



# Synchrotac 700

The Wind Synchrotac is designed for general meteorological applications where accuracy, durability and long term reliability are required even in severe climatic conditions. This sensor is one of the most rugged and durable sensors available. The Synchrotac is solidly constructed from naval bronze, brass, stainless steel and other corrosion resistant materials. The bearings are low friction stainless steel for low starting threshold.

The instrument is sealed against dust, moisture, and vermin ingress. It mounts directly on a 1.5 inch, male BSP threaded pipe. Special bearing lubricants ensure reliable operation over the temperature range and, under normal conditions, should give maintenance free operation in excess of 10 years.

The anemometer uses three hemispherical cups to measure wind speed. Cup wheel rotation produces one of three options for output signal: a ten-pole AC generator (#732), a magnetically actuated reed switch (#734), or an opto-electronic transducer (#736).

The wind direction is measured with a balanced vane assembly with vane position sensed by one of three optional transducers: a long-life potentiometer (#706), a brushless resolver (#716), or two potentiometers in a 540° configuration (#724).

## Technical Specifications

Wind Speed	
Range:	>100 m/s
Accuracy:	Better than $\pm 3\%$ at >5m/s
Wind Direction	
Range:	360° mechanical 354° electrical with #706 360° electrical with #716 540° electrical with #724
Accuracy	$\pm 2.5$ degrees
Threshold: Anemometer:	<0.5 m/s with #736 <0.6 m/s with #734 <0.7 m/s with #732
Vane:	< 0.5 m/s
Operating temperature:	-40°C to +60°C
Dimensions:	
Overall height:	558 mm (22 in)
Vane length:	457 mm (18 in)
Cup diameter:	127 mm (5 in)
Cup wheel dia:	457 mm (18 in)
Mounting:	1.5 in BSP female thread
Weight:	12 kg (26.4 lbs)



## Transducer Specifications

Type 706 Wind Direction Transducer	
Transducer:	1K ohm precision potentiometer
Max. voltage	12 VDC continuous
Type 716 Wind Direction Transducer	
Transducer:	Brushless resolver (synchro)
Resolver drive:	12 V @ 2K Hz, 60 mW max
Output voltage:	6 V, 15 mV null voltage
Type 724 Wind Direction Transducer	
Transducer:	Two 1K ohm pots, 180° a part
Max. voltage	12 VDC continuous
Type 732 Wind Speed Transducer	
Transducer:	10-pole AC generator
Signal output:	136 mV / m/s and 1.8 Hz / m/s
Type 734 Wind Speed Transducer	
Transducer:	Magnetic actuated reed switch
Output:	Momentary contact closure per rev.
Contact rating:	50V AC/DC, 0.5A max
Type 736 Wind Speed Transducer	
Transducer:	Opto-electronic
Output:	30 pulses / rev, 5 V or 1 mA
Power:	8 – 24 VDC, 12 mA

## Ordering Information

Specify direction transducer type and then speed transducer type separated by a slash.

706	1K ohm potentiometer direction transducer
716	Brushless resolver direction transducer
732	10 pole AC generator speed transducer
736	Opto-electronic speed transducer

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