SPECIFICATIONS *– sin-cos hallpot® resolver*

Made by ---------- *Elweco, Inc.*

DESCRIPTION:

Two signals are simultaneously present.

The NON-CONTACTING HALL EFFECT is used to generate the signals such that there is no wear in the sensor. Ball bearings are used on the rotor for long life. Anodized journal bearings are used for lower cost applications.

Model 100SB-GSC

Model 100TJ-GSC

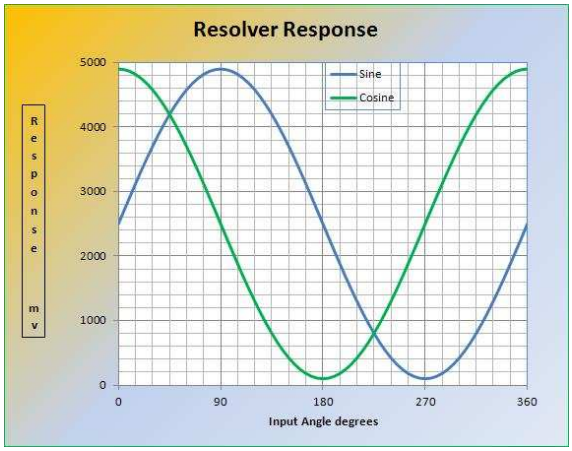
APPLICATIONS

Measure and control

--- antenna direction
--- wind direction
--- fluid flow direction
--- camera angle
--- hydrofoil and airfoil angle
--- robotic joint angle
--- dancer arm angle

These are typical applications. Your application may be different.

Elweco, Inc can modify design and parameters to fit into other applications.



This shows the relationship of the two waveforms from the sin-cos hallpot® resolver to be decoded and converted into the angular signal in your system.

SPECIFICATIONS

Power supply --- +4.5 to +5.5 Vdc at 18 ma.

Input angle of rotation --- 0 to 360 degrees, continuous.

Output signal range --- With Power Supply voltage of 5000 mv

Sine ------ 2500 + 2400sinθ

Cosine --- 2500- +2400cosθ
.
Rotation rate --- 0 to 10,000 RPM

ENVIRONMENT:

Temperature ---- -20 to +105 Deg C
Relative Humidity ----- 0 to +95 %

CONTACT

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RETURN TO HOME PAGE

This page contains information to help mounting and connecting the Two-Pi hallpot® Linear Angle Sensors. This includes:
1 --- Power supply and signal connections.
2 --- Internal electronics and explanation of signal outputs
3 --- Mechanical configurations --- made to fit.

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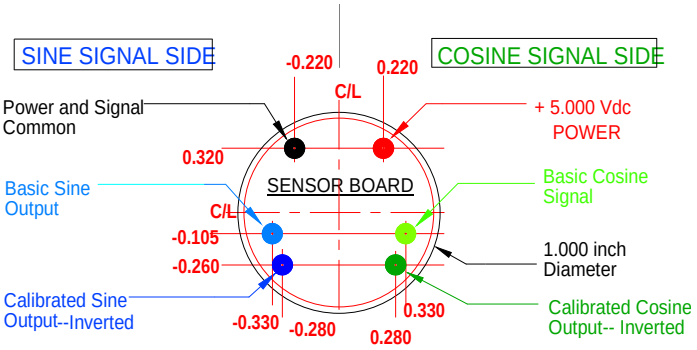
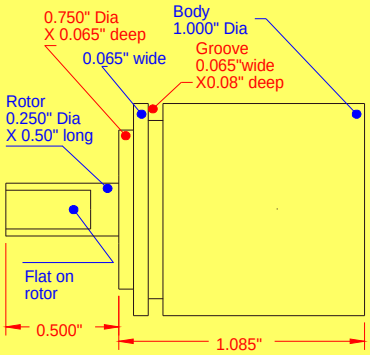
Dimensions are shown in the following drawings to enable designing into your system.

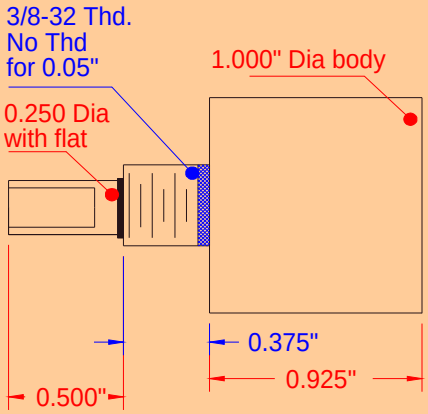
POWER SUPPLY and signal CONNECTIONS

It is important that the power supply be connected properly or damage to the device can result.





Model 100SB-G5



Model 100TJ-G5

INTERNAL Electronics and explanation of signal outputs of the **sin-cos hallpot®resolver**

Two hall-effect sensors are mounted orthogonally in the same magnetic field. Two signals, -sine and –cosine, are produced. They are standardized in gain and the phase error is measured. A second set of amplification corrects the phase error and produces the sine and cosine signals to within specifications.

Mechanical configuration ----- made to fit

Standard common dimensions and shape are used for mounting so that no special hardware is needed to fit these devices into most systems, either new systems or existing designs. These consist of common servo-mounting with two common sizes and one device with a threaded journal to fit where ordinary potentiometers normally fit.

Ball bearings are used in the servo-mounting designs and anodized journal bearings are used in the threaded designs.

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RETURN TO HOME PAGE