

PRODUCT DESCRIPTION

The dataloggers **UxxxxM** equipped with a two-part self-locking terminal block are designed for measuring and recording physical and electric quantities with an adjustable logging interval from 1 second to 24 hours. The measured values (the average values or min/max values over a recording interval) are stored in 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). For each measured value it is possible to set two alarm limits. The alarms are signalled by the symbols on the LCD display, by flashing the LED, by acoustic or by sending a warning SMS message. The data recording can be performed continuously or only when an alarm occurs.

GSM modem is a part of each datalogger. Modem is used to send SMS messages to up to four selected recipients and to send the measured values using JSON messages. In addition to warning messages the information SMS messages containing current measured values and alarm status can be sent at a preset interval. These messages may be of two kinds: user readable (suitable to be displayed on a mobile phone), or machine readable (suitable for automated data processing in a database or a cloud).

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

The **internal Lilon battery** is designed to power the datalogger. The battery charging is activated immediately after connecting the device to the computer, or after connecting an usual USB charger.

Device type	Measured values	Construction
U0843M	2 x Te + 2 x BIN	Terminal block for connection of two external Pt1000 probe and two binary inputs
U6841M	3 x I + 1 x BIN	Terminal block for connection of three current inputs 0 – 20 mA and one binary input
U7844M	4 x BIN	Terminal block for connection of four binary inputs (two of them can work as a counter)

Te...Temperature, I...Current 0-20 mA, BIN...Binary inputs

INSTALLATION AND OPERATION

Insert the micro-SIM card into the device (see the other side of this sheet). Proceed with care and avoid contact of the external conductive parts with the electronics of the device (the datalogger is constantly supplied from the internal battery). The SIM card have to support the required services (the sending SMS messages, data transfers) and if it is protected by a PIN code, it is necessary before inserting the card to enter this code into the device (use the COMET Vision software). Otherwise, the SIM card will be locked and display show "card Loc"

Fasten the datalogger on the wall with two screws or insert it into the wall holder **LP100** (optional accessory). The device always install vertically (with the antenna facing up) into locations with sufficient GSM signal quality. Insufficient signal level can be in reinforced concrete buildings, metal chambers and other shielded areas. The device can be operated as a portable – in this case the device protect from falling and try to maintain the proper working position. The device should be located as far as possible from potential interference sources.

Connect input cables

- Remove the terminal block from the device, connect the wires (maximum wire cross-section 1.5 mm²) with either the supplied **SP013** tool or a screwdriver corresponding to the size and the terminal block again push to the device.
- The maximum length of input cables should not exceed 30 m (recommended cable length of the Pt1000 probe is 15 m).
- All current and binary inputs are not each other galvanically isolated.
- The current inputs (U6841M) are **passive**, the current loops cannot be powered from datalogger.
- The device with all cables should be located as far as possible from potential interference sources

Set-up the device

- Install the **COMET Vision** software into your computer (the program is available at www.cometsystem.com)
- Connect the datalogger with attached cables to the computer. Use an USB cable with USB-C connector (max. cable length 3 m).
- Click on the **Configuration** button. The device configuration will be downloaded and you can change the setup of some items.
- Finally save the new configuration into the device

The devices do not require special maintenance. We recommend verifying the measurement accuracy regularly by calibration.

SAFETY INSTRUCTIONS

- Read carefully the **Safety information for dataloggers with GSM modem** before operating the device and observe it during use!
- 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



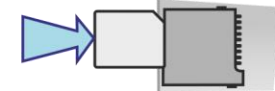
Technical specifications

Device type	U0843M	U6841M	U7844M
Power batteries	Li-Ion accu pack 5200 mAh		
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		
Temperature measuring range	-200 to +260°C	—	—
Accuracy of temperature measurement	± 0.2°C *	—	—
Current measurement range	—	0 to 20 mA	—
Accuracy of current measurement	—	± 20 µA	—
Recommended calibration interval	2 years	2 years	—
Protection class of the case with electronics	IP20	IP20	IP20
Temperature operating range	-20 to +60°C	-20 to +60°C	-20 to +60°C
Relative humidity operating range (without condensation)	0 to 100%RH	0 to 100%RH	0 to 100%RH
Working position	with antenna facing up	with antenna facing up	with antenna facing up
Recommended storage temperature range (5 to 90 %RH, without condensation)	-20 to +45°C	-20 to +45°C	-20 to +45°C
Electromagnetic compatibility according to	ETSI EN 301 489-1	ETSI EN 301 489-1	ETSI EN 301 489-1
Weight	270 g	270 g	270 g
Dimensions [mm]			

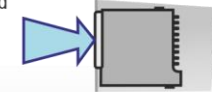
SIM card installation

1/ Unscrew the rear cover of the device
- use the TORX T10 key

2/ Insert the SIM card into the holder



- briefly press and release to eject a SIM card



3/ Screw up the rear cover of the device
- check the seal in the nut for integrity
- the screws tighten carefully

SP013

operating tool for WAGO connector



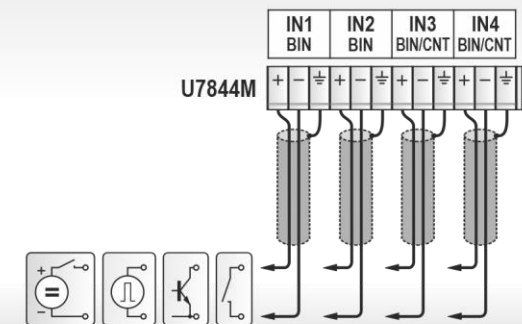
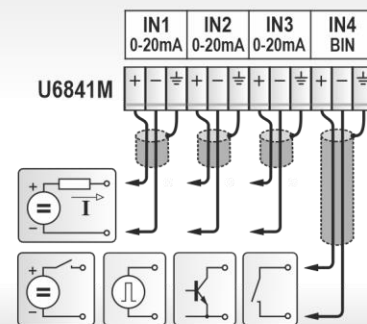
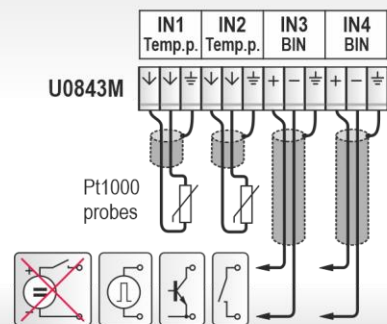
Electrical connection

Dry contact

Excitation voltage: approx. 3 V
Contact resistance in „switched-on“ state: < 10 kΩ
Contact resistance in „switched-off“ state: > 2 MΩ

Voltage input

Input voltage range: 0 to 30 V
Input voltage „L“: < 0.8 V
Input voltage „H“: > 2.0 V



* the accuracy of the device without probe in the range of -200 to +100 °C (in the range of +100 to +260 °C is accuracy ±0.2 % of measured value)