

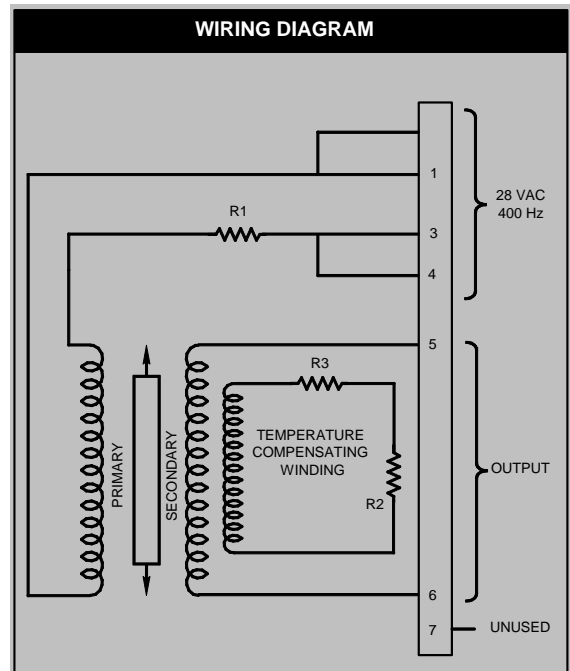
LINEAR VARIABLE DIFFERENTIAL TRANSFORMER (LVDT), SINGLE CHANNEL

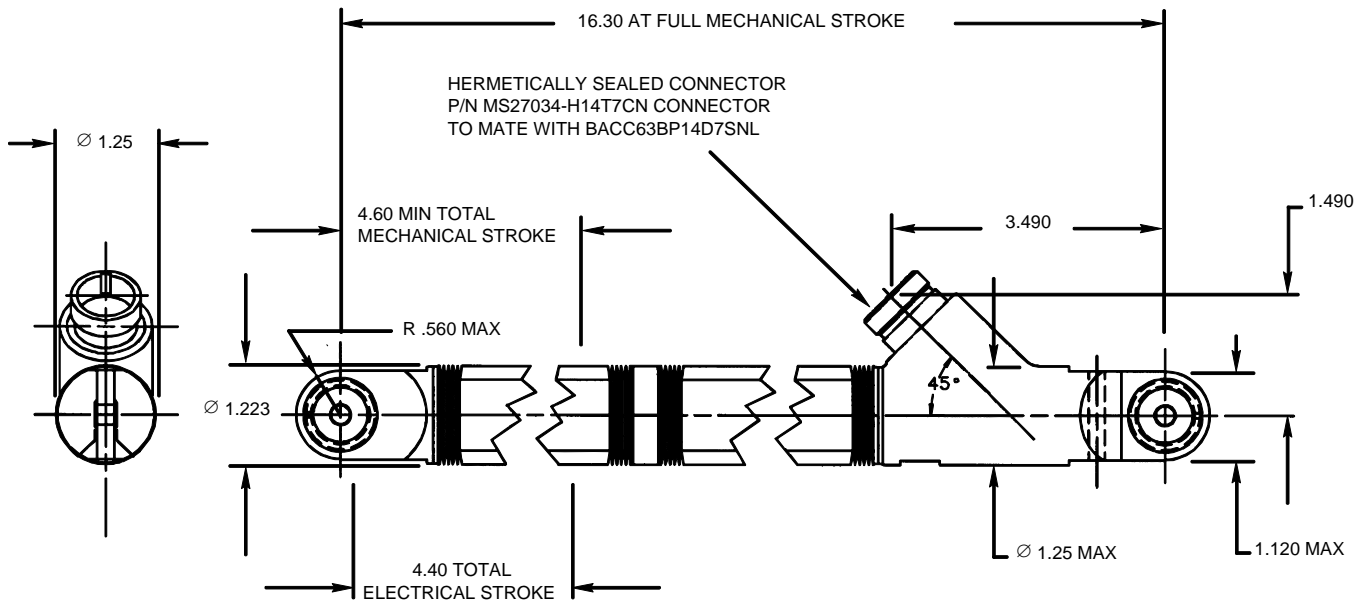
The Flap Skew Sensor for the Boeing "777" aircraft is a single channel Linear Variable Differential Transformer (LVDT) designed to meet the demanding requirements of the commercial aircraft industry. These units are mounted under each wing and connected to the various control surfaces. The signals are compared from wing to wing to determine the amount of skew between the matching surfaces. If the skew surpasses a specified angle, the aircraft will not continue to fly correctly. Due to its placement, the unit required a special flexible bellows to prevent internal contamination. Kearfott worked diligently with several vendors to develop and specify a flexible metal bellows that will provide the necessary protection while flexing for over 1,000,000 cycles without loss of internal pressure. The available envelope for this 400 Hz unit was limited to Boeing's desire to design the entire aircraft without a mock-up. Available space was completely determined by computer mock-up and was conservative to insure success. This unit has completed qualification testing and is currently flying on the "777".



MECHANICAL DATA			
CHARACTERISTICS	UNITS	SYMBOL	VALUE
GROUND SURVIVAL TEMP, RANGE (REF)	°F	T	-65 TO 180
OPERATING TEMP. RANGE (REF)	°F	T	-65 TO 160
WEIGHT (MAX)	POUNDS	W_T	2.67

PERFORMANCE CHARACTERISTICS @ 70°F				
CHARACTERISTICS	UNITS	SYMBOL	VALUE	
EXCITATION VOLTAGE	VOLTS rms	V _t	28	
EXCITATION FREQUENCY	HERTZ	f	400	
MAXIMUM OVERVOLTAGE	V rms	-	44	
LOAD	-	-	SEE ATP198252340	
PHASE SHIFT	DEGREES	ϕ	15 MAX	
NULL VOLTAGE	mV rms	-	50	
SENSITIVITY	V rms/INCH	V ₂	4.2459	
ACCURACY	V rms	-	±0.0748	
INPUT IMPEDANCE (±20%)	OHMS	Z _{IN}	556+j265	
OUTPUT IMPEDANCE (±20%)	OHMS	Z _{OUT}	267+J30	
INSULATION RESISTANCE	BETWEEN WINDINGS AND CASE @ 800 V dc	MEGOHMS	-	100
	BETWEEN ISOLATED WINDINGS @ 500 V dc			100
HIGH POTENTIAL	BETWEEN WINDINGS AND CASE	VOLTS RMS	-	1000
	BETWEEN ISOLATED WINDINGS			1000





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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