

# CAN FD cable specification

**The nonprofit CAN in Automation (CiA) association with more than 650 member-companies has released the CiA 601-6 specification.**

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Typical wiring harness with CAN FD cables for example provided by Leoni (Source: Leoni)

The CiA 601-6 specifies requirements and test methods of mechanical and electrical parameters for cables to be used in CAN FD networks. In general, the specification refers the ISO 6722 series standardizing single-core cables for 60 V to 600 V in road vehicles. In the CiA document, there are specified for example bending radius and twist-rate. Additionally, impedance tolerance, specific cable delay, insertion loss, and ohmic DC-resistance per length are given. The symmetry of cable by means of transverse conversion loss is specified for different frequencies. The 7-page document includes an annex recommending ohmic DC resistance values for different network lengths. The released specification is part of the CiA 601 series, which can be subscribed annually.

The CiA technical group Task Force (TF) CAN FD cable, in which there are carmakers and cable manufacturers, prepared this specification. The TF CAN FD cable is a sub-group of the Interest Group (IG) layer 1/2 that develops and maintains the data link layer and physical layer of CAN-based technologies. This specification provides the additional references of the CAN FD physical layer for the system designer.

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