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Find the *National Instruments BNC-2096* at our website: *Click HERE*

Interface Accessory for Class 1 TEDS Sensors

NI BNC-2096

- Adds TEDS capability to NI 447x devices and SCXI-153x modules
- Interfaces with up to 16 TEDS sensors (Class 1 with IEPE analog)
- Software control direct from Measurement & Automation Explorer (MAX) and LabVIEW™ TEDS Library
- Implements mode control (analog/digital) required of IEEE 1451.4 Class 1 sensors
- Digital communications and control from NI 4021 switch controller or data acquisition device
- Multidrop configuration – control two or more units from a single control device (E Series or NI 4021)
- 19 in. rack mountable

Operating Systems
- Windows 2000/NT/XP

Recommended Software
- LabVIEW™

Measurement Services Software
- NI-DAQmx



Overview

The National Instruments BNC-2096 is a front-end Transducer Electronic Data Sheet (TEDS) interface accessory for NI 447x devices and SCXI-153x modules. The NI BNC-2096 interfaces directly with IEEE 1451.4 sensors (smart TEDS sensors), which deliver improved system configuration and diagnostics, reduced downtime, and better sensor data management for customers. Using smart TEDS sensors, you achieve easier setup, configuration, and maintenance of computer-based measurement and automation systems. In addition, you can cascade several BNC-2096 accessories for high-channel-count applications.

Sensors Plug&Play

The IEEE 1451.4 standard delivers plug-and-play capability to analog sensors. End users, systems integrators, and developers can automate the configuation of measurement systems for analog sensors. By defining an easy add-on approach that brings TEDS benefits to all types of sensors, the standard makes data acquisition systems easier to set up, configure, and maintain. The TEDS structure is compact and flexible enough to handle a very wide range of sensor requirements.

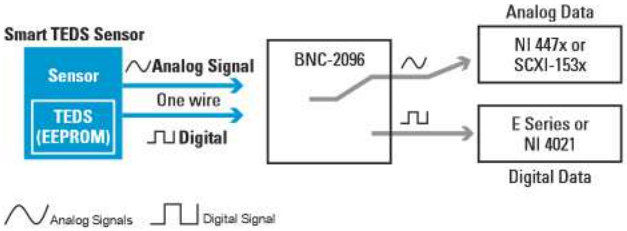


Figure 1. System Diagram

Smart TEDS Sensors

An IEEE 1451.4 smart TEDS sensor consists of the analog components and an embedded memory chip, which together provide the mixed-mode interface for analog and digital signals. A smart TEDS sensor identifies and describes itself – providing the manufacturer, sensor model number, serial number, measurement range, sensitivity, and calibration information. TEDS information resides on a memory chip (EEPROM) within the sensor and is accessed by measurement systems via a simple low-cost serial interface. The BNC-2096 passes the analog signal from the sensor to the NI 4472, NI 4474, SCXI-1530, or SCXI-1531 device for conditioning and digitizing, and transmits the digital TEDS content to the PC via an E Series multifunction DAQ device or NI 4021 switch controller.

LabVIEW and NI-DAQmx

A fundamental component of any Sensors Plug&Play system is the TEDS processing software. National Instruments developed the TEDS library for LabVIEW to implement the TEDS reading and writing functions. In addition, you can perform basic TEDS reading and configuration direct in NI-DAQmx, reducing set-up time and system complexity.

Ordering Information

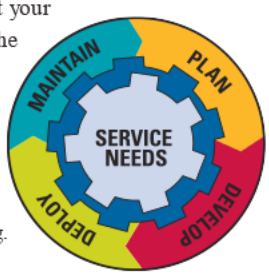
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