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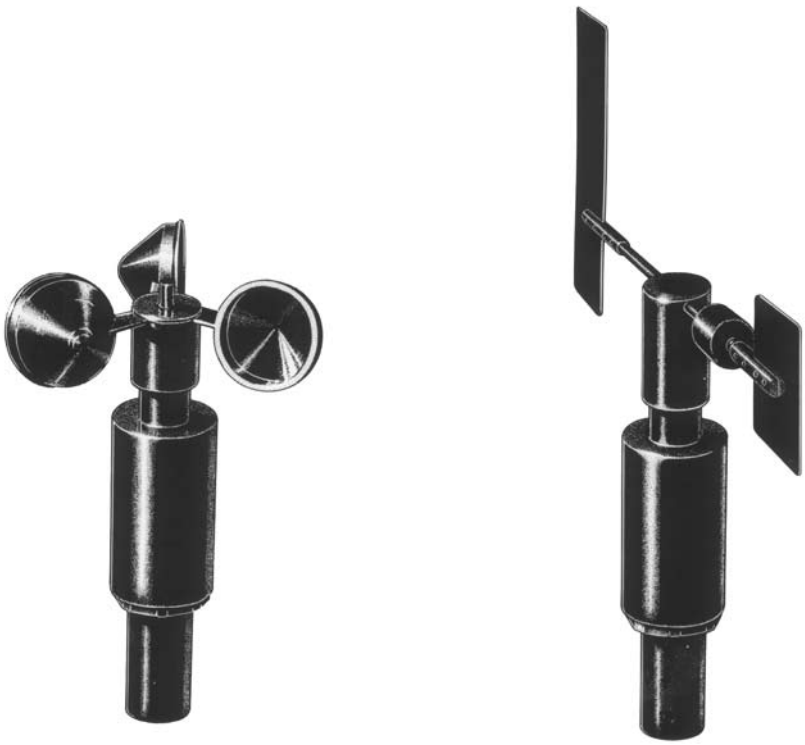
Precision Weather Monitoring Instruments

SYNCHROTAC 710 SERIES WIND SENSORS



Synchrotac 710 Series Wind Speed and Direction Sensors

The **Synchrotac 710 Series** of wind speed and direction sensors are designed for general-purpose wind measuring applications. They are constructed from corrosion resistant materials and incorporate precision sealed stainless steel bearings for reliability and low starting threshold.

The sensors can be individually mounted directly to a pipe mast with a ½ inch BSP male thread or as a pair on the optional cross arm or mounting sickle.

The **Synchrotac SYN710-1965** wind speed sensor (anemometer) generates a DC voltage proportional to wind speed and requires no external power. The **Synchrotac SYN710-1970** anemometer uses opto-electronic techniques to produce voltage pulses at a rate proportional to wind speed and requires external power whereas the **Synchrotac SYN710-1980** uses a magnet/reed switch assembly to actuate a momentary contact closure every cup set revolution and requires no external power.

The **Synchrotac SYN710-2900** wind vane uses a precision potentiometer to produce a voltage proportional to wind direction. The **Synchrotac SYN710-2900** requires an external reference voltage supply for the precision potentiometer.

All **Synchrotac 710** sensors are available in optional stainless steel construction.

Synchrotac 710 Series Wind Speed and Direction Sensors

Specifications

Anemometer Models	**SYN710-1965**	**SYN710-1970**	**SYN710-1980**
Cup Diameter	45mm		
Turning Circle Diameter	130mm		
Body Diameter and Height	41.5mm, 170mm		
Mass of Cup Set	20g		
Weight	565g		
Mounting	½ inch BSP female thread		
Body Material	Brass standard or optional Stainless Steel (SS)		
Cup Set Material	Fibreglass reinforced phenolic		
Bearings	Two stainless steel roller ball, sealed with low viscosity lubricant.		
Transfer Coefficient	0.0526 km/hr per rpm or 0.9m of wind run per revolution (@50km/hr.)		
Measurable Wind Speed	Over 50m/sec. (180km/hr.)		
Transducer	DC generator	Opto-electronic	Magnet/Reed Switch
Starting Threshold	<0.75m/sec.	<0.5m/sec.	<0.6m/sec.
Signal Output	6.5mV/km/hr. nom. To calibration certificate supplied.	1, 2, 4 or 8 pulses per cup set revolution. Pulses nominally 5V@ 1mA max.	Momentary contact closure per cup set revolution.
Output Impedance	30 ohms nominal	100 ohms nom.	10 ohms nom.
Power Requirements	Nil	8 - 26V dc, 15mA.	Nil
Connection	2 pin	3 pin	2 pin
Electrical Load	>600 ohms	>5,000 ohms <1,000 pF.	50V dc/ac 0.5Amp resistive.
Operating Temperature Range	-20°C to +60°C	-10°C to +60°C	-10°C to +60°C

Wind Direction Transmitter	**SYN710-2900**
Vane Length (Overall)	335mm
Turning Circle Diameter	382mm
Body Diameter	41.5mm
Overall Height	252mm
Mass of Vane Assembly	235g
Weight	675g
Mounting	½ inch BSP female thread
Body and Vane Material	Brass/Stainless Steel standard, all stainless Steel (SS) optional.
Bearings	Two stainless steel roller-balls, sealed with low viscosity lubricant.
Transducer	Precision potentiometer, 5,000 ohms ± 20%, Linearity error <1%, 1.25W max.
Mechanical/Electrical Travel	Mechanical - 360° (continuous)/Electrical - >340°
Typical Transducer Voltage	3 to 12 volts dc.
Connection	5 pin (3 pin to special order)
Operating Temperature Range	-20°C to +60°C

4 – 20mA Output Versions

SYN710-3500	Wind Speed, loop powered.	Refer to the SYN710-3000 series data sheet.
SYN710-3900	Wind Direction, loop powered	Refer to the SYN710-3000 series data sheet.

Accessories Available

SYN710-4900	Mounting cross arm (1m long, horizontal, centre mounting).
SYN710-4950	Mounting sickle for vertical alignment of transmitters.
SYN710-5#**	Cable Assemblies (#=0 combined, #=1, Speed only, #=2, Direction only; **=cable length in meters (max 100m) and includes transmitter connector(s).
SYN239	Wind speed (or direction) indicator and alarm unit. Refer to the SYN239 data sheet.
SYN72CS, SYN96CS or SYN144CS	Wind speed or direction indicators based on DIN72, DIN96 and DIN144 formats.

Complete set of indicators, interface units, loggers, alarm units and mounting hardware to suit almost every application.