

FTS Weather Station

FTS Monitoring Station is a complete, ready-to-go system from customized assembly tool kit to your software. Everything required to collect, manage, and analyze your weather data is provided.

Tough and Reliable

The station is tough inside and outside. With ¼ inch thick cast aluminum cases, waterproof O-ring seals, stainless steel hardware, military style connectors and built-in lightning protection, FTS equipment is the toughest you can get.



Fast to Install, Easy to Operate

FTS stations go up quickly and don't require a technical background. Our Quick Deploy is fully operational in 10 minutes. A permanent mast-mounted system takes two people about one hour to setup. Color coded connectors, preprogrammed data logger, easy-fit mounting brackets, tool-free keyway mounting, automatic re-initialization after power interrupts, and built-in LED indicators for immediate status confirmation make it simple for anyone to install and operate FTS stations.

- No field programming or calibration
- Waterproof data logger with 500k of storage, allowing approximately 70,000 to 200,000 readings depending on the parameters being stored.
- Quick connect, color coded military style connectors
- No terminal strips; no wiring to figure out

- Built-in LED status indicators
- World leading PC software
- Extreme power efficiency. Power is provided by a 26AH Gel Cell battery and a 10W solar panel. The 26AH battery will run the station for 4-6 months without solar re-charging.

FWS-12S DataLogger



FWS-12S Datalogger

Designed for permanent installation in remote locations, the FWS-12S is equally at home in remote northern installations, coastal rain forests, or southern deserts. In combination with the back-up power supply, 500k data logger memory capacity ensures that logged data is never lost.

- **The latest technology** - This is FTS's newest data logger. Fully field proven, the FWS-12S is being rapidly adopted by international government agencies.
- **Built-in real time clock** - Maintains time and date even when power is disconnected.
- **Maximum field simplicity** - Military style quick connect cabling, quick mount hardware, a fully modular system.
- **Reliable and tough** - Extensive and tough internal lightning protection, waterproof O-ring sealed cast aluminum case, power independent data storage. Designed for permanent installation in the world's harshest environments.



Communication

- One programmable RS-232 bi-directional port.
- One RS-232 bi-directional operator port.
- On-site display or direct connection to a PC or laptop.

Inputs



- SDI-12 port: The SDI-12 port is capable of supporting a minimum of 10 SDI-12 sensors (with additional connection hardware).
- Dedicated ports: There are 5 pre-configured connectors supporting wind speed, wind direction, air temperature and/or humidity, rainfall, plus one of barometric pressure or electronic fuel stick.

Power Input

- Two input sources with diode isolation for primary and back-up power.
- 8 - 20 V at approximately 2 mA. SDI sensors will increase this as per specific sensor requirements.
- SDI-12 power is supplied from the data logger and is regulated to 12V nominal.

FWS-12S Specifications

Power Consumption

Quiescent: 2 mA @ 12 V DC

Active: 10 mA @ 12 V DC

Operating Temperature Range: -40°F to +140°F (-40°C to +60°C)

Dimensions

Cabinet Style: 10 in x 8 in x 6.5 in (25.4 cm x 20.3 cm x 16.5 cm)

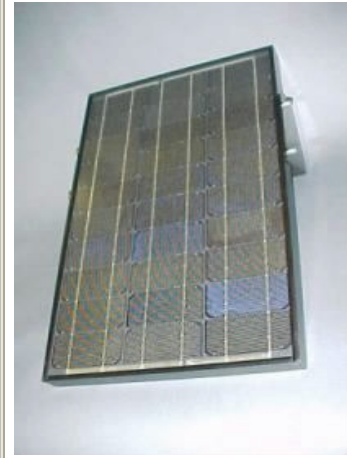
Mast Mount: 11 in x 8.9 in x 3.3 in (27.9 cm x 22.5 cm x 8.3 cm)

Solar Panels

The solar panel power supply is ideal for sites with radio or telephone modems, where AC power is not available. Cellular sites require more power and typically use a larger 48 Watt panel and deep-cycle battery. Other solar and AC supply combinations are available.

SPS-10W Solar Panel

Solar Panel Power: 10 W



ASL Heavy-Duty Wind Speed Sensor

The Heavy Duty Wind Speed sensor has been specifically designed for use in remote, unattended monitoring applications where it is likely to encounter high winds and heavy icing conditions.

A unique feature of the sensor is a built-in skirt which allows operation with up to **2 inches** of ice load.

- Accuracy of +/- 2%
- Temperature operating range of -58F to +158F (-50C to +70C)
- Stainless steel ball bearings for greatest accuracy and long operating life
- Starting threshold of 1.5 mph



The sensor is supplied with an extremely robust aluminum cup assembly which has a distance constant of less than 15 feet. Maximum operational reliability is ensured by the use of a sealed magnetic reed switch which produces a series of contact

closures at a rate proportional to wind speed.

WS-013 Specifications

Range: 0-150 mph (0-241 kmh)

Starting Threshold: 1.5 mph (2.4 kmh)

Accuracy: ± 0.25 mph or 2% (0.4 kmh)

Ice Load: 2 in (5.1 cm)

Distance Constant: Less than 15 ft (4.6 m)

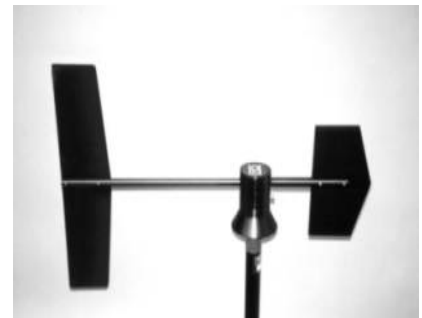
Operating Temperature Range: -58°F to $+158^{\circ}\text{F}$ (-50°C to $+70^{\circ}\text{C}$)

Weight: 14 oz (400 g)

FS Heavy-Duty Wind Direction Sensor

The Heavy Duty Wind Direction sensor has been specifically designed for use in remote, unattended monitoring applications where the sensor is likely to encounter high winds and heavy icing conditions.

- Low starting threshold of 1.5 mph
- Unique "Mechanical Average System" reduces sensor wear
- Built in alignment and calibration fixture
- Operation in winds of **150 mph** and ice loads of **2 inches**



The two part wind vane is connected by a unique 10 slotted shaft coupler to a precision wire wound potentiometer. The sensor output is an accurate mechanical average of the wind direction. An additional benefit of the slotted shaft coupler is decreased potentiometer wear and greatly increased sensor life. It also includes an orientation fixture which facilitates accurate field alignment.

WD-023 Specifications

Range: 0 - 360°

Threshold: 1.5 mph (2.4 kmh)

Maximum Wind Speed: 150 mph (241 kmh)

Accuracy: ±10° standard (±5% optional factory setting)

Ice Load: 2 in (5.1 cm)

Delay Distance: 15 ft (4.6 m)

Damping Ratio: 0.3

Operating Temperature Range: -58°F to +158°F (-50°C to +70°C)

THS-2000 Temperature/Humidity Sensor

The THS-2000 is a high quality, precision temperature and humidity sensor housed in a metal solar radiation shield.

The solar radiation shield consists of 6 double louvered epoxy painted aluminum louvers providing excellent shielding from direct or reflected sunlight or rain. Internal electronics are fully protected in a waterproof “O” ring sealed aluminum tube. The temperature and humidity sensing elements are housed inside a sintered bronze cap for maximum protection from contaminants and environmental exposure.



The THS-2000 mounts to a corrosion resistant anodized aluminum mounting arm which clamps directly to a weather station mast, providing a lightweight yet rugged sensor support. The connecting cable from the THS-2000 is fitted with a waterproof military style bayonet connector for ease of service and reliable, long term operation.



THS-2000 Specifications

Temperature

Resolution: 0.1°F (0.1°C)

Accuracy: 0.4°F (0.2°C)

Operating Temp. Range: -60°F to 140°F (-51°C to +60°C)

Humidity

Resolution: 1%

Accuracy: ±2% RH from 0-80%RH

Life Expectancy: 4 years, re-calibration after second year
(varies with environmental conditions)

Operating Temp. Range: -60°F to 140°F (-51°C to +60°C)