OBSERVATOR
instruments

The OMC-140 tube housing with a small GPRS Antenna

The OMC-040 aluminium housing with three cable glands

OMC-040 main board

OMC-040 connection board with bottom part

Datasheet

OMC-040 GPRS Data Logger

The OMC-040 GPRS data logger is a small, ultra low power logger with build-in GPRS modem and internal battery. It is very suitable for water level and water quality monitoring.

Features
- Two RS-232 input ports
- One RS-485 Modbus port (shared with one RS232 port)
- One SDI-12 port (shared with one RS232 port)
- Two analog 4-20 mA and two analog 0-3.3 V inputs
- One digital input, can be used for pulse counting
- One switchable power output (12 Vdc) to power sensors
- Internal temperature sensor
- Internal quad-band GPRS/GSM modem
- Supports FTP, TCP/IP, email, SMS and USB
- Internal monitoring of the remaining battery capacity
- Programmable thresholds (low, low-low, high and high-high) on all parameters, including battery capacity
- Programmable input and output drivers

- Tube housing fits in a 2 inch well
- Internal battery

Options
- Tube housing with internal battery:
  - OMC-040 Cable gland (IP68)
  - OMC-040-I IINW connector (IP67)
  - OMC-040-Y YSI MS-8 connector (IP67)
  - OMC-040-H Hirschmann connector (IP67)
- Aluminium housing:
  - OMC-040-ALU With three cable glands
- PCB only:
  - OMC-040-010 Main board and connection PCB

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Specifications

Internals

- Quad band GPRS modem.
- Temperature sensor.
- Power monitor.
- 2 GB micro SD card and a SIM card slot.
- 3.6 Volt Lithium battery that will last for years in most applications.

Sensors

- Seamless interface to all meteorological and hydrological sensor from Observator Instruments and many more.
- Supports all major standard interfaces and protocols like RS232, ModBus, NMEA and so on.
- Drivers are available for a large range of sensors.
- Other drivers will be created on request.
- Data from the sensors are stored on a micro SD card, before transmission.

Parameters & thresholds

Thresholds can be defined on all parameters. Whenever a parameter exceeds a threshold, an alarm is generated. This alarm can be send as a text message (SMS) to a mobile phone. The 'remaining battery capacity' is also measured as a parameter.

Data transfer

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

- FTP and TCP/IP.
- Email and text messages (SMS).
- USB to a PC.

Data transfer is done in a simple ASCII file format. The file format is open.

Housing

The unit is available in several housings and as 'board only'. The tube housing is perfectly suited for groundwater monitoring purposes. Because of its small size (40 mm diameter) the logger fits inside most wells. The aluminum housing with three cable glands allows for easy connection to multiple sensors.

Environment

- Temperature range (operating): -30 to +70 ºC
- Temperature range (storage): -40 to +85 ºC

Dimensions

- Main board: 190 x 27 mm
- Connection PCB: 35 x 25 mm
- Tube housing: Ø40 x 395 mm (plastic)
- Aluminium housing: 220 x 120 x 90 mm (l x w x h)

^ SIM card installed on PCB, 2 GB Micro SD memory card is positioned under SIM card holder.

^ INW connector (IP67) installed on tube housing.

^ Standard cable gland (IP68) or Hirschmann (IP67) connector installed on tube housing.

Related products (refer to our website)

- OMC-Programmer: free Windows software for configuring the OMC-04X loggers.
- OMC-042: GPRS logger with solar panel or display.
- OMC-045-III: High performance GPRS data logger.
- OMC-DOL: Software for data collection and processing.
- INW sensors: for measuring pressure, temperature, conductivity and pH.
- NEP sensors: For measuring turbidity.

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