DewCheck4®
Dewpoint Gauge

DC7000

TQC
W W W . T Q C . E U

Vision on **quality**

Instruction
Manual

$C\epsilon$ This product meets the emc directive 89/336/EEC, amended 92/31/EEC & 93/68/EEC

This product is RoHs conform 2002/95/EC

Warranty

TQC will grant a warranty for a period of 24 months for DewCheck Series 4 and 12 months for all related equipment from the date of delivery in respect of any evidence of faulty workmanship and materials. Should a delivered consignment prove to be contrary to contract upon inspection, the customer shall grant TQC the opportunity hereunder of removing the fault, or else the customer may demand replacement. Should the supply or delivery of any improvement or replacement not prove possible, the customer may choose between having the purchase price reduced or in demanding the contract of sale to be rescinded (conversion). Damage resulting from natural wear and tear, mechanical or chemical damage, an act of God or non compliance with the operating instructions shall be excluded from the warranty as well as mechanical interference by the customer or by third parties with DewCheck Series 4 and related equipment without TQC's written permission. No liability will be accepted for defects, damage or injury caused due to use not carried out in accordance with the manufacturer's user instructions.
To claim warranty, the rejected product has to be sent to TQC together with the original invoice, any exchange before the product has been returned to TQC is not possible. TQC reserve the right to repair, exchange or supply an equivalent substitute. TQC is not liable for handling or transport costs. Warranty on the purchase price is limited, all liability for consequential damages or changes in technology is expelled.
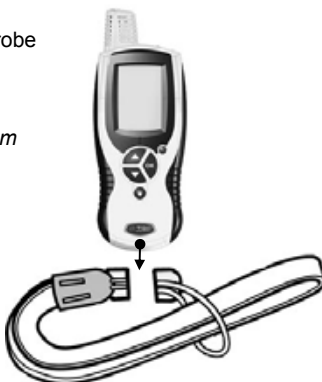
Scope of supply

The DewCheck4 with ordercode DC7000 comes with the following items:
- Instrument
- 3 X AA Alkaline batteries, placed inside the instrument
- Genuine leather pouch
- Wriststrap*
- Calibration certificate
- English manual

The DewCheck4 Dock with ordercode DC7500 comes with:
- Dock unit
- USB-cable
- Magnetic surface temperature probe
- DewLog evaluation software
- Allen key 2.5 mm.

* attach the wriststrap at the bottom
* of the instrument as folllows:*

INSTRUCTION MANUAL DEWCHECK4

1 Introduction

The DewCheck4 dewpoint gauge is specially developed to check climatic conditions in the surface treatment industry according to ISO 8502-4, ASTM D3276-05, BS 7079-B4 and NACE RP prop 97.

There is always a risk of condensation on surfaces to be treated. Condensation is difficult to spot without suitable instruments, in particular on blasted surfaces.

The phenomenon of condensation also depends on three highly changeable climatic factors. The ambient temperature, the surface temperature, and the dewpoint (calculated with the relative humidity) should be measured at *regular intervals.*

It is not only important to take frequent measurements; they should also be taken at different areas of the surface. Factors such as the sun-shadow side and the shape and the mass of the object to be painted can create unexpected thermal behaviour of the surface.

In order to document the climatic conditions during a coating job, the DewCheck4 is equipped with two types of internal memory. The memory for manual logging can store up to 6,000 records in a maximum of 8 batches. The memory for interval logging can store up to 12,000 records in a maximum of 8 batches.

Data can be evaluated on screen or exported to a PC using the optional DewCheck4 Dock. This optional extension can also be used to measure the surface temperature with an external sensor.

2   Starting the DewCheck4

The DewCheck4 is ready to start measuring as soon as it has been unpacked. The only settings you may need to check are the language, date, time, unit of measuring, and temperature (Celsius or Fahrenheit). See Section 3 for more information on setting up the instrument.

2.1   The Keypad

The instrument is operated using five buttons on the keypad, all of which are described below.

|	
	Press the ON/OFF button to switch the instrument on and off.
	Press to navigate upward through the menu.
	Press to navigate downward through the menu.
OK	Press to access the selected function or submenu
	Press the LIGHT button to switch the light on and off. The light illuminates the surface that is measured and switches off automatically after approx. 4 seconds.

Note:

- The backlight of the menu switches on after pressing any of the buttons on the keypad and switches off after approx. 16 seconds.
- Auto Power Off is initiated after approx. 120 seconds when not measuring.

2.2   The Sensors
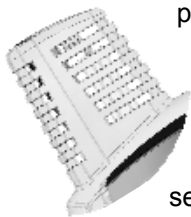
The instrument always measures three different parameters: ambient temperature, surface temperature, and relative humidity. These values are used to calculate the dewpoint temperature and Delta-T. The sensors used to measure the parameters are located at the top of the instrument (see figure). The surface temperature sensor (protrudes somewhat) has to make a connection with the surface to be able to measure the surface temperature. An external sensor can be used in combination with the optional DewCheck4 Dock.

See Section 4.4 for detailed information on parameters.

2.3   The Start menu

When DewCheck4 is switched on, the menu in Figure 2-1 is displayed. The user can select the following submenus:
- Measure
- Log manual
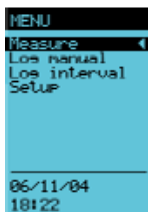- Log interval
- Setup

Figure 2-1 Start menu with Measure selected

Selecting a menu option

Select the function you wish to use by pressing the up and down buttons △ ▽ to navigate though the menu. Press OK to access the selected function or its submenu. Note that a selected menu option is highlighted black and has a ◄ sign.

2.3.1 Measure

Select *Measure* to start measuring immediately. See Section 4.1 for more information.

2.3.2 Log manual

Select *Log manual* to start measuring in a batch and manually log the measurements. See Section 4.2 for more information.

2.3.3 Log interval

Select *Log interval* to start measuring in a batch and log the measurements in a set interval. See Section 4.3 for more information.

2.3.4 Setup

Select *Setup* to change the instrument's settings. See Section 3 for more information.

3   Setup

The *Setup* menu enables you to change the instrument's settings.
1.   Select *Setup*.
2.   Press OK. The *Setup* menu displays.

Figure 3-1 Setup menu

The *Setup* menu contains the following submenus:
- Interval
- Limits
- Language
- °C / °F
- Date/time
- Backlight on
- Device info

These submenus are described below in detail.

3.1   Interval

Select *Interval* to set the standard interval time for the measuring option *Log interval.*

Each interval time is paired with the number of days the measurements are logged. This duration is automatically generated using the free memory and interval time.

This screen also displays the total battery power remaining (% full) and the amount of free memory (% free).
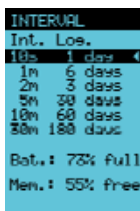
Figure 3-2 Setting the interval

When a critical logging time is set, the message *Low battery* will be displayed instead of *% full*. This means that the logging period cannot be fully used due to a lack of battery power. Note that the instrument retains the data even if the batteries are empty. You may need to change the batteries or change the interval time to be able to complete interval logging.

3.2   Limits

The limits you set here are only used when measuring without logging (option *Measure* in the start menu). The limits for the batches in manual and interval logging are set in the *Batch* menu. See Section 4.2 and 4.3 for more information.

Figure 3-3 Limits for measuring without logging

1. Select the parameter you want to set the limits for and press OK.
2. Use the up and down buttons to set the first digit of the limit.

3. Press OK. The second digit of the parameter can now be set.
4. Press OK. The line with *Lo limit:On* (or *Off)* is selected.
5. Press OK to change the current setting (*On* or *Off)*.
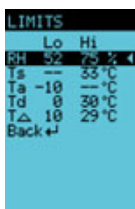6. Use the down button to go to the line with *Hi limit:On* or (*Off*).

3.3   Language

Use this option to set the language of the instrument's interface.

3.4   °C / °F

Select this option to set the temperature unit that is to be used. You can choose between Celsius and Fahrenheit.

3.5   Date/time

Use this option to set the date and time. The date and time are displayed on the start menu.

Date

Select the date format and enter the correct date in the chosen format. The selected format is displayed below the input fields.

Time

Select the time format and enter the correct time in the chosen format. The selected format is displayed below the input fields.

3.6   Backlight on

Use this option to turn the instrument's backlight on. The backlight will light up for 16 seconds after touching a button. Note that the backlight has a high power consumption. Completely switching off the backlight optimises the instrument's power consumption.

3.7   Device info

Use this option to check the serial number and firmware. You must provide this information when you need support.

This screen also displays the battery status (% full) and the memory status (% free). See Section 6.2 for more information on battery maintenance.

Figure 3-4 *Device info* example

The battery status is also displayed on the measurement screens. The more segments displayed, the better the condition of the battery. When the battery is low, the symbol starts blinking to indicate that the batteries have to be changed.

4 Measuring

In the start menu, you can select three kinds of measuring:

- Select *Measure* to measure without logging
  (see Section 4.1.).
- Select *Log manual* to measure with manual logging
  (see Section 4.2.).
- Select *Log interval* to measure in intervals
  (see Section 4.3.).

See Section 4.4 for detailed information on parameters and the recommended measuring method.

See Section 4.5 for more information on batches.

4.1 The Measure function

Select *Measure* in the start menu to start measuring immediately without logging the results. If required, limits for the alarm can be set in the *Setup* menu (Section 3.2).

Procedure

1. Check the limits for the alarm in the *Setup* menu.
2. Place the rubber tip of the surface temperature sensor against the surface at an angle of 90°, and keep it in this position until the measured value remains stable.
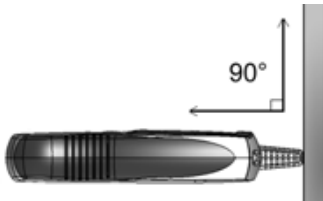

Figure 4-1 Correct measuring angle

DO NOT USE EXCESSIVE FORCE!
A light contact with the surface is sufficient. Using force does not increase the measuring speed or improve the accuracy of the measurement, but it does wear and/or damage the sensor tip. Do not drag the probe over the surface.

3. Select *Measure* in the start menu and press OK. The instrument starts measuring.

Figure 4-2 Measuring without logging

The trend indicator between the parameter and the reading indicates if the value is increasing or decreasing.

When a limit is exceeded, an audible alarm is triggered and the alarm sign displayed next to the concerned parameter.

4. Select *Hold* and press OK to freeze the measurements.
5. Select *Release* and press OK to start measuring again.
6. Select *Menu* and press OK to return to the start menu.

See Section 4.4 for detailed information on parameters.

4.2   The Log manual function

Select *Log manual* to store measurements batch by batch. An entry is written to the selected batch every time you select *Hold.*

Procedure

1. Select *Log manual* and press OK. The *Log manual* screen displays. When the memory is full, the batches are unavailable. This is indicated by a cross in the memory symbol ▣. You must clear the batches before you can start logging.
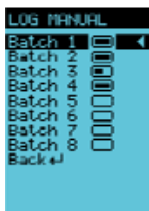
Figure 4-3 Batch selection screen

2. Select a *Batch*. Batches can be numbered of given names using the PC software. You can select empty batches (▭) and batches that were previously used for manual logging (▣). Closed batches (▬) cannot be used for manual logging.

3. Press OK. The following screen displays the available batches. If you see *Closed* at the top of the screen the batch has been used for interval logging and cannot be used for logging.

Figure 4-4 Batch menu *Log manual*

4. If required, select *Limits* and press OK to set the limits for the selected batch and indicate whether the limits should be used. When a limit is exceeded, an audible alarm is

triggered and the alarm sign displayed next to the concerned parameter. If no limits are set here, the settings in the *Setup* menu are used. Select *Back* and press OK to return to the *Batch* menu and start logging.
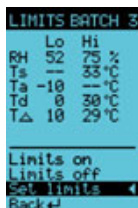
Figure 4-5 Limits in batch

5. Place the rubber tip of the surface temperature sensor against the surface at an angle of 90° (see figure 4-6), and keep it in this position until the measured value remains stable.

    DO NOT USE EXCESSIVE FORCE!
    A light contact with the surface is sufficient. Using force does not increase the measuring speed or improve the accuracy of the measurement, but it does wear and/or damage the sensor tip. Do not drag the probe over the surface.

6. Select *Log* to start logging. The screen with measurements displays.

Figure 4-7 Measuring with manual logging

▮ The trend indicator between the parameter and the reading indicates if the value is increasing or decreasing.

▮ When a limit is exceeded, an audible alarm is triggered and the alarm sign displayed next to the concerned parameter.

7. Select *Hold* and press OK to freeze the measurements. The Hold option changes to Store.
8. Select *Store* and press OK to save the current log record. Each log record contains the following measurements: Relative humidity, ambient temperature, surface temperature, dewpoint temperature, Delta-T, and the time and date. Check the measurement visually before storing it. Use *Cancel* to cancel the measurement and prevent it being stored.
9. Repeat steps 7 and 8 to save more log records.
10. Select *Back* to stop manual logging and return to the Batch menu.

See Section 4.4 for detailed information on parameters.

Recall

Select *Recall* to evaluate the measurements stored for a selected batch. The *Recall* menu displays the *Average*, *Maximum* and *Minimum* values for all five parameters of the selected batch.

Clear

The Clear function deletes **all stored batches** from memory. Note that cleared batches cannot be recalled and that the cleared datasets are permanently deleted.

4.3   The Log interval function

Select *Log interval* to start measuring in a batch and log the measurements at a set interval. The logging interval is set in the *Setup* menu (Section 3.1).

Procedure

1. Check the set interval in the *Setup* menu. See Section 3.1 for details on setting the interval.
2. Select *Log interval* and press OK. The *Log interval* screen displays. When the memory is full, the batches are unavailable. This is indicated by a cross in the memory symbol ▧. You must clear the batches before you can start logging.
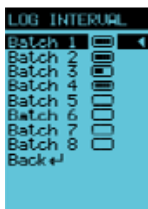
Figure 4-8 Batch selection screen.

3. Select a *Batch*. Batches can be numbered of given names using the PC software. Only empty batches (▭) can be selected for interval logging.
4. Press OK. The below screen displays. The *Interval* time and *Log* time are displayed at the bottom of the screen.
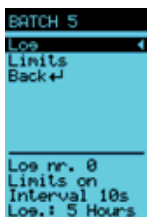
Figure 4-9 Batch menu *Log manual*

Closed or Occupied

A batch cannot be used when *Closed* or *Occupied* is displayed at the top of the screen. *Closed* indicates that a batch was previously used for interval logging. *Occupied*

indicates that a batch was previously used for manual logging.

5. If required, select *Limits* and press OK to set the limits for the selected batch and indicate whether the limits should be used (see Section 3.2 for details on setting limits). Select *Back* and press OK to return to the *Batch* menu and start logging.
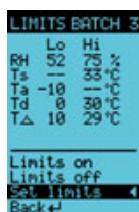
Figure 4-10 Limits in batch

6. Place the rubber tip of the surface temperature sensor against the surface at an angle of 90° (see figure 4-11), and keep it in this position until the measured value remains stable.

    DO NOT USE EXCESSIVE FORCE!
    A light contact with the surface is sufficient. Using force does not increase the measuring speed or improve the accuracy of the measurement, but it does wear and/or damage the sensor tip. Do not drag the probe over the surface.

    Since holding the surface temperature sensor against a surface for longer periods of time is impractical, we recommend using the optional DewCheck4 Dock, which is equipped to permanently position the instrument against a surface. See Section 5 for more information about the DewCheck4 Dock.

7. Select *Log* to display the parameter screen. The Start
    option at the bottom of the screen is automatically
    selected.
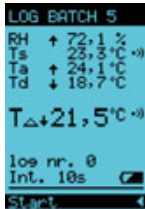
Figure 4-12 Measuring with interval logging

 Note that a blinking battery symbol indicates the battery
    must be replaced. See Section 6.2 for more information on
    battery maintenance.

 When a limit is exceeded an audible alarm is triggered
    and the alarm sign displayed next to the concerned
    parameter.

8. Press OK to start interval logging. The *Start* option is
    replaced by the *Stop* option.

    The current log record and interval time are displayed at
    the bottom of the screen. Each log record contains the
    following measurements: Relative humidity, ambient
    temperature, surface temperature, dewpoint temperature,
    Delta-T, and time and date. A flashing green LED
    indicates that logging is in progress.

9. Press OK to stop logging and close the batch. You cannot
    resume measuring this batch.

10. Select *Yes* and press OK to confirm you want to stop
    logging. The data are saved and the Batch menu displays.

11. Select *Back* to return to the Log interval menu. You can select another batch for interval logging or return to the start menu.

See Section 4.4 for detailed information on parameters.

Recall

Select *Recall* to evaluate stored measurements for a selected batch. The *Recall* menu displays the *Average*, *Maximum* and *Minimum* values for all five parameters in the selected batch.

4.4   Parameters

The parameters for each measuring mode are displayed in the same way (see Figure 4-13). Use the *Setup* menu to set the limits for each parameter when measuring without logging (see Section 3.2). Use the *Batch* menu to set the limits for each parameter when measuring with manual and interval logging (see Section 4.2 and 4.3).
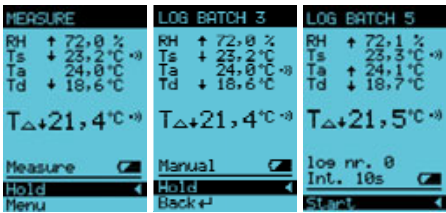
Figure 4-13 Measurements on screen

The trend indicator between the parameter and the reading indicates if the value is increasing or decreasing.

When a limit is exceeded, an audible alarm is triggered and the alarm sign displayed next to the concerned parameter.

A blinking battery symbol indicates the battery must be replaced. See Section 6.2 for more information on battery maintenance.

4.4.1 Relative humidity - RH

The first parameter, RH, is the measured relative humidity. The humidity sensor is located behind the grid at the top of the instrument. To ensure an accurate RH is measured, check that the airflow through the grid is not obstructed. Although the sensor is equipped with an integrated dust filter, it is recommended to keep it away from paint dust and dirt as much as possible.

4.4.2 Surface temperature - Ts

The second parameter is the surface temperature. The sensor for measuring the surface temperature is located at the very top of the instrument and has a rubber tip.

The rubber tip is to be placed against the surface at an angle of 90° (see figure 4-14), and kept in this position until the measured value remains stable.

A light contact with the surface is sufficient. DO NOT USE EXCESSIVE FORCE! Using force does not increase the measuring speed or improve the accuracy of the measurement, but it does wear and/or damage the sensor tip. Do not drag the probe over the surface.

4.4.3 Ambient temperature - Ta

The third parameter, Ta, is the ambient temperature. The sensor used to measure the air temperature is located behind the grid at the top of the instrument. This sensor measures the temperature of the air in its immediate surrounding. It is important to keep things away from the sensor that may affect the air temperature, such as fingers.

It is also recommended to give the instrument time to acclimatise if you are moving it from a cold to a warm environment or vice versa.

4.4.4 Dewpoint temperature - Td

The fourth parameter is the calculated dewpoint temperature, which is derived from the ambient temperature and the relative humidity.

Surfaces with a temperature below this dewpoint temperature will be covered with condensation/moisture.

4.4.5 Delta-T - TΔ

The last parameter is the Delta-T, TΔ, which is calculated by subtracting the dewpoint temperature from the surface temperature.

Alarm

When the Delta-T falls below the set limit (default setting 3°C), the Alarm symbol displays. An acoustic alarm is also triggered. The Alarm symbol displays as long as Delta-T is lower than the set limit.

It is risky to paint in such a situation, as the slightest change in climate conditions may cause condensation on the surface.

4.5 Batches

All of the DewCheck4 measurements are stored in batches. A total of 8 batches are available that can be used for either manual or interval logging. Batches can be numbered of given names using the PC software.

Memory

The memory for manual logging can store up to 6,000 records in a maximum of 8 batches. The memory for interval logging can store up to 12,000 records in a maximum of 8 batches.

Each log record contains the following measurements: relative humidity, ambient temperature, surface temperature, dewpoint temperature, Delta-T, and time and date.

Batches with measurements can be *Recalled* and *Cleared* in the batch menu.

Recall

Select *Recall* to evaluate stored measurements for a selected batch. The *Recall* menu displays the *Average*, *Maximum* and *Minimum* values for Delta-T measurements in the saved dataset.

Clear

The *Clear* function deletes **all stored batches** from memory. It is not possible to clear individual batches. Note that cleared batches cannot be recalled and that the cleared datasets are permanently deleted.

5 DewCheck4 Dock

The DewCheck4 Dock is an optional unit that serves as a USB interface between the instrument and a PC, and as a magnetic holder with an input for the magnetic surface temperature probe. (Thermocouple in Dock overrides gauges surface probe.)

Stored measurements can be evaluated on screen or with the optional DewCheck4 Dock. The stored data can be transferred to a personal computer using a USB cable.

5.1   Installing the DewCheck4 Dock

1. Connect the probe to the Dock, making sure the two legs of the connector are in the correct position. Note that one leg is wider than the other.
2. Then place the two tabs at the top of the Dock into the two openings at the top back of the instrument and gently press the connector onto the instrument (Figure 5-1).

Figure 5-1 Connecting the Dock

3. Press the magnet of the probe against the ferrous steel surface.
4. Start the DC7000 and select Measure in the start menu to start measuring without logging. For other types of measuring, see chapter 4.

5.1.1 Positioning the DewCheck4 with Dock

In its role as magnetic holder, the Dock can be fixed to any ferrous steel surface for a longer period of time. The Dock must then be secured with a bolt (Figure 5-2).

Make sure the surface is ferrous steel. Gently place the back of the instrument against the steel, top first. Then gently place the lower part of the instrument against the steel.

Figure 5-2 Securing the Dock

5.2   DewLog V1 - the software

The dock software is designed to evaluate and analyze the data collected by your data logger.

5.2.1   Installation

Insert the DewLog disc into the CD-ROM drive in your computer and wait for the installation screen to appear.

If the screen does not appear automatically, start the installation by running the setup.exe file located on the CD-ROM.

Enter the product key in the text box and click Install. The product key is written on the CD. If not, click the Explore the CD button and open the Product key.txt file. Copy the key into the text box and click Install.

Follow the instructions of the Install Shield Wizard, which will guide you through the installation process.

5.2.2   Quick start

Step 1.	Connect the DewCheck 4 Dock to the DC7000 data logger. Then connect the USB cable to the DewCheck 4 Dock and your PC. If the USB device is not automatically detected and installed by MS Windows, install the USB drivers located on the DewLog CD-ROM.
Step 2.	Select the preferred language by choosing the relevant item in the language box.
Step 3.	In the DewLog menu, choose *Logger - Configure & Test*…
Step 4.	On the form, choose the communication port to which your data logger is connected.

Step 5.	Click *Test*; if the connection is successful the battery status of the data-logger is displayed. The firmware and serial number are displayed after clicking the *More* button. In addition, a *Start* button for real time measuring is displayed.
Step 6.	Press *Start* to check whether all the probes are giving readings. Click *OK* to close the window.
Step 7.	In the DewLog menu, choose *Logger - User Settings*…
Step 8.	Select the preferred *Display units* and *Synchronize* the date and time with the PC.
Step 9.	Click *Next*
Step 10.	Set the preferred *Interval* time,
Step 11.	Click *Next*.
Step 12.	Enter the *batch* names.
Step 13.	Click *Next*.
Step 14.	Enable the readings you want to set an alarm limit for and enter the lower and upper limit for each alarm.
Step 15.	Click *Finish* to send the user settings to the logger. After successfully sending the settings a dialog appears that prompts you to disconnect the logger and start logging.
Step 16	Click *OK* to close the dialog.

For a complete overview of the options and settings, see the help that is provided with the DewLog software.

6 Safety, Care and Maintenance

6.1 General Maintenance

- Always keep the instrument in its pouch when not in use. Ensure the instrument is correctly inserted in the pouch with the display to the front.
- The humidity sensor is fragile and should never be touched. Do not use compressed air to clean the sensors or the instrument.

Screen care

- Be careful not to scratch the LCD screen or break the glass screen.
- Do not subject the DewCheck4 to a strong impact or extreme temperatures. If a Liquid Chrystal Display is heated above 50°C (120°F) it may be damaged. This can happen if it is left in a car parked in strong sunlight.
- We suggest cleaning the instrument with a soft, dry cloth such as those made to clean eyeglasses. Do not use solvents!

Cleaning the plastic housing

- Clean the plastic housing only with isopropyl alcohol (rubbing alcohol) and a soft dry cloth.

Cables and ports

- Never force a connector into a port if the connector and port do not easily join. Make sure the connector matches the port and that it is properly aligned and undamaged before you attach it.

Heat, moisture, dust

- Keep the instrument away from extreme heat. Do not leave it on the dashboard, in the boot of a car, or near a heater. Heat can damage the screen, the plastic housing and internal components.

- Do not leave the instrument in extremely dusty, damp or wet places. Dust and moisture can damage the gauge and cause it to malfunction. The instrument is not waterproof and may not be submerged.

6.2   Battery maintenance

The batteries need to be replaced when the battery symbol flashes. The battery symbol is displayed in the measurement screens. The battery status is displayed in the *Setup* menu – submenu *Device info.*

To save the time and date settings, the batteries must be exchanged within 30 seconds.

Battery type: AA 1.5 V alkaline (non-rechargeable). We recommend using high-quality batteries only.

Always put the + side of the battery in first and gently press down the – side.

Always check the time and date after replacing batteries.

7 Specifications

Humidity

Accuracy at 23°C	±3%rh
Measurement resolution	0.5%
Measurement range	0…100%rh

Temperature Ta (Air)

Accuracy	± 0.5°C / 1°F
Measurement resolution	0.1 °C / 0.1°F
Measurement range	-20…+80°C / -4..+175°F

Temperature Ts (Surface)

Accuracy	± 0.5°C / 1°F
Measurement resolution	0.1°C / 0.1°F
Measurement range	-30…+60°C / -22..+ 140°F

Temperature Te (Surface External)

Accuracy	± 0.5°C / 1°F
Measurement resolution	0.1°C / 0.1°F
Measurement range	-30…+60°C /-22…+140°F

Display

Graphical display with backlight	
Operating temperature range	-20…+60°C/-4…+140°F

Keys

Menu	3
On / off	1 (electronic)
LED flashlight	1 (electronic)

Memory

Type	Dynamic
Memory size manual logging	6,000 records
Record content	Batch number, time/date, humidity, Ta, Ts, Td, TΔ, status byte for alarm.
Memory size interval logging	12,000 records
Record content	Humidity, Ta and Ts. Other parameters and date and time are calculated.
Batches	8 max

Measurement / features

Limits	Adjustable for each parameter
Lo-Hi Alarms	Beep sound, symbol in display
Hold/freeze function	Yes
Data storage	Two types. Manual and interval(auto)
Data recall	Gauge displays average, min/max for each batch. Download to PC possible via optional adaptor.
Battery indicator	Yes, detailed
Trend indicator	Yes
User interface	Menu driven through up/down/enter key.
Languages	6 languages including English, German, French and Spanish
Extra flashlight	Built-in bright white LED orientation

Hardware

Case	Plastic custom housing with protective rubber parts at the side and around the display window. Wrist strap.
Dimensions	195 x 75 x 35 mm.
Weight (incl. batteries)	± 300 gram
Power	3 X AA 1.5 batteries,
Typical lifetime	OFF > 2 years Interval logging > 1 year with 10 min. interval measurement (manual logging) 400 hours continuous operation.(data based upon use without backlight)

Optional DewCheck4 Dock

Unit to be connected to the back of the gauge. Unit provides communication through USB interface, K-type thermocouple input for external thermocouple and has three rubber coated magnets to attach the gauge to ferrous substrates.

Content of the expansion pack

Adaptor Unit

USB cable
Software

8 Menu Structure

8.1 Start menu

Measure
Log manual
Log interval
Setup

The date and time are displayed at the bottom of the main menu.

8.2 Measure menu

Measure
       Hold/Release
       Menu

8.3 Log manual menu

Log Manual
       Batch 1
       Batch 2
       Batch 3
       etc up to Batch 8
             Batch 1
                 Log
                       Hold
                       Back
                 Recall
                       Average
                       Maximum
                       Minimum
                       Back
                 Limits
                       Limits On
                       Limits Off
                       Set Limits
                       Back
                 Clear
                       Yes
                       No
                 Back

If a Batch is closed, the status *Closed* is displayed at the top of the Batch menu screen. The Log nr., whether Limits are On or Off, and Manual are displayed at the bottom of the screen.

8.4   Log interval menu

```
Log Interval
          Batch 1
          Batch 2
          Batch 3
          etc up to Batch 8
                    Batch 1
                              Log
                                        Hold
                                        Back
                              Recall
                                        Average
                                        Maximum
                                        Minimum
                                        Back
                              Limits
                                        Limits On
                                        Limits Off
                                        Set Limits
                                        Back
                              Clear
                                        Yes
                                        No
```

If a Batch is closed, the status *Closed* is displayed at the top of the Batch menu screen. The Log nr., whether Limits are On or Off , and the Interval in seconds are displayed at the bottom of the screen.

8.5   Setup menu

Setup

      Interval
      Limits
      Language
      °C/°F
      Date/time
      Backlight
      Instrument Info
      Back
      Language
            English
            German
            French
            Spanish
      °C/°F
            Celsius
            Fahrenheit
      Date/time
            Date
            Time
            Back
      Backlight
            On
            Off

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