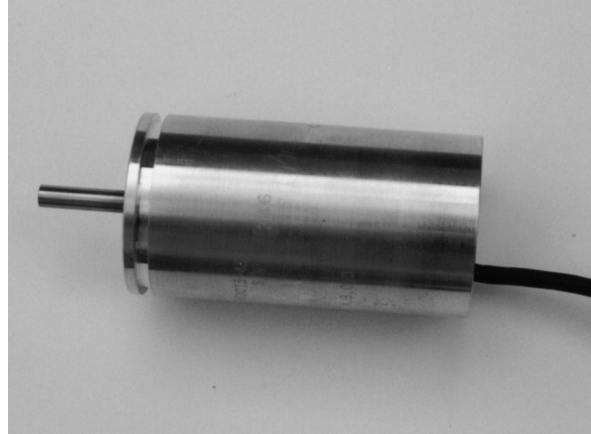


# RVDT Sensors DC/DC

Rotary Variable Differential Transformer



The Sentech DC/DC RVDT includes integrated electronics with an AC/AC coil. It features non contact type construction, similar to AC/AC RVDT: a stationary coil and rotating sensing element on the shaft. The shaft is supported at both ends by precision ball bearings (ABEC class 7) minimizing friction. The stable oscillator drives the primary and a precision demodulator and state-of-the-art filter produce smooth DC output voltage. The output unaffected by power supply variations, can be connected directly to a meter, op amp or data acquisition board. Sentech has models for  $\pm 15$  V DC or 24 V DC input and offers either voltage output or 4-

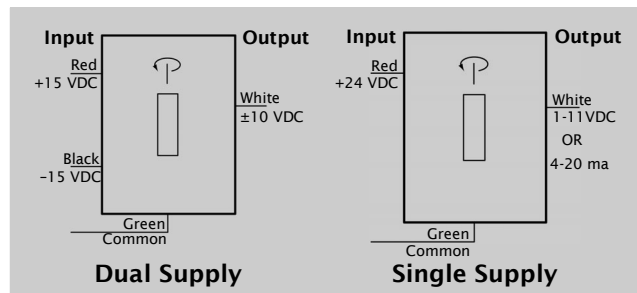


20 mA current output. Mechanically capable of rotating continuously, RVDT offers linear measurement up to  $\pm 70^\circ$ . Within  $\pm 45^\circ$ , linearity is less than  $\pm 0.5\%$  of Full Scale. There are two linear regions  $180^\circ$  apart. Factory calibrates one of the two regions and marks its corresponding null position. All Sentech RVDTs are magnetically shielded. Sentech also offers different diameter housings for RVDTs from 1" to 1.5" dia. with either aluminum or stainless steel housing. Combined with their rugged construction, they offer high performance and reliability and will also resist the shocks and vibrations occurring in most industrial environments.

## OPTIONS

- Different angular ranges
- Intrinsic Safe units certified to UL & CSA standards
- High Temperature — mil-spec versions up to  $125^\circ\text{C}$
- Different supply & output voltage/current schemes
- Flying leads or connector termination

## SCHEMATIC



## Technical Specifications (call for specific model drawings)

### PERFORMANCE

Non-Linearity	$< \pm 0.5\%$ of Full Scale @ $-45^\circ$ to $+45^\circ$ $< \pm 1.0\%$ of Full Scale @ $-60^\circ$ to $+60^\circ$
Angular Displacement	up to $\pm 70^\circ$
Mechanical Rotation	$360^\circ$
Operating Temperature Range	$32^\circ\text{F}$ to $160^\circ\text{F}$ ( $0^\circ\text{C}$ to $70^\circ\text{C}$ ) Wider range available

### ELECTRICAL

Input Voltage	Dual Supply or Single Supply (Nominal)
Output	Voltage ( $\pm 10$ , 0-10, $\pm 5$ , 0-5, special) or Current (4-20 or 0-20 mA)
Ripple Voltage	Voltage $< 25$ mV RMS or Current 0.04 mA RMS
Null Voltage	Zero or half of Full Scale Output Customer specified available

#### WARRANTY

All Sentech Inc. products are warranted against defective materials and workmanship. This warranty applies for a period of one year from the date of delivery to the original purchaser. Any product that is found within the one year period not to meet these standards will be replaced or repaired at the discretion of Sentech Inc. No other warranty is expressed or implied. Although Sentech Inc. manufactures its products to exacting specification standards, we assume no responsibility for their misuse. Sentech Inc. accepts no liability for damages, incidental or punitive, in applications using our products. *Please note:* It is solely the user's responsibility to properly install and maintain transducers. Sentech Inc. manufactures its products to meet stringent specifications and cannot assume responsibility for those consequences arising from their misuse or unauthorized modification.

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