

Ammonit data logger Meteo-40 - for the most accurate measuring data



Measuring wind power to the highest standards
Data logger Meteo-40 will be available in early 2011

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Ammonit Data Logger Meteo-40: Introduction

Ammonit has developed and produced data loggers for the wind industry since 1989.

Our development engineers have responded directly to the requirements of our customers and incorporated the latest technology in the design of reliable, high quality data loggers.

Ammonit data loggers offer a wide range of possibilities and are the core of our wind measurement systems. They ensure accurate and precise measurement to the high standards required by professional wind consultants, wind farm operators and climate research engineers.

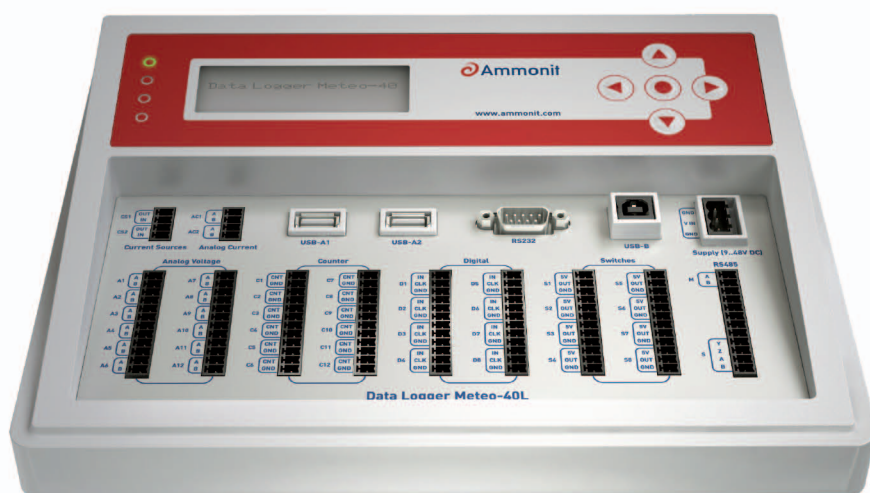
Our loggers are suitable for all climates and the remotest regions, due to their low power and maintenance requirements.

The new data logger generation Meteo-40 is designed for wind site assessment, wind farm monitoring, climate research and solar assessment and solar monitoring, traffic meteorology and agricultural meteorology.

Meteo-40 offers major benefits. It has been tested to the toughest standards and in challenging real-world conditions, both in independent laboratories and by our partners.

Meteo-40 is offered in two configurations: Meteo-40M (medium) with max. 22 channels, and Meteo-40L (large) with max. 35 channels.

The new logger will be available in early 2011.



Meteo-40 designed for you

Ammonit Data Logger Meteo-40: Features

Application / Outdoors:

1. Data logger applications: wind site assessment, wind farm monitoring, climate research, solar assessment and solar monitoring, traffic and agricultural meteorology.
2. Meteo-40 is available in two configurations: Meteo-40 M (medium) & Meteo-40L (large).
3. Suitable for all climates and the remotest regions.
4. Self-contained, low maintenance & high performance.
5. Designed for the toughest real-world conditions and tested in independent laboratories.
6. Low power consumption, runs on 50W solar panels.

Measurement Technology:

7. 2 GB memory: recording of complete 1 sec. original measurement data (approx. 1 year - typical number of sensors).
8. Additional storage of aggregate data (min.~3 years).
9. Many channels (max. ~22 or max. ~35), differential measurement.
10. High resolution (~16bit, ~8Hz): symmetric, differential analog channels with various input ranges to choose from ($\pm 0.1V$, $\pm 1V$, $\pm 10V$).
11. High sensitivity analog input, e.g. temperature sensor PT 100.
12. Digital channel for smart sensors such as the Thies TMR vane, no mechanical wear, higher precision.
13. Counter channel with AC input support allows for a combination of high quality Thies sensors with cheaper sensors, e.g. NRG sensor w/o adapter.

Communication:

14. Data communication and data exchange via HTTPS, FTP, SCP connection and email.
15. Modem: GSM, CDMA, GPRS, (RS-485 / RS-232); 3 USB slots for PC-connections; Adapter: WiFi, Ethernet or memory stick.
16. UMTS & Bluetooth will be offered at a later stage.
17. Compatibility with all SCADA systems.
18. Easy connection to computer via USB cable or remote via the internet.

Flexibility / Convenience:

19. Integrated Linux system for maximum flexibility and adaptability.
20. New structural concept makes Meteo-40 very flexible. (An application programming interface (API) to customise the data logger is planned for later Meteo-40 firmware releases).
21. Web based access without the need for additional software.
22. User-friendly web interface and large LC display.
23. Multi-lingual configuration; Meteo-40 settings can be adjusted to a language of your choice, currently English, Spanish, German, French. Additional languages options will be added at a later stage).
24. Multi-lingual online help.
25. Accessible, modern product design.
26. Custom software provided by Ammonit, on request.

Meteo-40 is available in early 2011.

Meteo-40 designed for you

Meteo-40 - Overview Features:

The Ammonit data logger is safely stored into a CE certified steel cabinet to protect it against weather and condensation damage, theft and vandalism. Several optional components can be included in the cabinet, such as a communication modem, a barometric pressure sensor, a battery and surge protection.

The data communication and exchange between your PC and the logger can be carried out via a HTTPS connection and / or email, satellite or via direct interface.

It offers 3 USB slots for PC-connections (in addition to RS-485 / RS-232), a modem: GSM/GPRS/CDMA, and an adapter: WiFi, ethernet, or memory stick. UMTS and Bluetooth will be provided at a later stage.

Ammonit provides free service software to simplify your communication and data management procedures. Our online platform AmmonitOR can be used to access, manage, monitor and visualise your measurement data comfortably, around-the-clock, from wherever it suits you.

A wide range of accessories is available to customise each measurement system to meet specific regional and climatic requirements.

The low power consumption of our data loggers and first class sensors allows for self-contained measurement systems in remote and undeveloped areas.

A solar module of 50W will reliably run an entire measurement system.

Meteo-40 offers 2 GB of memory recording of complete 1sec. original measurement data (approx. 1 year - typical number of sensors).

It offers many channels (max. ~22 or max. ~35), a precise resolution (~16bit, ~8Hz) and symmetric, differential analog channels, as well as various input ranges to choose from ($\pm 0.1V$, $\pm 1V$, $\pm 10V$).

Meteo-40 is compatible with SCADA wind farm monitoring software.



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Installation, Maintenance and Support:

Installation and Maintenance:

All Ammonit loggers are enclosed in IP65 protective housings that bear the CE-mark of the European Commission. The data logger should be installed in a lockable and well-earthed metal cabinet. This not only provides protection against weather and lightning, as well as theft and vandalism. Ammonit has developed solid steel cabinets, which can also house additional components and thereby ensures a comfortable installation of the equipment on site.

All Ammonit measurement equipment is designed for permanent automatic operation on exposed sites. If the system is provided with a remote monitoring facility and small solar system as a power supply, the only required maintenance is an occasional check to ensure the sensors are working properly.

It is crucial that all sensor cables are safely attached to the mast. Damaged cables could let harmful moisture into the cabinet or into the logger itself.

Ammonit Service Software:

Ammonit develops three different types of software programs to simplify your data access and management.

Firmware:

`Firmware` is the software required to run the data loggers and will be delivered with all of our data loggers. The firmware is regularly updated and can be downloaded from our website.

Communication software programs:

We provide software programs to simplify the communication between measuring stations and your computer. All software programs are available for free on our website.

Online platform AmmonitOR:

With AmmonitOR you can access, manage, monitor and visualise your wind measurement data online, around-the-clock.

To register, simply email us at: ammonitor@ammonit.com.

To learn more about AmmonitOR, visit our website at:

<http://www.ammonit.com/en/ammonit-custom-er-login>.



Our sales and support team will be pleased to help you with any further information.

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Meteo-40 designed for you

Overview Channels	Meteo-40 M	Meteo-40 L	Applications
Switches	4	8	Sensor supply, relais (for heating)
Connectivity	[2] USB host, [1] USB device		PC; Modem; Memory Stick; Ethernet; WiFi
	(1) RS-485, Master		Smart Sensors (e.g. Ultrasonics)
	(1) RS-485, Slave		SCADA, Wind Farm Monitoring Software
	(1) RS-232		Modem
Display & Keys	(20 x 4) LC display with backlight, five keys		
Counter	8	12	Anemometers Precipitation Sensor
Digital/Status	4	8	Serial Wind Vane (e.g. TMR Vane)
Analog Voltage	8 16-bit $\pm 0.1V, \pm 1V, \pm 10V$	12 16-bit $\pm 0.1V, \pm 1V, \pm 10V$	Potentiometric Wind Vane Meteo Sensors Barometers Hygro- Thermal Sensors Pyranometers
Analog Current	1 16-bit $\pm 20 \text{ mA}$	2 16-bit $\pm 20 \text{ mA}$	PT 100 Thermometer

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