

U0111 • U0121 • U0122 • U0141 • U3121 • U3631**PRODUCT DESCRIPTION**

The dataloggers Uxxxx with connectors for external probes connection are designed for measuring and recording physical and electric quantities with an adjustable logging interval from 1 second to 24 hours. The measured values, or the average values and min/max values over a recording interval are stored into the internal non-volatile memory. The data logging mode can be cyclic (when the data memory is completely full, the oldest data are overwrite by the new ones), or non-cyclic (the recording will stop once the memory is full). The device also allows to the evaluation of alarm states - exceeding the limit of the measured value or falling below this limit, exceeding the limit of memory filling, technical defects of the instrument or probes. The alarm signalling can be realised visually, optionally by a symbol appearing on the display or by a short blink of an LED, or acoustically. The data recording can be performed continuously or only when an alarm occurs. The devices are powered by internal a replaceable lithium battery.

Device setting, recorded data downloading and online monitoring is carried out using the computer with the **COMET Vision** software installed (see www.cometsystem.com). The USB interface is used to communicate with the computer.

| Device type | Measured values | Construction |
|--------------|-------------------|---|
| U0111 | Te | Connector for connection external Pt1000/E probe |
| U0121 | 2 x Te | Connectors for connection up to four external Pt1000/E probe |
| U0122 | Ti + Te | Internal temperature sensor and connector for connection external Pt1000/E probe |
| U0141 | 4 x Te | Connectors for connection up to four external Pt1000/E probe |
| U3121 | Te + RH + Td | Connector for connection Digi/E probe |
| U3631 | Ti + Te + RH + Td | Internal temperature/humidity sensor and connector for connection external Pt1000/E probe |

Ti ... Internal temperature, Te...External temperature, RH...Relative humidity, Td...Dew point temperature

INSTALLATION AND OPERATION

Fasten the device on the wall with two screws or insert it into the wall holder **LP100** (optional accessory). Datalogger may be operated as a portable one. In this kind of operation avoid the device falling down. Try to maintain the proper working position.

- Please pay attention to the device and probes mounting. Inappropriate selection of the working position and the measurement location may adversely affect the accuracy and long-term stability of the measured values.
- Connect the probes to the device (maximum length of cables should not exceed 30 m, recommended cable length of the Pt1000/E probe is 15 m)
- The devices with all cables should be located as far as possible from potential interference sources
- Remove the transport protection foil from the front panel of the U3631 datalogger

Set-up the device

- Device setup can be performed using the computer with the Windows 7 operational system or higher. Minimum HW requirements are 1.4 GHz processor and 1 GB memory.
- Install the **COMET Vision** software into computer (the program is available free of charge at www.cometsystem.com)
- Connect the datalogger to the computer. Use an USB cable with USB-C connector (max. cable length 3 m). If the device is connected properly, its current status is displayed in the *Device Home panel*.
- Click on the **Configuration** button. The device configuration will be downloaded and you can change the settings of some items.
- Save the new configuration into the device
- Disconnect the device from the computer and close the USB connector with a closing cap

Operating the device from the keypad

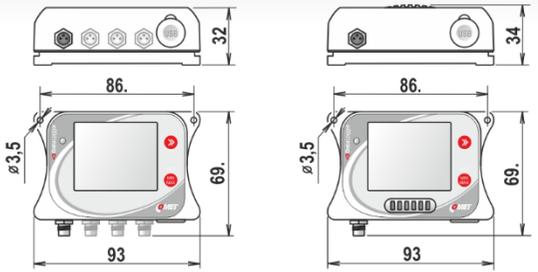
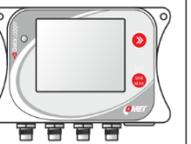
- Press and hold the lower key. After the light up the row with menu items, release the key and briefly press the upper key.
- Press the upper key to scroll through the menu items (device turning On/Off, deleting the Min/Max values in the device, ...)
- Press the lower key to confirm (SET)

The devices do not require special maintenance. We recommend that you regularly verify the accuracy of the measurement with calibration.

SAFETY INSTRUCTIONS

- Installation, electrical connection and commissioning should only be performed by qualified personnel in accordance with applicable regulations and standards
- Devices contain electronic components, it needs to liquidate them according to currently valid conditions.
- To **complement the information in this data sheet** read the manuals and other documentation, which are available in the **Download** section for a particular device at www.cometsystem.com

Technical specifications

| Device type | U0111 | U0121 | U0122 | U0141 | U3121 | U3631 | | | | | | |
|---|---|---------------|---|---------------|---|-----------------------|---|--|--|--|---|--|
| Power batteries | Lithium battery 3.6 V / 2200 mA | | | | | | | | | | | |
| Recording interval | (1 - 2 - 5 - 10 - 15 - 30) s • (1 - 2 - 5 - 10 - 15 - 30) min. • (1 - 2 - 3 - 4 - 6 - 8 - 12 - 24) h | | | | | | | | | | | |
| Memory capacity | 500 000 values in non-cyclic record mode • 350 000 values in cyclic record mode | | | | | | | | | | | |
| Internal temperature measuring range | — | — | -30 to +70°C | — | — | -30 to +70°C | | | | | | |
| Accuracy of internal temperature measurement | — | — | ± 0.4°C | — | — | ± 0.4°C | | | | | | |
| External temperature measuring range | -90 to +260°C | -90 to +260°C | -90 to +260°C | -90 to +260°C | according the probe | -90 to +260°C | | | | | | |
| Accuracy of external temperature measurement | ± 0.2°C * | ± 0.2°C * | ± 0.2°C * | ± 0.2°C * | according the probe | ± 0.2°C * | | | | | | |
| Relative humidity measuring range (without condensation) | — | — | — | — | according the probe | 0 to 100 %RH | | | | | | |
| Accuracy of relative humidity sensor | — | — | — | — | according the probe | ± 1.8 %RH ** | | | | | | |
| Dew point temperature measuring range | — | — | — | — | according the probe | -60 to +70 °C | | | | | | |
| Accuracy of dew point temperature measurement | — | — | — | — | according the probe | ± 1.5 °C *** | | | | | | |
| Calculation the difference between external temperature and dew point temperature | — | — | — | — | — | yes | | | | | | |
| Recommended calibration interval **** | 2 years | 2 years | 2 years | 2 years | according the probe | 1 year | | | | | | |
| Protection class | IP67 | IP67 | IP67 | IP67 | IP67 | IP67 | | | | | | |
| Temperature operating range | -30 to +70°C | -30 to +70°C | -30 to +70°C | -30 to +70°C | -30 to +70°C | -30 to +70°C | | | | | | |
| Relative humidity operating range (without condensation) | 0 to 100%RH | 0 to 100%RH | 0 to 100%RH | 0 to 100%RH | 0 to 100%RH | 0 to 100%RH | | | | | | |
| Working position | any position | any position | any position | any position | any position | connector facing down | | | | | | |
| Recommended storage temperature | -20 to +45°C | -20 to +45°C | -20 to +45°C | -20 to +45°C | -20 to +45°C | -20 to +45°C | | | | | | |
| Recommended storage relative humidity | 5 to 90 %RH | 5 to 90 %RH | 5 to 90 %RH | 5 to 90 %RH | 5 to 90 %RH | 5 to 90 %RH | | | | | | |
| Electromagnetic compatibility according to | EN 61326-1 | EN 61326-1 | EN 61326-1 | EN 61326-1 | EN 61326-1 | EN 61326-1 | | | | | | |
| Weight | 120 g | 120 g | 120 g | 130 g | 120 g | 130 g | | | | | | |
| Dimensions [mm] |  | | | | | | | | | | | |
| |  <p>the Pt1000/E probe</p> | |  <p>the Pt1000/E probes</p> | |  <p>the Pt1000/E probe temperature sensor (inside the case)</p> | |  <p>the Pt1000/E probes</p> | |  <p>the Digi/E probe</p> | |  <p>the Pt1000/E probe temperature and rel. humidity sensor</p> | |
| | <p>U0111, U0121, U0122, U0141, U3121</p> | | | <p>U3631</p> | | | | | | | | |

* the accuracy of the device without probe in the range of -90 to +100 °C (in the temperature range of +100 to +260 °C is accuracy ±0,2 % of measured value)

** at temperature 23 °C in the range of 0 to 90 %RH (hysteresis ±1 %RH, non-linearity ±1 %RH)

*** at ambient temperature $T < 25^{\circ}\text{C}$ and $\text{RH} > 30\% \text{RH}$ (for more details see graphs at device manual)

**** recommended calibration intervals: temperature - 2 years, relative humidity - 1 year