



## **Indian Standard IS 17709 : 2022 Cardiac defibrillators Connector assembly DF-1 for implantable defibrillators Dimensions and test requirements**

IS 17709:2022 is an identical adoption of ISO 11318:2002, specifying the dimensional and test requirements for the DF-1 connector assembly used in implantable defibrillators. It applies to connectors that do not exceed 1 kV/50 A peak output, ensuring interchangeability between defibrillator leads and pulse generators from different manufacturers. However, the standard does not cover aspects such as fastening mechanisms, materials, system performance, or overall reliability.

The standard establishes key design parameters, including:

- Lead connector and connector cavity dimensions
- Sealing mechanisms for electrical isolation
- Insertion and withdrawal force limits
- Marking requirements for easy identification

To ensure safety, compatibility, and reliability, the standard includes a series of mechanical, electrical, and sealing tests, such as:

- Insertion & Withdrawal Force Test
- Lead Connector GO Gauge Test
- Connector Cavity GO Gauge Test
- Electrical Isolation Test (to prevent current leakage)
- Current-Carrying Test (to ensure the connector cavity can handle defibrillation currents safely)
- Marking & Labelling Verification

By standardizing DF-1 connectors, IS 17709:2022 promotes interchangeability, reducing design mismatches that could affect device performance. It also provides design flexibility (e.g., allowing different sealing mechanisms) and encourages continuous innovation in implantable defibrillator technology.