

## LINEAR VARIABLE DIFFERENTIAL TRANSFORMER (LVDT), LONG STROKE

The Linear Variable Differential Transformer (LVDT) is used in an open loop reservoir level sensing system for flow control of aircraft hydraulic system. The unit is designed to withstand severe vibration to a peak response of 60 g<sup>2</sup>/Hz at 700 Hz. Mechanical design required a combination of disciplines to obtain a housing with optimal strength to weight ratio and to operate at high slew rate in hydraulic fluid at -40 to 275°F. The transformer design offers versatile output signal processing in either the Difference/Excitation or the Difference/Sum ratiometric mode which lends itself well to applications requiring superior accuracy and gain versus temperature stability with built-in sensor fault detection capability.



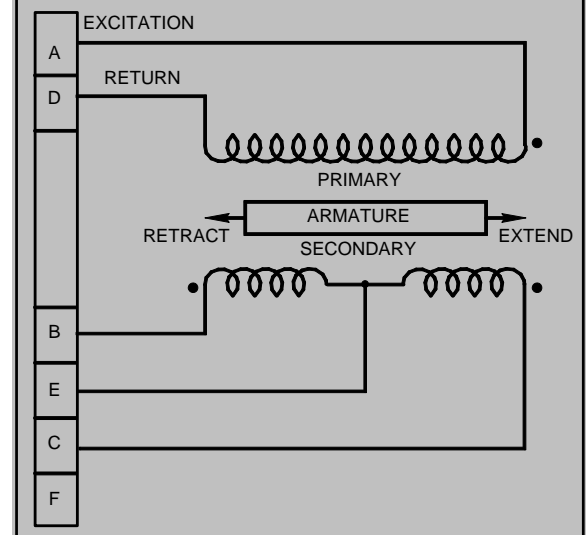
### MECHANICAL DATA

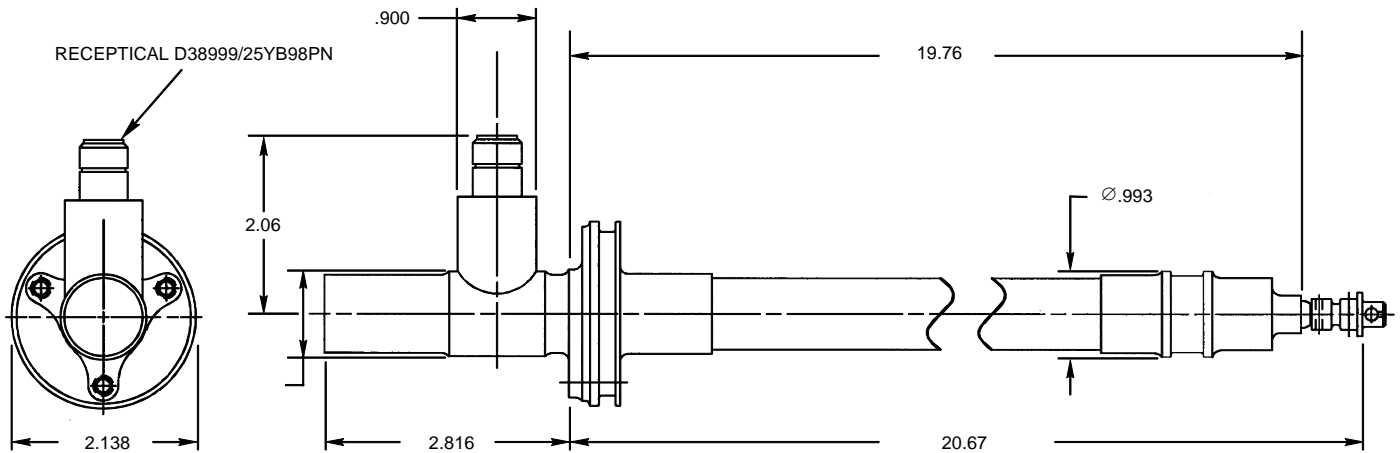
CHARACTERISTICS	UNITS	SYMBOL	VALUE
GROUND SURVIVAL TEMP, RANGE (REF)	°F	T	-65
OPERATING TEMP. RANGE (REF)	°F	T	-40 TO +275
OPERATING PRESSURE (REF)	PSIG	P	85
STROKE, MECHANICAL (REF)	INCHES	-	8.603
MAX WEIGHT (REF)	POUNDS	W <sub>T</sub>	2.28

### PERFORMANCE CHARACTERISTICS

CHARACTERISTICS	UNITS	SYMBOL	VALUE
EXCITATION VOLTAGE	V rms	V <sub>1</sub>	7.10°2%
EXCITATION FREQUENCY	Hz	f	3000°10, 3200°10
SECONDARY LOAD IMPEDANCE; IN PARALLEL WITH 150-500 Pf	KOHM	-	50°3%
SENSITIVITY (IN-PHASE) @ 3000° ±10 Hz	V <sub>2</sub> /INCH	-	0.5010~1%
SENSITIVITY (IN-PHASE) @ 3200° ±10 Hz	V <sub>2</sub> /INCH	-	0.5013°1%
LINEARITY	%FULL SCALE	-	°0.5
INPUT IMPEDANCE	OHMS	Z <sub>IN</sub>	500°10%
OUTPUT IMPEDANCE	OHMS	Z <sub>OUT</sub>	<300
INSULATION RESISTANCE	BETWEEN WINDINGS AND CASE @ 800 V dc	MEGOHMS	100
	BETWEEN ISOLATED WINDINGS @ 500 V dc		100
DIELECTRIC STRENGTH	BETWEEN WINDINGS AND CASE 80 Hz	V rms	1000
	BETWEEN ISOLATED WINDINGS 80 Hz		1000
STROKE, ELECTRICAL	INCHES	-	°8.510
TEMP. COEF, (% OF FULL SCALE)	V <sub>2</sub> /V <sub>1</sub> /100° F	tc	-1.0 TO -2.0

### WIRING DIAGRAM





### ASHEVILLE PRODUCT LIST

#### SENSORS

LVDT  
RVDT  
Synchros  
Resolvers

#### ELECTRONICS

PWM Amps  
Servo Amps  
Converters  
Power Supplies

#### MOTORS

AC  
DC  
Brush/Brushless  
Induction/Synchronous

#### ACTUATORS

Linear  
Rotary

#### OTHER

Motor Gearheads  
Servo Systems  
Dampers  
Angle Sensors  
Torquers  
Tachometers  
Generators  
Alternators  
PC Boards  
Harnesses

For additional information on this product or any other product listed above please contact Kearfott's Marketing Department at:

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