



F1 AWOS

Automated Weather Observing System

DESCRIPTION

The F1 AWOS Automated Weather Observing System from DBT is a type-certified system that meets the current FAA Advisory Circular 150/5220-16 requirements for nonfederal airports. The F1 AWOS incorporates state-of-the-art sensors, FlexAWOS aviation weather display software, and is supported with expert service. This ensures the F1 AWOS provides reliable aviation-grade data 24 hours a day.

Features include.

- Indoor interface with one or more Operator Terminals.
- AWOS processor is co-located with the field sensors, and includes multiple communication protocol interfaces.

These external interfaces are available.

- Voice via VHF Radio
- Voice via VoIP Service
- Voice via traditional telephone service
- Voice via a handset interface
- RMM via a secure Internet-enabled service
- Line printer
- NADIN port
- VC/VD display emulation port
- AWOSNet emulation port

The Acquisition Control Unit (ACU) pulls live sensor data and uses algorithms compliant with the latest FAA 150/5220-16 Advisory Circular to produce, log, and disseminate aviation weather products.



- **FAA certified weather**
- **NADIN service**
- **State-of-the-art sensors**
- **Graphical user interface**
- **Standalone and Split Configuration options**

The Communications Interface Unit (CIU), located indoors, is an interface for data reception and dissemination. One or more Operator Terminals (OT) can be connected. The Operator Terminal interacts with the ACU, and is used to record voice remarks and NOTAMs indoors, and to enable/disable sensors.



Communication from the ACU to the CIU is supported using these media.

- Fiber (TCP/IP network)
- UHF radio link
- RS-485 serial link
- DSL (ADSL or SHDSL over twisted-pair wires)
- Cellular (TCP/IP via VPN)

PROCESSOR

SPECIFICATIONS

Parameter		Specification
Operating Temperature and Humidity	Outdoor	-35°C to 55°C (-30°F to 130°F) 5–100% RH
	Indoor	5°C to 40°C (40°F to 105°F) 5–90% RH
Input Power		115 VAC (±10%) , 60 Hz (±5%) 3-wire single phase
Electromagnetic Compatibility (EMC)		Radiated and Conducted Emissions MIL-STD-461 Telecom Port Conducted Emissions CJSPP 22
Communication Interfaces	Serial	<ul style="list-style-type: none"> RS-485 UHF radio
	TCP/IP	<ul style="list-style-type: none"> Fiber modem DSL (ADSL or SHDSL) Cellular (VPN)
Backup Power		
Outdoor UPS		1000 V•A
Backup Battery (ACU/CIU)		1 hour
Outputs		
Voice		VHF Radio & Dial Up
NADIN		METAR to NADIN service to WMSCR network

ORDERING INFORMATION

Order F1 AWOS based on:

- Standalone and Split Configuration options
- External Interfaces
- Communication Interface
- AWOS Type and specific sensors based on weather data required.

AWOS Types

AWOS A

- altimeter only

AWOS I

- wind data (speed, direction, gusts); temperature; dew point; altimeter; and density altitude

AWOS II

- AWOS I reports plus visibility

AWOS III

- AWOS II reports plus precipitation accumulation and cloud height

AWOS III P

- AWOS III reports plus present weather

AWOS III T

- AWOS III reports plus thunderstorm/lightning

AWOS III P/T

- AWOS III reports plus present weather and thunderstorm/lightning

AWOS IV Z

- AWOS III P/T reports plus freezing rain

Supported FAA Certified Sensors	
7150 Barometric Pressure Sensor	PTB330 Barometric Pressure Sensor
2020/2030 Anemometer/Wind Vane	WAC155 Mechanical Wind Sensor system
2040/2040C Ultrasonic Wind Sensor series	WMT702 Ultrasonic Wind Sensor
5190-F Temp/RH probe (analog) with aspirated shield	HMP155-CFG06 Temp/RH probe (digital) with aspirated shield
6021-A/6022-A Tipping Bucket Rain Gauge (heated)	TR-525I Tipping Bucket Rain Gauge with HT-525 Heater
8339-FAA Ceilometer	CL31-CFG01 Ceilometer
6498-P/6498-DC-P Present Weather Sensor	PWD22-CFG06 Present Weather and Visibility Sensor (requires LCS-624D Day/Night Sensor photodiode input)
6498-V/6498-DC-V Visibility Sensor	
6498-PV/6498-DC-PV Present Weather and Visibility Sensor	
6495 Freezing Rain Sensor	872C3 Freezing Rain Sensor
6500/6500-DC Thunderstorm/Lightning Detector	SA20 Lightning Sensor



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