

ROTATIONAL VOLTAGE DIFFERENTIAL TRANSFORMER

PULSE TECHNOLOGY BASED

MICROCONTROLLER BASED

Introduction:

MRVDT range of Pulse base RVDT [DC/AC] is available in 10 different regular models apart from tailor made solutions. Virtually covering all industrial and research applications requirement like electrical, thermal, mechanical, and environmental specifications. These Sensors/controllers are used in generation, transmission/distribution/heavy electrical engineering industries, defense, electrical/mechanical m/c testing, industrial electronics, railway, and avionics and many research and development activities. These RVDTs are compatible to any standard makes very high degree of accuracy (upto one micron meter)/repeatability/reliability. These indicators are available in different constructional material like ceramic-coated ms/poly carbonate/Al/SS...

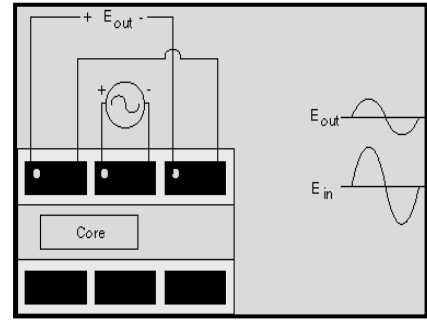
Operating Principle: The Pulse RVDT is based on two secondary coils, symmetrically wound moving under a primary coil. movement of the push rod displaces the position of the high permeability armature, which determines the voltage induced from the primary to each secondary. This voltage is linear proportional to a angular displacement and is conditioned by the hybrid circuit. In 'free armature' unguided versions there is no physical contact between, the armature and coils making it inherently a friction free device providing infinite resolution with least hysteresis. This means the RVDT can respond to the most minute movement of the high permeability armature.



Pictorial presentation of product



Pictorial presentation of product



pictorial presentation of working

Models & Technical data:

RVDT [A.C.]

Stroke length < 99.99 m.m

RVDT [D.C.]

Stroke length < 99.99 mm

| Model | Useable/un-usable angular displacement | Guided/UnGuided/Weight(gms) | KHz | Vout/deg/Vin 10 ⁻³ | Body O.D./Shaft dia. m.m. | Model | Useable/un-usable angular displacement | Guided/Un-ded/weight(g ms) | KHz X10 | Vout/deg/Vin 10 ⁻³ | Body O.D./Shaft dia. m.m. |
|-------------|--|-----------------------------|------|-------------------------------|---------------------------|-------------|--|----------------------------|---------|-------------------------------|---------------------------|
| MRVDT-01001 | 0001.0/0010.0 | Option/060 | 1.0 | 2.60 | option | MRVDT-01002 | 0001.0/0010.0 | Option/068 | 13 | 2.60 | option |
| MRVDT-02001 | 0002.0/0016.5 | Option/075 | 5.0 | 3.90 | option | MRVDT-02002 | 0002.0/0016.5 | Option/085 | 12 | 3.90 | option |
| MRVDT-02501 | 0002.5/0025.0 | Option/100 | 2.40 | 1.60 | option | MRVDT-02502 | 0002.5/0025.0 | Option/120 | 8.0 | 1.60 | option |
| MRVDT-03001 | 0003.0/0036.0 | Option/140 | 2.4 | 0.75 | option | MRVDT-03002 | 0003.0/0036.0 | Option/160 | 6.0 | 0.75 | option |
| MRVDT-05001 | 0005.0/0040.0 | Option/155 | 2.0 | 0.61 | option | MRVDT-05002 | 0005.0/0040.0 | Option/180 | 5.0 | 0.61 | option |
| MRVDT-07501 | 0007.5/0050.0 | Option/170 | 2.0 | 0.41 | option | MRVDT-07502 | 0007.5/0050.0 | Option/190 | 4.5 | 0.41 | option |
| MRVDT-10001 | 0010.0/0100.0 | Option/170 | 2.0 | 0.23 | option | MRVDT-10002 | 0010.0/0100.0 | Option/210 | 3.0 | 0.23 | option |
| MRVDT-20001 | 0020.0/0150.0 | Option/190 | 1.5 | 0.19 | option | MRVDT-20002 | 0020.0/0150.0 | Option/220 | 2.5 | 0.19 | option |
| MRVDT-30001 | 0030.0/0150.0 | Option/210 | 1.5 | 0.12 | option | MRVDT-30002 | 0030.0/0150.0 | Option/245 | 2.0 | 0.12 | option |
| MRVDT-40001 | 0040.0/0200.0 | Option/220 | 1.5 | 0.09 | option | MRVDT-40002 | 0040.0/0200.0 | Option/255 | 1.5 | 0.09 | option |
| MRVDT-50001 | 0050.0/0300.0 | Option/260 | 1.0 | 0.02 | option | MRVDT-50002 | 0050.0/0300.0 | Option/265 | 1.0 | 0.02 | option |
| MRVDT-60001 | 0060.0/0300.0 | Option/290 | 1.0 | 0.009 | option | MRVDT-60002 | 0060.0/0300.0 | Option/285 | 1.0 | 0.009 | option |
| MRVDT-99001 | 00100.0/300.0 | Option/310 | 1.0 | 0.002 | option | MRVDT-99002 | 00100.0/300.0 | Option/340 | 1.0 | 0.002 | option |

General electrical/mechanical specifications:

Operating voltage: 12 volts D.C. /220 Volts A.C./option

Frequency: 5000-20,000 Hz

Linearity: 0.1/0.2/0.3% of F.S.

Null voltage: 0.5/1/1.5% of F.S.V.

Position offset/Gain: programmable

Operating Temperature range: 60/100/200 Degree cel

Temperature coefficients of measurement: 10x10⁻⁶ ppm/degree cel

Temperature range: 0-70 degree cel

Permissible harmonic: upto 3.0% of principle harmonic

Power consumption: 5.0 V.A [max]

Accuracy: 0.5/1.0/2.0 % reading

Repeatability: 100 of reading Size: 6x8x8

Resolution: 1/10 of least significant bit (**1/10 degree**)

Switching operation life: 10000

Control: control against three different set point

Interface: RS-232/0-5 volt D.C/ proportional to angular rotation

Additional: linearity control in six steps. /

R.V.D.T. Shaft: SS-304/ SS-316/Al.N/Si.C

NOTES:

The Four numeral after product code indicates the (displacement in degree), and last digit corresponds AC/DC excitation (1-A.C., 2-D.C., 3-PULSE)



MRVDT-50001

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