

# TEDS Technical Information

## **What is TEDS**

TEDS (*Transducer Electronic Data Sheet*) is a set of electronic data in a standardized format defined within the IEEE 1451.4 standard. This data specifies what type of sensor is present, describes its interface, and gives technical information such as manufacturer, type number, serial number, sensitivity, calibration date, reference condition, etc.

A TEDS sensor is the same as a "plug-and-play sensor". Via its internally memory, it can identify and describe itself to the data acquisition system and perform automatic system configuration.

## **What are the advantages of TEDS?**

By implementing TEDS sensors you will obtain the following advantages:

### **Ensure integrity of the measurement chain**

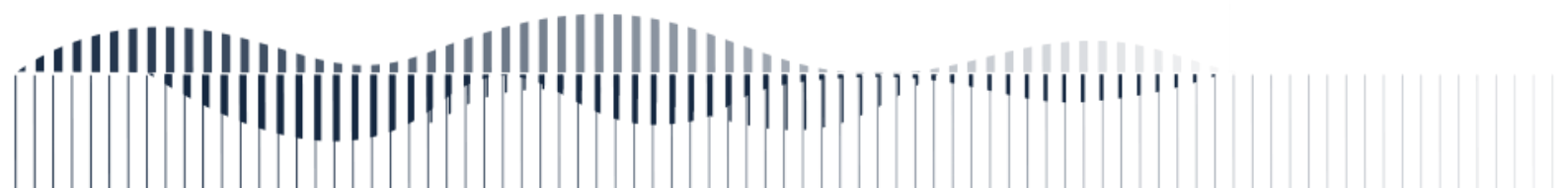
- What is connected to what
- Quick traceability
- Improved diagnostics and troubleshooting
- Monitoring of calibration intervals
- Improved sensor data management, bookkeeping and inventory management

### **Plug-and-play**

- No recalibration is needed when replacing sensors
- The data acquisition system can recalibrate itself

### **Reduction of routine work**

- Reduced need for precautionary measures when checking connectivity.
- Reduced costs for setup and teardown
- Reduced downtime for sensor repair and faster, more automated system setup



## TEDS DS2431

A microphone with TEDS will typically consist of the data shown in table 1.

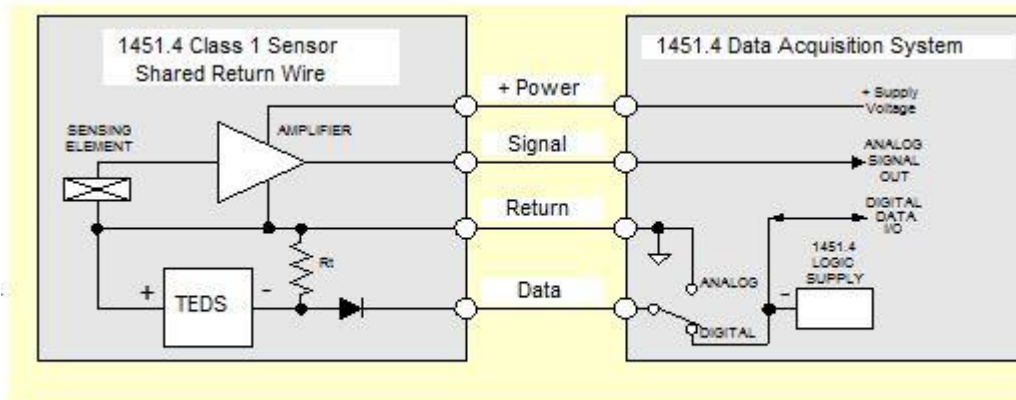
<b>Basic TEDS</b>	Manufacturer ID
	Model Number
	Version Letter
	Version Number
	Serial Number
<b>Standard TEDS</b>	Calibration Date
	Sensitivity @ 250 Hz
	Prepolarized 0/1
	Microphone Type
	Polarization voltage
<b>User TEDS</b>	Measurement position

**Table 1.** Typical Microphone TEDS data

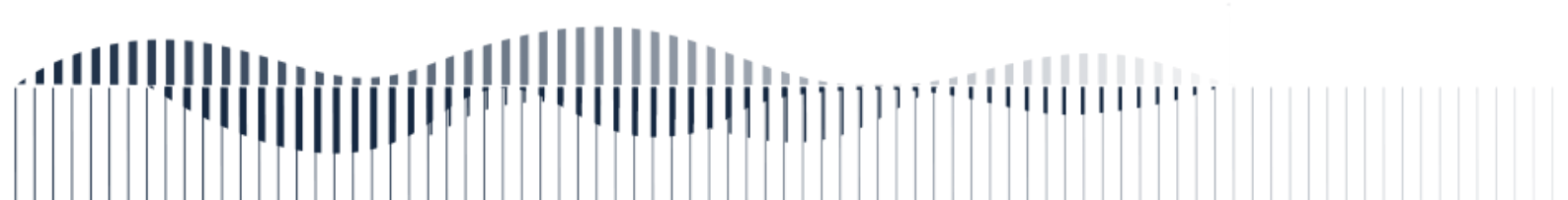
## Sensor wiring

TEDS is available in both standard LEMO preamplifiers and in CCP (ICP) preamplifiers.

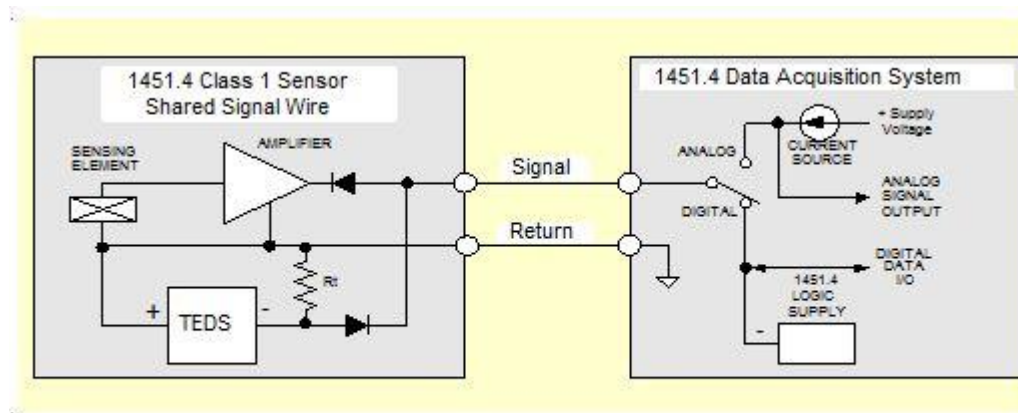
In standard preamplifiers with a 7-pin LEMO plug, one of the pins (5) is used for TEDS data and the ground pin is shared as shown in figure 2.



**Fig. 2.** Preamplifier with shared return wire



In CCP preamplifiers, the TEDS data signal uses the same wire as the microphone signal as shown in figure 3.



*Fig 3. Preamplifier with shared signal wire*

## TEDS Support

GRAS no longer supports TEDS chip Dallas 2430, which is being phased out. If your test system, therefore, has problems reading the information in the new TEDS chip, Dallas DS2431, please contact the manufacturer of your test system. A software update may be required.

**If you have any questions concerning TEDS, please contact Global Technical Support and Training [here](#).**