



## **SYNCHROTAC**

### **SYN706 SERIES**

Synchrotac SYN706 Series Heavy Duty Wind Speed and Direction Transmitter designed for general meteorological applications where accuracy, durability and long term reliability are required even in severe climatic conditions.

The Synchrotac SYN706 series has a long history of reliable service in very aggressive environments such as in coastal tropical cyclone areas and oil rigs.

They are solidly constructed from naval bronze, brass, stainless steel and other corrosion resistant materials. Bearings are low friction stainless steel for a low starting threshold.

The instrument is sealed against dust, moisture and vermin ingress and mounts directly on a  $\frac{3}{4}$  inch diameter (speed only) or  $1\frac{1}{2}$  inch diameter (speed & direction) male BSP thread. Special bearing lubricants ensure reliable operation over the temperature range and, under normal conditions, should give maintenance free operation in excess of 10 years.

#### **Models**

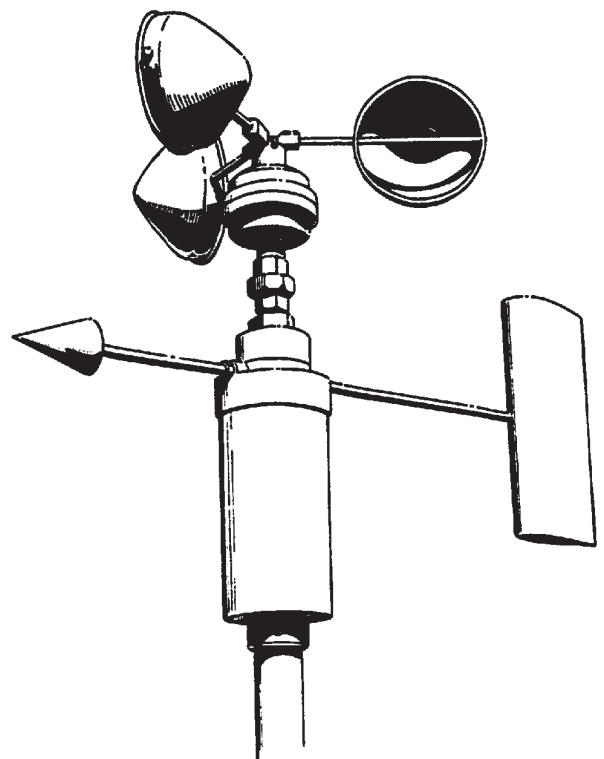
Three anemometer models and one wind direction model are available in the Synchrotac SYN706 series.

The anemometer models available are

- The **SYN732** - poly-phase linear generator;
- The **SYN734** - solated switch contact closure;
- The **SYN736** for opto-electronic pulse output.
- The wind direction **SYN706** section uses a single precision potentiometer.

The anemometer section may be purchased separately for wind speed only applications.

For intrinsically safe and Ex applications, the SYN706 wind direction section and SYN734 wind speed section are classified as "Simple Apparatus" because they use passive sensors (potentiometer and switch) and there are no energy storage components within.



*Synchrotac SYN706 Series Heavy Duty Wind Speed and Direction Transmitter*

### WIND SPEED TRANSMITTER SECTION

• Cup Diameter	127mm (5") internal
• Turning Circle Diameter	457mm (18")
• Body Diameter	102mm (4")
• Overall Height	239mm (9.4")
• Mass of Cup Set	0.95kg (2.1lbs)
• Overall Weight	3kg (6.6lbs)
• Mounting	¾" BSP Female Thread
• Maximum Wind Speed	>100m/sec (>200 knots)
• Accuracy	±3% above 5m/sec.
• Transfer Coefficient	0.35 revs/meter

### TYPE SYN732 WIND SPEED TRANSDUCER

• Transducer	Permanent magnet 10 pole ac generator. 5 cycles/rev.
• Signal Output	136mV/m/sec, and 1.8Hz/m/sec @>3m/sec.
• Starting Threshold	<0.7 m/sec.
• Output Resistance	22 ohms nominal
• Operating Temp.	-40°C to +60°C

### TYPE SYN734 WIND SPEED TRANSDUCER

• Transducer	Magnetically actuated reed switch
• Output	Momentary contact closure.
• ON Resistance	8.2 ohms nominal
• Starting Threshold	<0.6 m/sec.
• Contact Rating	48Vdc/30Vac, 0.3A max
• Operating Temp.	-40°C to +60°C

### WIND DIRECTION TRANSMITTER SECTION

• Vane Length	457mm (18")
• Turning Circle Diameter	914mm (36")
• Body Diameter	109mm (4.25")
• Overall Height	329mm (13")
• Mass of Vane Assembly	1.1kg (2.4lbs)
• Overall Weight	9kg (19.8lbs)
• Mounting	1½" BSP Female Thread
• Starting Threshold	<0.7m/sec.
• Mechanical Travel	360° (continuous)
• Operating Temperature	-40°C to +60°C

### TYPE SYN706 WIND DIRECTION TRANSDUCER

• Transducer	1kΩ ± 15% precision potentiometer
• Linearity	1% over electrical travel
• Electrical Travel	Better than 354°
• Max Transducer Voltage	12V dc continuous CW to CCW.
• Dead Band Detection	100kΩ fixed resistor

### TYPE SYN736 WIND SPEED TRANSDUCER

• Transducer	Opto-electronic.
• Output	From 1 to 30 pulses per cup set revolution either 5V or 1mA
• Starting Threshold	<0.5 m/sec.
• Starting Threshold	4 - 28V dc, 12mA
• Operating Temp.	-20°C to +60°C

### COMBINED WIND SPEED & DIRECTION SECTIONS

• Overall height	568mm (22,4")
• Overall weight	12kg (26,4 lbs)