



Weather Station Product Brief

INTRODUCTION

Dyacon weather stations are built and designed by our U.S. engineers, who are experienced in rugged computer design.

We provide plug-and-play capability with industrial flexibility; the embedded cell phone and modbus port eliminate expensive satellite links, server programs, IT support, and external antennas.

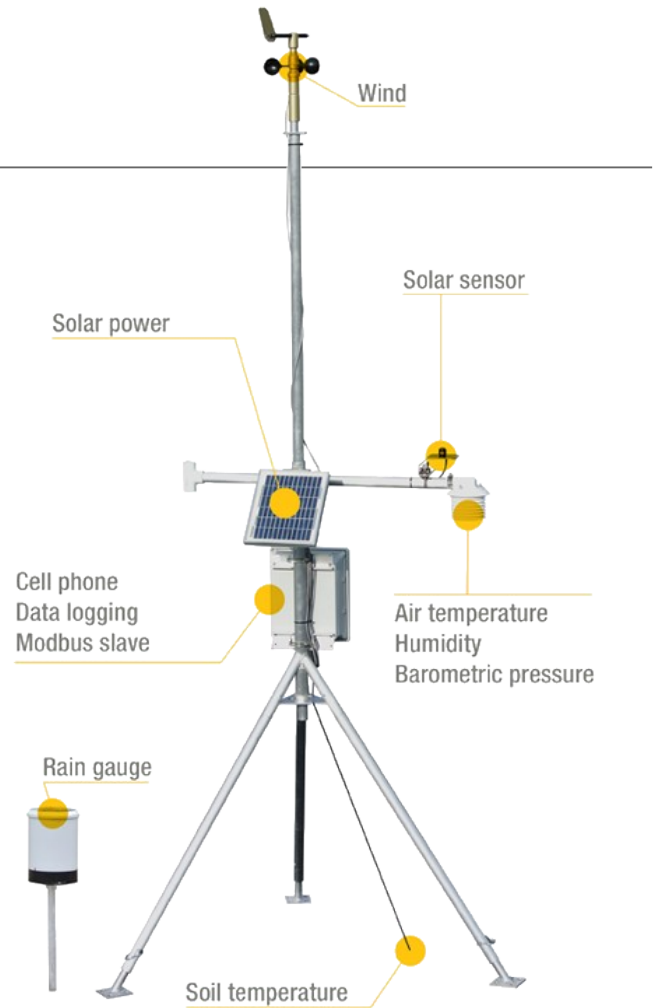
Because Dyacon owns the technology, custom adaptations can be made to meet the requirements of OEMs, VARs, and integrators.

WHY DYACON?

Unlike other weather station providers that use third-party sensors, Dyacon designs and manufactures our sensors, weather station controllers (datalogger), and weather data web portal in order to provide tight integration for industrial and commercial users.

Some datalogger-based weather stations require extensive technical background to install and program. Dyacon equipment can be configured and installed by those with typical “wire-twister” skills. Most industrial technicians can easily handle the task, thus reducing total system cost and eliminating the need for outside consultants.

Stations are shipped pre-configured, allowing new stations to be up and operational in less than an hour.



FEATURES AND OPTIONS

The **basic** weather station uses digital instruments for:

- Air temperature
- Humidity
- Wind speed
- Wind direction
- Barometric pressure

General purpose inputs allow for configurable **expansions**, including:

- Rain gauge
- Solar or UV sensor
- Soil moisture sensor
- Soil or liquid temperature
- Lightning detection
- Globe Temperature

Advanced integrated feature options include:

- Data logging
- Solar charge controller
- Embedded cell phone
- LCD

Dyacon weather stations are available in wired or wireless configurations.

Solar powered weather stations with an integrated cell phone ensure that the weather station can be installed anywhere, without hassle. The integrated solar charge controller maintains the internal battery, which provides a 7-day backup.

Separate sensors allow each to be positioned at preferred elevations.

APPLICATIONS

The range of instruments and options available are useful for multiple applications:

- Private runway
- Agriculture and livestock
- Emergency services
- Wildfire management
- Public weather service
- Environmental site assessment
- Solar power station modeling
- Industrial safety
- Mining



SMS TEXT

Weather reports can be requested at any time by sending a text message directly to the weather station. For example, sending a 'C' triggers a reply with a Current Conditions weather report.

DYACONLIVE

Weather stations configured with the embedded cell phone modem option can upload data directly to DyaconLive and WeatherUnderground.com if required. These provide a convenient (graphical) interface for viewing real-time and historical weather data.

WEATHER STATION COMPONENTS

The basic weather system is composed of the following components: wind speed and direction sensor (WSD), air sensor (TPH), control module (CM), mounting brackets, and solar module (if applicable).



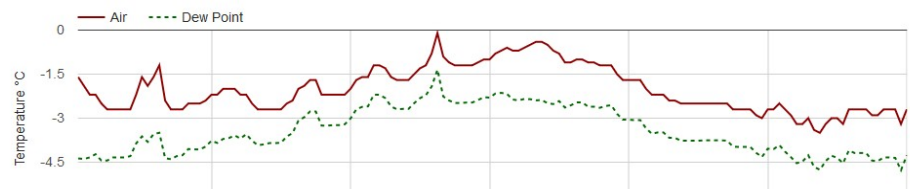
SETUP

As a user, you will find that installation and maintenance can be done by yourself using standard tools.

Sensors can be changed and added easily and with no special training - cables pass through holes in the bottom of the Control Module and attach to labeled connectors.

In the event that a change is required, an LCD screen and on-board buttons provide a convenient way to change system settings. No laptop, special utilities, or obscure programming language is required.

Setting the north position on the wind vane is a simple matter of pointing the vane north and pressing a button.



PRECONFIGURED STATIONS

If you are not a “weather professional,” specifying a set of sensors for your application can be a bit confusing. To help you with this, the following models are pre-configured to fit most applications.

Feature Comparison	MS-120	MS-130	MS-140	MS-150
Wind Speed	•	•	•	•
Wind Direction	•	•	•	•
Air Temp.	•	•	•	•
Barometric Pressure	•	•	•	•
Relative Humidity	•	•	•	•
Data Logging	•	•	•	•
Lightning Detection	•	•	•	•
Solar Sensor				•
Soil/Submersible Temp.			•	•
Rain Gauge				•
Soil Moisture			•	
Integrated Cell Phone		•	•	•
WeatherUnderground Upload		•	•	•
Over-the-Air Updates		•	•	•
Solar Panel		•	•	•
Solar Charge Controller	•	•	•	•
Modbus Slave	•	•	•	•
USB Device Port	•	•	•	•

CONNECTIVITY

The control module includes a USB device port for system maintenance, if required.

Other users may find that a wired connection is the best option. The weather station control module includes a Modbus RS-485 port, which can be used with industrial controllers (PLCs), environmental data loggers, and other devices.

OVER-THE-AIR FIRMWARE UPGRADES

Dyacon weather stations with embedded cell phone modems can be updated over the air. This ensures units in the field can take advantage of the latest updates and features of Dyacon weather stations.

DATA LOGGING

Dyacon weather stations also include data logging capability. Data is automatically recorded to on board, non-volatile memory. Data can be retrieved through the USB port, transferred by FTP, or emailed through the embedded cell phone.

ALERTS AND ALARMS

Text message and email alerts of weather parameters such as wind, temperature, heat index, and lightning can be sent automatically to through DyaconLive and the embedded cell phone.

Whether you are harvesting crops or concerned about safety, SMS text alarms will ensure you have the information you need at the time it occurs.

