

1.0 GENERAL DESCRIPTION:
 UV-J IS A ROTARY POSITION SENSOR DESIGNED FOR COST EFFECTIVE FEEDBACK SENSING ELEMENT FOR SERVO SYSTEM WHERE HIGH PERFORMANCE AND RELIABILITY ARE REQUIRED IN SEVERE OPERATING ENVIRONMENTS.

2.0 ENVIRONMENTAL SPECIFICATIONS:

- 2.1 OPERATING TEMPERATURE: -40°C TO +125°C
- 2.2 STORAGE TEMPERATURE: -40°C TO +125°C
- 2.3 SHOCK: 50 G's, 11 mS.
- 2.4 VIBRATION: 20 G's, 10 to 2,000 Hz.



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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 ±30
- 3.3 ELECTRICAL ANGLE: ^(A) ±40° (F.S.=90°) Ta = -40°C TO +125°C
- 3.4 INDEPENDENT LINEARITY: ±1.5% F.S. Ta = -40°C TO +125°C
- 3.5 OUTPUT SENSITIVITY: 2.5%Vin/10° MIN.
- 3.6 INSULATION RESISTANCE: 100 Meg OHMS MIN. @ 500 Vdc.
- 3.7 DIELECTRIC STRENGTH: 500 Vrms @ 50/60 Hz.
- 3.8 TEMPERATURE EFFECT (DEVIATION IS EXPRESSED IN EQUIVALENT ANGLE): REFER TO FIGURE 4 FOR CLARIFICATION.

3.8.1 FOR MODEL UV-J (STANDARD UNIT W/O TEMP. COMPENSATION CIRCUIT)

Ta = 0°C to +75°C

- AT 0° POSITION: 1.5° MAX.
- AT ±40° POSITION: 6.7° MAX.

3.8.2 FOR MODEL UV-J-1-TCx (UNIT WITH TEMP. COMPENSATION CIRCUIT)

- | | | | |
|----------------------------------|--------------------------|----------------------------|-----------------------------|
| | -TCA
(0°C to +60°C) | -TCB
(-20°C to +80°C) | -TCC
(-30°C to +100°C) |
| AT 0° POSITION: | 0.3° MAX. | 0.5° MAX. | 0.7° MAX. |
| ^(B) AT ±40° POSITION: | 3.1° MAX. | 4.9° MAX. | 6.7° MAX. |

4.0 MECHANICAL SPECIFICATIONS:

- 4.1 MECHANICAL ANGLE: 90°
- 4.2 TORQUE: 20 g-cm MAX. ^(A)
- 4.3 WEIGHT: 20 g MAX.

5.0 ELECTRICAL CONNECTIONS: REFER TO FIGURES 1 AND 2.

6.0 MARKING:

EACH UNIT SHALL BE MARKED WITH MIDORI MODEL NO. AND MANUFACTURING LOT NO. (OR DATE CODE) OR SERIAL NO.

7.0 MATERIAL:

- 7.1 HOUSING and ROTOR: POLYPHENYLENE SULFIED, GLASS ENFORCED.
- 7.2 MOUNTING HOLE INSERT: NICKEL PLATED
- 7.3 INSULATED WIRE: ^(B) AVX-0.5f (NO.18AWG, 20 STRANDED, CONDUCTORS, VINYL SLEEVE)

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

TOLERANCES:

ANGLES	±1.5°
<10 mm:	±0.25
<100 mm:	±0.5
>100 mm:	±1

REVISION					
C.O.N	SYM	DESCRIPTION	DATE	DRAWN	APPR'D
A		ELECT. ANGLE WAS P45D. TORQUE WAS 10 ¹ g-cm MAX.	3/30/92	T.TSUGAWA	
B		PARA.3.8.1, FIGURES 3 AND 4; CORRECTED FOR 90D F.S. FIG.1.0: "150±20" WAS "200P15". FIG.1.1: 1.75 WAS 1.5.	10/12/92	T.TSUGAWA	

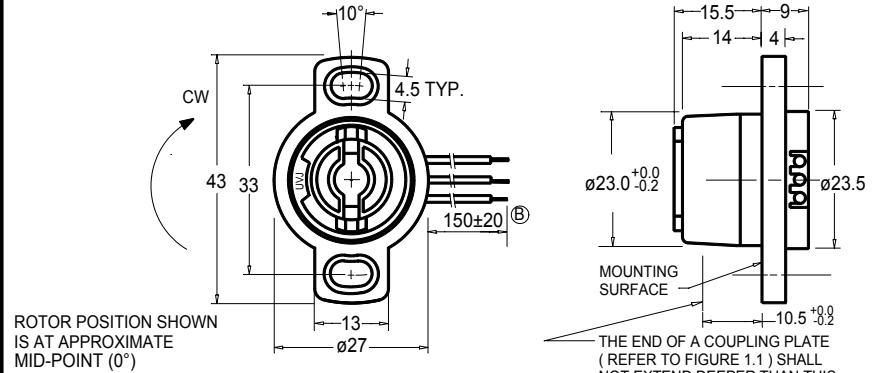


FIGURE 1 OUTLINE DIMENSIONS

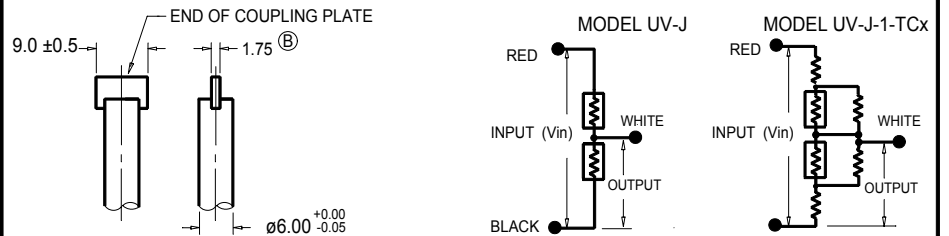
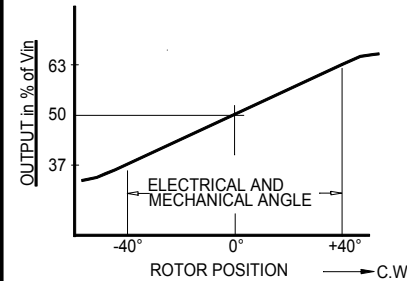
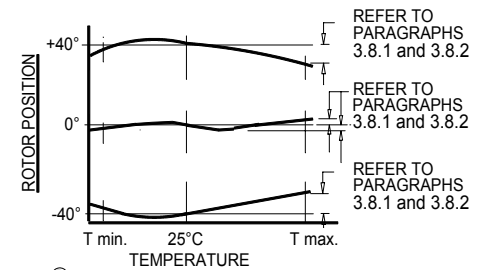


FIGURE 1.1 RECOMMENDED COUPLING SHAFT

FIGURE 2 SCHEMATIC



^(B) FIGURE 3 TYPICAL OUTPUT CHARACTERISTICS



^(B) FIGURE 4 TYPICAL TEMPERATURE CHARACTERISTICS (REF. ONLY)

DRAWN T. TSUGAWA CHECKED Y. NAKAMURA APPROVED APPROVED SCALE:	DATE 2/14/92 DATE 2/28/92 DATE DATE DATE FILE: UV-J	SPECIFICATION DWG FOR MODEL UV-J CONTACTLESS ROTARY POSITION SENSOR	1 OF 1
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