

Plug and Measure ...

... with transducer identification



At the heart of transducer identification is the TEDS module. It can be incorporated into the housings, cables or connectors of different kinds of transducers. It contains an electronic data sheet which lets you set up the measuring amplifier automatically.



Just plug in and get started...

TEDS

Transducer Electronic Data Sheet



Plug and Measure with an electronic data sheet in the transducer

Plug and Measure is to measurement technology what Plug and Play is to PCs in general – the technology that lets you just plug in and get started. The characteristics of a transducer are stored inside it in the form of an electronic data sheet. The amplifier can import this data. It then converts it automatically into the right settings and gets on with measuring straight away, in the correct units, with no further effort on your part.

The TEDS Advantage

- It's very easy to use
- You can get measurement up and running in almost no time at all
- Manual amplifier setup mistakes are eliminated allowing for greater measurement certainty

IEEE 1451.4 – the TEDS standard

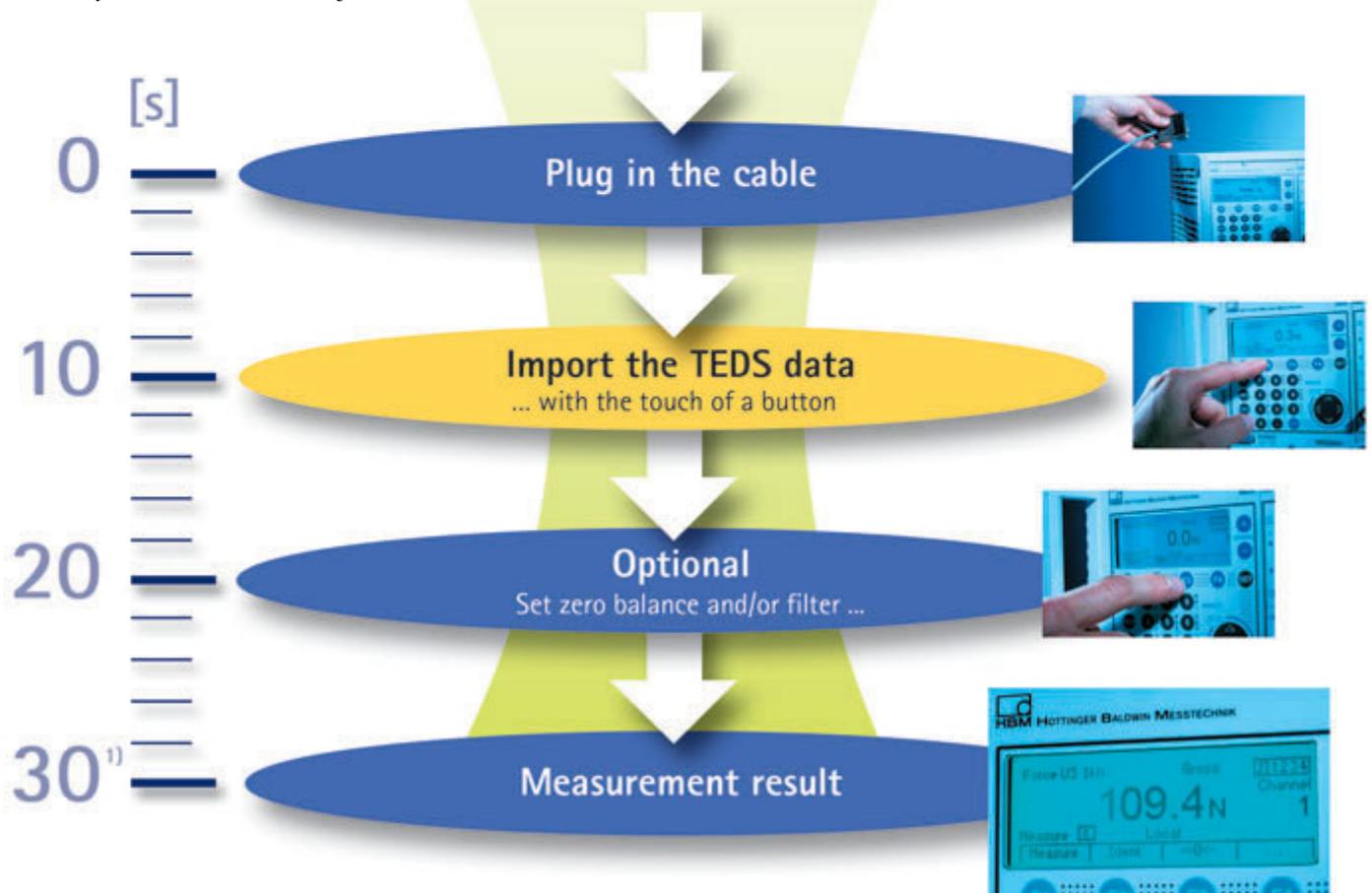
- The contents and data format of the TEDS memory comply with international standards and are not specific to a particular manufacturer
- TEDS can be applied to transducers operating on different principles
- HBM and other leading manufacturers of transducers and amplifiers contributed to the standard



Measured values in 30 seconds



Nearly all transducers can be fitted with TEDS



1) typical setup time

Just plug in and get started...



TEDS makes measurement

in the development laboratory

Development laboratories typically experience ...

... frequently changing measurement configurations and tasks

... interaction between a wide range of measured quantities and transducer types

Therefore ...

... measuring amplifiers frequently have to have their setups changed

With TEDS ...

... changing over to the next measurement task is much faster

in manufacturing and production monitoring

It's a fact of life in manufacturing ...

... metrological components are integrated in complex machines for which measurement technology is only one task among many

... the consequences of a breakdown are very costly, since machine downtime quickly brings production to a complete standstill

Therefore ...

... in the event of a machine failure the defective components must be quickly identified and replaced

With TEDS ...

... swapping out metrological components is significantly faster. The on-site service engineer does not need to be concerned with the details of the amplifier settings





easier and faster

in road tests and vehicle development

Typical situations for road tests are...

... complex measurement tasks with many different measured quantities

... measurements that are recorded first and analyzed later

... ranges of tests which the measurement engineer cannot attend in person

Therefore ...

... faulty measurements caused by incorrect amplifier settings are a major concern

With TEDS ...

... setup is practically automatic which protects the accuracy of your tests

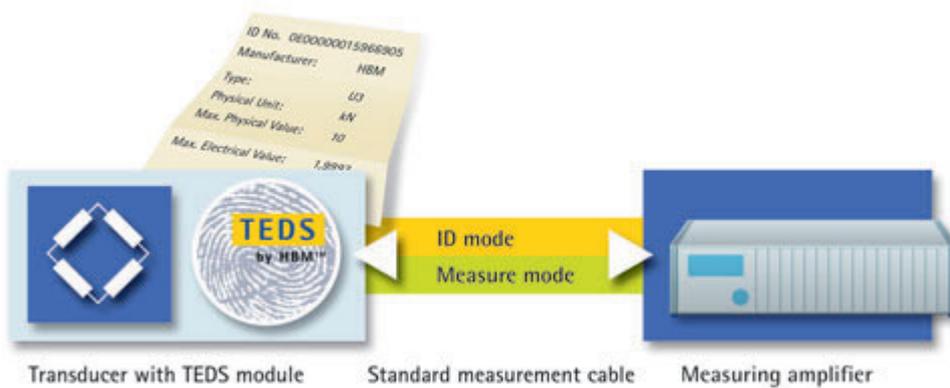
Other TEDS applications

- Calibration with reference transducers
- Commissioned measurement tasks which service providers carry out on their customers' premises
- Situations where simpler handling and increased certainty are required

TEDS ...

How it works

The integrated microchip gives the measuring amplifier not only the transducer's unique identification number (ID) but also all the important elements of that transducer's characteristic data. The amplifier imports this information automatically and is then able to start measuring straight away.



Wireless technology

No extra wiring is needed to transfer the TEDS data (patent pending), since the system makes use of the standard wiring used for analog measurement data. This means that the software can switch intelligently between analog measurement mode and digital ID mode when necessary.

- TEDS-compliant components can be combined with conventional technology, since the connector and leads are the same
- Existing transducers are easy to retrofit
- The original operating principle continues to be used in all transducers with return lines, including SG transducers in a 6-wire configuration, inductive transducers and Pt100 temperature sensors

What does the TEDS memory hold?

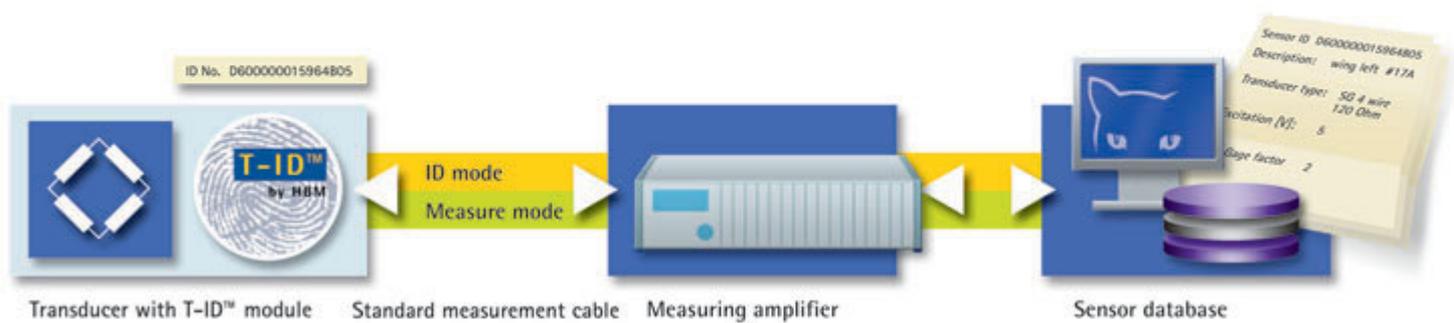
- Transducer type, manufacturer and identification number in the base area to standard IEEE 1451.4
- The second area contains manufacturer-specific data. For main items the standard specifies templates that are uniformly interpreted by different amplifiers
- The third area contains user-defined descriptions, such as filter settings, zero signal and a short comment
- HBM provides you with the TEDS Editor for storing your data



T-ID™ ...

SG identification for stress analysis

T-ID™ is tailor-made transducer ID for experimental stress analysis. Even with thousands of measurement channels, each transducer has its own integrated, internationally unique number (ID) and can therefore be assigned to its measurement channel quickly and with certainty.



The main advantages of T-ID™

- Performs an efficient check to prevent incorrectly assigning SG connections to an amplifier channel, even when there are a large number of channels
- The assignment between a measurement channel and its measuring point is identified by a LED integrated into the T-ID™ module. This can be set to flash by the operator of the amplifier or PC
- Can be linked to a database. This can then store basic technical data such as the gage factor, as well as memory-consuming information such as the description or an image of the measuring point



Even with several hundred leads, each SG measuring point can be uniquely identified with the aid of T-ID™



Flashing LED at the measuring object

At the heart of SG identification is the T-ID™ module. This is installed immediately next to the strain gage concerned, either in place of a soldering terminal, in which case it is glued to the test object just like an actual SG, or in the cable.



Plug and Measure ...

We can supply TEDS for your application:

- TEDS with new transducers
- TEDS retrofitted to existing transducers by HBM
- TEDS modules for retrofitting to a wide range of transducers, including those of other manufacturers
- TEDS Editor for programming the TEDS modules
- Amplifiers that can import the TEDS contents

*TEDS
integrated in the
transducer*



*TEDS in the
transducer cable*

*TEDS in
the transducer
connector*



From Sensor to Software

HBM is a partner you can totally rely on.

That's why we offer you a complete product range for your test and measurement tasks – from sensor to software.



measurement with confidence

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