Use of Synchronous Motors with Climatronics P/N 100075 F460 Wind Speed Sensors

Purpose:
A synchronous motor is used to spin a wind speed sensor at a known rate to check system linearity.

Technique:
The motor should be connected to the sensor with a "hard" coupling. A piece of tubing may accelerate sensors at higher speeds. Do not use this. Climatronics motors are provided with the correct "hard" coupling for this application.

Conversions:
Meters per Second = MPH X 0.44704
Knots = MPH X 0.86897
Kilometers per Hour = MPH X 1.6094

Calculations:

Cup Type	Cupset P/N	Output Frequency	Velocity in MPH	Velocity in M/S
Lexan	102104	RPM/2	= ((Frequency / 9.511) + 0.3) = ((RPM / 19.022) + 0.3)	= ((Frequency / 21.28) + 0.13) = ((RPM / 42.55) + 0.13)
Heavy Duty Aluminum	101287	RPM/2	= ((Frequency / 9.511) + 0.5) = ((RPM / 19.022) + 0.5)	= ((Frequency / 21.28) + 0.22) = ((RPM / 42.55) + 0.22)
Stainless Steel	100057	RPM/2	= ((Frequency / 10.425) + 0.5) = ((RPM / 19.022) + 0.5)	= ((Frequency / 23.31) + 0.22) = ((RPM / 46.64) + 0.22)
Vinyl	100083	RPM/2	= ((Frequency / 9.511) + 0.5) = ((RPM / 19.022) + 0.5)	= ((Frequency / 21.28) + 0.22) = ((RPM / 42.55) + 0.22)

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