



Texas Electronics, Inc.

The Gold Standard in Weather Instrumentation Since 1957

Wind Speed Activated Control System

WSC-5



Description

The Texas Electronics WSC-5 Wind Speed Activated Control System is designed for switching on and/or off, various types of equipment according to wind speed parameters. Designed to withstand harsh environments the WSC-5 is a truly commercial/research grade instrument that is ideally suited for safety applications such as cranes and other types of high reach and load bearing equipment where strong winds can be a factor. The WSC-5 also offers complete, user-defined capability in controlling alarms, fountains, beacons, deodorizers, air samplers, etc., when wind speed exceeds or falls below a certain selectable value. The control output function (either switch-on or switch-off or both) can be set for activation at any desired speed value from 0-100 MPH (alternate ranges available). Single and dual set points are available depending on the requirements of the user. An adjustable time delay is used to minimize premature on-off cycling of the controlled equipment when wind speed is fluctuating around the selected set point. Time delays are programmable with time periods ranging from 1 to 1023 seconds.

Two modes of operation are provided; Automatic and Latching. In the Automatic mode, the relay(s) is energized at wind speeds exceeding the set point(s), but automatically de-energized when wind speed falls below the set point(s). In the Latching mode, the relay(s) energizes when the wind speed set point(s) is exceeded and remains energized until manually reset.

The WSC-5 Indicator/Control components are housed in a Nema-style enclosure for maximum environmental protection. Conduit connectors are mounted on the cabinet base for entry of respective cables. A terminal strip is provided within the enclosure for making the appropriate cable connections. A clear Lexan window in the door allows viewing of the control panel without opening the door.

Two standard WSC-5 systems are available, depending upon the requirements of the user. Both systems operate on a scale of 0-100 MPH unless special scale range (optional price) is requested.

Wind Speed is measured by a 3-cup anemometer, which is remotely located from the wind speed control/indicator assembly. The rotating cup assembly is mechanically coupled to a precision low-torque alternating current generator. The absence of brushes and contacts in this generator provides long life and low sensor starting threshold. The life of the generator is essentially equal to the life of its bearings. Bearings are incorporated on both the anemometer and generator shafts, which require no additional lubrication. All exposed sensor parts are constructed of gold-anodized aluminum to resist adverse environmental conditions. Sixty feet of 24 gauge insulated two-conductor cable provides transmission from sensor to controller module, although additional length may be specified.

Features & Benefits

- Enhances safety in numerous industrial operations
- Single and Double set points available
- System includes Controller and Wind Speed Sensor
- Easy installation and maintenance
- Over 30 years in production
- Weatherproof enclosure for superior outdoor protection
- Offers wide variety of settings

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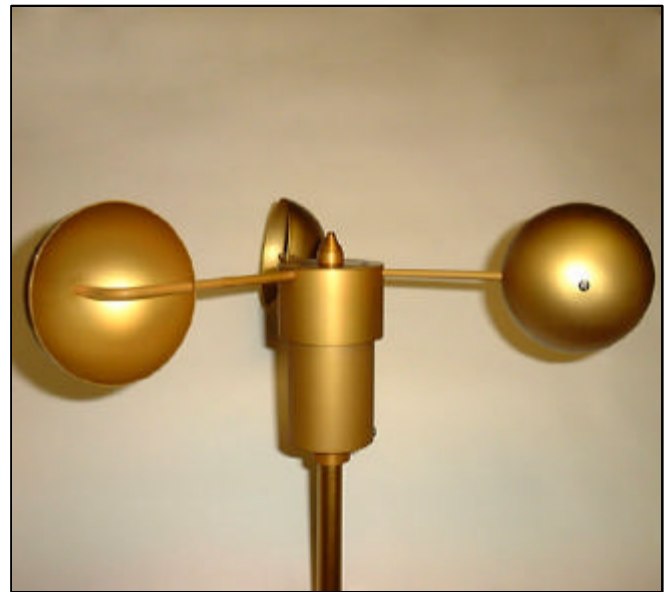
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Specifications – Display Console

Indicator Range:	0-100 mph
Indication/actuation accuracy:	2% of full scale
Set Point adjustability:	Adjustable over full scale
Dual set point units:	Adjustable to within 0 mph of each other
Time Delay Relays:	Switch Settable Time Delays From 0.1s to 10,230 s +/- 2% Setting Accuracy +/- 0.1% Repeat Accuracy SPDT or DPDT 10 A Output Contacts
Operator Controls:	1) on-off switch 2) set point adjustment knob(s) 3) time delay set point knob(s) 4) latch & auto switch
Control Console size:	12" W x 15.5" H x 7.5" D
Enclosure type:	Covers: NEMA style 3, 3R, 4, 4X and 12 Mounting: Wall Type Finish: Gray Fiberglass throughout with Lexan viewing window
Power Consumption:	Approximately 3 Watts
Warranty:	3 years
Cable:	60', 22 gauge 2 conductor



Wind Speed Sensor (Model TV-114)

A three-cup anemometer directly connected to a precision alternating current brushless generator measures wind speed. The anemometer and generator shaft rotate in sealed ball bearings.

Starting Threshold:	2.2 to 3.0 mph (1.1 to 1.3 m/s)
Distance Constant:	21.7 ft. (6.6 m)
Accuracy:	+/- 2.0 mph (0.9 m/s)
Excitation Requirement:	None, Self-Generating
Operational Envelope:	0 to 120 MPH (0 to 53.7 m/s)
Cup Wheel Diameter:	18" (45.7 cm)
Overall Height:	7.5" (19.1 cm)
Turning Radius:	9.0" (22.9 cm)

Installation & Maintenance

Console and wind speed sensor may be mounted at any desired location. The speed sensor should be mounted so that it will measure a true representative sample of wind speed affecting the equipment being monitored. It should be mounted high enough to clear all obstructions in a vertical position. A 12" straight mounting tube is provided with the sensor and may be clamped to any convenient vertical mast, as desired. The indicator/controller unit may be mounted either indoors or outdoors as required.

Field maintenance should include occasional cleaning of the cup assembly and inspection of the internal mechanism to make sure it is free of insects and debris. In some applications users may need to occasionally verify and document sensor accuracy with a synchronous test motor. Bearing and AC generator replacement may be performed every three to five years.

Ordering Information

<u>Model #</u>	<u>Description</u>
WSC-5-SDOR	Wind Speed Controller, Single Set Point
WSC-5-DDOR	Wind Speed Controller, Dual Set Point

Optional Parts / Accessories

Cable	Additional Cable
WSC-Alarm1	Indoor Alarm and Strobe
WSC-Alarm2	Outdoor Alarm and Strobe