

Two-Channel Humidity, Temperature and Dew Point Data Logger with USB Interface

UTH-10

Two-Channel Humidity, Temperature and Dew Point Data Logger with USB Interface
It Can Also Be Used As an Easy and Portable Meter



INTRODUCTION

This data logger measures and stores up to 32,000 humidity(0 to 100%RH) and temperature(-35 to 80°C (-31~176°F)) readings. Dew point and more professional applications can be provided by the PC software *DGraph*. Logger status, alarm indication and low battery indication are via flashing red/green LED and yellow LED. The button on housing can be used to start logging, or confirm and clear LED alarm when LED alarm is hold status.

User can plug data logger straight into PC's USB port without any cables. Before getting started, user need to install USB driver and *DGraph* software, provided on the CD which is included in product packing box. All the software can run under Windows XP, Vista, 7 or 8(32 bit and 64 bit Versions). User can easily use *DGraph* software to setup sample rate(from 10 seconds to 12 hours), high/low alarm limit and start/stop method, and download data to PC, etc. And then user can view, analysis and print the data, or export other file formats (txt, xls, csv, bmp, jpg).

Especially, for some professional applications, user can set access password, name each channel, enable/disable specified channel, input calibration data for each channel, disable LED indication for saving power, and select sample mode(Instant, Average, Maximum and Minimum), etc.

APPLICATIONS

This data logger is used mainly to monitor and verify humidity & temperature-sensitive goods, equipment or areas. e.g.:

- Shipping
- Food
- Pharmaceutical
- Warehouse
- Museums
- Buildings
- Computer Rooms
- Communications Equipment
- Containers
- Equipment Run Time
- Laboratories
- Libraries
- HVAC
- Refrigeration
- Agriculture and Livestock
- Greenhouses



BENEFITS

- Portable, precise, compact and low cost
- Easy to record and analyses data
- Unique and uniform PC software *DGraph* can meet your higher requirements
- Elaborate design make it perfectly work in more application fields
- Strict design ensure long term reliable work
- Enhanced electrostatic protection design to prevent unexpected damage
- Each unit have single serial number identified by *DGraph* software to manage data simply
- All data from different data logger and all different measurement parameters can be graphed and analysed together

FEATURES

- USB interface directly communicate with PC for setup and data download
- User can set access password for data logger
- User can name each channel and enable/disable specified channel freely
- LED alarm enable/disable, LED alarm hold enable/ disable and alarm limit settings for all channels via *DGraph*
- User can input formula to customize compound graph from selected logging data
- User can create and customize new unit easily and freely for all measurement parameters
- Logging status indication via red/green LED and battery status indication via yellow LED
- Start logging method: Immediately, Button, Delayed
- User can input two point calibration value for each channel when setup
- Dew point calculated via software *DGraph*
- IP54 environmental protection
- Long battery life: Approx. 4 Years @ 10 Minute Sample Rate
- Replaceable lithium battery and logged data are not lost if battery exhausted

Low Cost

Easy to Use

DGraph
Software

4 Years
Battery
Life

Firmware
Upgradable

Password
Restriction

SPECIFICATIONS

| Measurement | | |
|---------------------|---|---|
| Relative Humidity | Measurement range | 0~100%RH |
| | Accuracy(Typ.) ^{Figure 1} | ±3%RH(20% to 80%RH) ±4%RH (0 to 20%RH, 80 to 100%RH) |
| | Resolution | 0.1%RH typically |
| | Long Term Drift | <0.5%RH per year |
| Temperature | Measurement range | -35~80°C (-31~176°F) |
| | Accuracy(Typ.) ^{Figure 2} | ±0.3°C (±0.5°F) (0 to 60°C (32 to 140°F)) ±0.5°C (±0.9°F) (-20 to 0°C (-4 to 32°F), and 60 to 80°C(140 to 176°F)) ±0.7°C (±1.3°F) (-35 to -20°C(-31 to -4°F)) |
| | Resolution | 0.1°C / 0.1°F |
| | Long Term Drift | Negligible |
| General | | |
| Number of Channels | Double Channels (One for humidity and the other for temperature) User can enable/disable any channels when setup via <i>DGraph</i> | |
| Memory Capacity | 64KBytes(Total 32,000 readings for all channels) | |
| Sample Rate | Can be selected from 10 seconds to 12 hours | |
| Start Method | Immediately, Start by button, and Start at date & time | |
| Stop Method | Stop when memory full, overwrite when memory full, and stop until specified number of sample points finished | |
| Sample Mode | Instant(default), average, maximum and minimum This will decide how to dispose data at idle time between a sample interval | |
| Button | Software configured to start logging by button, or clear and reset LED alarm when LED alarm is hold | |
| LED | Red & green LED: Logger Status indication(Include Delay to Start, Logging, Alarm, Finished) (Software can disable this two LED for saving power) Yellow LED: Low battery indication | |
| Alarm | User programmable high or low alarm limit for each channel(If necessary) LED alarm and hold | |
| Communication | Direct USB connection Need to install the driver provided on CD | |
| PC Software | <i>DGraph</i> software and USB driver required (Included on CD) (Compatible with Windows XP, Windows Vista, Windows 7&8(32 bit & 64bit Versions)) Use these software to setup, download, view graph and analysis data | |
| Power Supply | User replaceable 1/2AA 3.6V Lithium Battery 1200mAh <i>NOTE: USB interface can supply power directly if necessary</i> | |
| Battery Life | Approx. 2 Years @ 1 Minute Sample Rate Approx. 4 Years @ 10 Minute Sample Rate Approx. 8 Years without any sample task <i>NOTE: It also Depends on ambient temperatures and using of LEDs</i> | |
| Operating Range | 0 to 100%RH -35 to 80°C (-31 to 176°F) | |
| Storage Range | Recommended: 20 to 60%RH 10 to 50°C (50 to 122°F) | |
| Case Material | ABS, TPU, PC | |
| Dimensions | 120mm×35mm×30mm(4.7"×1.4"×1.2") | |
| Weight | Approx. 90 grams(3.19 oz) | |
| Mounting | Mounting bracket (Optional) or locking eyelet | |
| Standard Compliance | IP54 (option select IP66) | |

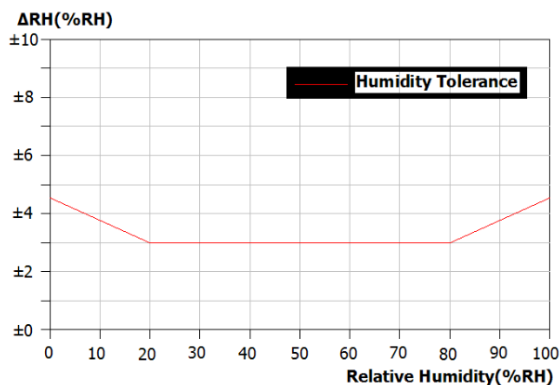


Figure 1: Tolerance at 25°C for relative humidity.

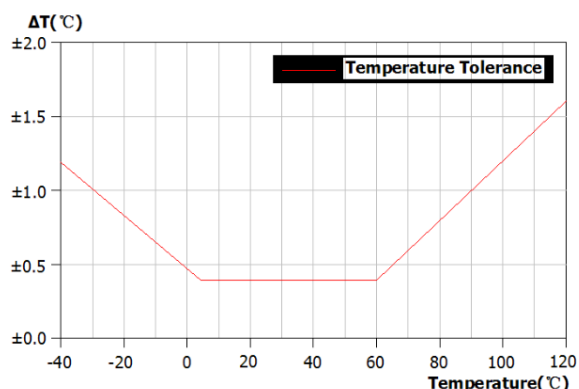
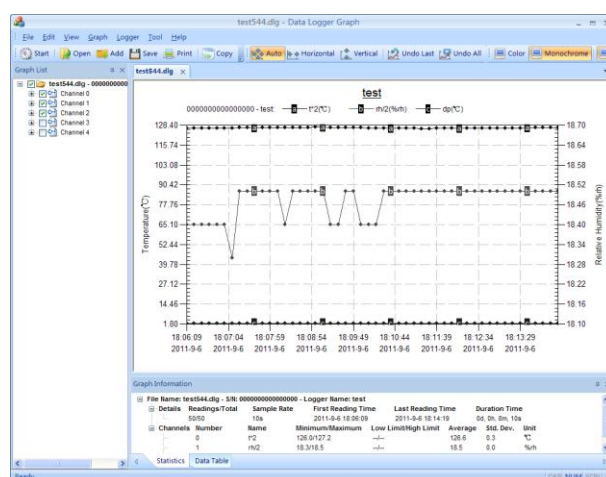
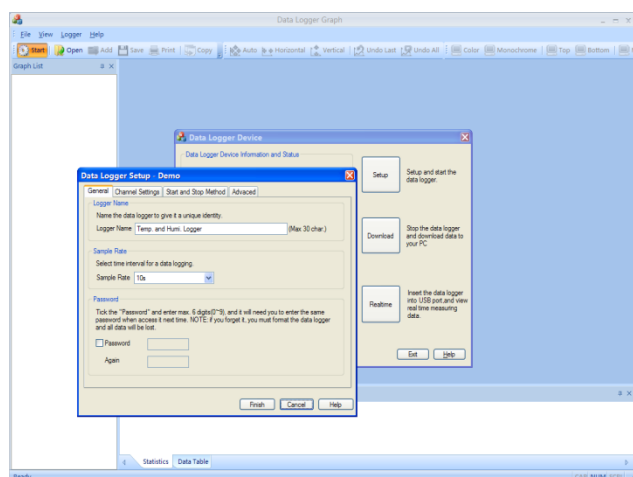


Figure 2: Tolerance for temperature in °C

SOFTWARE

Software need to be used to setup and start data logger as well as download, graph, analysis, print and export data to other file formats. Data logger standard kit include the software named DGraph which can run under Windows XP, Vista, win 7&8 (32 bit and 64 bit Versions).For all details, please see the “DGraph Software Datasheet” and “DGraph Software Guide” on the CD included in product packing box.




BATTERY REPLACEMENT

When battery is exhausted or replaced, stored readings aren't lost. However, the latest logger task which have not been finished will be stopped and can't be restarted even if new battery installed. You can setup data logger via DGraph software to restart new task. Especially, you can download data without battery because USB interface can supply power directly. We recommend that you check the battery capacity before some important logging task.

WARNING:

Handle lithium batteries carefully, observe warnings on battery case, and dispose of in accordance with local regulations.

ORDER INFORMATION

| Picture | Description | Part # |
|---|--|--------|
|  | Data Logger Standard Kit >>Data logger >>CD with USB driver, DGraph software, Related documents >>Quick start guide, >>1/2 AA 3.6V Lithium Battery | UTH-10 |