

# R60D RVIT

## DC-Operated Rotary Variable Inductance Transducer

### DESCRIPTION

**RVIT's** are DC operated noncontact rotary transducers. The RVIT proprietary design incorporates a set of printed circuit coils and a conductive spoiler to achieve superior performance and low cost. During operation, the conductive spoiler rotates with the transducer shaft, altering the magnetic field generated by the printed circuit coils. The resulting unbalance is precisely measured using a patented autoplexing circuit. This signal is then converted to a linear DC output signal that is directly proportional to the angle of the rotor shaft. The predominantly digital circuit is very resistant to environmental disturbances and is ideally compatible for use with most digital electronics.

RVITs offer wide operating temperature range, infinite resolution, and a virtually infinite rotational life.

### R60D

The R60D rotary transducer is a shorter version of the R30D. Calibrated for use over  $\pm 60$  degrees, the R60D offers improved range without sacrificing other performance parameters.

The R60D also has improved resistance to electromagnetic disturbances and built in voltage regulation for guaranteed operation in applications where high noise environments exist. Typical applications include ball valve position feedback, throttle and position level feedback and actuation feedback.



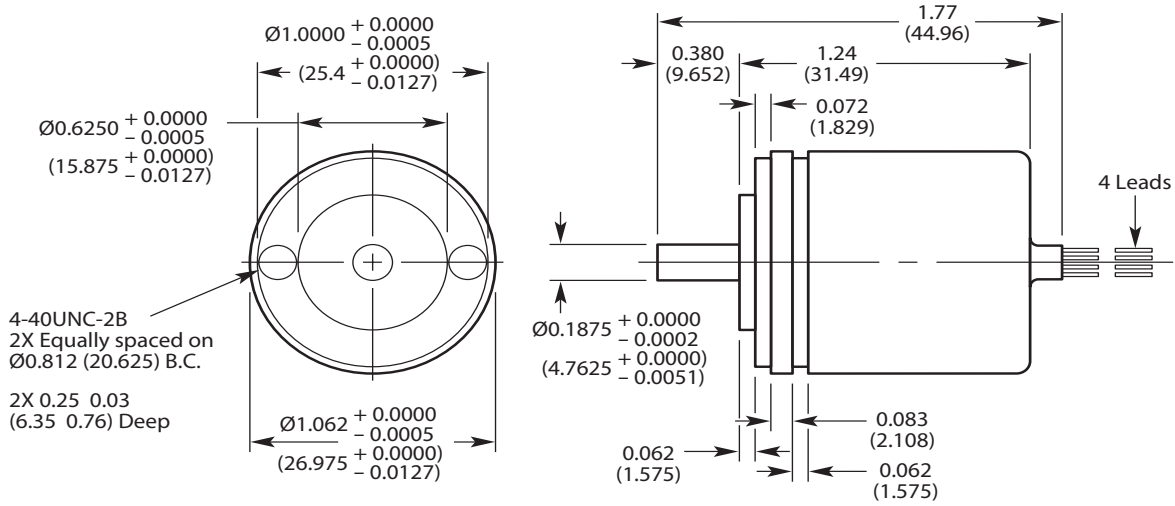
### specifications

<b>Full Range</b>	$\pm 60^\circ$
<b>Input Voltage (nom)</b>	$\pm 15$ Volts ( $\pm 10\%$ ) DC
<b>Scale Factor</b>	0.125 V/ $^\circ$
<b>Output Voltage (nom)</b>	$\pm 7.5$ VDC (at $\pm 60$ deg)
<b>Input Current (max)</b>	21 mA
<b>Output Current (max)</b>	5 mA
<b>Output Impedance</b>	<1 Ohms
<b>Frequency Response</b>	200 Hz @ -3 dB
<b>Linearity Error</b>	$\pm 0.50\%$ of full scale output
<b>Nonrepeatability &amp; Hysteresis (max)</b>	0.1% of full scale output maximum
<b>Storage Temperature Range</b>	-67°F to 250°F (-55°C to 125°C)
<b>Operating Temperature Range</b>	-13°F to 185°F (-25°C to 85°C)
<b>Temperature Coefficient of FS</b>	$\pm 0.02\%$ of FS/20°F to 160°F ( $\pm 0.04\%$ of FS/-5°C to 70°C)
<b>Lead Wires</b>	24 AWG, PVC insulation, 4 wire, minimum 12" long
<b>Torque</b>	0.12 in-oz (8 gm-cm)
<b>Weight</b>	1.2 oz (34 gm)
<b>Mounting</b>	Size 11 servo mount BU-ORD
<b>Bearings</b>	Matched and preloaded ABEC 3
<b>Shaft Diameter</b>	3/16 in (4.76 mm)
<b>Axial Shaft Bearing Load Capability</b>	10 lbs (4.54 kg)
<b>Radial Shaft Bearing Load Capability</b>	10 lbs (4.54 kg)
<b>Casing Material</b>	Aluminum

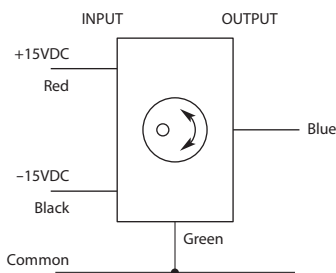
# R60D RVIT

## dimensions

in (mm)



## wiring



## ordering information

Specify by model number.

Model Number	Size	Range
R60D	11	$\pm 60^\circ$



R-Flex coupler available separately.