

PCAN-MiniDiag FD

Compact Diagnostic Device for CAN and CAN FD Buses



Description

The PCAN-MiniDiag FD is a compact, low-cost handheld device for basic diagnosis and checking of CAN and CAN FD buses. Service technicians and developers can easily access networks of vehicles, machines, or industrial equipment whose configuration is unknown. For this, the nominal bit rate for CAN and additionally the data bit rate for CAN FD are determined using bit timing measurement. Furthermore, the device has measuring functions for the termination, bus load, and voltage levels at the CAN connector.

The PCAN-MiniDiag FD has an increased protection due to its membrane keypad and casing. The power is supplied by three replaceable batteries.

The new CAN FD standard (CAN with Flexible Data rate) is primarily characterized by higher bandwidth for data transfer. The maximum of 64 data bytes per CAN FD frame (instead of 8 so far) can be transmitted with bit rates up to 12 Mbit/s. CAN FD is downward-compatible to the CAN 2.0 A/B standard, thus CAN FD nodes can be used in existing CAN networks. However, in this case the CAN FD extensions are not applicable.



Technical Specifications

- High-speed CAN connection (ISO 11898-2)
 - Complies with CAN specifications 2.0 A/B and FD
 - CAN FD support for ISO and Non-ISO standards
 - CAN FD bit rates for the data field (64 bytes max.) from 66.6 kbit/s up to 10 Mbit/s
 - CAN bit rates from 10 kbit/s up to 1 Mbit/s
 - Microchip CAN transceiver MCP2558FD
- CAN bus connection via D-Sub, 9-pin (in accordance with CiA[®] 303-1)
- No influence to the CAN bus due to permanent listen-only mode
- OLED display with 128 x 128 pixel resolution
- Power supply via exchangeable batteries (3 x Micro AAA with 1.2 V or 1.5 V)
- Operation via membrane keypad with four keys
- Plastic casing with increased Ingress Protection IP42
- Dimensions: 122 x 69 x 44 mm
- Operating temperature range from -10 to 50 °C (14 to 122 °F)

Measuring functions

- Detection of bit rates via exact bit timing measurements
- Measurement of the CAN termination
- Measurement of the CAN bus load with display in diagram
- Voltage measurement for CAN-High and CAN-Low at the CAN connector (D-Sub) via pin 2 and 7
- Voltage check at pin 6 and 9 with display of the voltage difference
- Counter for CAN, CAN FD, and error frames