



OMC-044-xxx-PV with solar panel (1), display (2) or standard housing (3)

Datasheet

OMC-044 Data Logger with LTE-M and GPRS modem

The OMC-044 data logger is a small, rugged, ultra low power device. It is specifically designed for remote areas without mains power.

Internals

- Data logger with embedded LTE-M (4G) modem with GPRS (2G) fall-back.
- Processor temperature sensor and power monitor.
- 8 or 16 GB micro SD card and a SIM card slot.
- 3.6 Volt Lithium battery or 8..30 Vdc external power, or 3xAA NiMH for integrated solar panel, depending on the model.

Sensors inputs

- Seamless interface to all meteorological and hydrological sensors from Observator Instruments and many more.
- Supports all major standard interfaces and protocols like RS232, ModBus, SDI-12, NMEA and so on.
- Drivers are available for a large range of sensors.

Parameters & thresholds

Thresholds can be defined on all parameters. Whenever a parameter exceeds a threshold, an alarm is generated. This alarm can be sent as a text message (SMS) to a cell phone. During an alarm condition, the logger can switch to a higher sample & transmit rate.

Internal calculations

Input signals can be converted to engineering units by a simple gain & offset correction. For example, 4-20 mA can be translated into 7 to 10 meters water level. Parameters can be averaged over a certain period or number of samples. Complex calculations involving multiple parameters and non-linear math formulae can also be performed.

Data transfer & remote configuration

The measurement data stored on the SD card can be transmitted periodically. The logger supports:

- FTP, TCP/IP (CHAP) and HTTP
- Email and text messages (SMS)
- USB to a PC
- Remote configuration (TCP)
- Support for satellite and radio modems
- Several 'open' ASCII file formats

Housing

The OMC-044 is available in three different housings. Each housing includes the logger, a battery holder, a GPRS/4G modem and an antenna. So only the sensors are external and everything else is inside. Optionally, an external antenna and an external power source can be used.

Features

- Analog in: 2x 4..20mA, 2x 0-10V, 1 x potmeter . *1)
- Digital in: 3x switch or pulse counter inputs.
- Serial: 1x RS-232 or RS-485/Modbus or SDI-12. *1)
- Serial: 1x RS-232 accessory. *1)
- Current consumption at 3.6V: 50 mA active, 300 mA transmitting, <100 µA sleeping.
- 1x 12V@100mA switchable sensor power out.
- Alarm output (open collector).
- Remote configuration possible using TCP.
- Integrated antenna. External antenna optional.

*1) depending on the input configuration.

Environment

Temperature range (operating) -30 to +70 °C
 Temperature range (storage) -40 to +85 °C
 (Model with TFT has more limited temperature range.)

Dimensions

OMC-044 with blind cover 130 x 120 x 75 mm (l x w x h)
 OMC-044 with solar panel 130 x 120 x 125 mm (l x w x h)
 OMC-044 with display 130 x 120 x 90 mm (l x w x h)

The logger is available with 3 different input configurations:

- Analog & digital inputs, no serial ports.
- Digital & one serial (RS232/485/SDI-12) inputs, no analog inputs.
- Analog, digital and two serial inputs. One serial port is for accessories like the TFT display or an Iridium modem.



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