



TACMET II WEATHER SENSOR SYSTEM (JBPDS)

FEATURES:

- **Sonimometer™ Wind Sensor**
- **Fast Response Relative Humidity Sensor**
- **Flux-Gate Compass**
- **Digital Output**

Climatronics' TACMET II Weather Sensor System (JBPDS), P/N 102451, is a second-generation weather sensor, which includes a number of features now possible with new sensor technology resulting from our commitment to product improvement. The TACMET II Weather Sensor System (JBPDS) incorporates Climatronics' new and unique folded-path, low-power sonic anemometer, the Sonimometer™, with a temperature sensor, a fast-response capacitive relative humidity sensor, and an internal flux-gate compass. An on-board microprocessor provides a digital output message (serial ASCII, RS-232C).

Preserving much of the compact size and weight, low power, and reliability of its predecessor, the TACMET II Weather Sensor System (JBPDS) includes an internal flux gate compass to automatically orient the wind direction data to magnetic North.

The TACMET II Weather Sensor System (JBPDS) has an aluminum housing and special filtering for EMI/RFI resistance. Several paint colors are available.

The TACMET II Weather Sensor System (JBPDS) is designed for maximum durability, portability, and utility, making it uniquely applicable for rapid deployment and use by one person under adverse conditions. The sensor may be mounted on a tripod or vehicle mast.

The TACMET II Weather Sensor System (JBPDS) is supported by a number of accessories, including: carrying cases; hand-held displays; compact, lightweight tripods; and, depot repair and calibration fixtures.



SPECIFICATIONS:

PERFORMANCE:

Wind Speed

Range 0-65 m/s (0-145 mph)
 Accuracy * ± 0.5 m/s (1.1 mph) or 5%
 Resolution 0.1 m/s (0.22 mph)

Wind Direction

Range 0 to 360°
 Accuracy * $\pm 3^\circ$ @ wind speed > 2.2m/s (5 mph)
 (Including compass error)

Resolution $\pm 1.0^\circ$

Compass

Accuracy $\pm 2^\circ$

Temperature

Range -40°C to +60°C (-40°F to 140°F)
 Accuracy $\pm 2.0^\circ\text{C}$ ($\pm 3.6^\circ\text{F}$) @ WS > 2.0 m/s (4.5 mph)
 Resolution $\pm 0.1^\circ\text{C}$

Relative Humidity

Range 0 - 100 %
 Accuracy ± 3 %
 Resolution ± 1.0 %

ELECTRICAL:

Measurement Format Two orthogonal axes, North/South
 and East/West

Measurement Rate 2 Hz each axis

* This accuracy is maintained when the sensor is within ± 10 degrees of vertical

Operating Frequency
 Signal Output

40 KHz
 RS-232C, RS-422 or RS-485
 ASCII @ 1200/19200 BPS
 9.5-36 Vdc @ 50 mA nominal,
 option dependent

Power Requirements

ENVIRONMENTAL:

Temperature -40° to 60°C (-40° to 140°F)
 Humidity 0-100%
 Altitude -100 to +12,000 ft MSL

PHYSICAL:

Weight 1.8 Kg (4.0 lbs.)
 Size 311 mm (12.25") high by
 101.6 mm (4.0") diameter
 Mounting P/N 102621-GX-XX or
 P/N 102286-XX sensor mount to
 3/4", 1", or 1.25" IPS vertical pipe
 stub

Colors

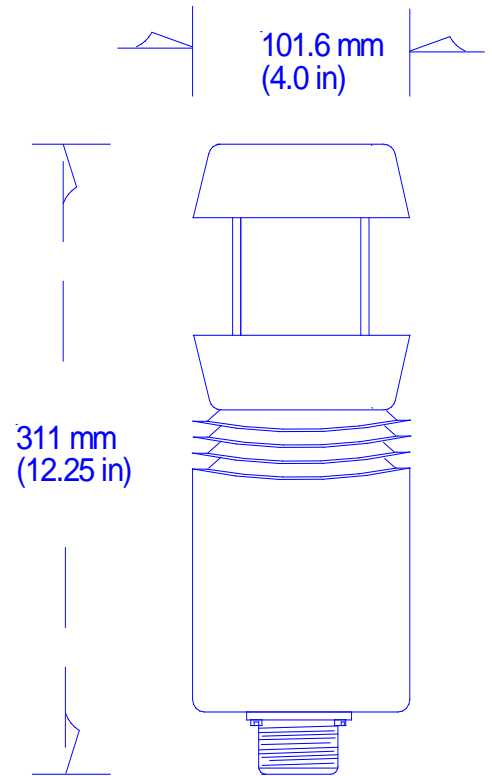
Finished per FINISHED PER MIL-DTL-64159:
 • CARC Green 383, 34094
 • CARC Tan 686A, 33446
 • CARC Aircraft White, 37875

SHIPPING:

Weight 2.5 Kg (5.5 lbs)
 Volume 0.012 m³ (0.44 ft³)

102451 TACMET II, JBPDS Options Configuration Guide

Base Part Number	102451-		
Body Paint	CARC Green	A	
Options	CARC Tan	B	
	CLEAR ANODIZE	C	
Shield Paint	CARC Green	1	
Options	CARC Tan	2	
	CARC White	3	
	GLOSS WHITE	4	
	<i>(C body paint option only)</i>		
Software Options	JBPDS	J	
	P3I BIDS	P	
EMI Shielding	Hardened EMI		1



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