CAN Bus Tester CAN-BT

Industrial Automation

Tool for the commissioning and maintenance of CAN networks

Application

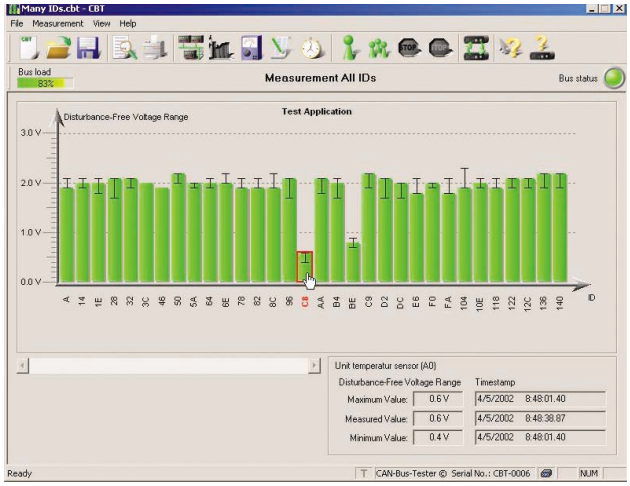
The CAN Bus Tester is a useful tool for the commissioning, maintenance, monitoring and production control of CAN devices and systems. By means of an electrical line analysis, the CAN Bus Tester enables not only experts to quickly identify and localize bus problems. The tester, which is supplied in a portable case, helps especially electricians, service technicians and operating staff with unsophisticated plant diagnosis. By an analysis of CAN messages of low signal quality, typical errors such as the use of wrong cable types, improper cable installation or faulty driver function of individual CAN Bus stations are quickly detected.

Performance

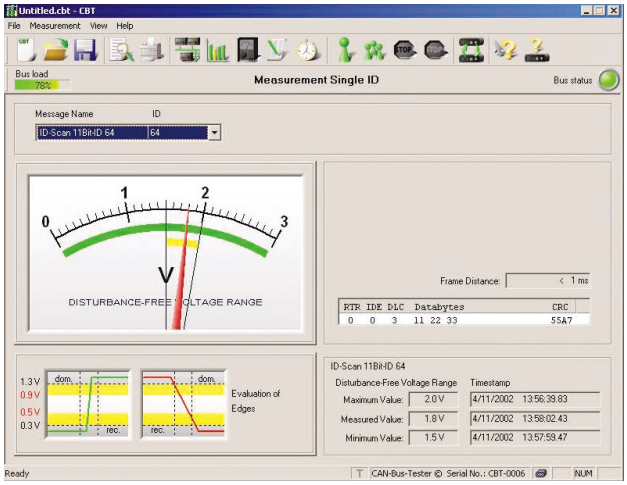
The CAN Bus Tester physically consists of easy-to-handle measurement hardware which is connected to the PC by USB. The diagnostic software offers comprehensive analysis and display of the measuring results.

The main functions are:

- Overall view of the electrical signal conditions on the bus
- Detection of mismatched bus lines
- Automatic baud rate recognition
- Measurement of the peak-to-peak voltage for detecting bus cabling mismatch
- Analysis of the edge steepness and the signal levels per CAN identifier or bus station
- Measurement of the individual bus stations' signal quality over any desired period of time (logging)
- Detection of all existing CAN identifiers
- Definition of the cycle times of messages with equal identifiers
- Comprehensive triggering possibilities, e.g. triggering on physical and logical errors and error frames
- Protocol analysis on the bit level
- Measurement of the optional supply voltage
- Display of bus load and bus state



Example: measurement of the noise ratio



Example: measurement of a specific identifier

Technical Data

Bus specification	CAN (or CANopen or DeviceNet) according to ISO 11898-2 (CAN Highspeed) with 11- or 29-bit identifier (CAN 2.0A and 2.0B)
Transfer rates	10; 20; 50; 62.5; 100; 125; 250; 500; 800; 1000 Kbits/s, automatic recognition
Type of bus station	Passive
Bus connector	2 x 9-pole SUB-D plug with 1:1 connection
Message recognition	Recognition of all identifiers by ID scan
Logging	Noise ratio for all identifiers with time stamps
Noise ratio measurement	0.9 V ... 5.0 V (resolution 0.1 V)
Bus state	Display: ok, statically recessive, statically dominant
Bus load	Display in %
Bus supply voltage	Display up to max. 40 V
Triggering	On identifiers, physical errors, logical errors, error frames
Trigger output	BNC socket, galvanically isolated, pulse length 2 bit times, approx. 5.5 V
PC connector	According to USB Version 1.1
Power supply	By extra-low-voltage socket (DIN 45323), 11 to 36 V DC; 0.3 to 0.1 A
Housing	Aluminum, h = 35 mm, w = 109 mm, l = 143 mm, 320 g
Temperature range	Operation: +5° C to +40° C, storage: -20° C to +60° C

Scope of Delivery

The CAN Bus Tester is supplied in a portable plastic case and has the following components:

- CAN Bus Tester hardware with operating instructions (German or English) and CD, USB cable (3m)
- CAN adapter cable, 30cm length, 4 poles, with PU plug
- 2 adapter cables DeviceNet (A1 – Open Connector, A2 – Sealed Microconnector, M12)
- Adapter board for terminal connection (e.g. for oscilloscope)
- Power adapter (100 to 240 V, 50/60 Hz), output voltage 24 V, 500 mA (DC)

System Requirements

- PC with CD drive
- 1 free USB interface
- Windows 98, ME, 2000 or XP
- Graphics: min. resolution 800 x 600, min. depth of color 16 bits
- 8 MB free user memory

Order Number

CAN-BT/d	CAN Bus Tester German
CAN-BT/e	CAN Bus Tester English

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