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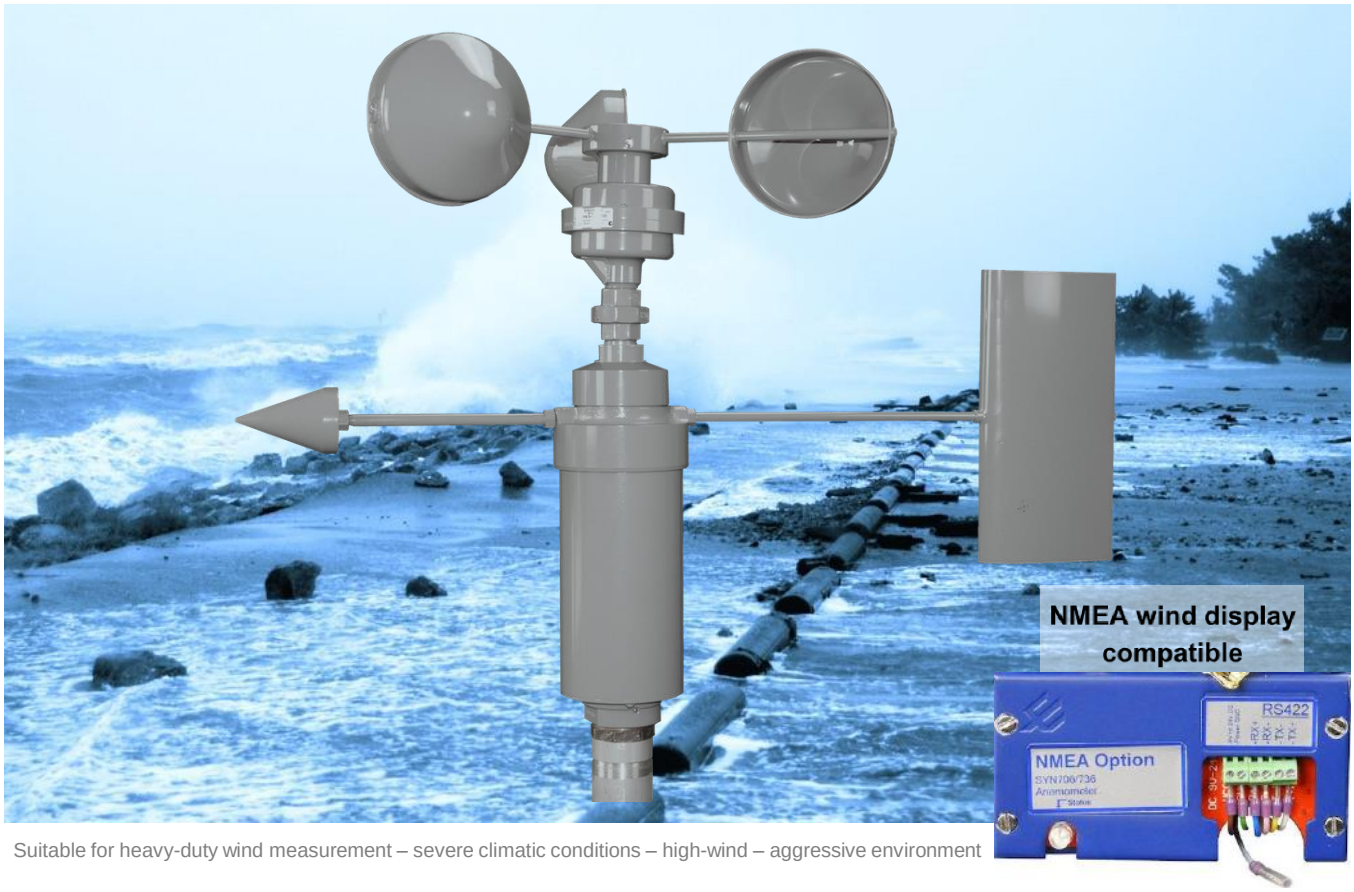
SYNCHROTAC an Observator brand



Suitable for heavy-duty wind measurement – severe climatic conditions – high-wind – aggressive environment

Datasheet

SYN-706 / SYN-73X NMEA output

Synchrotac heavy-duty wind speed & direction

The Synchrotac SYN-706 / SYN-73X has a long history of reliable service in very aggressive environments such as in coastal tropical cyclone areas and oil / gas platforms. It is designed for general meteorological applications where accuracy, durability and long term reliability are required, even in severe climatic conditions.

The heavy duty anemometer is available as the SYN-732 (poly-phase linear generator); the SYN-734 (isolated switch contact closure); and the SYN-736 (for opto-electronic pulse output).

The wind direction SYN-706 section uses a single precision potentiometer. For NMEA output all versions can be used. The anemometer section may be purchased separately for wind speed only applications.

The Synchrotac SYN-706 / SYN-736 is now compatible with Observator NMEA wind displays.

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Wind speed & direction transmitter

The Synchrotac SYN-706 Series heavy duty wind speed and direction transmitters 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.

For intrinsically safe and external applications, the SYN-706 wind direction section and SYN-734 wind speed section are classified as “Simple Apparatus” because they use passive sensors (potentiometer and switch) and there are no energy storage components within.

Heavy duty transmitter

The instrument is sealed against dust, moisture and vermin ingress. It mounts directly on a ¾ inch diameter (speed only) or 1½ 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.

The wind speed section may be any one of three user selected technologies. The type SYN-732 is a ten pole AC generator, the type SYN-734 employs magnetically actuated reed switches and the SYN-736 is an opto-electronic transducer. The wind direction section SYN-706 is available as a single precision potentiometer.

Specifications: wind direction transmitter

Direction 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

Specifications: wind speed transmitter

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	Better than ±3% above 5m/sec
Transfer coefficient	0.35 revs/meter

Combined wind speed and direction

Overall height	568mm (22.4”)
Overall weight	12kg (26.4lbs)

Compatibility

NMEA displays	OMC-display compatible

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Type SYN-732 wind speed transducer

Transducer	Permanent magnet 10 pole AC generator. 5 cycles/rev
Signal output	136mV/m/sec, and 1.8Hz/m/sec at >3m/sec
Starting threshold	<0.7m/sec
Output resistance	22 Ohms nominal
Operating temperature	-40°C to +60°C

Type SYN-734 wind speed transducer

Transducer	Magnetically actuated reed switch
Output	Momentary contact closure V1: one closure per cup set revolution V2: five closures per cup set revolution
ON resistance	8.2 Ohms nominal
Starting threshold	<0.6m/sec
Contact rating	48VDC/30VAC, 0.3A max Load must be non-inductive
Operating temperature	-40°C to +60°C

Type SYN-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). Default is 5 pulses/rev
Starting threshold	<0.5m/sec
Power requirements	4 - 28VDC, 12mA
Operating temperature	-20°C to +60°C

Type SYN-706 wind direction transducer

Transducer	1kΩ ± 15% precision potentiometer
Linearity	Better than 1% over electrical travel
Electrical travel	Better than 354°
Max transducer voltage	12V DC continuous CW to CCW. Fixed fuse fitted on wiper circuit
Dead band detection	100kΩ fixed resistor fitted Between potentiometer wiper and CCW end

Ordering information

Wind speed only	SYN-732, SYN-734V SYN-734V2, SYN-736
Wind speed & direction	Start with wind direction section (SYN-706) and add wind speed section preceded by a slash
Wind direction only	SYN-706
NMEA option	SYN-NMEA-OP
Examples	SYN-706/732 SYN-706/734V1 SYN-734V2

Welcome to the world of Observator

Solutions beyond expectations. That's what sets Observator apart. We believe in taking the extra step. Retaining our competitive edge, through innovation and uncompromised support, are key to success. As an ISO 9001:2015 certified company, we apply the highest quality standards to our products and systems.

Solutions beyond expectations

Since 1924 Observator has evolved to be a trend-setting developer and supplier in a wide variety of industries. From instruments for meteorological and hydrological solutions, air and climate technology, to high precision mechanical production, window wipers and sunscreens for shipping and inland applications.

Originating from the Netherlands, Observator has grown into an internationally oriented company with a worldwide distribution network and offices in Australia, Germany, the Netherlands, Singapore and the United Kingdom.

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