

RVDT Displacement Transducer

Penny+Giles RVDT's

The Penny+Giles rugged, high integrity RVDT displacement transducer is designed for operation in harsh automotive and motorsport environments. The design elements employed have evolved from the technology and experience gained over 40 successful years in the aerospace/military sensor market, where performance and reliability under extreme operating conditions are paramount

High accuracy system performance

This AC operated RVDT displacement transducer has been designed primarily for use in the 'difference over sum' (ratiometric) configuration to provide high system accuracy performance where the output is virtually unaffected by temperature and supply changes. Using high integrity coil and rotor designs, combined with a titanium housing, this RVDT can be supplied with a choice of shaft and mounting flanges to suit high performance, high temperature engine control applications.



RVDT Features

Benefits

- | | |
|--|---|
| <ul style="list-style-type: none"> • No contact between the sensing elements <ul style="list-style-type: none"> • Precision low torque bearings <ul style="list-style-type: none"> • Infinite resolution • Temperature range -40° to +180°C • High integrity coils, screen and connection assemblies <ul style="list-style-type: none"> • Rugged mechanical design with titanium housing • Corrosion resistant stainless steel drive shaft | <ul style="list-style-type: none"> • Virtually infinite life and fast dynamic response • Long trouble free life • All displacement will be sensed • Maximum reliability in hostile environments • Maximum reliability in hostile environments • Maximum reliability in high shock and vibration environments • Accurate drive location in hostile environments |
|--|---|



RVDT ac operated

PERFORMANCE

Electrical angle	degrees	±60 (120 total)
Mechanical angle	degrees	360 continuous
Input voltage	Vrms	3
Input frequency	kHz	2
Insulation resistance		Greater than 50M at 250V d.c.
Resolution		Virtually infinite
Operational temperature	°C	-40 to +180
Operating mode		Ratiometric
Electrical output R proportional to position		$R = \frac{V_a - V_b}{V_a + V_b}$
Electrical output R at ±60°		±0.504
Non-linearity (0 to ±50°)	±%	1
(±50° to ±60°)	±%	2
Input impedance		Greater than 150 at 2kHz
Load resistance (per coil)		Greater than 100k
Phasing		With black, white and yellow leads common, the output on blue and green leads shall be in anti-phase with the red input for all shaft positions
Temperature error	ppm/°C	Please consult the factory for details
Weight (maximum)	gm	65

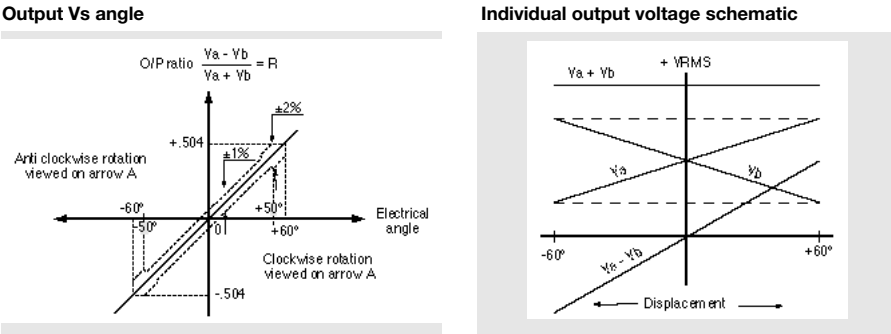
OPTIONS

Mounting Custom mounting configurations can be specified

ORDERING CODE

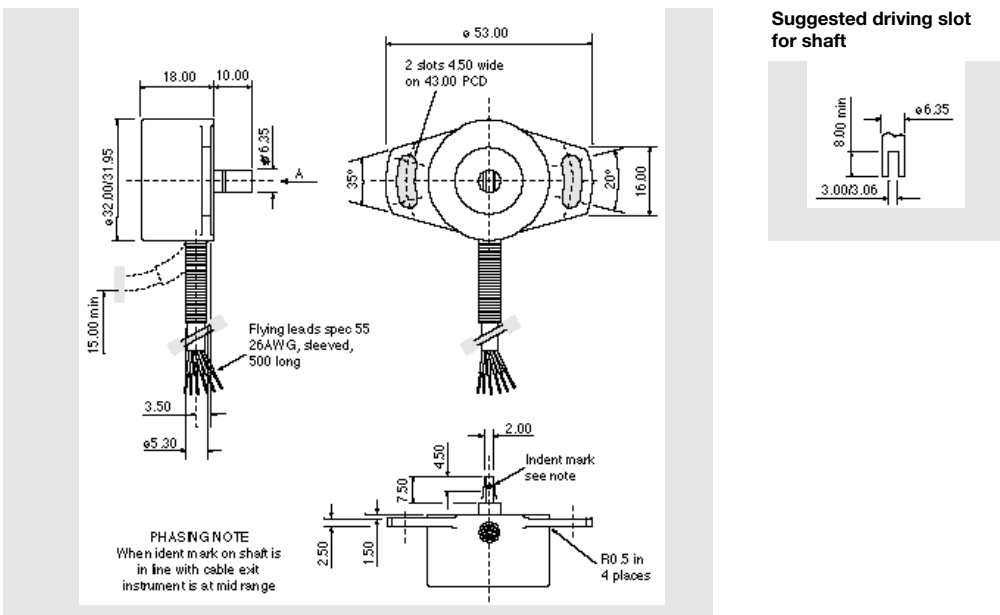
RVDT D45600

OUTPUT SCHEMATICS



DIMENSIONS

All dimensions shown in mm

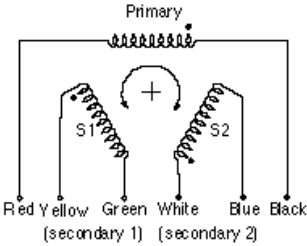


Note: Drawings not to scale

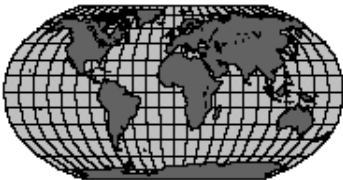
ELECTRICAL CONNECTIONS

RVDT

6 flying leads 26 AWG, sleeved 500mm long.



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