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Met One Instruments

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 Sonimometer, 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.

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

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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 *	± 3° @ wind speed > 2.2m/s (5 mph)
Resolution	±1.0°

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

Temperature
Range	-40°C to +60°C (-40°F to 140°F)
Accuracy	±2.0°C (±3.6°F)@WS>2.0 m/s (4.5 mph)
Resolution	±0.1°C

Relative Humidity
Range	0 - 100 %
Accuracy	±3 %
Resolution	±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

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 m^3 (0.44 ft^3)

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

*** 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

Specifications are subject to change at any time.

101.6 mm (4.0 in)

311 mm (12.25 in)

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