



Texas Electronics, Inc.

The Gold Standard in Weather Instrumentation Since 1957

Wind Speed Fountain Controller

FC-2



Description

The Texas Electronics Series FC-1 and FC-2 Fountain Controller System are designed for switching on and/or off, various types of fountains and water features when wind speed exceeds a certain selectable value. The control output function can be set for activation at any desired speed value from 0-100 MPH (alternate ranges available). Single (FC-1) and dual (FC-2) 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. The Fountain Controller 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.

Wind Speed is measured by a 3-cup anemometer, which is remotely located from the fountain controller assembly. The rotating cup assembly is mechanically coupled to a 20-slot interrupter disc located within the lower sensor housing. A light beam, produced by a solid state light emitting diode (LED) passes through the interrupter disc and falls upon a photo detecting transistor assembly. The transistor switches on and off 20 items for each revolution of the anemometer shaft. A

pulse-train results, which is directly proportional and linear to wind speed. A 3-conductor cable is utilized to transmit the pulsed signal to the Fountain Controller console in addition to providing sensor circuit excitation. Power for the internal LED light source is supplied on one conductor, the open-collector output of the photo-transistor is available on the second conductor. The third conductor is a common ground. Normally, sensors are supplied with a factory selected resistor value that provides maximum signal strength by using a 5 VDC LED supply and a 10K pull-up resistor to 5 VDC on the collector output. This resistor can be changed, by the customer or the factory, for different operating voltages and pull-up values.

Features & Benefits

- Controls over-spray and water loss caused by wind
- Enhances the enjoyment and safety of your water feature
- Automatically turns fountains on/off based on current wind conditions
- Compact sized anemometer responds quickly to wind speed changes
- Can be easily camouflaged so it does not detract from beauty of water feature
- Time delay prevents rapid on/off cycling during sporadic or gusty wind conditions
- Dual set points

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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:	10" W x 12" H x 6.5" D
Enclosure type:	Covers: NEMA style 4X Mounting: Wall Type Finish: Gray Fiberglass throughout
Power Consumption:	Approximately 3 Watts
Warranty:	3 years
Cable:	60', 22 gauge 2 conductor



Wind Speed Sensor (Model TV-4)

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:	0.6 mph (0.27 m/s)
Distance Constant:	21.7' (6.6 m)
Accuracy:	+/- 2.0 mph (0.9 m/s)
Operational Envelope:	0-135 mph (0 to 60 m/s)
Cup Wheel Diameter:	6.0" (15.3 cm)
Overall Height:	4.75" (12.1 cm)
Turning Radius:	3.0" (7.6 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. 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. Possible bearing and/or photo-detector replacement at three to five year intervals, dependent upon environmental conditions.

Ordering Information

<u>Model #</u>	<u>Description</u>
FC-2	Fountain Wind Speed Controller, Dual set point

Optional Parts / Accessories

Cable	Additional Cable
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