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   Titolo   IEEE Std 1451.3-2003: : IEEE Standard for a Smart Transducer Interface
                       for Sensors and Actuators - Digital Communication and Transducer
                       Electronic Data Sheet (TEDS) Formats for Distributed Multidrop Systems
                       / / Institute of Electrical and Electronics Engineers

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   Descrizione fisica 1 online resource (ix, 175 pages)

   Disciplina   681.2

   Soggetti   Transducers - Standards
                       Detectors

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Sommario/riassunto A digital interface for connecting multiple physically separated
                       transducers to a single processor over a single pair of wires. The
                       interface can support both asynchronous and isochronous data
                       transfers. Several Transducer Electronic Data Sheets (TEDS) and their
                       data formats are described. An electrical interface, channel
                       identification protocols, time synchronization protocols, read and write
                       logic functions to access the TEDS, and transducers with a wide variety
                       of attributes are defined. This standard does not specify signal
                       conditioning, signal conversion, or how an application uses the TEDS
                       data. Scope: This project will develop a standard thqt defines a digital
                       interface for connecting multiple physically separated transducers. It
                       will leverage off the IEEE P1451.1 and IEEE P1451.2 standards. The
                       standard will define the TEDS format, the electrical interface, channel
                       identification protocols, hot swap protocols, time synchronization
                       protocols, and the read and write logic functions used to access the
                       TEDS and transducer data. The standard will nto specify signal
                       conditioning, signal conversion, or how an application uses the TEDS
                       data. Purpose: There is currently no defined independent standard for
                       interfacing multiple physically separated transducers that allos time

synchronization of data. Without such a standard, custom transducer interface solutions are required which are time-consuming and costly. The standard will provide a minimum implementation that allows multidrop, hot swapping, self-identification and configuration of transducers that may not be located in the same enclosure, but are confined to a relatively small space.