R60D – DC Operated Rotary Variable Inductance Transducer



RoHS

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

DESCRIPTION

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.

Also see our other DC operated, angular position sensor models, **RVIT-15 Series** (single ended DC operation, voltage or current output), **R120LC** (+5VDC operation, low cost) and **R30D** (bipolar DC operated RVDT).

Measurement Specialties, Inc. (NASDAQ MEAS) offers many other types of sensors and signal conditioners. Data sheets can be downloaded from our web site at: http://www.meas-spec.com/datasheets.aspx

*MEAS acquired Schaevitz Sensors and the **Schaevitz**® trademark in 2000.*

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

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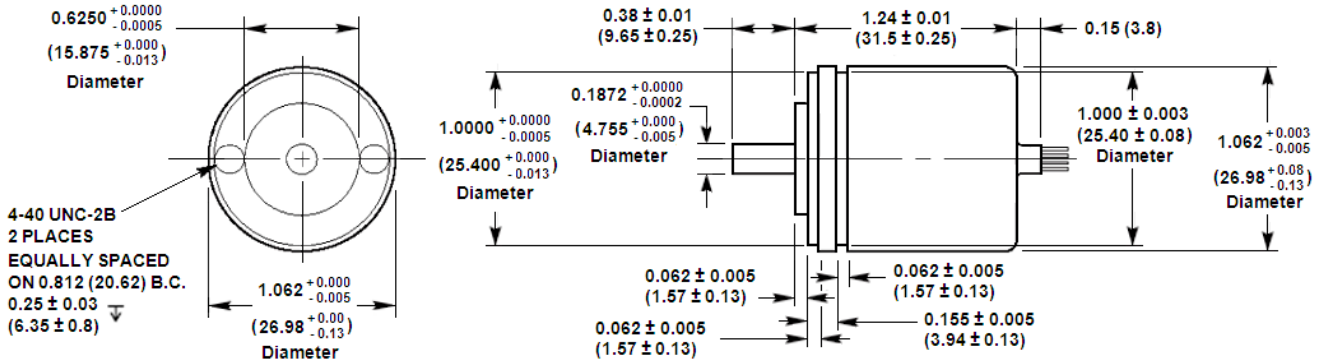
PERFORMANCE SPECIFICATIONS

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]

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

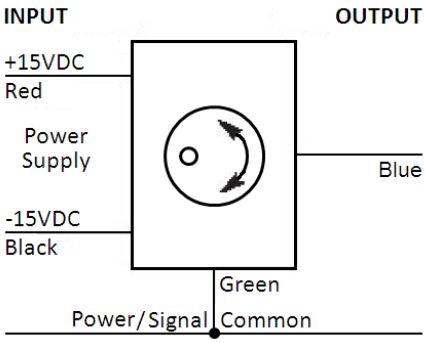
DIMENSIONS



Dimensions are in inch (mm)

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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 4-15	02291331-000

Refer to our "RVDT and RVIT Accessories" data sheet for other accessories.

TECHNICAL CONTACT INFORMATION

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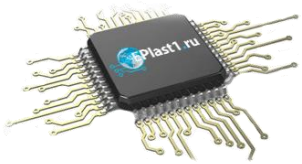
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Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

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- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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