

Galltec Configuration Software

Manual

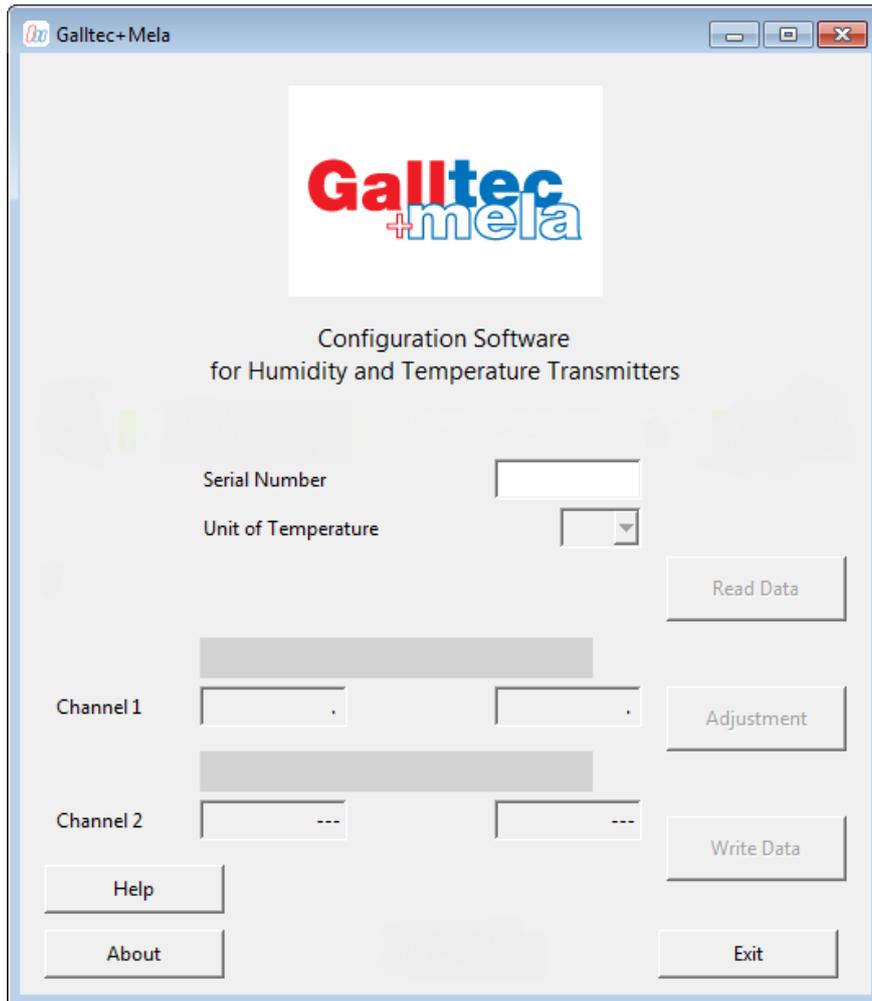


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General information about the software

The following settings can be made using the "Galltec USB Configuration Software" and a standard micro USB cable:

- Change of physically measured values
- Change of analogue output scaling / measuring range
- Change of temperature variables to °C or °F
- Air pressure or altitude input
- Single point adjustment of temperature and relative humidity

Language: English

Instruction Manual: see "Help" in the program

System requirements

Available memory: 10 MB

Compatible with: Win 10 / Win 8 / Win 7 / Win Vista / Win XP

USB-port: USB 2.0

Download

Software: www.galltec-mela.de/downloads/...

Galltec Configuration Manual: www.galltec-mela.de/downloads/...

Software license agreement: www.galltec-mela.de/downloads/...

Connecting cable

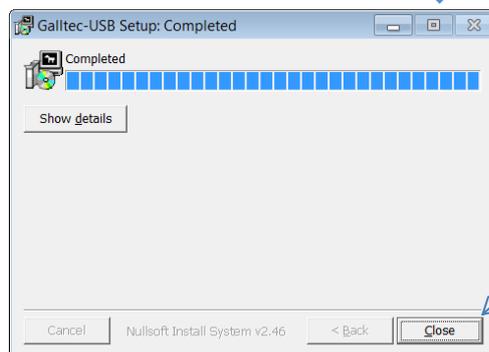
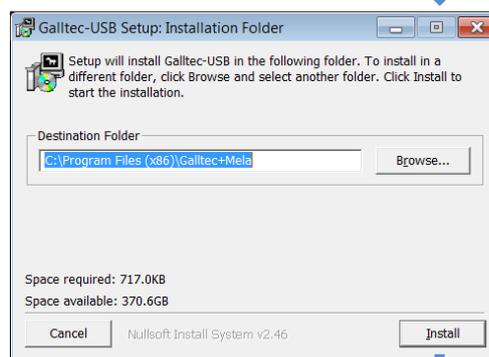
(not part of the delivery)

USB "A" plug to USB "micro B"



Installation

- Download (.zip) File from Homepage: www.galltec-mela.de/Downloads/...
- Close all programs
- Unpack zip folder
- Start "... .exe "
- Read and accept the license agreement.
- If necessary, change the installation path



Registration in Windows

The sensor is automatically registered in Windows via the USB cable after connecting to the PC. The registration in Windows is performed once for each USB port and can take from a few seconds to 3 minutes depending on the PC. After this, the sensor is ready for operation. When plugged in again, the sensor is immediately ready for operation.

Sensor power supply for

1. Change of output scaling and configuration of physical values:

The sensor is powered via USB.

Note: Any existing power supply on the connecting terminal can be left in place.
The analogue outputs will not be issued without power supply to the sensor via the terminal.



Warning: If the sensor has current outputs, ensure galvanic isolation between PC and possible power supply on the connection terminals. Non-observance leads to destruction of the sensor!
See ⊛

2. Adjustment:

Power supply to the sensor via connection terminal.



Warning: If the sensor has current outputs, ensure galvanic isolation between PC and power supply on the connection terminals. Non-observance leads to destruction of the sensor!
See ⊛



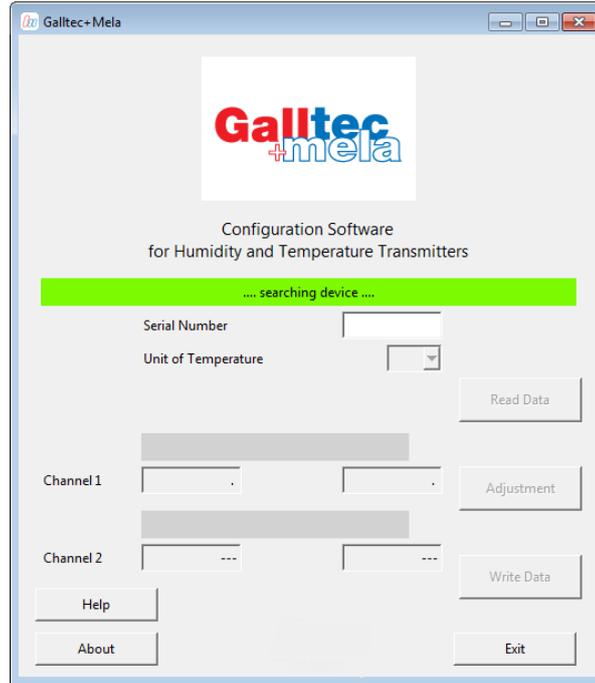
Definition of Galvanic Isolation:

Galvanic isolation refers to the lack of an electrically conductive connection between conductive objects or circuits. Potentials are separated from each other. Ways of establishing galvanic isolation:



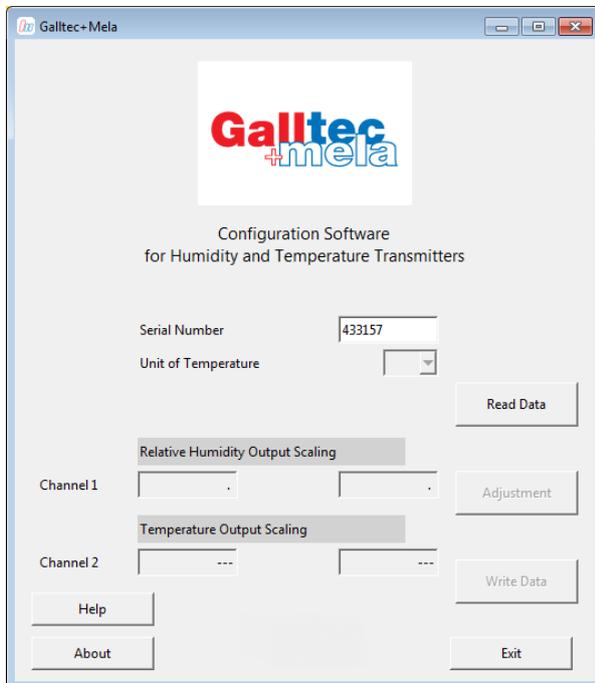
- Use a battery operated laptop without charging cable or
- a galvanic isolated power supply unit or
- an USB isolator or
- operate the computer / sensor via an isolation transformer.

Start the program

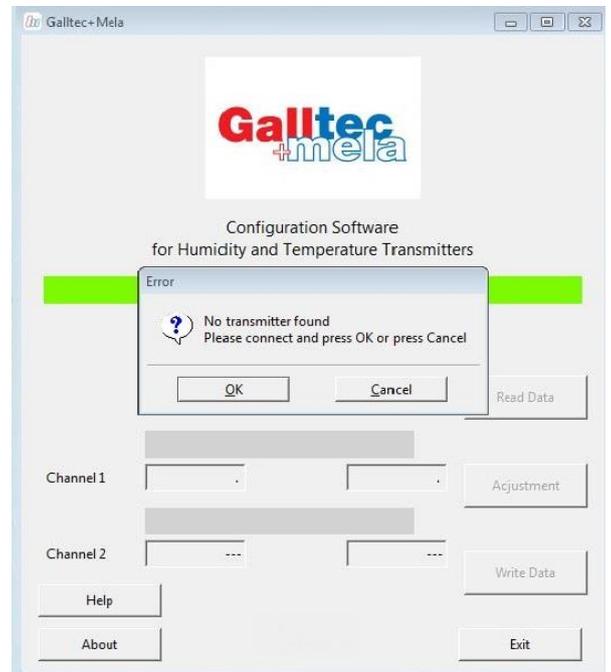


Galltec-Mela sensor detected

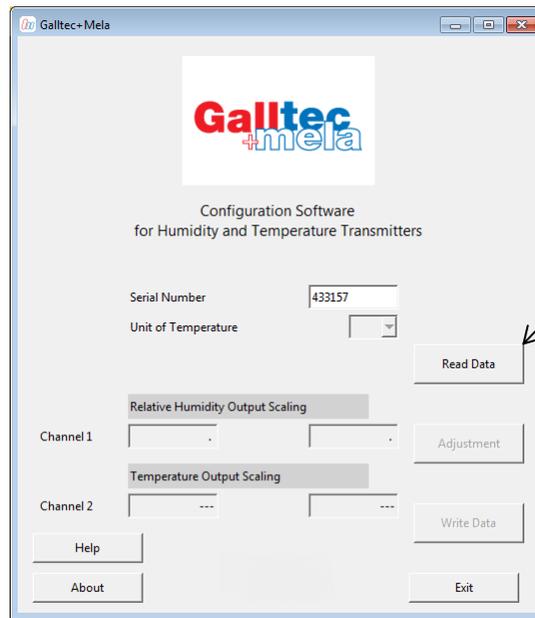
No Galltec-Mela sensor connected
or
registration in Windows has not yet been completed



Readout sensor configuration
see next page

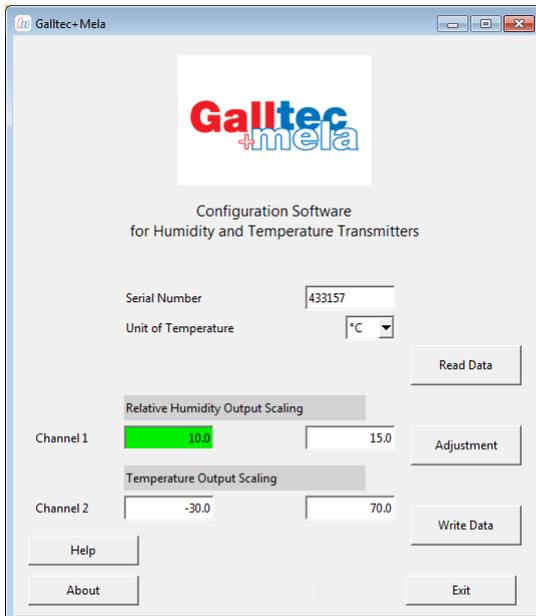


Readout sensor configuration

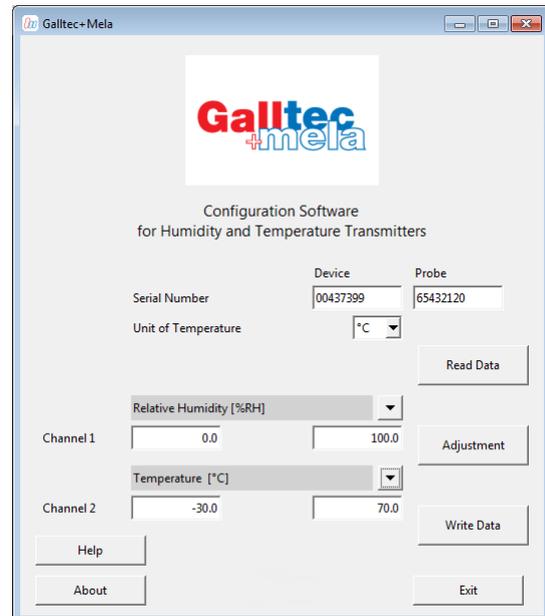


Readout sensor configuration using "Read Data"

D-transmitter ECO



D-Transmitter

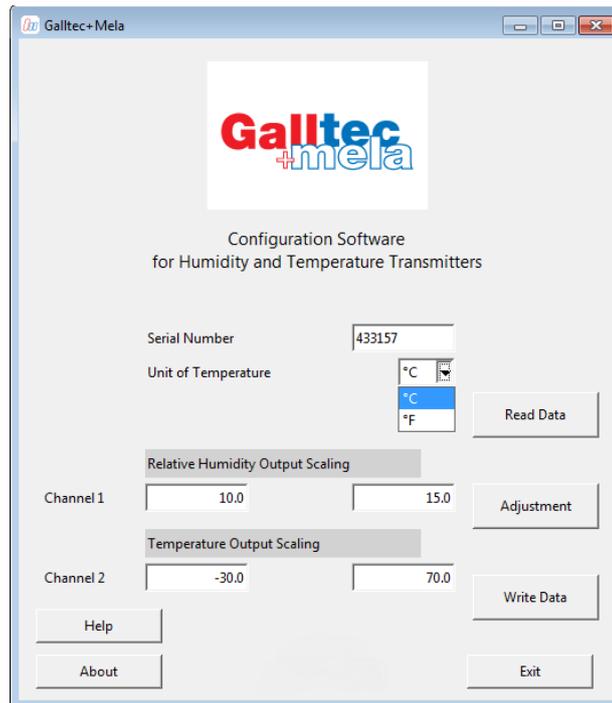


The sensor is now ready for:

- Change of analogue output ranges
- Configuration of physical values (not for transmitter ECO)
- Adjustment
- Clear user adjustment

(for more information see following chapters)

Selection of °C und °F



The selection of "unit of temperature" is relevant to the following points:

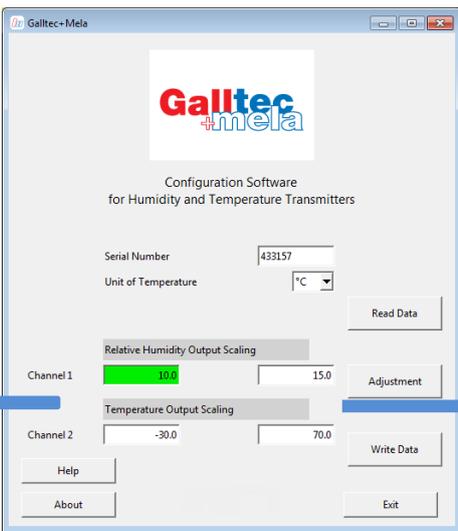
- Output Scaling
- Physical values:
 - Temperature
 - Wet bulb temperature (not for Transmitter ECO)
 - Dew point temperature (not for Transmitter ECO)

Note:

There is an automatic conversion between °C and °F.

- T & RH Adjustment

Change of analogue output ranges



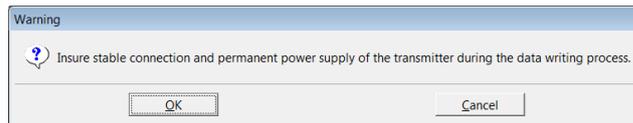
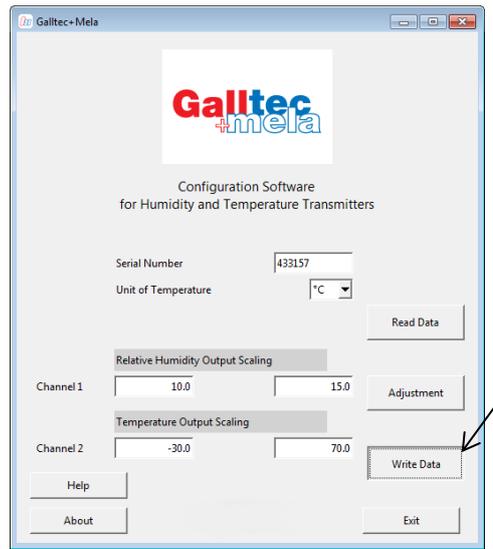
Input fields
 Min. measuring range limits

Input fields
 Max. measuring range limits

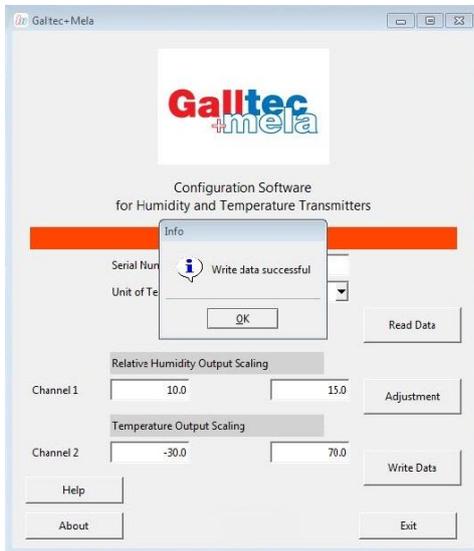
Input ranges:

Temperature	[°C]	-100 °C	....	200°C
	[°F]	-148 °F	....	392°F
Relative humidity	[%RH]	0 %RH	....	100%RH

Saving values to the sensor



Back to main screen



Note: "Write Data" may take 1-4 seconds.

Configuration of physical values

(not for Transmitter ECO)

Possible physical values :

- Relative Humidity [%RH]
- Dew point temperature [°C]
[°F]
- Mixing ratio [g/kg]
- Enthalpy [kJ/kg]
- Absolute humidity [g/m³]
- Wet bulb [°C]
[°F]
- Temperature [°C]
[°F]

Input ranges

0	%RH	....	100	%RH
-20	°C	....	70	°C
-4	°F	....	158	°F
0	g/kg	....	100	g/kg
0	kJ/kg	....	80	kJ/kg
0	g/m ³	....	100	g/m ³
-10	°C	....	50	°C
14	°F	....	122	°F
-100	°C	....	200	°C
-148	°F	....	392	°F

Selection for Channel 1:

Selection for Channel 2:

e. g.

Save values with „Write Data“

Air pressure and altitude

For the following physical values, the air pressure is relevant to obtain a correct reading:

- Mixing ratio [g/kg]
- Enthalpy [kJ/kg]
- Wet bulb temperature [°C / °F]

If a physical value is selected, for which the air pressure is relevant, the input field automatically appears.

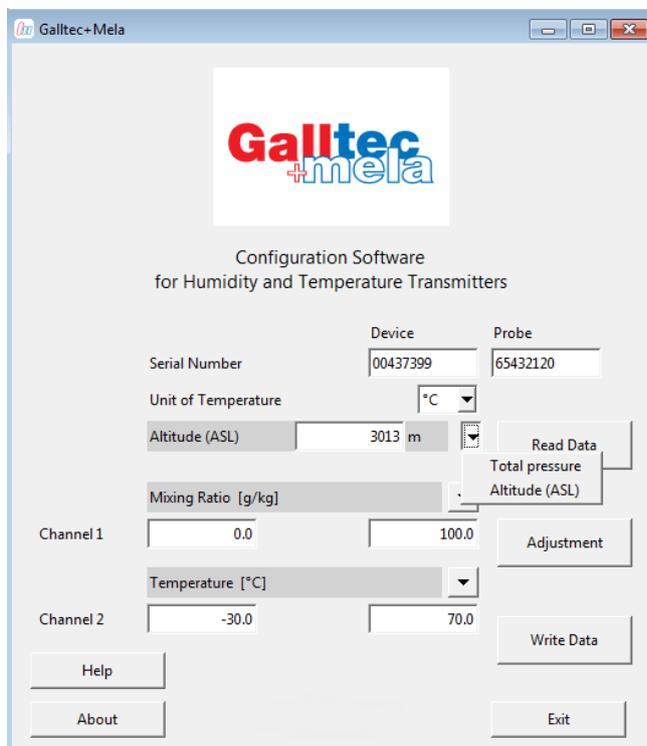
The air pressure can be entered either directly or indirectly via the altitude in m above sea level. This is, in every case, only the average air pressure. The air pressure is subject to natural weather-related fluctuations.

Please note that major measuring deviations can be caused in pressure-dependent measurements through entering incorrect air pressure or altitude.

Information: There is an automatic conversion between altitude and air pressure.

The air pressure can be selected within the following limits:

[hPa]	600hPa	....	1070hPa
[m above sea level]	-462m	....	4207m



Save values with „Write Data“

T & RH adjustment

The sensor can be adjusted for humidity and temperature (single point adjustment).
This requires a power supply via the connection terminal.

Warning:

If the sensor has current outputs, ensure galvanic isolation between PC and power supply on the connection terminals. Non-observance leads to destruction of the sensor! (see “Definition of Galvanic Isolation” (page 5))

1. Offset correction

- An offset in temperature and / or relative humidity can be entered.
- The current T and RH readings are displayed in real time on the right hand side.

2. Adjustment with reference

- Enter the T & RH readings from the reference sensor
- The current T and RH readings are displayed in real time on the right hand side.

Information:

The measuring accuracies specified in the technical data refer exclusively to factory adjustment.



Configuration Software
for Humidity and Temperature Transmitters

Serial Number: 433157

Unit of Temperature: °C (selected), °F

Relative Humidity Output Scaling:
Channel 1: 10.0 to 15.0

Temperature Output Scaling:
Channel 2: -30.0 to 70.0

Buttons: Read Data, Write Data, Adjustment, Help, About, Exit

Info

For adjustment a sensor power-supply is necessary

Attention:
Only sensor with current analog outputs (4-20mA)
Ensure galvanic isolation between USB & sensor supply!
(press Help --> see manual for details)

Please power-up the sensor and press OK

Buttons: OK, Back

Info

T- & RH adjustment

All changes will be initiated directly after the click
Please ensure stable environment conditions

Buttons: OK, Back

Sensor Adjustment (1 Point)

Buttons: Clear User adjustment, Offset Adjustment, °F %RH, Adjustment with Reference, Help, Back

Sensor Adjustment (1 Point)

Buttons: Clear User adjustment, Offset Adjustment, °C %RH, Adjustment with Reference, Help, Back

Offset Adjustment

An offset in temperature and / or relative humidity can be entered. Actual values are adjusted by this offset.

A maximum offset of ± 20 % RH and ± 20 °C / ± 36 °F can be entered. Overall, only a shift of the actual values to ± 20 % RH and ± 20 °C / ± 36 °F of the factory adjustment is possible.

Please note that this also includes previous adjustments.

Note: You can reload the factory adjustment with "Clear User Adjustment".

Info: The analogue outputs and the display information retain the set values also in Adjustment Mode.

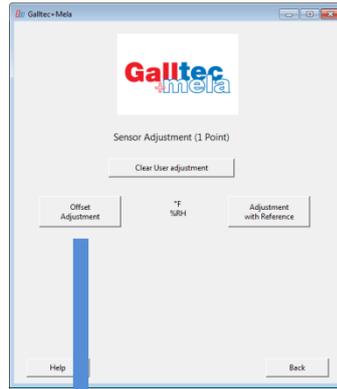
The adjustment values in T & RH indirectly influence their physical values. (not for transmitter ECO)

The measuring accuracies specified in the technical data refer exclusively to factory adjustment.

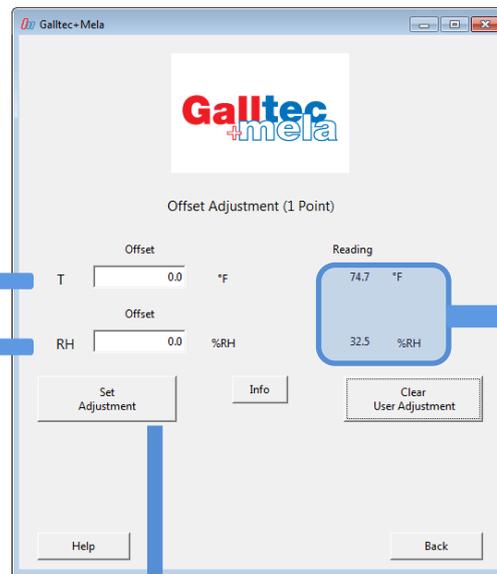
Environmental conditions:

The sensor can only be adjusted within 20 ... 80 % RH and -30 ... 70 °C / -22 ... 158 °F.

Please note: Whilst adjustments are being made, in particular when saving data, an uninterrupted power supply to the sensor must be ensured.



Temperature offset
 Input field
 Relative humidity
 offset input field



Display of actual values of T and RH in real time

Save adjustment values to the sensor

Information:

Maximum offset

T ± 20 °C / ± 36 °F

RH ± 20 %RH

Environmental Conditions:

T -30...70 °C / -22...158 °F

RH 20...80 %RH

Adjustment with Reference

By entering reference measuring values, sensor readings are adjusted to the reference. Please ensure stable environmental conditions, a good thermal link between the two sensors and an appropriate equalizing time.

The permitted maximum difference between the current sensor and the reference measuring value is $\pm 20\%$ RH and $\pm 20\text{ °C}$ / $\pm 36\text{ °F}$. In total, only a shift of the actual values to $\pm 20\%$ RH and $\pm 20\text{ °C}$ / $\pm 36\text{ °F}$ of the factory adjustment is possible. Please note that this also includes previous adjustments.

Information: You can reload the factory adjustment with "Clear User Adjustment".

The analogue outputs and the display indications retain their set values during adjustment.

The adjustment values in T & RH indirectly influence the physical values. (not for Transmitter ECO)

The measuring accuracies specified in the technical data refer exclusively to factory adjustment.

Environmental conditions:

The sensor can only be adjusted within 20 ... 80 % RH and -30 ... 70 °C / -22 ... 158 °F. This limit also applies to the reference sensor value.

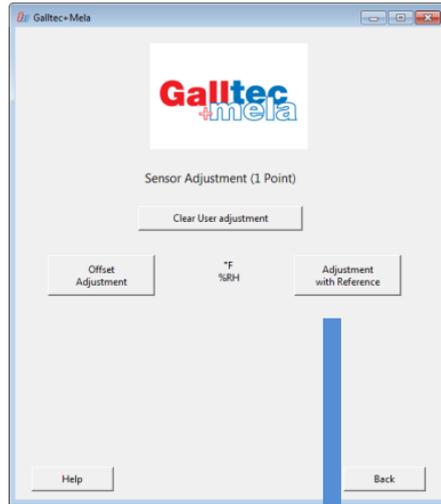
If the sensor „Reading“ (Display of actual values in real time) for relative humidity [%RH] is 0,0%RH or 100,0%RH the Galltec Sensor will not be able to adjust to the reference. Reload the factory adjustment with „Clear User Adjustment“ and try again.

Please note: Safeguard a stable temperature and relative humidity during adjustment. During the adjustment process, in particular when saving data, an uninterrupted power supply to the sensor must be ensured.

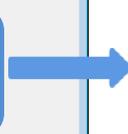
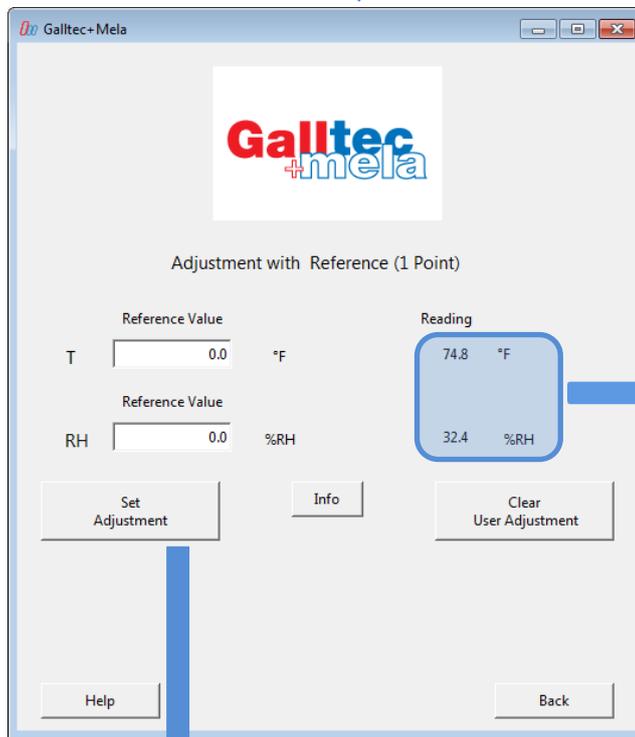
Humidity adjustment:

As a reference for the humidity adjustment, appropriate Humidity Standards are supplied as accessories (see datasheet).

Prior to making adjustments, the standard humidity level at the sensor should remain steady for at least 2 hours. During this time a constant temperature must also be ensured. (See also datasheet F5.2 Humidity Standards.)



Reference value input
 Temperature
 Relative Humidity



Display of actual values of T and RH in real time.



Save adjustment values to the sensor

Information:

Maximum difference between the reference sensor and Galltec sensor readings:

T ± 36 °F / ± 20 °C

RH ± 20 %RH

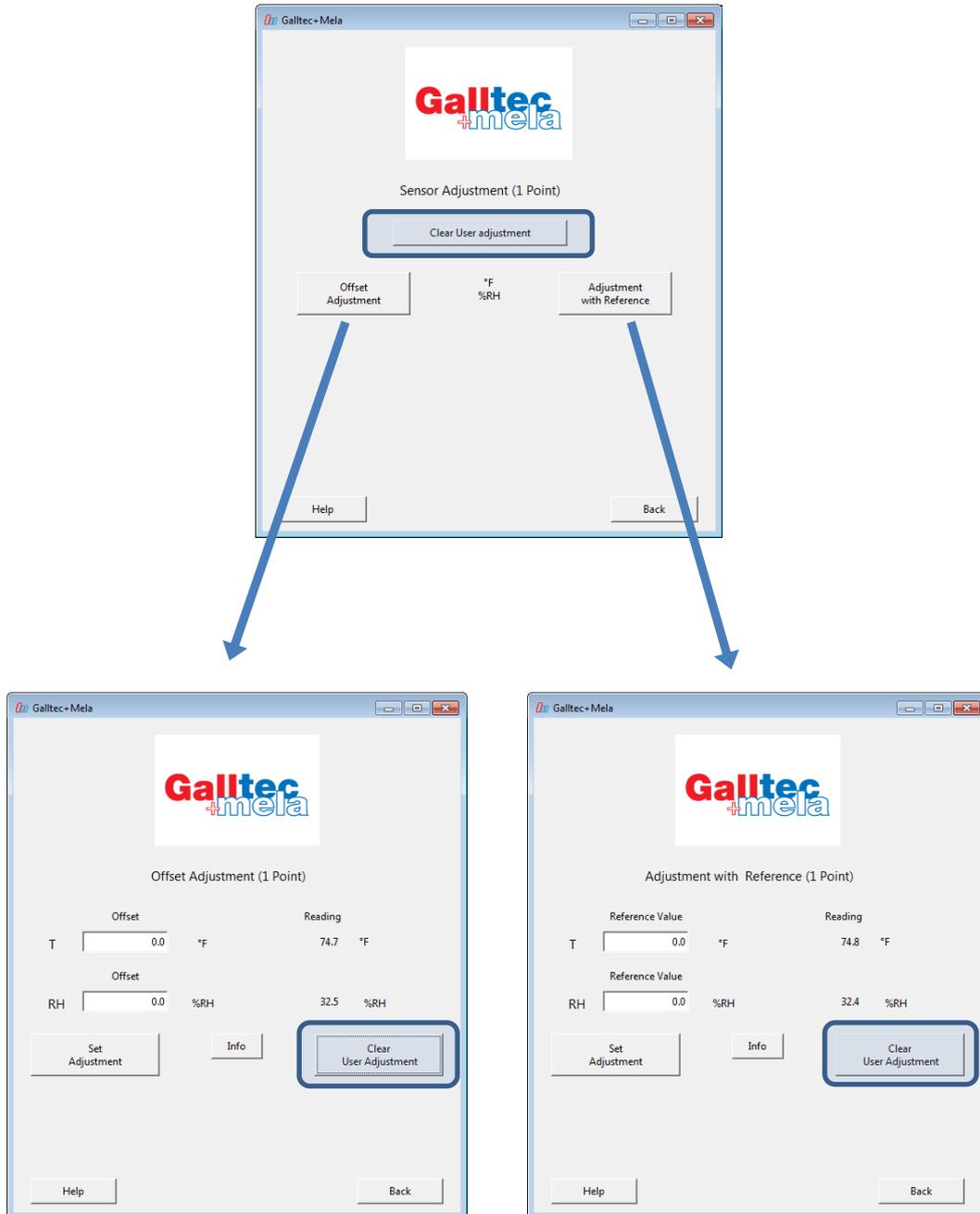
Environmental Conditions:

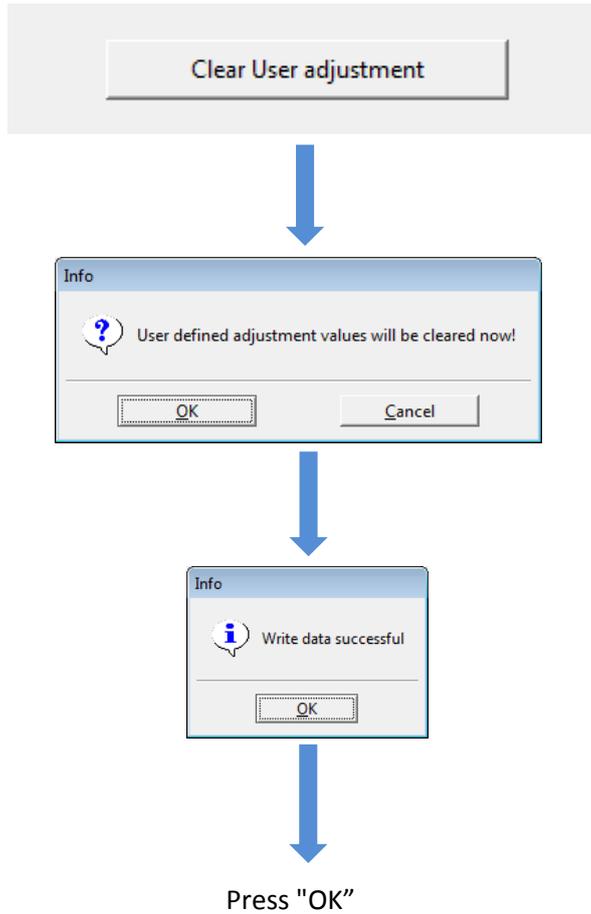
T -30...70°C / -22...158°F

Clear User Adjustment

Delete the user adjustment values in temperature and relative humidity.
The sensor will revert to the factory adjustment.

There are three locations to select "Clear User Adjustment".





This information is based on current knowledge and is intended to provide details about our products and their possible applications. It is therefore not intended to guarantee specific properties or suitability for a particular application. We are unable to assess every individual case.

The purchaser or user is responsible for checking the equipment and the software for suitability for any particular application. Any existing industrial rights of protection must be observed.

The quality of our products is guaranteed under General Conditions of Sale.

Issue: March 2016. Subject to modification.
