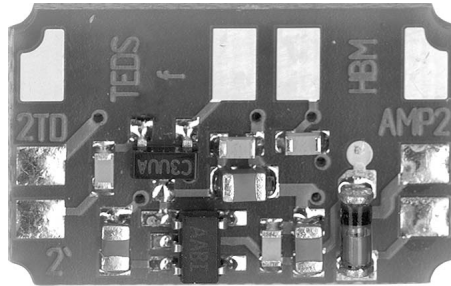
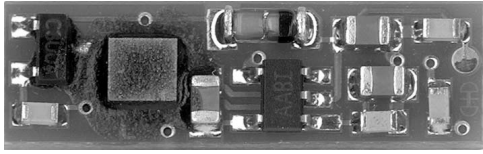


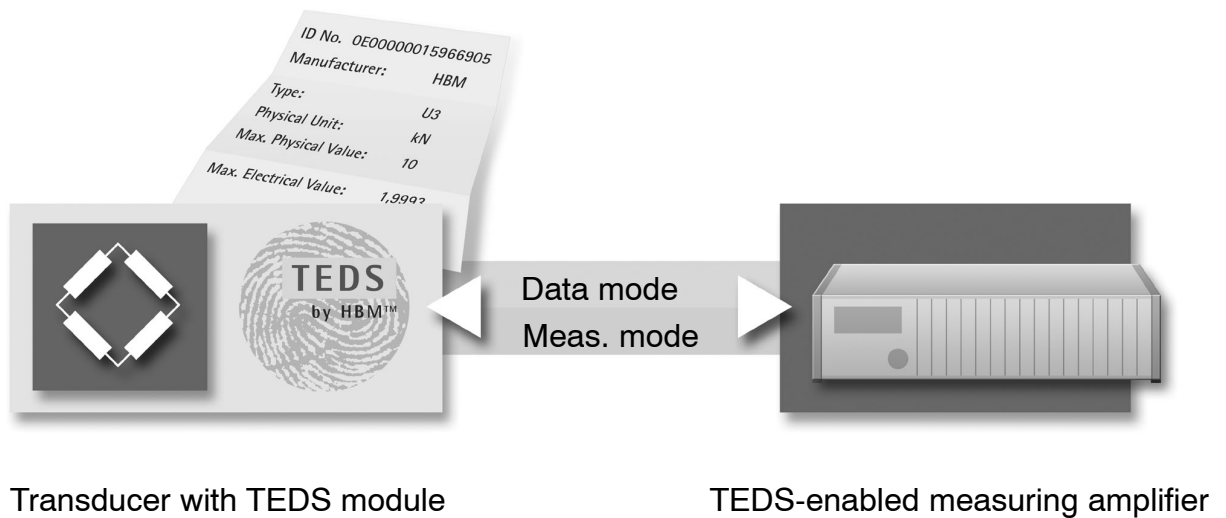
# TEDS

## Transducer electronic data sheet



### Special features

- Memory modules for retrofitting new or existing transducers
- Data storage per IEEE1451.4 TEDS standard
- Suitable for SG full-bridge transducers and inductive transducers
- Amplifier set up automatically on importing the data sheet information from the transducer
- Data easily written to the TEDS memory using the TEDS Editor provided at no extra cost



## Specifications

Type	TEDS	
<b>Data transfer</b> To switch from measurement mode to data mode in order to transfer TEDS data  Nominal value of supply voltage for TEDS data memory Working range of supply voltage for TEDS data memory Data transfer protocol  Data format	  V V   	Apply a supply voltage between one of the excitation voltage lines (HBM designation: 2) and the associated sense lead (HBM designation: 2' ). The sense lead acting as the signal lead and the excitation voltage line as the ground. If this voltage is no longer present, the module switches to measurement mode, in which it has no effect on the excitation voltage and the measurement signal.  5 3.4 to 6.0 As specified in IEEE standard 1451.4 ("one wire protocol"). As specified in IEEE standard 1451.4
<b>Maximum permissible excitation voltage for connected transducer</b>	V	30
<b>Nominal temperature range</b>	°C	-20 to + 60
<b>Storage temperature range</b>	°C	-25 to +70
<b>Dimensions wide version</b> Circuit board  <b>Dimensions small version</b> Circuit board Metal sleeve (when installed by HBM)	 mm  mm mm	 19 x 11  20 x 5.5 93 long, Ø15
<b>Protection class</b> (when installed in D-sub connector according to installation instructions)		IP54
<b>EMC conformance</b>		Complies with EN61326 when installed in Sub-D connector by HBM or acc. to the mounting instructions; the same applies for installation in the cable by HBM. This ensures that the TEDS module has no effect on conformance of the whole system with EMC Guideline 89/336/EEC.

## Available configurations

### TEDS ready fitted in transducer connector (15-pin D connector)

complete with new HBM transducer

Order No.: D-TEDS/MONT-DB

for customer's own HBM transducer

Order No.: D-TEDS/MONT-DB/K



### TEDS ready fitted in transducer cable, non-crush enclosure

complete with **new** HBM transducer

Cable diameter 3 mm to 5 mm

Order No.: D-TEDS/MONT-K3

Cable diameter 5 mm to 6.5 mm

Order No.: D-TEDS/MONT-K5

for **customer's own** HBM transducer

Cable diameter 3 mm to 5 mm

Order No.: D-TEDS/MONT-K3/K

Cable diameter 5 mm to 6.5 mm

Order No.: D-TEDS/MONT-K5/K

### TEDS modules for self-fitting

TEDS module, wide (for fitting in D-sub connector)

Order No.: 1-TEDS-BOARD-L

TEDS module, narrow (for fitting in cable)

Order No.: 1-TEDS-BOARD-S

TEDS module, wide, complete with metallized D-sub connector (15-pin)

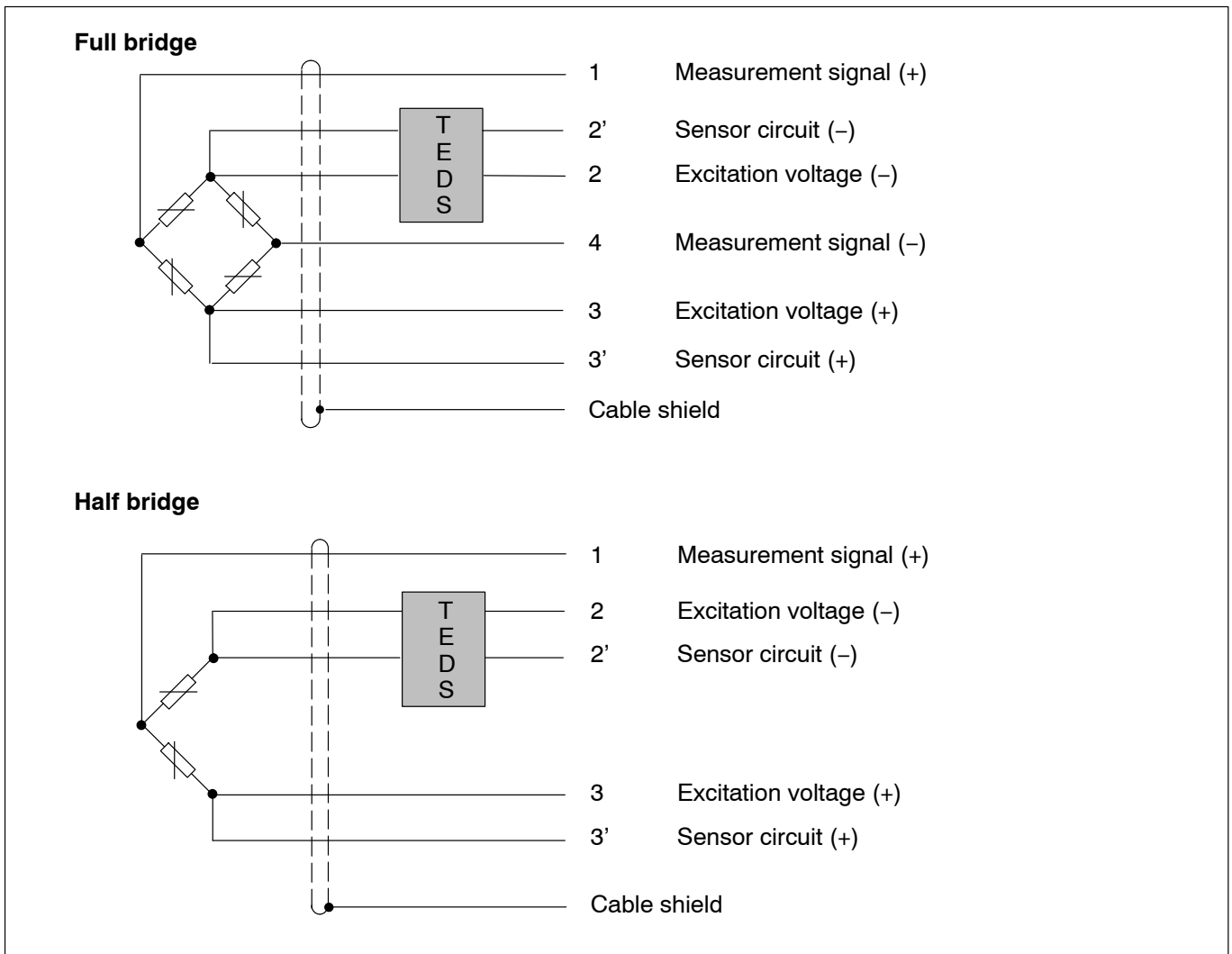
Order No.: 1-TEDS-DB-15P



### Recommendation:

The TEDS integrated in the transducer connector (15-pin D-sub) is the standard solution that we recommend. If it is not possible to work with this connector type, we recommend the TEDS integrated in a transducer cable.

## Pin assignment



## Scope and purpose of application

The memory in the TEDS module holds an electronic data sheet containing every important transducer characteristic and a unique identification number, so that the measuring amplifier can be set up automatically. A suitably equipped amplifier can import the transducer characteristics and adopt them as its own settings. The TEDS module can be integrated into the amplifier connector or into the cable so long as the cable is connected firmly to the transducer.

A special circuit makes it possible to use the existing cable leads for transferring the TEDS data. This means that the same cables can be used as for transducers that do not have TEDS.

## Suitable measuring amplifiers

Transducers fitted with TEDS can be connected and operated like conventional transducers without restriction, even in the case of amplifiers that do not support TEDS. The prerequisite for using the TEDS functionality is support for the TEDS interface and for the data format as defined by IEEE standard 1451.4. In addition the wiring must meet the specifications in this data sheet or in the mounting instructions.

In the case of the MGCplus family of amplifiers, the circuit for importing and writing the TEDS data is located on the following connector plates:

- all connector plates with the identifier "i" in the name (APxxi).

Import and adoption of the TEDS data are controlled by amplifier modules and the display and control unit. The amplifier modules concerned are:

- all amplifier modules with the name extension B (MLxxB)
- ML460, ML455

## Writing the transducer data to the TEDS memory

If HBM factory-fits TEDS to new HBM transducers as a fully assembled solution or as an expansion of existing transducers, data is written to the TEDS memory at the same time. TEDS is then ready for immediate use.

HBM provides you with the **TEDS Editor** for storing your data. This is included in the software for the MGCplus Setup Assistant from version 3.1 and higher.

Similarly the TEDS Editor is included in the HBM catman<sup>®</sup> measurement software from version 5.0 and higher. Older versions of catman<sup>®</sup> can be combined with an updated version of the MGCplus Setup Assistant.

The Editor also supports management of different user rights via the MGCplus Setup Assistant, in order to protect fundamental transducer data from being inadvertently overwritten.

The TEDS Editor (as part of the MGCplus Setup Assistant) is available on the system CD supplied with every MGC system. It is also available as a download from: [www.hbm.com](http://www.hbm.com) → Support → Downloads → Software → MGCplus Assistant.

## Template overview

The information in the TEDS memory is organized into templates which are prestructured to store defined groups of data in table form. Only the entered values are stored in the TEDS memory.

The amplifier firmware assigns the interpretation of the respective numerical values. This keeps the demand on the TEDS memory to a minimum.

The table shows the most important templates for using SG bridge sensors and inductive bridge sensors.

Template	
Basic TEDS	Identification number Transducer manufacturer, model and serial number Characteristic transducer data User settings
IEEE bridge sensor template	Physical measured quantity Physical unit Characteristic curve settings
HBM inductive displacement transducer template	Physical measured quantity Physical unit Characteristic curve settings
HBM signal conditioning template	Filter settings Zero balance
HBM user channel name template	Comments
HBM unit conversion template	Conversion into display units not allowed for per IEEE standard