

ENVIRONMENT

METEOROLOGY



MMETEO 500

LOCAL MULTI-PURPOSE
MANAGEMENT UNIT

GENERAL CHARACTERISTICS

The **MMeteo 500** multi-functional unit is a local control unit indispensable to the management and control of weather conditions, even in the road area, because it helps to create a complete picture of weather conditions, from the data collected by the sensors connected to the unit.

The information provided by the **MMeteo 500** control unit on weather and road weather conditions (state of the road surface: temperature, possible ice formation, presence of deicing salt; state of precipitation, etc.) are an essential support to operators performing winter road maintenance, contributing to ensure a high level of mobility safety, with significant economies in management.

MMeteo 500 ensures the production of detailed and accurate data, in real time, independently from the detection technology used in the field.

MMeteo 500 finds the information provided by the sensors, processes them, analyzes them in real time and sends them to the central control unit, at intervals that can be set to a default FTP server, automatically via Ethernet or GSM network (3G).

An elaborate diagnostic system, integrated in the control unit, allows you to check the function of each module and the connected sensor, making maintenance easy and rapid.

The **MMeteo 500** multi-purpose unit has high interfacing flexibility.

The collection of information, including diagnostics, firmware upgrade and parameters configuration, are easier to accomplish tasks either remotely or locally, through an internet browser thanks to the WEB-Server implemented on board.

Locally, through a USB interface, with a memory key it is possible to download data previously stored on a SD card (high capacity memory).

You can also run local diagnostic checks through LED lights and LCD display with keypad for setup operations.

The low consumption of **MMeteo 500** allows to power the multi-purpose control unit either via the mains (230 V / 50 Hz), or via photo-voltaic panel.



MAIN FEATURES

- Monitoring of weather and road weather conditions
- Provision of data in real time and for statistical purposes
- Communication via Web Server
- Low power consumption
- Compact and hermetic housing



TECHNICAL FEATURES

RECORDED DATA

- Meteorological data: measured values according to the functionality of the connected sensors
- Video data: context images
- Condition of the road surface: temperature of the surface and to -4 cm; state of the pavement surface concentration of salt in solution

ELECTRONICS

- Low Power CMOS Technology
- Real-time clock, integrated watchdog

RANGE OF OPERATION

- Temperature: -40 ° C ... +80 ° C
- Humidity: 0 % ... 100 %, non-condensing

POWER AND CONSUMPTION

- 12 V_{DC} ... 24 V_{DC}
- About 1 W (with communication and display modules OFF)

OPERATING SYSTEM

- Embedded Linux

HOUSING DIMENSIONS

- 285,5 X 171,5 X 96,5 mm (A X L X P)

HOUSING MATERIAL

- ABS, with aluminum front

DEGREE OF PROTECTION

- IP 67

DATA MEMORY

- 2GB with SD Card (optionally extensible)

COMMUNICATION

- Web Server on board
- 4 diagnostic LEDs
- 3 buttons and LCD display
- 1 iEthernet interface 10 / 100T - data transmission every 60 seconds
- TCP/IP Protocol
- 1 USB interface
- 1 internal modem GSM/GPRS/UMTS (optional) - data transmission every 3 minutes

SENSORS INTERFACE

- 8 analog inputs for weather sensors (converter resolution A/D 12 Bit)
- 8 inputs for soil sensors
- 1 input for precipitation and / or visibility sensor through SCAD-BUS
- 1 input for the context camera sensors

INPUT / OUTPUT

- 4 or 8 digital inputs (one reserved for the closet door opening contact)
- 4 relay contacts (2 exchanges, 2 NA)