

10717

MODELS CP-2UTX and CP-2UTX-1-TCx

1.0 GENERAL DESCRIPTION:
 MODEL CP-2UTX IS A MINIATURE CONTACTLESS ROTARY POSITION SENSOR PACKAGED IN $\phi 16$ mm X 13.3 mm ($\phi 0.63$ " X 0.53") HOUSING. THE SENSOR IS DESIGNED FOR APPLICATIONS REQUIRING LOW TORQUE AND HIGH PERFORMANCE IN OUTPUT SMOOTHNESS, RESOLUTION AND RELIABILITY.

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2.0 ENVIRONMENTAL SPECIFICATIONS:

- 2.1 OPERATING TEMPERATURE: -40°C to +125°C
- 2.2 VIBRATION: 20 G's per MIL-STD-202E, 204C.
- 2.3 SHOCK: 50 G's, 11 mS per MIL-STD-202E, 213B.

3.0 ELECTRICAL SPECIFICATIONS: (UNLESS OTHERWISE SPECIFIED, Ta= 25°C)

- 3.1 INPUT VOLTAGE (Vin): 10 Vdc MAX. Ta= -40°C to +125°C
- 3.2 INPUT IMPEDANCE: 15 KOHMS $\pm 30\%$
- 3.3 ELECTRICAL ANGLE: $\pm 45^\circ$ (F.S.=90°) Ta= -40°C to +125°C
- 3.4 OUTPUT SENSITIVITY: 2.5% Vin/10° MIN.
- 3.5 INDEPENDENT LINEARITY: $\pm 1.5\%$ over F.S. Ta= -40°C to +125°C
- 3.6 INSULATION RESISTANCE: 100 meg OHMS @ 500 Vdc
- 3.7 DIELECTRIC STRENGTH: 500 Vrms @ 50/60 Hz for ONE MINUTE.

3.8 TEMPERATURE EFFECT (DEVIATION IS EXPRESSED IN EQUIVALENT ANGLE): REFER TO FIGURE 4 FOR CLARIFICATION.

3.8.1 FOR MODEL CP-2UTX (STANDARD UNIT W/O TEMP. COMPENSATION):

	Ta= 0°C to +75°C	Ta= -30°C to +125°C
AT 0° POSITION:	1.5° MAX.	4.5° MAX. (REF. ONLY)
AT $\pm 45^\circ$ POSITION:	7.3° MAX.	22° MAX. (REF. ONLY)

NOTE: THE VALUES SPECIFIED WITH " REF. ONLY " ARE PROVIDED ONLY AS DESIGN GUIDE INFORMATION NOT FOR GUARANTEED VALUE.

3.8.2 FOR MODEL CP-2UTX-1-TCx (TEMP. COMPENSATED UNIT):

	-TCA (Ta= 0°C to +60°C)	-TCB (Ta= -20°C to +80°C)	-TCC (Ta= -30°C to +100°C)
AT 0° POSITION:	0.3° MAX.	0.5° MAX.	0.7° MAX.
AT $\pm 45^\circ$ POSITION:	3.5° MAX.	5.5° MAX.	7.5° MAX.

4.0 MECHANICAL SPECIFICATIONS:

- 4.1 MECHANICAL ANGLE: 360° (ENDLESS)
- 4.2 TORQUE: 0.5 g-cm MAX.
- 4.3 WEIGHT: 15 g (APPROX.)
- 4.4 MOUNTING HARDWARES: A PANEL NUT and INTERNAL TOOTH LOCKWASHER SHALL BE SUPPLIED WITH EACH UNIT.

5.0 ELECTRICAL CONNECTIONS: SEE FIGURES 1 AND 2.

6.0 MARKING:

UNIT SHALL BE LABELED WITH MIDORI NAME, MODEL NO. AND SERIAL NO.

- 6.2 THE ARROW ON LABEL AND THE DOT ON SHAFT END, SHOWN IN FIGURE 1, ARE FOR DETERMINING APPROXIMATE 50% OUTPUT POINT BY ALIGNING THOSE MARKS. REFER TO FIGURES 1 AND 2.

7.0 MATERIAL:

HOUSING: CARBON STEEL, ZINC COATED
 SHAFT: STAINLESS STEEL
 BUSHING and FRONT LID: ALUMINUM, ANODIZED
 TERMINAL POST: BRASS, TIN PLATED

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN mm (in).

TOLERANCES:
 ANGLES $\pm 1.5^\circ$
 <10 mm: ± 0.25
 <100 mm: ± 0.5
 >100 mm: ± 1

		REVISION			
C.O.N	SYM	DESCRIPTION	DATE	DRAWN	APPR'D

A		1) 1.0 "GENERAL DESCRIPTION" RESTATED.	1/31/96	T.TSUGAWA	
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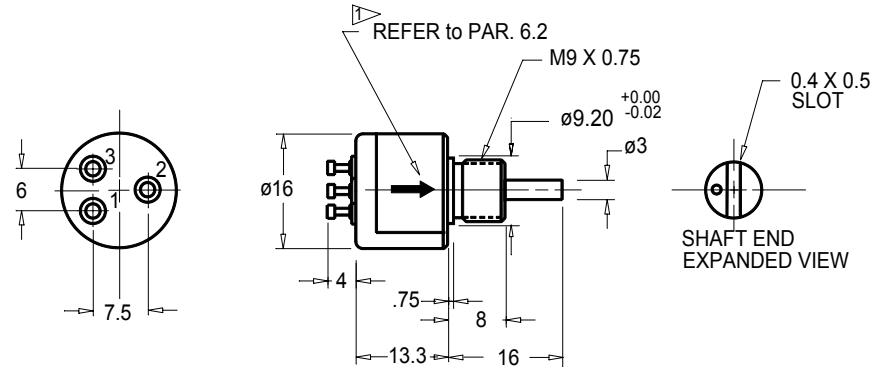


FIGURE1 OUTLINE DIMENSIONS

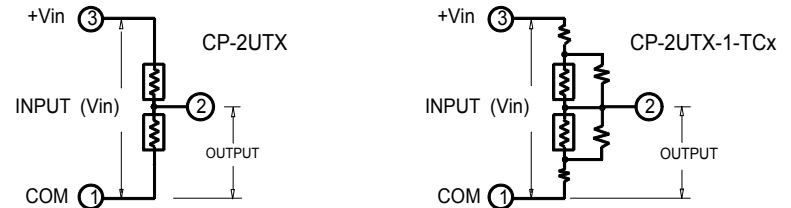


FIGURE2 SCHEMATIC

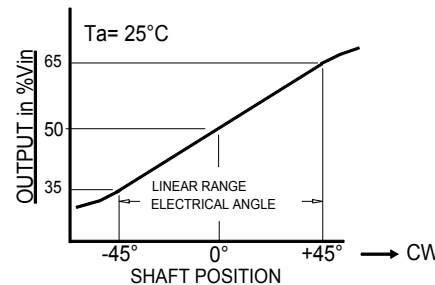


FIGURE3 TYPICAL OUTPUT CHARACTERISTICS

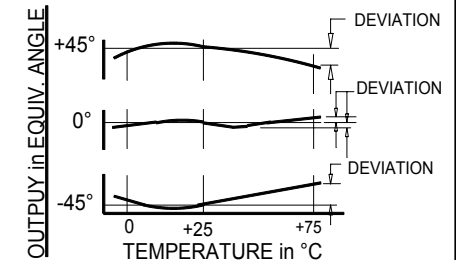


FIGURE4 TYPICAL TEMPERATURE CHARACTERISTICS

DRAWN T. TSUGAWA CHECKED Y. NAKAMURA APPROVED I. SOMA APPROVED	DATE 7/6/95 DATE 9/19/95 DATE 9/19/95 DATE	SPECIFICATION DWG FOR MODEL CP-2UTX CONTACTLESS POTENTIOMETER	Midori America Corporation FULLERTON, CA A-MAC-B73	A
SCALE:	FILE: CP-2UTX			