FT742-SM (SURFACE MOUNT)

ACOUSTIC RESONANCE WIND SENSOR



DESIGNED FOR INTEGRATION

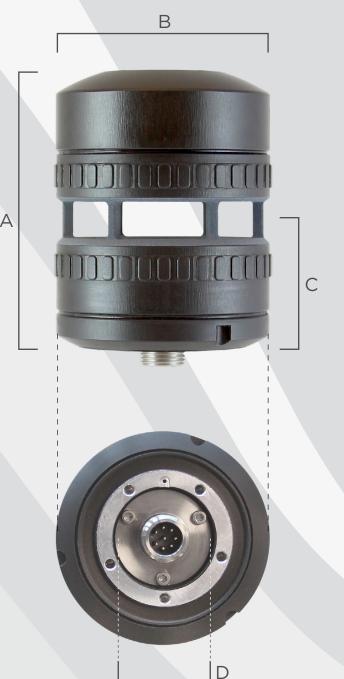
The FT742 Surface Mount wind sensor is designed for OEM integration. It has an electronic compass and a thermostatic heater. The sensor has been integrated into UAVs, military vehicles, autonomous robots, handheld weather stations, CBRN detection units, drifter buoys, vehicle-mounted and ship-based meteorological systems.

The hard anodised aluminium body is highly resistant to electromagnetic interference, corrosion, sand, dust, solar radiation and bird attack. With no moving parts to degrade or damage, it is also able to withstand significant shock and vibration. It is sealed to IP66 and IP67 standard.

The sensor can be installed to ensure alignment with a standard reference, typically Magnetic North, or the integrated compass can calculate this automatically.

DIMENSIONS

A. Sensor height	71.2mm
B. Sensor width max.	56mm
C. Mounting surface to cavity centre	32.9mm
D. Recommended mounting surface hole	24mm



SPECIFICATIONS AT A GLANCE

WIND SPEED

0-75 m/s

WEIGHT

252

AVAILABILITY

>99.9_%

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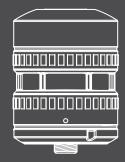












WIND SPEED 4

Range	0-75m/s	0-270km/h	0-145.8 knots	
Resolution	0.1m/s.	0.1km/h		
Δοσιμάον	+0.3m/s/0-16m/s	:1		

±2% (16-40m/s) ±4% (40-75m/s)

WIND DIRECTION

Range	.0 to 360°
Resolution	1°
Accuracy	4° RMS
Compass accuracy	.5° RMS

ACOUSTIC TEMPERATURE

Resolution	U.1 C
Accuracy	±2°C
Under the following of	conditions:
Speed Range	5m/s - 60m/s
Operating Range	20°C to +60°C
Temperature Differe	ence<10°C
between the air ten	nperature and the
actual temperature	of the sensor

SENSOR PERFORMANCE

Measurement principle		, pressure & humidity)
	Metres per second, kilometres per hour or knots		
Altitude	0-4000m operating range		
Temperature range	40° to +85°C (operating and storage)		
Humidity	0-100%		
Ingress protection	IP66, IP67 - when correctly installed with supplied O-ring		
Heater settings	0° to 55°C (factory and user configurable)		

POWER REQUIREMENTS

Supply voltage	6V to 30V DC (24V DC non	ninal). Supports battery operation	on with reduced heater capacity.3
Supply current (heater off)	25mA typical (29mA with o	compass enabled)	
Supply current (heater on)	Up to 2A ^{1,2}		

Power consumption with heater disabled (for battery use):

Battery Supply Voltage	Compass Disabled	Compass Enabled
24V	600mW	696mW
12V	300mW	348mW
9V	225mW	261mW
6V	150mW	174mW

PHYSICAL

I/O connector	Universal M12 8-pole circular connector
Sensor weight	252g

DIGITAL SENSOR

THE TUCE	1415422 (run dupick). N5465 (nun dupick)
Format	. ASCII data, polled or continuous output modes, Polar and NMEA 0183
Data update rate	10Hz
Error handling	When the sensor detects an invalid reading an error flag is included in the wind velocity output message
	(see user manual for further details).
Oversneed Warning	The sensor has an ontional overspeed warning scheme. This scheme is disabled by default but can be

enabled at the factory if requested. With the scheme enabled, if the sensor detects a wind speed greater than 75m/s a character is set in the wind velocity output message (see user manual for further details).

 $^{^{\}rm 4}$ km/h & knots only available when operating the sensor in NMEA 0183 mode.





¹ This is the default heater current limit, if higher currents are required, please contact FT Technologies.

² Heater control is achieved through a closed loop system, therefore the power consumption of the heater is a function of the applied cooling load on the sensor and the user temperature set point. Maximum heating power is 60 W at 30 V.

³ EN 61000-4-29 only applicable when the sensor power supply is between 20V to 30V DC.