IS 16444 (Part 1): 2015
a.c. Static Direct Connected Watthour Smart Meter Class 1 and 2 — Specification

IS 16444 (Part 1): 2015 defines specifications for static direct-connected watthour smart meters, intended to measure alternating current energy consumption accurately for both residential and commercial settings. The standard focuses on Class 1 and Class 2 meters, detailing requirements for their construction, accuracy, power consumption, communication protocols, and load-switching capabilities.

These meters, essential for India's smart grid development, enable two-way communication with utilities via Advanced Metering Infrastructure (AMI) components like the Head End System (HES) and Neighbourhood Area Network (NAN).

It outlines the meter's operational functions, including remote data retrieval, firmware updates and disconnect/reconnect commands based on pre-set conditions. Compliance with electromagnetic and environmental standards ensures durability, while data exchange protocols support secure, remote communication for efficient grid management. Through rigorous testing, the standard ensures that meters meet reliability and safety needs essential for modernizing energy distribution systems.