

D7 MALOG (MILLI-AMP LOGGER)

Datasheet D7



Description

The MAlog (Milli-Amp logger) is a low power, easily installed, wireless web-enabled data acquisition system which can read most 4-20mA sensors and pulse sensors.

Controlling and configuring the logger is effortlessly achieved using a cloud-based web portal.

Features

- Reads up to five sensors simultaneously
- Data uploaded wirelessly and automatically to MAlog web portal
- Connects to the Internet using a SIM card with wireless data plan
- No fixed IP address required
- Can store up to 1.5 million data-points
- Low power consumption; battery life up to six months using a 7Ah lead acid battery (higher capacity available)
- Multiple permission levels on the web portal

Benefits

- Compatible with loop-powered or external-powered mA sensors, and mechanical or electronic pulse sensors
- Minimum site set up required
- Ideal for long-term, unattended, wireless data acquisition projects
- Tested and proven – over 5,000 units in use worldwide
- Quick and easy to install



Comprehensive information about this product and our full range is available at www.soil.co.uk
If you would like to speak with someone directly please call +44 (0)1825 765044 or email sales@soil.co.uk

Operation

Before going to site, a SIM card is installed into the logger and configured.

When on site, the sensors are connected to MAlog before connecting and activating a power supply. Up to five sensors can be connected to the logger; connectors 1 and 2 can read a 4-20mA analogue input and a pulse input, connector 3 can read a 4-20mA analogue input.

Once the logger installation is complete, the sensors are configured via MAlog web portal, where logging intervals and reporting schedules are set according to individual user requirements.



Applications

Use of an MAlog opens up a vast range of pulse and analogue sensors for geotechnical and structural monitoring.

Typical applications include:

- Pore pressure monitoring
- Water level monitoring
- Barometric monitoring
- Tilt monitoring
- Deflection monitoring
- Displacement monitoring
- Load monitoring
- Rainfall monitoring
- Water and air flow monitoring
- Vibration monitoring



Associated products

For details on:	Catalogue code:
Solid State Piezometer	W12
Tipping Bucket Rain Gauge	D1-RAIN-0.2
Strain Gauge Load Cell	L3

View our full product range on www.soil.co.uk

THE TECHNICAL RATING FOR THIS PRODUCT:

INTERMEDIATE



As the correct installation of any monitoring sensor or system is vital to maximise performance and accuracy, Soil Instruments makes the following recommendations, for the skill level of the installation contractor.

ADDITIONAL SUPPORT

We offer installation and monitoring services to support this system. For more information please email : sales@soil.co.uk or call : **+44 (0) 1825 765044**

ADVANCED



The installer is trained and experienced in the installation of this type of instrument or systems, and is ideally a specialist Instrumentation and Monitoring contractor.

INTERMEDIATE



The installer already has previous experience and/or training in the installation of this instrument or system.

BASIC



As a minimum the installer has read and fully comprehends the manual, and if possible has observed these instruments or systems being installed by others.

Specifications

Power

Supply voltage ¹	5-20V DC (external power supply such as lead acid battery)
Active mode current	60mA
Peak current (module active & GPRS transmitting)	200mA at 12V DC
Idle mode current (module active & no GPRS)	40mA at 12V DC
Power-down sleep current	60µA

GSM/GPRS

Frequency band	800/900/1850/1900 MHz – worldwide compatible
Antenna	SMA

Data Logger

Flash memory	1.5 million data points
Logging frequency range	Fastest 2 seconds (with all channels active) to 1 day
Upload frequency range ²	2 seconds (real-time mode) to 1 month

Analogue Inputs

Channels	3 single-ended 0-20mA
Resolution	16 bits
Accuracy ³	0.1% uncalibrated, 0.02% calibrated
Electrical	100 Ohms impedance, protected to 30V

Pulse Inputs

Channels	2 x Pulse Counter (25ms debounced) shared with analogue
Electrical	Internal Pull-up to 3.3V, protected to 30V DC
Frequency max	10Hz

Physical Properties

Size	120mm x 64mm x 40mm
Weight	150g
Operating temperature	-40°C to +85°C
Ingress protection	IP67

¹Exact voltage depends on supply voltage requirement to mA sensors

²Uploading frequency of less than one hour is an optional function

³Calibrated available by special request

Ordering Information

Milli-Amp Logger

D7-1-PACK	MAlog (Milli-Amp Logger) Package, Data Acquisition System Complete with an MAlog power lead, 3 x MAlog sensor leads (additional sensor leads are available as optional extras), a quad band SMA stubby antenna (800, 900, 1850 and 1900 MHz) plus a manual. Including the website set up and the first 12 months' web hosting
D7-3-BAT	MAlog within GRP Enclosure, with Battery Complete with a connection for 3No. sensors, an SMA 3m wired antenna, a 12V 22Ah rechargeable battery; all mounted in a 430mmx330mmx200mm polyester enclosure, plus a manual. Including the website set up and the first 12 months' web hosting
D7-3-EXP	MAlog within GRP Enclosure, with Mains Lead and Battery Complete with connections for power and 3No. sensors, an SMA 3m wired antenna, a 12V 7Ah backup battery; all mounted in a 530mm x 430mm x 200mm polyester enclosure, plus a manual. Including the website set up and the first 12 months' web hosting

Optional Accessories

D7-SENSOR-CON	MAlog Sensor Lead; additional MAlog sensor for MAlog Package unit (D7-1-PACK)
D7-SMA-9	SMA 9" Antenna; 9" quad band SMA antenna
D7-SMA-3	SMA 3 Metre Wired Antenna; 3m wired external adhesive SMA antenna
D1-6.5	7Ah – 12V Rechargeable Battery; extra battery for D7-3-EXP
D1-6.6	22Ah – 12V Rechargeable Battery; extra battery for D7-3-BAT
D1-6.8	Recharging Unit for 12V, 7Ah Rechargeable Battery; unit to recharge up to 7Ah 12V batteries (D1-6.5)
D1-6.7	Recharging Unit for 12V, 17Ah Rechargeable Battery; unit to recharge up to 90Ah 12V batteries (D1-6.6)
D7-WEB-12	Website Hosting; additional 12 months' website hosting to manage the MAlog. (First 1 year subscription included in MAlog price), priced per annum
Note:-	SIM Card not included with MAlog Package

Manual

MAN-228	MAlog
---------	-------



FM 611948

Bell Lane, Uckfield, East Sussex
TN22 1QL United Kingdom

t: +44 (0) 1825 765044
f: +44 (0) 1825 744398

e: info@soil.co.uk
w: www.soil.co.uk

soil
INSTRUMENTS

Soil Instruments Ltd. Registered in England. Number: 07960087. Registered Office: 34 Bell Lane, Uckfield, East Sussex, TN22 1QL