

Quality tester PB-Q^{ONE}

Function

The **PB-Q^{ONE}** is a tool for the complete evaluation of PROFIBUS communication quality. With the provided adapter a non-reactive connection to the PROFIBUS network is allowed. Its ease of use and clear and automated evaluation of measuring results allow to reliably evaluate the state of the physical and logical transmission quality in the network. In addition, the PB-Q^{ONE} offers a powerful topology function.

Results

In this overview, all bus devices are displayed in the form of a device matrix including address and detailed information. The colouring of each device (green, yellow, red) allows to immediately evaluate the state of each device. Additionally, the results of the bus physics and bus communication evaluation are clearly displayed.

Quality values

PROFIBUS is based on voltage difference signal which transfers the logical telegram content to the wires A and B. The level of the voltage difference as well as the shape of these signals are indicators of the physical transmission quality respectively the signal quality. As result a bar chart diagram with a quality value for each device in the network is displayed.

Telegram mode

Further analysis possibilities are available in the telegram mode. Through a number of filter and trigger options the data traffic can be evaluated based on events or defined data content.

Topology Scan

It is the only tool on the market to offer fully automatic, non-reactive topology scan performable during a running production. As result the PB-Q^{ONE} represents the real wiring of all devices and even identifies repeaters, measuring points and the cable lengths between the devices.

Technical data

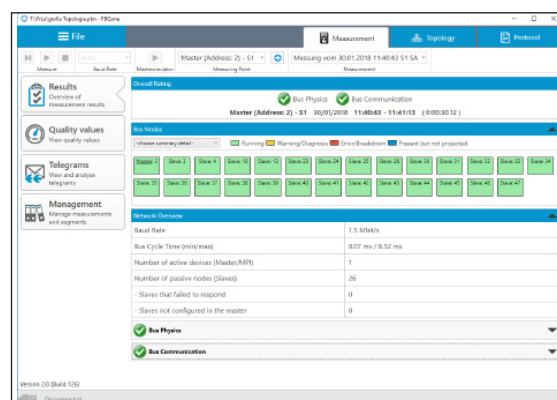
- PROFIBUS port: 9 pole D-SUB connector
- USB: USB 2.0 port
- Transmission rate: 9,6 kBit/s to 12 MBit/s
- Power supply: 500mA via USB
- Dimension (H x W x D): 60 x 117 x 35 mm
- Type of Protection: IP20
- Operating temperature: 0 °C to +50 °C
- Storage temperature: -20 °C to +70 °C
- Conformity: CE

Scope of delivery

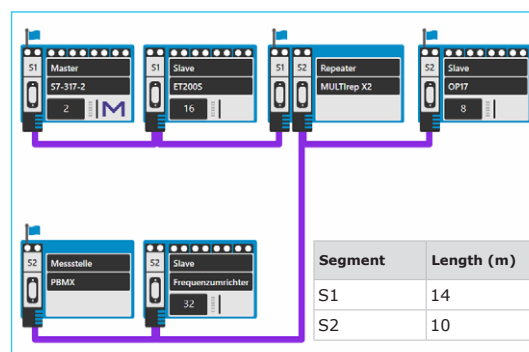
- PROFIBUS Tester PB-Q^{ONE}
- D-Sub 9-pin adapter cable
- USB cable (3 m)
- CD with operating software "Indu-Sol Suite" and device manual
- Transport case



PB-Q^{ONE}



Quality values



Topology

Ordering details	Art. No.
PB-Q ^{ONE}	110010050
Accessories	
PROFIBUS PA adapter for PB-Q ^{ONE}	110020110
M12 Y Measuring adapter	110020018

Leakage current clamp EmCheck® LSMZ I

Function

The leakage current clamp EmCheck LSMZ I is specially designed to measure leakage and shield currents in the frequency ranges of 50/60 Hz and 5 Hz to 1 kHz. It is characterized by a large opening (2.8 cm) for cable to be led through, so that a comfortable measurement is also possible in unfavorable installation situations. The measuring tool features a broad measuring range from 30 μ A to 100 A with the lower range being of particular interest. Through the holding-function it is possible to perform permanent measurements, such as maximum current. Shield currents are a problem for high frequent field bus cables to originate from a frequently missing or bad potential equalisation as well as a magnetic interference by a power supply cable.

Advantages

- Illuminated display
- Shield current measurement
- Measuring range up to 100 A
- Wide opening of shield current clamp (up to 2.8 cm)
- Holding functions allow a permanent measurement at maximum current
- Frequency changeover (50/60 Hz - 5 Hz ... 1 kHz)
- Shielded sensor

Tool information

- Manual selection of measuring range
- Integrated data storage
- Auto power-off (Battery life indicator)

Measuring range

- AC current: 30 μ A to 100 A effectively
Tolerance: 1.2 % $\pm$ 5 Digit (50 to 60 Hz)
2.5 % $\pm$ 5 Digit (60 to 500 Hz)
3.5 % $\pm$ 10 Digit (500 Hz to 3 kHz)
- Voltage AC: 0,1 to 600 V
Tolerance: 1 % $\pm$ 5 Digit (50 to 60 Hz)
1.2 % $\pm$ 1 Digit (60 to 500 Hz)
2.5 % $\pm$ 5 Digit (500 Hz to 3 kHz)
- Input impedance: 1 MOhm
- Resistance: 0.1 Ohm to 1 kOhm
Tolerance: 1 % $\pm$ 3 Digit
- Continuity: < 35 Ohm

Frequency range

- Current / voltage AC: 5 Hz to 1 kHz; 50/60 Hz
- Frequency measurement: 50 Hz to 3 kHz

Technical data

- Safety in accordance with: IEC61010-1 release 95
IEC61010-2-032 release 93
- Isolation class: Class III
- Overvoltage category: CAT III 600 V
- Pollution degree: 2
- Display: 4 digit LCD; 9999 Digits
- Clamp opening: $\varnothing$ 28 mm
- Power supply: 2 x 1.5 V; AAA or LR3
- Strong immunity to spurious currents: 70 dB
- Dimensions (L x H x W): 218 x 64 x 30 mm
- Weight: 2 80 g incl batteries



Leakage current clamp EmCheck® LSMZ I

Ordering details

EmCheck® LSMZ I

Measuring Clamp Set EmCheck® (MWMZ II & LSMZ I)

Measuring Clamp Set EmCheck® XL

Art. No.

122010005

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