## Quality tester CANBUSview XL III

### Function

The **CANBUSview XL** is a tool for determining the physical and logic communication quality of the data exchange in CAN networks. The measurement is performed online while the system is running. By means of an adapter the hardware is plugged feedback-free onto the CAN. The measuring and test results are displayed through a software on your PC. A standardized USB interface is used for the connection to the PC. We recommend to use the two ends of each segment/master system as measuring location in the CAN network. For this purpose suitable measuring points have to be provided.

### The measuring principle

#### CAN protocols
With the CANBUSview XL various CAN protocols can be analysed and evaluated in terms of quality, such as CAN, CANopen, SafetyBUS p and DeviceNet. Prior to the measurement the user is requested to select the relevant CAN protocol.

#### Physical quality determination

*Signal quality*
The CAN bus works with a differential voltage signal transmitting the logic telegram content to the lines CAN-H and CAN-L. The amount of the voltage differential and the form of these signals are a measure of the physical transmission quality and signal quality. Every bit andergoes a 64-fold scan. Major parameters used for the analysis are edge steepness, signal-to-noise voltage ratio and ripple of the CAN signal.
The measuring result is recorded over the time and as Q-value in the form of a bar chart. This measuring technique allows an easy and quick determination of the actual quality of the data communication.
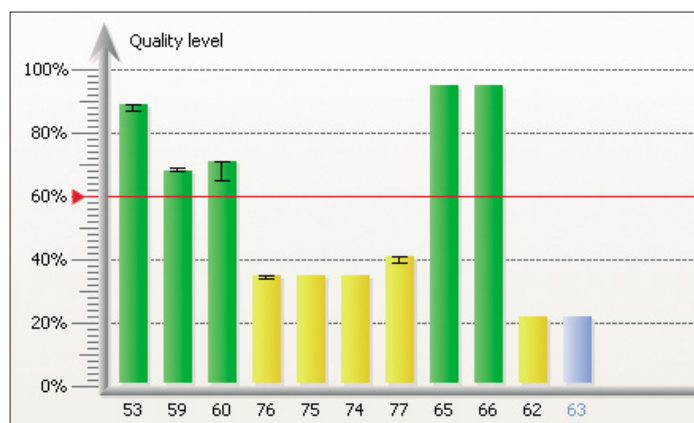
*Wiring test*
To ensure a correct bus wiring, the CANBUSview XL has an integrated wiring test. Any line short-circuits, line break, missing or additional terminating resistor can be detected and eliminated. In addition the loop resistances of the CAN line and the CAN current supply line and the total line length are determined.

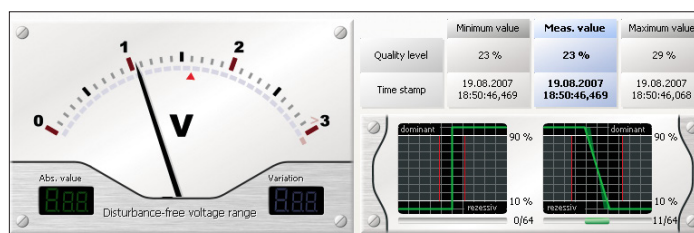#### Logic quality determination
Parallel to the physical transfer quality determination the CANBUSview XL checks the telegram traffic for defective telegrams, missing acknowledgements and overload of bus devices as well as the general bus capacity utilization. The online trigger is used to analyse the communication quality over several days / weeks. This helps to detect sporadic communication faults and allocate the same to a certain period of time. The online trigger is capable of analysing physical and logical faults.



CANBUSview XL III



Bar chart



Individual measurement



Wiring test

| Ordering details | Art. No. |
|---|---|
| CANBUSview XL III for CAN | 119010001 |
| Extension CANopen / SafetyBUS p | 119010002 |
| Extension DeviceNet | 119010003 |
| Extension SAE J1939 | 119010004 |
| Extension CANopen Monitor | 119010005 |

Indusol America • 980 Birmingham Rd Ste 721 • Alpharetta, GA 30004, USA • +1 (678) 880-6910 • sales@indusolamerica.com • indusolamerica.com
Guadalajara, Jalisco, MEX • +52 (55) 8526-6442 • ventas@indusolamerica.com

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