

DFM Mini Weather Station

The DFM Mini Weather Station (MWS) monitors micro climate conditions.

This multi sensor logging unit collects weather parameters and sends it to a central processing system. The parameters include:

- Temperature
- Relative humidity
- Precipitation
- Wind parameters
- Digital status condition
- Analogue pressure sensing

Data is stored locally, and sent to the central database system. The data is uploaded by either:

- Long-range radio protocol **OR** GPRS internet protocol

Radio MWS:

Data from the radio units is collected on a central point radio server and downloaded to a local database system. The functionality of the radio systems depends on line of sight signal quality. Each MWS can act as a data repeater for other stations, or being a data repeater for the soil moisture probes as well.

Advanced beacon technology on the radio units enable it to broadcast the climate parameters. This enables remote units to monitor the weather conditions and act accordingly. This is being used for PC driven frost modelling or irrigation control by soil moisture and temperature or rain. The radio MWS can control:

- an External relay controller **AND/OR** a Remote pump start unit

GPRS MWS:

The data from the GPRS units can be viewed and downloaded directly from the DFM web services. The functionality of the GPRS system depends on Cellular signal coverage and requires a cellular SIM contract. External antennas can be supplied on request. The units can be supplied with either SIM option:

- SIM chip, a pre-programmed electronic chip with monthly contract fee
- SIM card holder, for user supplied data SIM card

The GPRS MWS is ideally suited for the logging of micro climate conditions to be used for pest and disease modelling.

MWS power supply:

The MWS has very low power consumption and is ideally suited for battery application. The following three options are available:

- Long life battery: 3.6V D-Size lithium cell, suited for applications with limited sunlight.
- Solar unit with 6V rechargeable Lead acid battery, suited for sunny applications
- Mains power supply with 6V rechargeable Lead acid battery, suited for remote pump control applications.

The MWS system is designed to be incorporated into your soil moisture management system, and can share the same infrastructure of your long-range probe system. Its low implementation cost makes it an attractive option to monitor the climate conditions for different sections of the farm, and allows for the expansion of data collection.

