

TACMET II

WEATHER SENSOR SYSTEM (EMI)



Met One Instruments' TACMET II Weather Sensor (EMI) is a second-generation weather sensor, which includes a number of features now possible with new sensor technology as a result from our commitment to product improvement. The TACMET II (EMI) incorporates Met One's new and unique folded-path, low-power sonic anemometer, the Sonimeter, with temperature sensor, a fast-response capacitive relative humidity sensor, and a flux-gate compass. An on-board microprocessor provides a digital output

message; RS-232C is standard; RS-485 is available as an option. Special output formats are also available. Preserving much of the compact size and weight, low power, and reliability of its predecessor, the TACMET II (EMI) is available with optional barometric pressure sensors, which have accuracies ranging from ± 1.50 hPa to ± 0.40 hPa. The TACMET II (EMI) wind direction data will automatically be oriented to magnetic North if the optional flux gate compass is selected.



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

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



FEATURES:

- Sonimometer Wind Sensor
- Fast Response Relative Humidity Sensor
- Flux-Gate Compass
- Internal Barometric Pressure Sensor
- Digital Output

SPECIFICATIONS

TACMET II (EMI)

PERFORMANCE:

Wind Speed

Range 0-62 m/s (0-139 mph)
 Accuracy * ± 0.5 m/s (1.1 mph) or 5%
 Resolution 0.1 m/s or 0.1 mph
 Repeatability ± 0.2 m/s (0.45 mph) or 5%

Wind Direction

Range 0 to 360°
 Accuracy * $\pm 3^\circ$ @ wind speed > 2.2m/s (5 mph)
 Resolution $\pm 1.0^\circ$

Compass **

Accuracy +/- 3 & +/- 2 = max +/- 5

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 $\pm 3\%$
 Resolution $\pm 1.0\%$

Pressure

Range 600 - 1100 hPa
 Accuracy Refer to configuration guide
 Resolution ± 0.1 hPa

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

** OPTIONAL

102304 TACMET II Options Configuration Guide

Base Part Number 102304-

Body Paint	CARC Green	A	
Options ***	CARC Tan	B	
	CLEAR ANODIZE	C	
	CARC Sand	D	
Shield Paint	CARC Tan	2	
Options ***	CARC White	3	
	(C body paint option only) GLOSS WHITE	4	
	CARC Sand	5	
Serial Output	RS-232C	G	
Options	RS-422/RS-485	H	
Baud / Output	1200		1
Options	2400		2
	4800		3
	9600		4
	19200		5
	(requires option H) 485 Tracker		6
	NMEA		7

Averaging Options	Instantaneous Running Avg	J	
Speed Units	MPH, 0 to 145	K	
	M/S, 0 to 65		1
	Knots, 0 to 125		2
	Kilometers/Hr, 0 to 234		3
	MPH-A, 0 to 100		4
	M/S-A, 0 to 50 Knots-A,		5
	0 to 100		6
			7

Temperature Units	Degrees F, -40° to +140°		1
	Degrees C, -40° to +60°		2

Pressure Options	None		XX
	102716 Sensor (± 0.04 in Hg, 17.71-32.45 in Hg)		M1
	102716 Sensor (± 1.50 hPa, 600-1100 hPa)		M2
	102555 Sensor ± 0.01 in Hg, 17.71-32.45 in Hg)		S1
	102555 Sensor (± 0.4 hPa, 600-1100 hPa)		S2

Compass Option	None		X
	Electronic Flux Gate Compass		P

EMI Shielding	Hardened EMI (included with all sensors)		1
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*** COLORS
 FINISHED PER MIL-DTL-64159, COLOR CARC GREEN 383, 34094
 FINISHED PER MIL-DTL-64159, COLOR CARC TAN 686A, 33446
 FINISHED PER MIL-DTL-64159, COLOR CARC AIRCRAFT WHITE, 37875 FINISHED
 PER MIL-DTL-64159, COLOR CARC SAND, 33531

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

ENVIRONMENTAL:

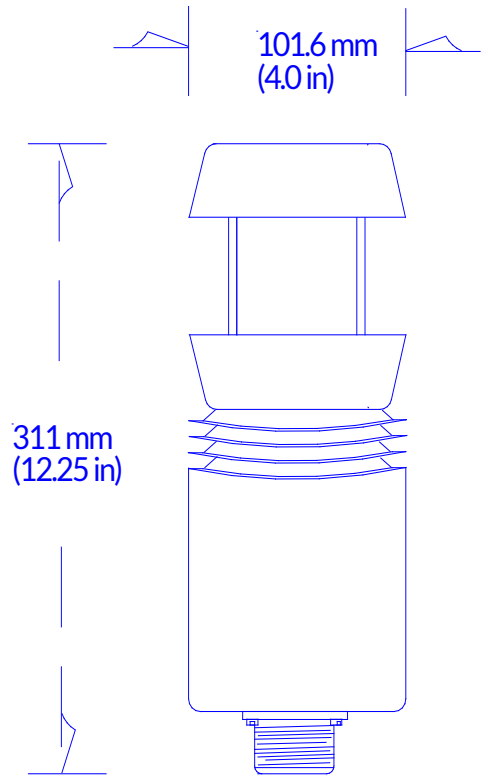
Temperature -40° to 60°C (-40° to 140°F)
 Humidity 0-100%
 Altitude -100 to +12,000 ft MSL

PHYSICAL:

Weight 1.8 Kg (4.0 lbs.)
 Size 311 mm (12.25") high by 101.6 mm (4.0") diameter
 Mounting MS3102R18-1P connector or P/N 102621-XX Quick Mount to 3/4" vertical pipe stub
 Colors Finished per MIL-DTL-64159, Color CARC Green 383, 34094
 Finished per MIL-DTL-64159, Color CARC Tan 686A, 33446
 Finished per MIL-DTL-64159, Color CARC Aircraft White, 37875
 Finished per MIL-DTL-64159, Color CARC Sand, 33531

SHIPPING:

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



Specifications are subject to change at any time.

