Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

√RoHS

R60D

DC Operated
Rotary Variable Inductance Transducer

SPECIFICATIONS

- **Lower cost than RVDTs**
- **Bipolar DC operation**
- **±60 degree sensing range**
- **High level VDC output**
- **Light-weight**
- **Non-contact electrical design**
- **Size 11 servo mount**
- **Anodized aluminum housing**

The **R60D** RVIT (Rotary Variable Inductance Transducer) is a DC operated non-contact angular position sensor. Operating on a ±15VDC supply, the R60D provides a smooth ±7.5VDC output proportional to angular position over a ±60 degree sensing range.

The RVIT proprietary design utilizes a set of four printed circuit coils and a light-weight conductive spoiler to achieve superior performance with a low moment of inertia. During operation, the light weight spoiler rotates with the transducer shaft, differentially altering the inductance of the printed circuit planar coils. The resulting unbalance is precisely measured using a patented autoplex circuit. This signal is then converted to a linear DC output voltage, proportional to the angle of the rotor shaft. The digital circuit is extremely resistant to environmental disturbances such as EMI and RFI, and is compatible for use with most analog position feedback systems.

Calibrated for use over the full ±60 degree sensing range, the R60D offers exceptional performance at a cost effective price. It also features a wide operating temperature range, infinite resolution, and an extremely long rotational cycle life.

FEATURES

- Wide temperature range
- ±7.5VDC output
- Internal voltage regulation
- Low moment of inertia
- Shielded ABEC 3 precision bearings
- Rugged aluminum housing

APPLICATIONS

- Ball valve position
- Throttle level position feedback
- Rotary actuator feedback
- Dancer arm position
- Reeler / Dereeler

PERFORMANCE SPECIFICATIONS

| ELECTRICAL SPECIFICATIONS	
Input voltage	+/-15VDC ±10%
Input current	25mA maximum
Angular range	±60 degrees
Non linearity	±0.5% of FR
Output at range ends	+/-7.5VDC
Sensitivity	125mV/degree
Temp. coefficient of output	±0.02% of FRO per ºF [0.036% of FRO per ºC], over operating temperature range
Output current	5mA maximum
Output impedance	1Ω maximum
Non repeatability & hysteresis	0.1% of FRO maximum
Frequency response	200Hz @ -3dB
ENVIRONMENTAL AND MECHANICAL SPECIFICATIONS	
Operating temperature	-13°F to +185°F [-25°C to 85°C]
Storage temperature	-67°F to +257°F [-55°C to 125°C]
Mechanical angular range	360 degrees (no stops)
Bearings	Shielded ABEC 3 precision
Shaft diameter	3/16 inch [4.76mm]
Housing material	Aluminum, black anodized
Mounting	Size 11 servo mount BU-ORD
Maximum torque, unbalance	0.12 inch.ounce-force [8.6 gram-force.cm]
Shaft load capability	10 lb [4.5Kg] Axial or Radial
Electrical connection	4 lead wires, AWG 24, PTFE insulation, 12 inches [30cm] long
Weight	1.2 oz [34 grams]
IP 60529 rating	IP60

Notes:
All values are nominal unless otherwise noted
FR (Full Range) is the angular range, end to end; 2xAº for ±Aº angular range
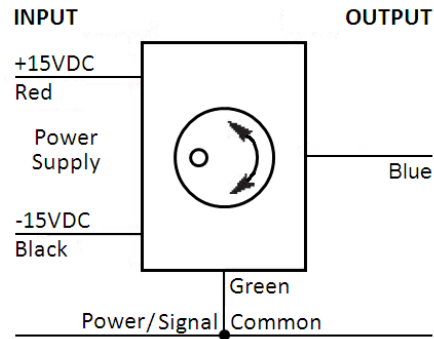_FRO (Full Range Output): Algebraic difference in outputs measured at the ends of the range_

DIMENSIONS
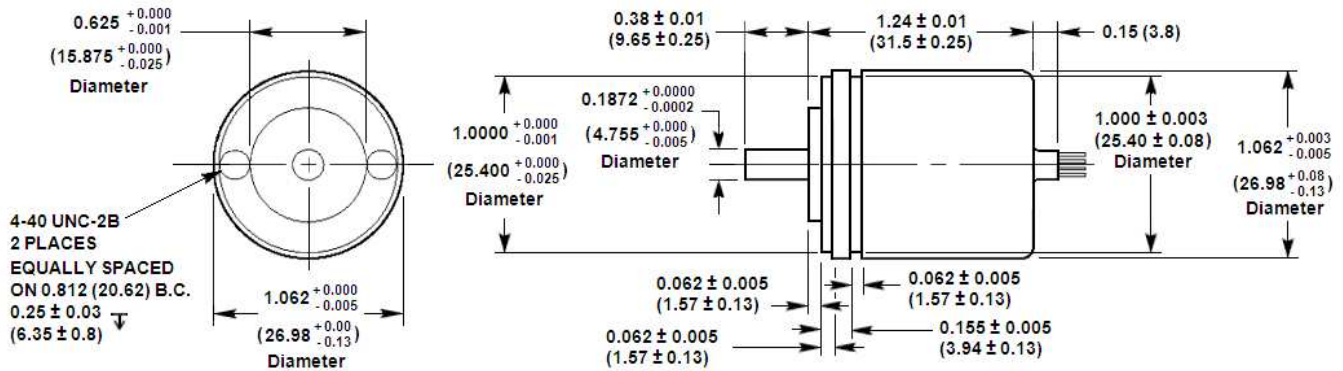
Dimensions are in inch (mm)

WIRING INFORMATION

ORDERING INFORMATION

Description	Model	Part Number
RVIT ±60º	R60D	02192500-060
ACCESSORIES		
R-FLEX multipurpose coupling kit	R-FLEX	66530072-000
Dual rail DC power supply (±15VDC)	PSD 40-15	02291339-000

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