H.B. Abrams Company
218 No. Woods Ave, Fullerton, Calif., 92832
Tel: (714) 526-6696, Fax: (714) 526-6616
www.hbabrams.com

025A SINGLE STAGE WIND CONTROLLER

Description

Provides one adjustable setpoint and one spdt output relay that trips instantly on setpoint. The relay output resets 60 seconds after the wind speed remains continuously below the setpoint.

This model is intended to control the display pump circuit on simple fountains or prevent irrigation systems from operating in high wind conditions.

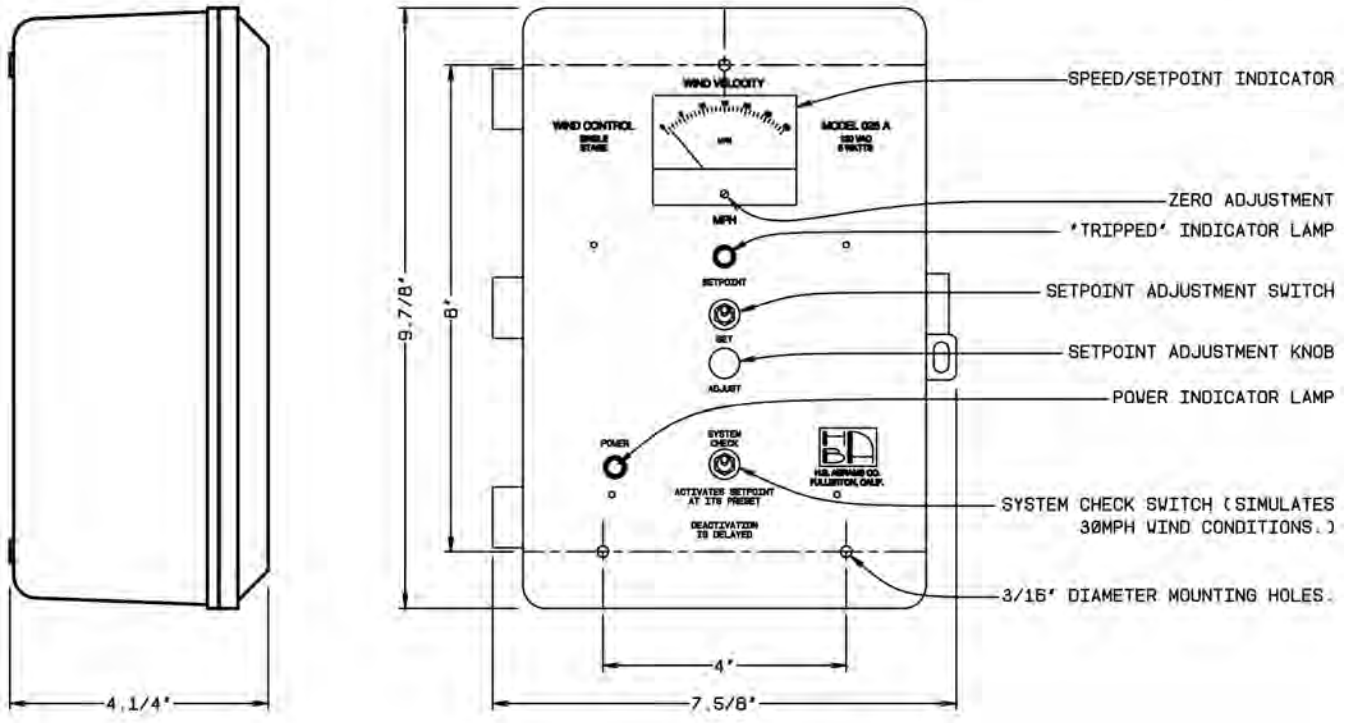
The wind speed is measured by means of an H.B. Abrams model 041 cup anemometer. The anemometer is constructed with lightweight, UV resistant plastic. The anemometer mount is a ½" npt brass conduit connection. Refer to the model 041 datasheet for more detail.

The model 025A is standard with analog wind speed indication meter, calibrated for 0 to 30 mph display, 120vac single phase power input, and 5 amp relay output. Included is one cup anemometer sensor, but can accept input from two (a four input model is available as a special order). The relay stage features a reset delay of 60 seconds to prevent excessive starting of the display pump.

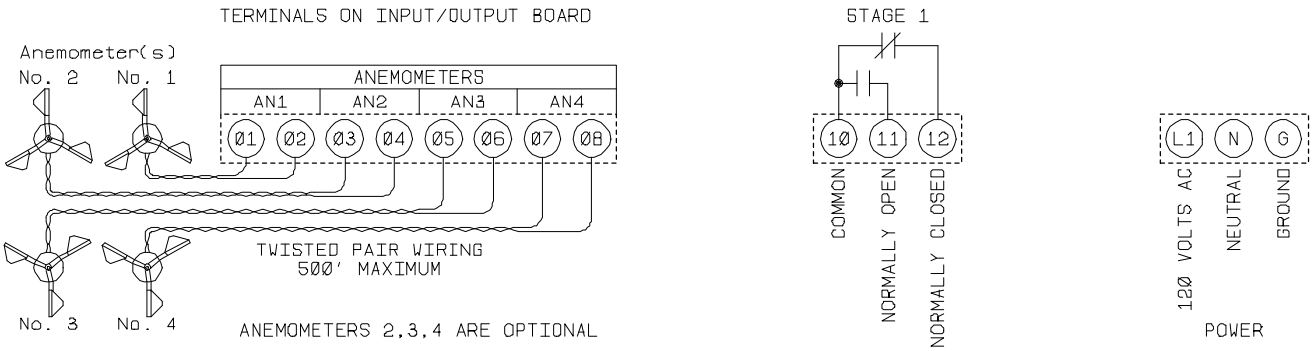
Installation

The controller enclosure is moisture proof but intended to be mounted indoors or under a cover to protect it from direct rain and sunlight. The anemometer (sensing head) can be mounted up to 500' away, with its own conduit and suitable cable (twisted pair, CAT 5 ethernet or similar). The anemometer should be mounted upwind of the fountain by at least 50'. This allows the controller to adjust or shut down the display before wind gusts gets to the fountain.

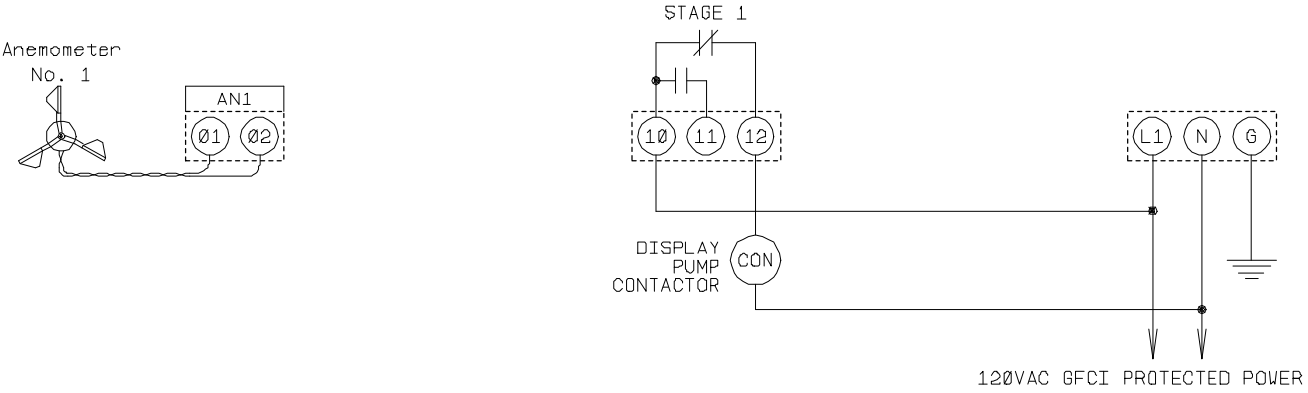
Dimensional Drawing



Connection Diagram



Suggested Electrical Connection



Specifications

Operational range……..0-30 mph

Accuracy……5% of full scale

Set point adjustable range……0 mph to 30 mph

Relay off delay……60 seconds

Enclosure type……NEMA 4 painted steel

Enclosure dimensions……8¾” x 7” x 4½”

Input voltage……120 vac nominal

Input frequency……50/60 Hz

Power consumption……5 watts

Shipping weight……9 lbs

Temperature range……32°f to 140°f

Anemometer cable……22ga twisted pair or better (cat5 ok)

Operator controls:

Setpoint set switch
Setpoint knob
System test switch

Operator indicators:

Power
Wind speed / setpoint adjust meter
Setpoint “tripped”

Digital output……5 amp SPDP relay contact

Warranty……One year

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041 CUP TYPE ANEMOMETER

Description

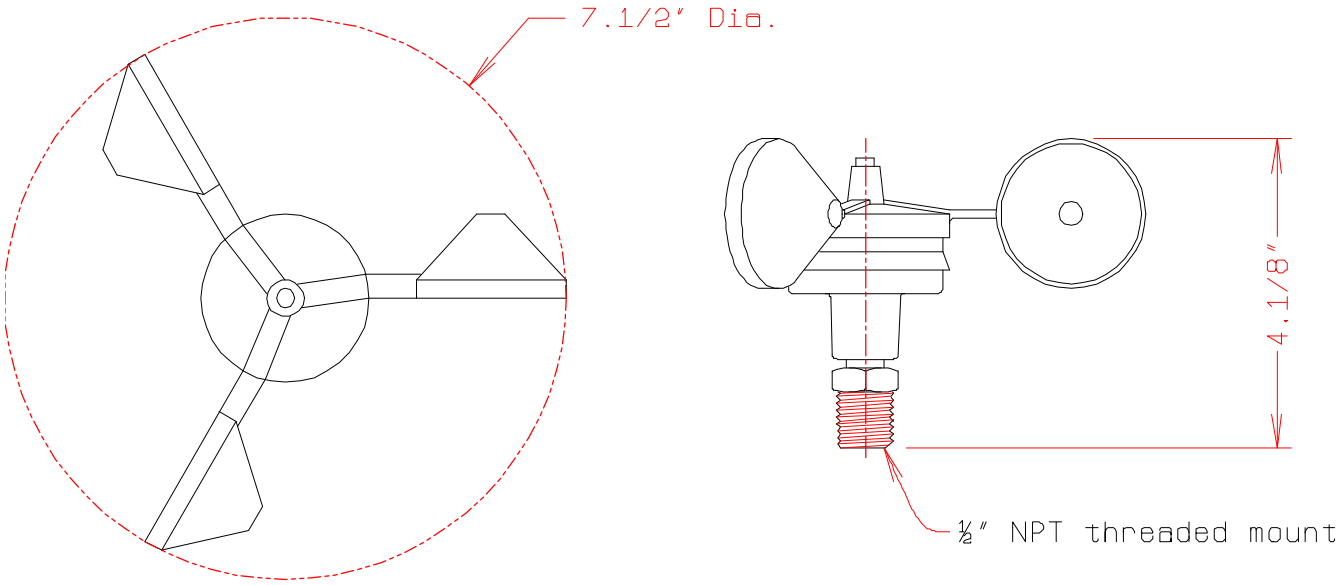
The anemometer is constructed with lightweight, UV resistant plastic. This allows for a low moment of inertia and unique bearings permit very rapid response to gusts and lulls. The black Lexan cups (virtually shatter-proof) have thermal properties which let it resist and shed icing far more effectively than metal assemblies. Because of their output linearity these sensors are ideal for use with various data retrieval systems. The model 041 sensor is factory calibrated. The anemometer mount is a ½" npt brass conduit connection. Connection is by two 1/8" brass posts with nuts. The center of the mount is hollow to route wiring through.

Installation

For proper monitoring and control, the anemometer should be mounted upwind from the device being controlled to allow the controlling device time to respond to approaching wind gusts before it reaches the device (fountain, irrigation system, crane, etc…).

In most areas, the wind will come from one of two directions depending on the time of day, and these two directions tend to be 180° from each other. Because of this, it's sometimes required to be able to sense the approaching wind from both directions.

Dimensional Drawing



Specifications

Anemometer type	Rotary cup
Cup type	Conical
Cup size	2" Diameter
Cup material	Black Lexan
Swept area	7½" Diameter
Rotor moment of inertia	68 x 10 x S-ft²
Starting threshold	<= 4mph
Distance constant	10 feet
Operational range	0-100 mph
Temperature range	–67° to + 130° f
Output	3 volts @ 102 mph, 300microamps
Humidity range	10% to 100% RH
Mount	½" male NPT
Mount material	Brass
Body material	Black ABS
Warranty	One year

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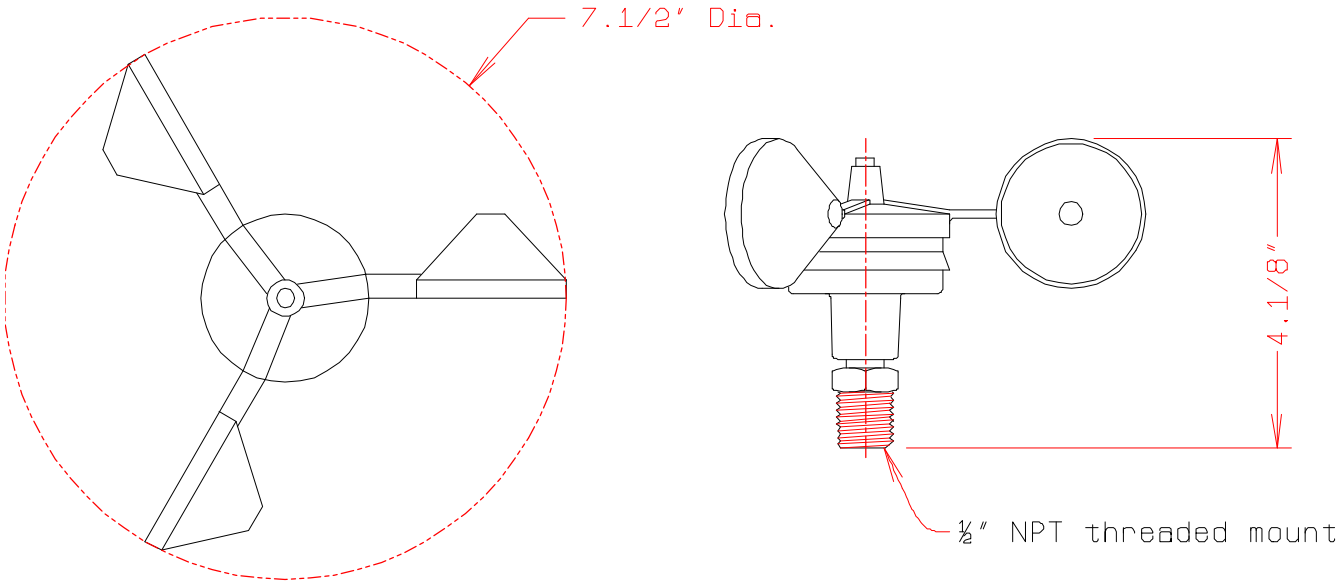

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