

## Temperature and Humidity Sensor

**Model  
160D/TH**

- **High Measuring Accuracy**
- **Suitable for In-Dummy Application**
- **TEDS Sensor Identification<sup>(1)</sup>**
- **Screw Fixing**

### Application

The temperature and humidity sensor was developed for the climate monitoring inside of dummies and vehicles.

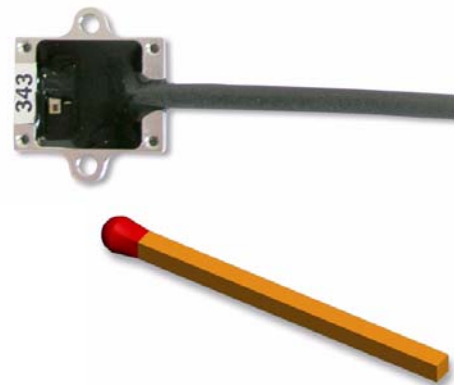
Using the Temperature- & Humidity Datalogger models 452D/TFD or 453D/TFD<sup>(2)</sup> you can apply an ideal measuring system to record and to store the temperature and humidity data for the test preparation and to run checks. You may join the sensor to the dataloggers and also to the environmental data recorder 460D/EDR<sup>(3)</sup>.

The MSC datalogger systems identify all sensors, joined at the 1 Wire sensor bus, by their TEDS. The measuring values are read-out and displayed via the Digital Transducer Adapter 620C/DTA and a PDA (PC) or via the MDDAS<sup>(4)</sup>. For the configuration of the system you need a 620C/DTA and a PDA (or PC) with installed user software MoST-TH (or SySt-TH).

### Functional Concept

The sensors are comprised of semiconductor units. The signals are conditioned inside the sensors and afterwards they are digitally transmitted. Thus the transmission is independent from the cable length and other noise sources.

We recommend the annual calibration of the temperature and humidity sensor to maintain its high accuracy and its low measurement uncertainty. The measuring accuracy is independent from the datalogger. It is only determined by the applied sensor.



#### Options

Customized cable lengths and connectors with specific customer pin assignment, customer-specific measuring range adjustment.

#### Accessories

- 2 mounting screws\*)
  - 452D/TFD Temperature & Humidity Datalogger (for in-dummy)
  - 453D/TFD Temperature & Humidity Datalogger (for test stand)
  - 460D/EDR Environmental Data Recorder
  - 620C/DTA Digital Transducer Adapter
  - PDA, iPAQ model (please ask our sales dep. for the proper type)
  - 677A/MoST-TH User software for the PDA
  - 677A/SYST-TH User software for the PC
- For further details please see accessories catalog*

\*) included in scope of delivery

<sup>(1)</sup> TransducerElectronicDataSheet

<sup>(2)</sup> See TD-452D/TFD and TD-453D/TFD Temperature & Humidity Dataloggers

<sup>(3)</sup> See TD-460D/EDR Environmental Data Recorder

<sup>(4)</sup> MiniatureDigitalDataAcquisitionSystem, MSC measuring system

## Technical Specifications

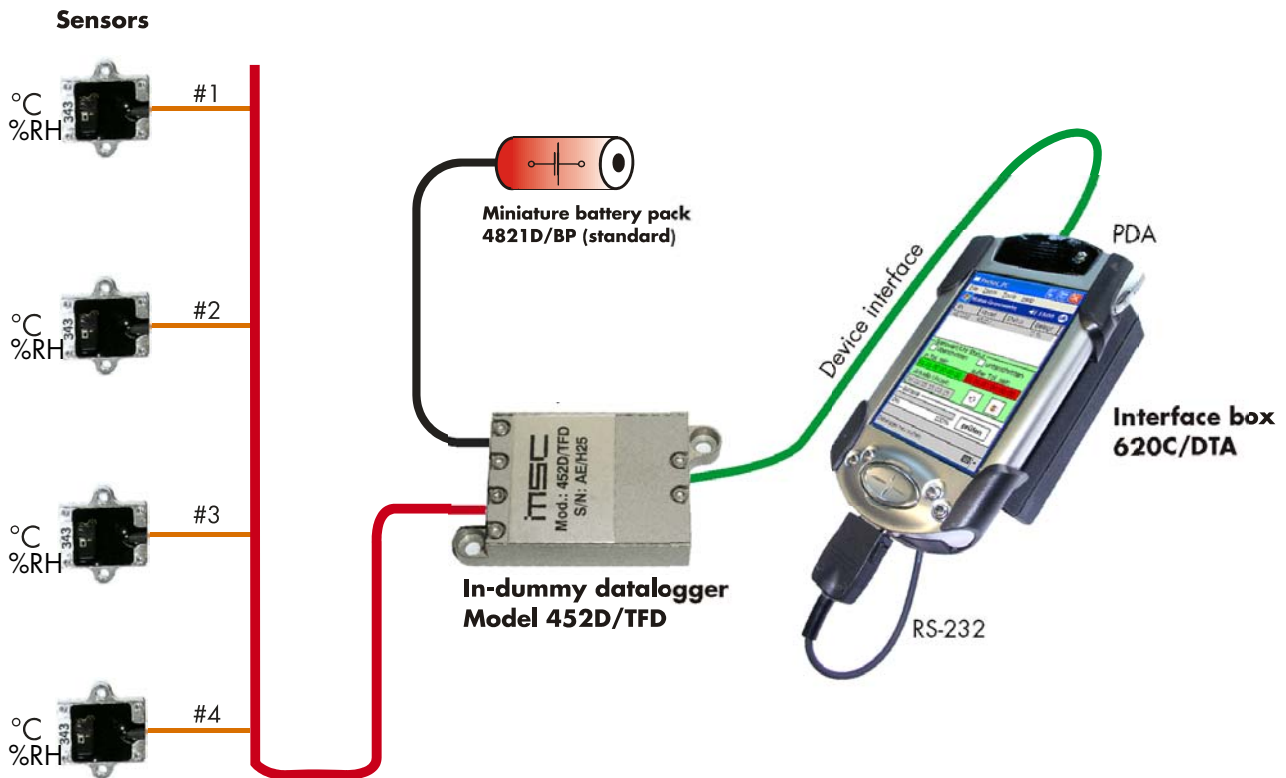
All specifications are typical at 25°C and rated at 10V sensor supply voltage, unless otherwise specified.

	Units	Value	Remark
Temperature measurement range	°C	-55...+85	
Calibrated temperature measurement range <sup>(1)</sup>	°C	10...40	
Calibrated temperature measurement accuracy <sup>(1)</sup>	°C	±0,26	
Humidity measurement range	%RH	5...95	
Calibrated humidity measurement range <sup>(1)</sup>	%RH	10...75	
Calibrated humidity measurement accuracy <sup>(1)</sup>	%RH	±1	
Supply voltage	V DC	5	
Sensor current consumption	mA	0,1	during the measurement
Sensor sampling rate	10 seconds to 255 minutes, adjustable via datalogger		
Working temperature	°C	-20...+80	
Storage temperature		-30...+90	
Dimensions (L x W x H)	mm	20 x 17,5 x 3	
Weight without cable	g	3	

<sup>(1)</sup> MSC factory calibration, other measurement ranges on request

**Model/Option Code:** 160D/TH-###-ST

160D/TH: Model declaration  
 -###: Cable length in cm  
 -ST: Connector type



**Application example with 4 temperature and humidity sensors, in-dummy datalogger 452D/TFD, digital transducer adapter 620C/DTA and Compaq PDA with installed user software „MoST-TH“.**