

Vaisala TacMet® Tactical Meteorological Observation System MAWS201M



Features

- Cost-effective quickly deployable portable automatic weather station
- For defense operations using small landing strips, drop zones, test ranges, UAV systems and uncategorized airports
- The most compact lightweight system with full aviation support
- Reliability and precision gained through built-in diagnostics and high quality sensor technology
- Robust design for harshest environment

Compact and lightweight basic system

The Vaisala TacMet® MAWS201M is a portable weather station that offers high performance in a very compact package. The MAWS201M measures, processes and reports data from wind speed and direction, air temperature, relative humidity (dewpoint), pressure and precipitation. The system is powered either by mains (AC) power or by an integrated solar panel. Back-up batteries are available, providing a minimum of 7 days of operation without recharging.

Full aviation support with enhanced system

The MAWS201M is easily enhanced with the needed support for aviation including cloud height and coverage, visibility, present weather and

lightning. The MAWS201M transmits data to users via a landline cable and/or a VHF or UHF radio modem. The MAWS201M includes also a PocketPC handheld display for viewing measured and calculated parameters and system alarms, as well as for setting station-specific parameters.

Maximum portability and ease of use

Mechanical parts of the system are lightweight but robust, and all cables are fitted with quick-release color-coded connectors. The carrying cases are light, yet providing excellent cushioning during transport.

Versatile reports automatically

The MAWS201M is delivered with advanced software, which displays numerical and graphical data and

codes automatically. It also issues METAR reports and based on user defined weather events, and SPECI reports. Remarks can easily be included with reports. The software also does the archiving and transmitting for further processing.

Reliability and highest precision

The MAWS201M processes statistical calculations, performs data quality control, and formats data for output. Built-in quality control software validates sensor data against user-set limits and step changes between successive measurements. In case of unlikely malfunction, the MAWS201M automatically detects failures and the sensor can be replaced quickly on site.

Technical data

General

Data Collection Platform	Vaisala Data Logger QML201A
Temperature	
Operating *)	-50 ... +60 °C (-58 ... 140 °F)
Storage	-50...+70 °C (-58 ... 158 °F)
Humidity	0 ... 100 %RH
IP rating	IP66
MTBF	>12,500 h (MIL-HNDB217F)
MAST	
	Tripod mast adjustable from 1.8 to 3.6 m (6 to 12 ft)
	Optional telescope mast 10 m (30 ft)
Maximum wind speed	35 m/s (70 kts)
Weight	
Basic System	In two carry cases, total 46 kgs
Enhanced System	64 kgs with carry cases
SET-UP TIME	
Basic System	Less than 15 min.
Enhanced System	30 min.
POWERING	
AC (Mains) power	85 - 264 VAC, 47 - 63 Hz, max. 200 VA
Solar panel	11W
Internal battery	
Basic System (continuous operation w/o AC power)	7 Ah / 12V
Enhanced System (min. 24 h operation w/o AC power)	48Ah / 12V
Battery regulator for Enhanced System	Charge/recharge control Temperature compensation Deep discharge protection Simultaneous inputs from solar and AC power allowed
Electromagnetic compatibility	IEC/EN 61326-1

Data validation, calculations and reports

Data quality control	Upper / lower climatological limits Step change validation Sensor status indication
Statistical calculations	Averaging over user set periods Minimum / maximum values Standard deviation Cumulative values
Other calculations	Dew point QNH, QFE, QFF, PA, DA, pressure tendency, pressure trend Gust, Peak, Squall Modified discomfort index
Weather data reports (w/ MIDASIV sw)	METAR SPECI

Sensor options per system type

	Basic	Enhanced
Wind speed (WMS302M)	√	√
Atmospheric pressure (PMT16A)	√	√
Temperature, relative humidity (QMH101M)	√	√
Rain / precipitation (QMR101M)	√	√
Cloud height & coverage (CT25KAM)		√
Visibility & present weather (PWD22M)		√
Lightning (SA20M)		√

Standard communication options **)

Wireless communication	UHF, VHF
Landline communication	RS232, RS485
Max. communication range between MIDAS IV PC and Power Supply Unit	8 km (5 mi.) with AWG 26 cable
Connection Unit	20 km (12 mi.)
Data displays	Pocket / Laptop PC

*) for further extended range, please contact Vaisala

**) for other communication options, please contact Vaisala

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