

TELID®230.humid

RFID / NFC Humidity and Temperature Transponder

- maintenance-free, battery-less sensor device
- provides precise relative humidity and temperature measurements for process control and building monitoring in demanding construction environments
- unique identification number
- memory for calibration and custom data
- contactless data communication, ISO 15693 and NFC compliant

TELID®200 RFID sensor devices are a core element of microsensys' innovative iID® system solution, delivering high-precision, contactless measurements even in challenging environments. These intelligent sensors are engineered for robust performance, combining durability with reliability to meet the demands of industrial and particularly construction applications. Thanks to their battery-free architecture, TELID®200 sensor transponder enable maintenance-free operation, reducing service requirements and supporting long-term, sustainable deployment.



TEL +49-361-59874 0 This data sheet is subject to change.
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 WEB www.microsensys.de Document Revision 002

Contactless interface: closed coupling HF sensor NFC
 RF Communication: ISO15693 / NFC-V / NFC Forum Tag Type 5 compliant
 Carrier Frequency / Communication Rate: 13.56MHz / 26.48 kbps
 Communication Distance: 0 ... 50 mm, depending on reader antenna and environmental conditions

Sensors: high-accuracy humidity and temperature sensor
 Operating Range: air humidity: 0 ... 100 %RH
 Accuracy: typ. ± 1.8 %RH
 Resolution: 0.01 %RH
 Operating Range: temperature sensor: -30°C ... +80°C
 Accuracy: typ. ± 0.2 °C
 Resolution: 0.01 °C

Data Memory: non-volatile memory write endurance >10⁵ cycles, data retention > 10 years
 Standard Content: unique TELID® identification number, parameter and calibration data
 Write protection¹: partial read-only protection
 Password¹: full, read-only or no memory access based on 32bit password
 Authentication¹: 128-bit AES authentication
 Originality¹: ECC-based programmable originality signature

Mechanical / Environmental:
 Dimensions: diameter 50.0 mm thickness: outer 0.7 mm, inner 3.1 mm
 Material: FR4, epoxy encapsulation
 Mounting: glueing
 Working Temperature: -30 °C ... +80 °C
 Storage Temperature: -40 °C ... +85 °C, recommended 25 °C

Operation: passive snapshot sensor
 Basic Functions: READ/WRITE memory and calibration data¹
 MEASURE, GET SENSOR VALUE
 Measure Modes: on-demand measurement within the reader's RF field
 Recommended Reader: iID®M30 reader, handheld devices with NFC interface
 Operating Software: TELID®soft
 Device Interface: driverless using text/plain NDEF message
 GET_SENSOR command, iID® driver engine (for iID®contactless RFID interfaces)

¹) on request

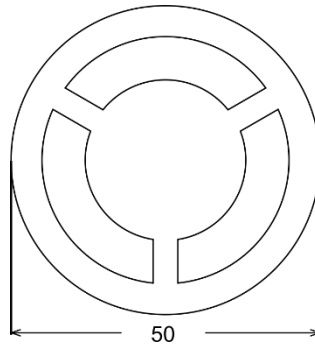
TELID®230.m.humid-D50

The **TELID®230.m-D50** is a passive (battery-free) RFID sensor transponder that measures temperature and humidity, while also providing unique object identification. Specifically designed for construction and industrial applications, the device communicates with mobile devices and **iID®**-compliant contactless readers.



Device Type	RFID / NFC Humidity and Temperature Transponder
Working Range	0 ... 100 %RH
Recommended Range	20 ... 80 %RH
Accuracy Humidity	typ. ± 1.8 %RH
Resolution Humidity	0.01 %RH
Response Time $\tau_{63\%}$	4 s
Accuracy Temperature	typ. ± 0.2 °C
Resolution Temperature	0.01 °C
Product Code	12.230.134.00

Dimensions:



all dimensions in mm (subject to change)