



Suitable for wind speed and direction measurement – general purpose wind measuring applications – corrosion resistant applications

Datasheet

SYN-710 series

Wind speed & direction sensors

The Sychrotac SYN-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 SYN-710 sensors are also available in loop powered 4-20mA output versions and information is available under a separate datasheet (SYN-710-3000 series).

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.

Anemometer (general model)

Cup diameter	45mm
Circle diameter	130mm
Body diameter	41.5mm
Body height	170mm
Mass of cup set	20g
Weight	565g
Mounting	½ inch BSP female thread
Body material	Brass
Cup set material	Fiberglass reinforced phenolic
Bearings	Two stainless steel roller balls, sealed with low viscosity lubricant
Transfer coefficient	0.0526 km/hr per rpm 0.9m of wind run per revolution
Wind speed	Over 50m/sec (180km/hr)

Anemometer SYN-710-1965

The Synchrotac SYN-710-1965 wind speed sensor (anemometer) generates a DC voltage proportional to wind speed and requires no external power.

Transducer	DC generator
Starting threshold	<0.75m/sec
Signal output	6.5mV/km/hr nom
Output impedance	30 Ohms nominal
Power requirements	Nil
Connection	2 pin
Electrical load	>600 Ohms
Operating temperature	-20°C to +60°C

Anemometer SYN-710-1970

The Synchrotac SYN-710-1970 anemometer uses opto-electronic techniques to produce voltage pulses at a rate proportional to wind speed and requires external power.

Transducer	Opto-electronic
Starting threshold	<0.5m/sec
Signal output	1,2,4,8 pulses per cut set Revolution pulses nominally 5V@1mA max
Output impedance	100 Ohms nominal
Power requirements	8-26VDC, 15mA
Connection	3 pin
Electrical load	>5,000 Ohms, <1.000 pF
Operating temperature	-10°C to +60°C

Anemometer SYN-710-1980

The Synchrotac SYN-710-1980 uses a magnet/reed switch assembly to actuate a momentary contact closure every cup set revolution and requires no external power.

Transducer	Magnet/reed-switch
Starting threshold	<0.6m/sec
Signal output	Momentary contact closure per cup set revolution
Output impedance	10 Ohms nominal
Power requirements	Nil
Connection	2 pin
Electrical load	30V AC/DC 0.3A resistive
Operating temperature	-20°C to +60°C

Wind direction transmitter SYN-710-2900

The Synchrotac SYN-710-2900 wind vane uses a precision potentiometer to produce a voltage proportional to wind direction. The SYN-710-2900 requires an external reference voltage supply for the precision potentiometer.

Vane length	335mm
Circle diameter	382mm
Body diameter	41.5mm
Overall height	252mm
Mass of vane	235g
Weight	675g
Mounting	½ inch BSP female thread
Body & vane material	Brass
Bearings	Two stainless steel rollerballs, sealed with low viscosity lubricant
Mechanical travel	360°
Electrical travel	>340°
Reference voltage	3 to 12VDC supplied by user
Connection	5 pin
Operating temperature	-20°C to +60°C

Other options

The SYN-710 sensors are also available in loop powered 4-20mA output versions and information is available under a separate data sheet (SYN-710-3000 series).

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