OMN_DAS

OMNIALOG

DATA ACQUISITION SYSTEMS

READOUT UNITS
AND DATALOGGERS

SISGEO








OMNIALOG
DATA ACQUISITION SYSTEMS

OMNIAlog data aquisition system is designed to be versatile and flexible. By adding modular components the system can be configured to handle the simplest or the most complex projects.
A single logger, housed in a cabinet with multiplexer expansion boards and a communication interface, can manage a large number of sensors.
OMNIAlog system is easily adapted for many application, such as tunnels or dams by using external multiplexer boxes. Such distributed system can be connected in a daisy chain or in a star configuration.
Recorded data can be downloaded via USB memory stick or pushed to remote servers by ftp and telecommunications. Alerts can be sent by email and graphs and reports can be generated on web pages to access anywhere.

APPLICATIONS

- Tunnelling
- Dam surveillance
- Structural monitoring
- Mining exploration
- Deep excavation
- Landslide safety implementation
- Retaining walls
- Geotechnical investigation campaigns

FEATURES

- Installation allowed in unattended areas or hard environment conditions
- Rated for wide temperature range
- Compatible with all major geotechnical sensors, both analogues and digitals
- 32 GB internal memory
- Stand alone or part of a network
- Built-in vibrating wire interface

OMNIA_DAS_EN_06_03/2024

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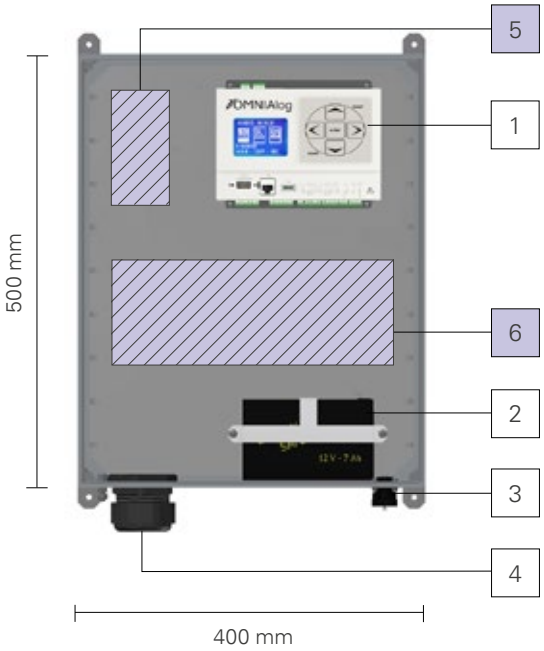
DATALOGGER CABINET
0OMNCAB2000

CAB2 is a compact cabinet ready to house OMNIAlog modules. It includes a IP65 polycarbonate enclosure with mounting brackets, a 12V 7Ah battery, USB memory stick and a LAN cable for local connection to the PC. The system can be powered by AC mains or by a solar power kit.



1	OMNIAlog module (Not included)
2	Backup battery
3	Connector for power supply
4	Cable gland for instrument cables
5	Communication interface area
6	Reserved area for **one** of the following devices: - 1 or 2 multiplexer boards for analogue instruments (0OMN24MUX00) - 1 digital instruments power supply and wiring board (0OMX24V100W) - 1 wiring board for 4 chains of external multiplexers (0OMX4MUXEXT)

Included Optional

TECHNICAL SPECIFICATIONS

Datalogger [1]	OMNIAlog module GT2400 or GT-100D
Enclosure	Lockable polycarbonate IP65 box, 500x400x200 mm (HxLxW). Customized enclosures are available
Backup battery	12V 7Ah. Not installed if the system is powered by solar panel kit
Number of MUX boards supported	Up to 2 internal mux or up to16 external MUX. 16 total MUX. (Not allowed with OMNIAlog GT-100D)
Installation	Enclosure has 4 brakets for wall mounting. Compatible with 0AX0SH15X80 support frame
Instrument cable input	M63 cable gland. Customized cable glands are available on request
On board communication ports	LAN port (10/100 Mbps, RJ45), USB port (2.0, pen drive only), RS232 port (GPRS modem only)
Display and keyboard	Backlight LCD 128x64 dpi with membrane keyboard for simple local management without PC

(1) refer to OMNIAlog datasheet for further information and specifications

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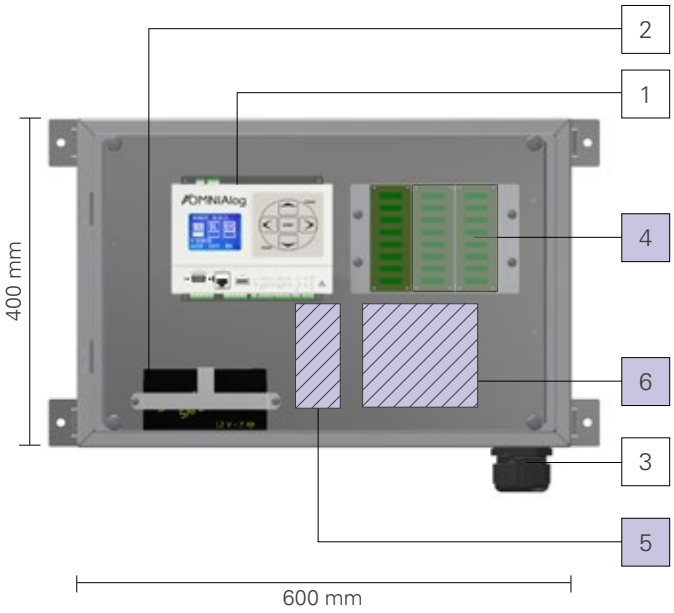
DATALOGGER CABINET
0OMNCAB3000

CAB3 is a cabinet ready to house OMNIAlog modules with room for internal expansion. It includes a high quality and durable IP65 stainless steel enclosure which is installed on a wall or support frame, a rack for up to 3 multiplexer boards, a 12V 7Ah battery, a USB memory stick and a LAN cable for local connection to the PC.
The system can be powered by AC mains or by a solar power kit.



1	OMNIAlog module (Not included)
2	Backup battery
3	Cable gland
4	Rack for up to 3 multiplexer boards (0OMN24MUX00)
5	Communication interface area
6	Reserved area for **one** of the following devices: - 1 digital instruments kit (0OMX24V100W) - 1 4 -chain mux box wiring board (0OMX4MUXEXT)

Included Optional

TECHNICAL SPECIFICATIONS

Datalogger [1]	OMNIAlog module GT2400 or GT-100D
Enclosure	Lockable stainless steel IP65 box, 400x600x250 mm (HxLxW). Customized enclosures are available
Backup battery	12V 7Ah. Not inserted if supplied with solar panel kit
Number of MUX boards supported	Up to 3 internal MUX (24 channels each), up to 13 external MUX (24 channels each). 16 total MUX. (Not allowed with OMNIAlog GT-100D)
Installation	Enclosure has 4 brakets for wall mounting. Compatible with 0AX0SH15X80 support frame
On board communication ports	LAN port (10/100 Mbps, RJ45), USB port (2.0, pen drive only), RS-232 port (GPRS modem only)
Display and keyboard	Backlight LCD 128x64 dpi with membrane keyboard for simple local management without PC

(1) refer to OMNIAlog datasheet for further information and specifications

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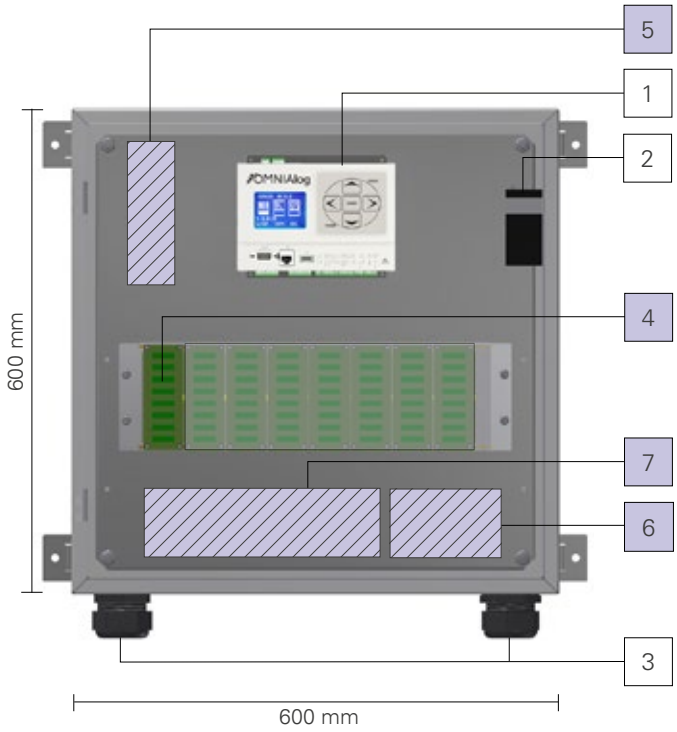
DATALOGGER CABINET
0OMNCAB8000

CAB8 is a cabinet ready to house OMNIAlog modules. It supports both internal and external multiplexer expansion boards. The CAB8 includes a high quality and durable IP65 stainless steel enclosure with wall mounting brackets, a rack for up to 8 multiplexer boards, a 12V 7Ah battery, a USB memory stick and a LAN cable for local connection to the PC. The system is powered by AC mains or by a solar panel kit.



1	OMNIAlog module (Not included)
2	Backup battery
3	Cable glands, ID Ø 42 mm
4	Rack for up to 8 multiplexer boards (0OMN24MUX00)
5	Communication interface area
6	4-chain mux box wiring board area (0OMX4MUXEXT)
7	1 digital instruments kit (0OMX24V100W)

Included Optional

TECHNICAL SPECIFICATIONS

Datalogger [1]	OMNIAlog module GT2400 or GT-100D
Enclosure	Lockable stainless steel IP65 box, 600x600x250 mm (HxLxW). Customized enclosures available.
Backup battery	12V 7Ah. Not inserted if supplied with solar panel kit
Number of MUX boards supported	Up to 8 internal MUX (24 channels each), up to 8 external MUX (24 channels each). 16 total MUX. (Not allowed with OMNIAlog GT-100D)
Installation	Enclosure has 4 brakets for wall mounting. Compatible with 0AX0SH15X80 support frame
On board communication ports	LAN port (10/100 Mbps, RJ45), USB port (2.0, pen drive only), RS-232 port (GPRS modem only)
Display and keyboard	Backlight LCD 128x64 dpi with membrane keyboard for minimal management without PC

(1) refer to OMNIAlog datasheet for further information and specifications

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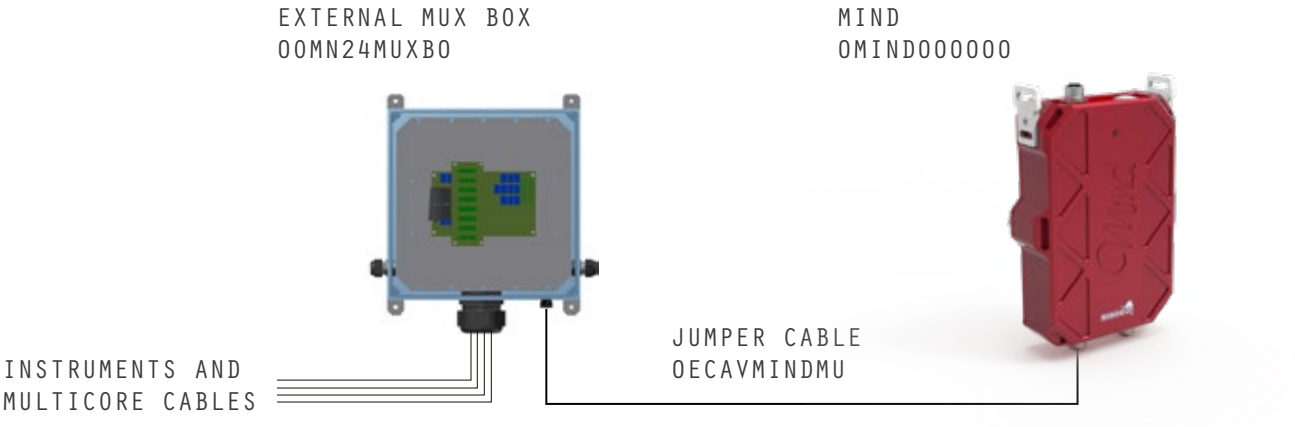
APPLICATION IN COMPLEX DISTRIBUTED ARCHITECTURE

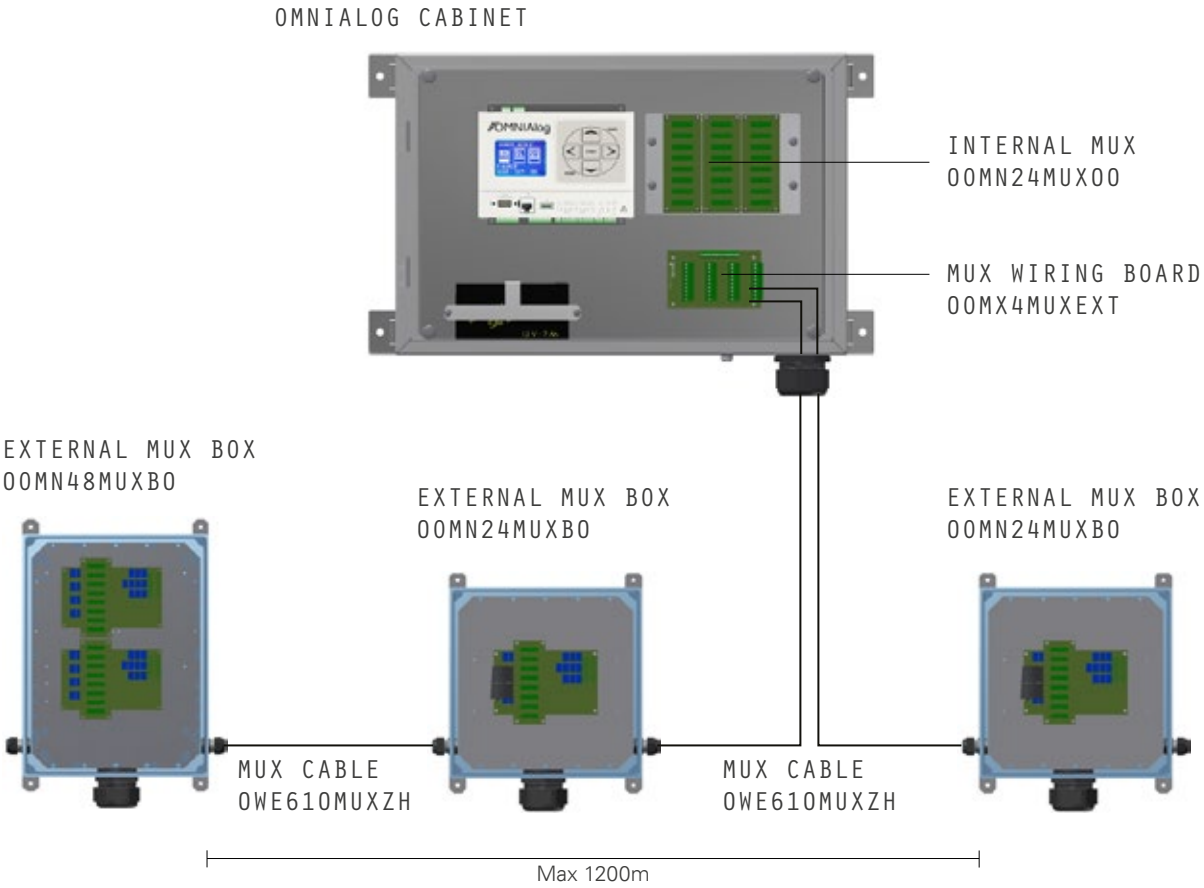
PHASE 1

Instruments are installed and wired to multiplexer boxes that serve as a temporary reading stations. The New Leonardo portable readout, connected by a special cable, can operate the multiplexer and collect readings by clicking a button.



PHASE 2

Multiplexer boxes are connected to OMNIAlog cabinet system which then manages all the instruments wired to the MUX boxes. OMNIAlog cabinet system can also manage internal multiplexer boards and chains of digital sensors.



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POWER SUPPLY UNITS

MAINS POWER SUPPLY
0AXBC022058

AC/DC charger, IP67
Oper. temp. -25 to +60°C
Vin 90-264 Vac, 47-63 Hz
Vout 13.2 Vdc, 2.1 A.

SUPPORT FRAME
0AX0SH15X80

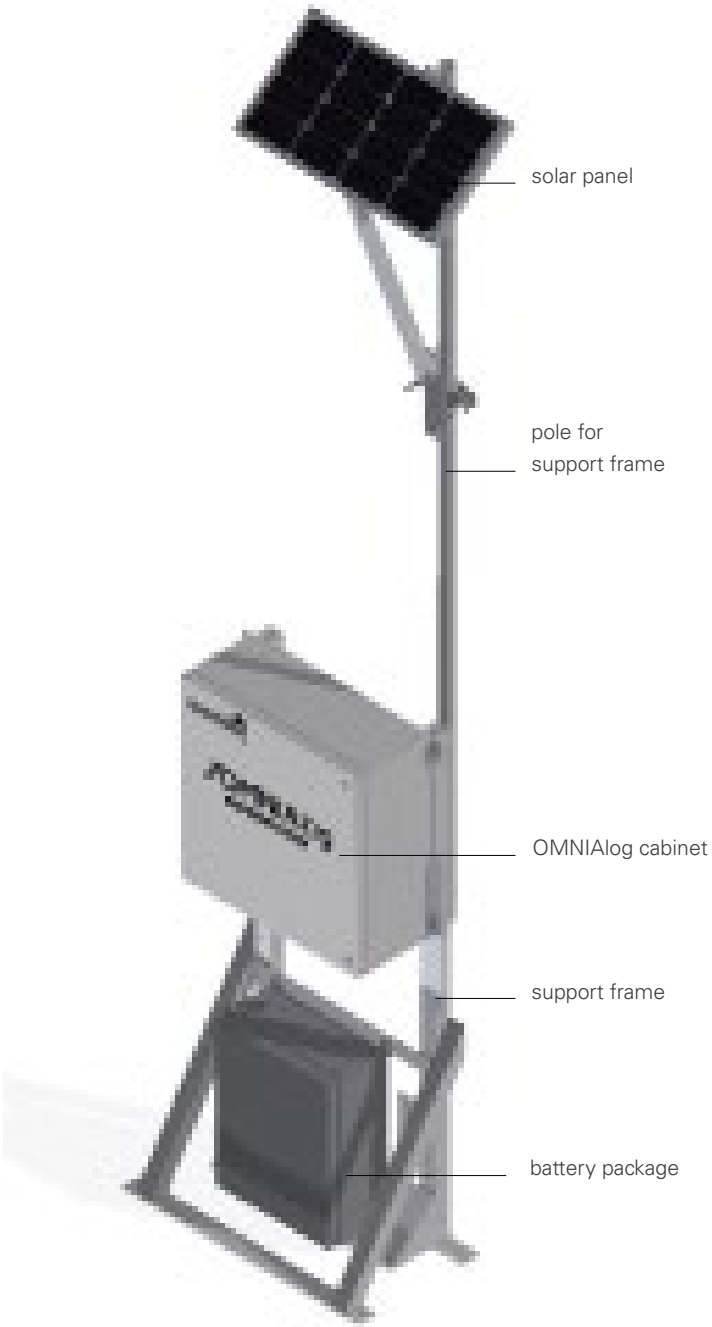
Galvanized steel mounting frame compatible with all OMNIAlog cabinets.

SOLAR PANEL PACKAGE
0AX00W000AH

Solar panel power supply for pole mounting. It includes solar panel, battery with regulator, and support brackets.

POLE FOR SOLAR PANEL
0AX0PAL0280

Floor-mounted 3m pole with base plate for solar panel kit. Also available for mounting on support frame mod. 0AX0SH0PALO.



EXAMPLE OF OMNIALOG CABINET MOUNTED ON SUPPORT FRAME AND POWERED WITH SOLAR PANEL KIT

COMMUNICATION INTERFACES

VPN 4G ROUTER
00MXR04G000

4G-VPN advanced router for fast connection, required when internet service provider does not support static IP addresses and inbound/outbound data traffic. Automatic fall-back to 3G network. For pushing data via ftp or email. Allowed allarms: email and ftp.
Three models are available to fit all the 4G bands worldwide: bands list are available in SISGEO website - F.A.Q.#108.

FIBER OPTIC INTERFACE
00MXF0MMSWT

Switch ethernet with multimode optical fiber ports for in/out (max 4 jumps). Available only upon request.

EXPANSION DEVICES

24 CH MUX BOARD
00MN24MUX00

24 channel relay multiplexer with surge arrestors for each channel.

24 CH MUX BOX
00MN24MUXB0

24 channel relays multiplexer, housed in IP65 polycarbonate box (300x300x180mm) including surge arrestors for each channel.

48 CH MUX BOX
00MN48MUXB0

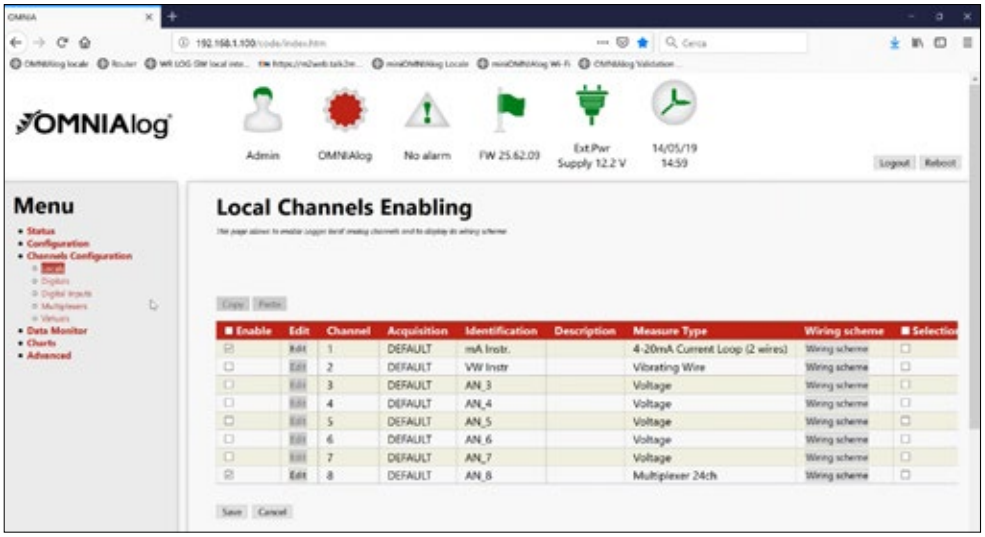
48 channel relays multiplexer, housed in IP65 polycarbonate box (400x300x180mm) including surge arrestors for each channel.

DIGITAL SENSOR KITS
00MX24V100W-0OMX24V030W

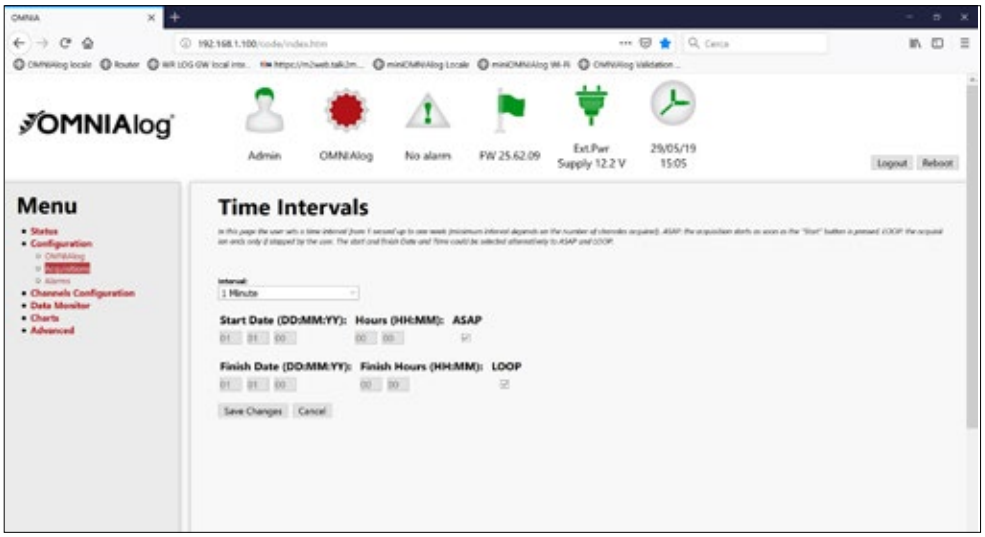
DC/DC 12/24V converter and wiring board for expanding up to:
- 250 digital sensors, 100 W
- 60 digital sensors, 60 W
both distributed in 4 chains maximum.

OMNIALOG SOFTWARE

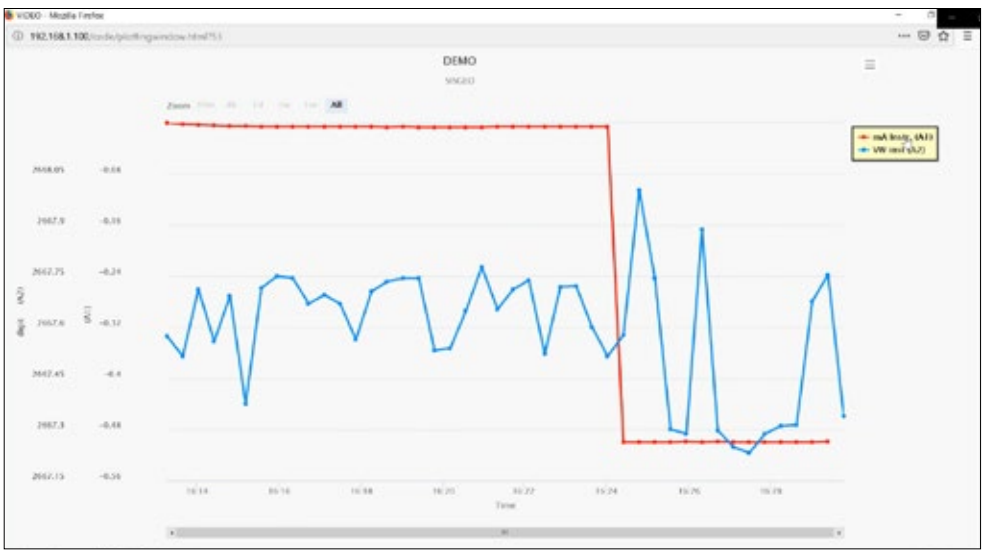
OMNIAlog software is built into the OMNIAlog. With a simple web browser, user can configure the logger, download data, set alarm thresholds and view graphs. The OMNIAlog user interface is written in HTML and is compatible with all browsers. No other software is needed. Once logged into the OMNIAlog module, users see a banner with icons showing logger status, alarms, availability of firmware updates, power supply, and local date/time. A menu on the left side, lets the user navigate to all the logger functions. OMNIAlog software is available in English, Italian and French languages.



Local channel configuration



Acquisition configuration time intervals



OMNIAlog graphs

OMNIALOG COMMUNICATION FEATURES

INTERFACE	LOCAL DATA DOWNLOAD	DATA PUSHING		ALARMS			REMOTE CONNECTION
		EMAIL	FTP	SMS	EMAIL	FTP	
OMNIAlog without communication interface	LAN OR USB FLASHDRIVE	NO	NO	NO	NO	NO	NO
OMNIAlog with 0OMXMODEM3G 3G modem	LAN OR USB FLASHDRIVE	YES	YES	YES	YES	YES	NO (only in emergency case)
OMNIAlog with 0OMXRO4G000 4G-VPN router	LAN OR USB FLASHDRIVE	YES	YES	NO	YES	YES	YES

NOTE: all of these features may not work if the ISP selected by the user blocks these types of services.
It is always customer responsibility to make sure that the SIM used enables these services.

INTERFACE	NORTH AMERICA / CANADA COMPATIBILITY
OMNIAlog with 3G modem	NO
OMNIAlog with INTERNET ROUTER 4G-VPN	YES, choose for 0OMXRO4G0NA model

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TECHNICAL ASSISTANCE

SISGEO offers customers e-mail and phone assistance to ensure proper use of instruments and readout and to maximize performance of the system.

For more information, please refer to the FAQ pages on our website or email us: ***assistance@sisgeo.com***