3 test clips
- USB cable
- Software and Manual



Fieldbus Diagnostic Handheld FDH-1

| | | | | | |
|---|----------------------|------------|-------------|--------|-------------|
| Segment Tag: | Segment2 | | | | |
| Segment Bus-Communication Status: | ● | | | | |
| Motherboard Properties | | | | | |
| Label | Actual Configuration | Status | Information | | |
| Motherboard Properties | Power Hub | | | | |
| Redundancy | Redundant | | | | |
| Module A | Galvanic isolated | ✓ | Excellent | | |
| Module B | Galvanic isolated | ✓ | Excellent | | |
| Segment Data <input type="checkbox"/> Ignore Secondary Bulk Power Supply when creating Snapshot | | | | | |
| Label | Actual Value | Min. Value | Max. Value | Status | Information |
| Primary Voltage [V] | 23.8 | 23.8 | 23.8 | ✓ | Excellent |
| Secondary Voltage [V] | 23.8 | 23.8 | 23.8 | ✓ | Excellent |
| Voltage [V] | 29.3 | 29.3 | 29.3 | ✓ | Excellent |
| Current [mA] | 242.0 | 242.0 | 242.0 | ✓ | Excellent |
| Unbalance [%] | -2.0 | -2.0 | -2.0 | ✓ | Excellent |
| Noise [mV] | 20.0 | 15.0 | 20.0 | ✓ | Excellent |

Segment assessment



Oscilloscope function

| Ordering details | Art. No. |
|------------------------------------|-----------|
| Fieldbus Diagnostic Handheld FDH-1 | 110010100 |
| FDH-1 Manager Software | 110010101 |