

10717

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

REVISION

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

C.O.N	SYM	DESCRIPTION	DATE	DRAWN	APPR'D
A		1) 1.0 "GENERAL DESCRIPTION" RESTATED.	1/31/96	T.TSUGAWA	

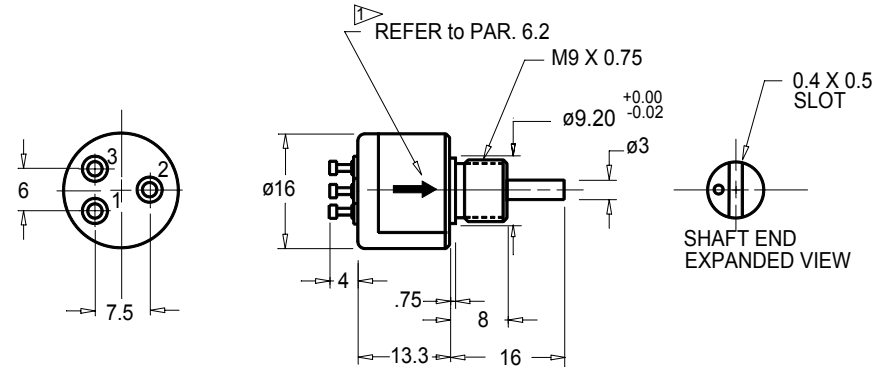


FIGURE1 OUTLINE DIMENSIONS

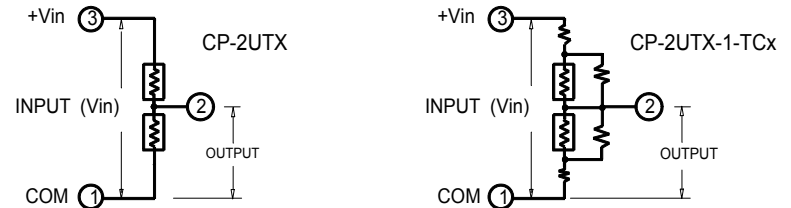


FIGURE2 SCHEMATIC

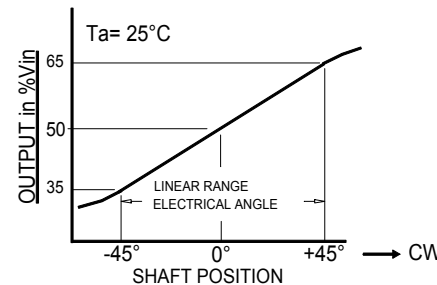


FIGURE3 TYPICAL OUTPUT CHARACTERISTICS

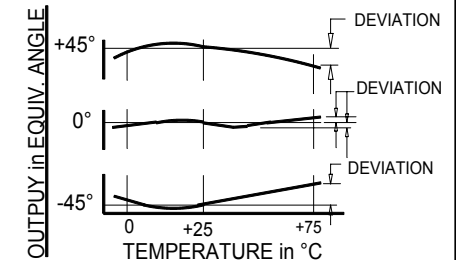


FIGURE4 TYPICAL TEMPERATURE CHARACTERISTICS

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	A-MAC-B73	A
SCALE:	FILE: CP-2UTX			