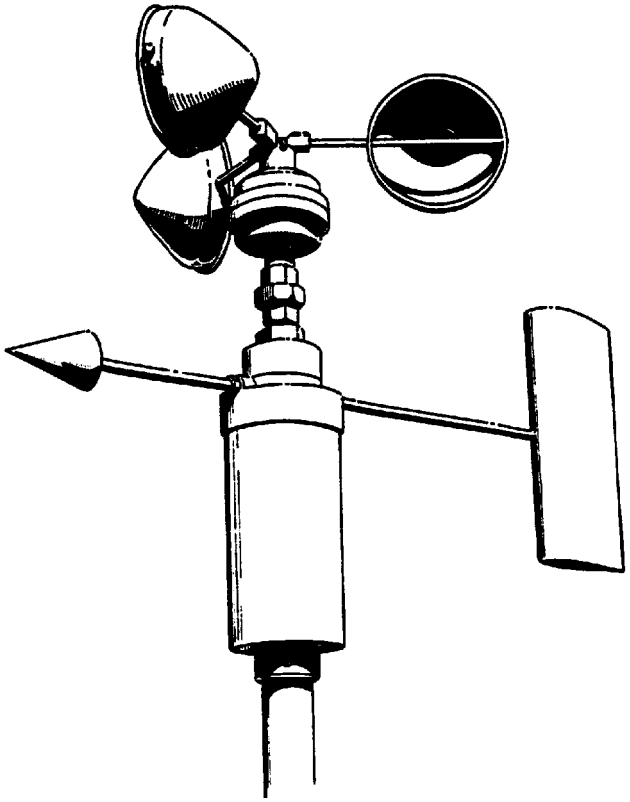
**RIMCO, MIDDLETON, SYNCHROTAC.**
Precision Weather Monitoring Instruments

# SYNCHROTAC
# 706 SERIES
# HEAVY DUTY WIND TRANSMITTER



## Synchrotac 706 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 has a long history of reliable service in very aggresive environments such as in coastal tropical cyclone areas and oil rigs.

Three anemometer models and two wind direction models are available in the Synchrotac 706 series. The anemometer models available are the 732 - poly-phase linear generator; the 734 - isolated switch contact closure; and the 736 for opto-electronic pulse output. The wind direction models may be either the 706 unit - 360° precision potentiometer or the 724 unit utilising a ganged 540° potentiometer assembly.

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

# Series 706 Heavy Duty Wind Speed and Direction Transmitter

**General Specifications**

The **Synchrotac 706 Series Heavy Duty Wind Speed and Direction Transmiters** are designed for long trouble free life under severe climatic conditions. 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 ¾ inch (speed only) or 1½ inch (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.

The wind speed section may be any one of three user selected technologies. The type **732** is a ten pole ac generator , the type **734** employs magnetically actuated reed switch(es) and the **736** is an opto-electronic transducer.

Wind direction is also ordered in one of two different configurations. The type **706** is a potentiometric transducer, and the type **724** is a 540° configuration employing two precision potentiometers.

**Wind Speed Transmitter Section - General**

| | |
|---|---|
| Cup Diameter | 127mm (5”). |
| Turning Circle Diameter | 457mm (18”). |
| Body Diameter | 102mm (4”). |
| Overall Height | 229mm (9”). |
| 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 | Better than ±3% above 5m/sec. |
| Transfer Coefficient | 0.35 revs/meter |

**Type 732 Wind Speed Transducer**

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

**Type 734 Wind Speed Transducer**

| | |
|---|---|
| Transducer | Magnetically actuated reed switch. |
| Output | Momentary contact closure. VER 1 single closure per cup set revolution, VER 2 five closures per cup set revolution. |
| ON resistance | 8.2 ohms nom. |
| Starting Threshold | <0.6 m/sec. |
| Electrical Rating | 48Vdc/30Vac, 0.3A max. Load must be non-inductive. |
| Operating Temperature | -40°C to +60°C. |

**Type 736 Wind Speed Transducer**

| | |
|---|---|
| Transducer | Opto-electronic. |
| Output | From 1 to 30 pulses per cup set revolution either 5V or 1mA (to be specified at time of order). |
| Starting Threshold | <0.5 m/sec. |
| Power Requirements | 5.5 - 28V dc, 10mA max. |
| Operating Temperature | -20°C to +60°C. |

**Wind Direction Transmitter Section - General**

| | |
|---|---|
| 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 706 Wind Direction Transducer**

| | |
|---|---|
| Transducer | 1 kΩ precision potentiometer. |
| Electrical Travel | Better than 354°. |
| Max Transducer Voltage | 12V dc continuous. |

**Type 724 Wind Direction Transducer**

| | |
|---|---|
| Transducer | Two 1 kΩ precision potentiometers ganged 180° apart. |
| Electrical Travel | 540°. |
| Max Transducer Voltage | 12V dc continuous. |

**Combined Wind Speed and Direction Sections**

| | |
|---|---|
| Overall Height | 558mm (22”). |
| Overall Weight | 12kg. (26.4lbs) |

**Ordering Information**

| | |
|---|---|
| Wind Speed Only Order | SYN732, SYN734 or SYN736 as required. For SYN734 specify VER1 or VER 2. |
| Wind Speed & Direction | Start with wind direction section and add wind speed section preceded by a slash. |
| Example | SYN706/732 |
| Options | Ordered separately. |