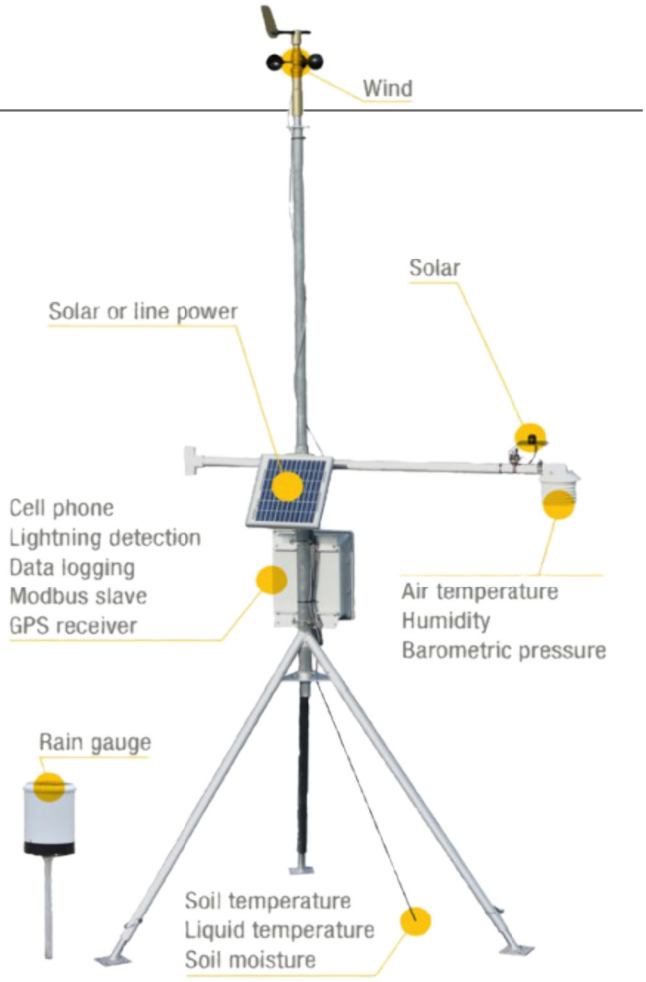
DYACON®

Weather Station Product Brief



INTRODUCTION

Dyacon weather stations provide great usability with professional flexibility and rugged performance. The weather station's integrated design combines solid weather instrumentation with wireless communications, solar power, data logging, and lightning detection.

Dyacon weather stations are built and designed by our own U.S. engineers, who are experienced in rugged computer design. Because Dyacon owns the technology, custom adaptations can be made to meet the requirements of OEMs, VARs, and integrators.

WHY DYACON?

Primitive, low-cost weather station options may be suitable for determining whether or not you should wear a coat, but they are deficient if you need to know the conditions in a remote orchard, beach, or landing strip.

Likewise, sophisticated meteorological instruments and data loggers are often costly or require specialized technical skills to install and configure the multiple add-on modules. Fortunately, Dyacon weather stations are affordable options that provide high accuracy, professional flexibility, and ease of use in an integrated, serviceable system.

Weather reports are provided by text messages direct to a user's cell phone*, which is a convenient, reliable, and low-cost method.

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
- Thermistor for soil or liquid temperature

Advanced integrated feature options include:

- Lightning detection
- Data logging

Dyacon weather stations are available in wired or wireless configurations.

Solar powered weather stations with an integrated cell phone add value to the weather data because the

weather station can be located where needed. The integrated solar charge controller maintains the internal battery, which provides a 7-day backup.

Separate air and wind sensors allow each to be positioned at preferred elevations.

APPLICATIONS

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

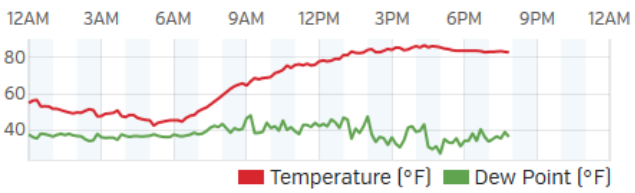
Private runway
Agriculture
Emergency services
Wildfire management
Public weather service
Environmental site assessment
Solar power station modeling
Industrial safety
Education

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.

WEATHER UNDERGROUND®

Weather stations configured with the embedded cell phone modem option can upload data directly to WeatherUnderground.com. This provides a convenient (graphical) interface for viewing current 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. If you can install a light switch, you can add sensors to a Dyacon weather station.

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 configured at the factory.

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 update themselves. Users control the timing of this operation, giving them control over any possible interruptions in data collection.

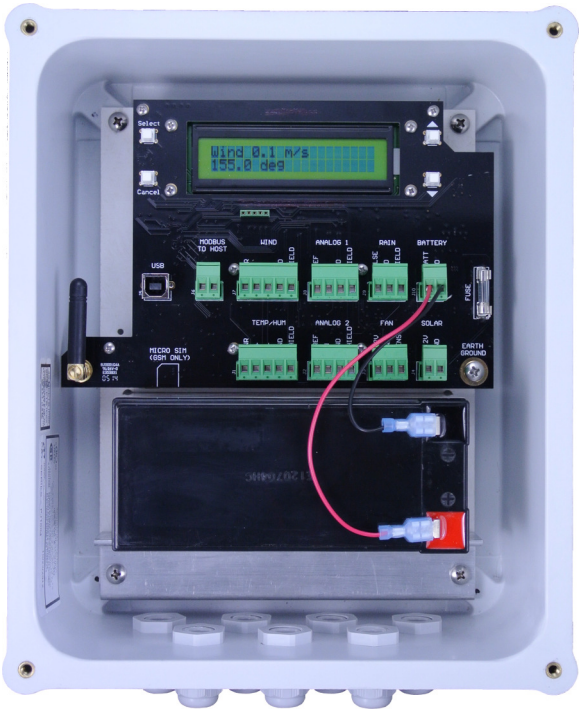
DATA LOGGING

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

ALERTS AND ALARMS

Text message alerts of weather parameters and lightning can be sent automatically to registered phone numbers.

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.



* Cell phone service required for wireless features.