

# Vaisala HydroMet Station MAWS100

- High reliability and low operating cost
- Modular and configurable design allows easy customizing
- Ethernet and GSM/GPRS telemetry
- Proven design in thousands of installations worldwide



Vaisala HydroMet Station MAWS100 extends the field-proven quality and reliability of the existing Vaisala HydroMet Systems to new applications. The MAWS100 is a compact system for hydrometeorological monitoring when a small number of sensors is required. The MAWS100 is well suited for Vaisala Weather Transmitter WXT510 and cellular telemetry.

The MAWS100 uses the same reliable data logger and sophisticated software as other Vaisala HydroMet Systems. Flexible sensor interfacing, advanced statistical calculations, extensive data logging on a compact flash memory card and versatile data reporting functions allow the MAWS100 to be customized to variety of applications.

Data retrieval can be done by direct link to PCs via serial or TCP/IP connection, via PSTN modem or using wireless cellular telemetry links. The Vaisala Real-time Display Software YourView is included for viewing real-time data when required.

The weatherproof enclosure houses the logger, telemetry options, power supply and back-up battery. The sensor connections are via connectors making installation and maintenance effortless.



## SENSORS

The basic sensor suite measures wind speed & direction, pressure, temperature, relative humidity and precipitation. Optional sensors can be added to measure e.g. water level, soil/water temperature, global and net solar radiation. Vaisala Ultrasonic Wind Sensor WS425 and Weather Transmitter WXT510 can also be supported. Generic and configurable 16 bit A/D conversion is provided if you want to interface your own sensors. The high accuracy (< 0.04 % of reading) of meteorological data is ensured by factory calibrated 16-bit A/D conversion (ADC), autocalibration of the ADC and measurement electronics, and advanced data quality control and validation software.

## POWER

The MAWS100 is a low power device. The basic system is powered using mains power or a small 6 W/6VDC solar panel and 1.3 Ah back-up battery. The 5 Ah battery and 12 W panel is available for the extended systems with telemetry.

## TELEMETRY

**TCP/IP:** The Vaisala HydroMet Station MAWS100 can be connected directly to a LAN network using the DXE421 ComServer module. The module converts a standard RS-232 port to a 10/100Base-T Ethernet connection making MAWS100 Internet-Enabled devices. The DXE421 is a compact module installed on the DIN -rail inside the enclosure.

**PSTN:** Connection to Public Switched Telephone Network(s) (PSTN) is made via an industrially hardened modem, which has been designed for demanding environments. It is rated for - 40 to + 60 °C operating temperatures.

The modem has low power consumption and includes both data compression and data correction functions. The maximum data rate is up to 57.6 Kbits/second with an excellent in-built line protection.

**GSM/GPRS:** The GSMTC35T-M3 is a dual band GSM Terminal especially designed for demanding professional use. The data modem is small, has low power consumption and an extended operational temperature range. The GSM package comes complete with all the necessary RF- and data cables and installation accessories for both the terminal and the antenna. The tri-band model is available for cellular networks in USA.

The GPRS (General Packet Radio Service) service offers continuous and high-speed connectivity to the GSM network. In addition to the standard GSM operation, this option offers additional functions, which greatly facilitate data collection. Data transmission via GPRS can be initiated by the MAWS100 using FTP (File Transfer Protocol). The MAWS100 acts as an FTP client placing a file on the FTP Server's hard disk at user configurable intervals, when a user set alarm condition is detected by the MAWS100 and/or when the daily log file(s) are completed. In practice, GPRS connectivity means the MAWS100 is on-line all the time and data is available immediately when needed at very low operating cost.

Together with the Vaisala MetMan Network Software mesoscale or national environmental monitoring networks can be easily and economically set up as a complete turnkey solution.



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