

10748

REFERENCE:

REVISION

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

**1.0 GENERAL DESCRIPTON:**

MODEL QP-3F IS A QUARTER TURN, SEALED, CONDUCTIVE PLASTIC POTENTIOMETER WITH RETURN SPRING. UNLIKE CONVENTIONAL POTENTIOMETERS, ITS MODULAR CONSTRUCTION AND ELIMINATION OF "WIPER TERMINATION TRACK ELEMENT" ENHANCE THE RELIABILITY AND PERFORMANCE, MAKING "QP-3F" SUITABLE FOR POSITION SENSORS AUTOMOBILE AND OFF-ROAD EQUIPMENT APPLICATIONS.

**2.0 ENVIRONMENTAL SPECIFICATIONS:**

- 2.1 OPERATING TEMPERATURE: -40° to +125°C
- 2.2 VIBRATION: 25 Gs, 50 to 500 Hz
- 2.3 WATER RESISTANT: JIS D0203 S1 (WATER SPRAY, 30 MINUTES - 20 CYCLES))

**3.0 ELECTRICAL CHARACTERISTICS:**

- 3.1 TOTAL RESISTANCE: 1 k OHMS ±20%
- 3.2 MAX. INPUT VOLTAGE: 15 Vdc
- 3.3 ELECTRICAL TRAVEL: 90° ±2°
- 3.4 INDEPENDENT LINEARITY: ±2%
- 3.5 INSULATION RESISTANCE: 100 megOHMS MIN. @ 500Vdc
- 3.6 DIELECTRIC STRENGTH: 1,000 Vrms, 50/60 Hz, for ONE MINUTE.
- 3.7 ELECTRICAL MID-POINT: [50±5]%Vin (WHEN SHAFT IS POSITIONED AS SHOWN IN FIGURE 1)

**4.0 MECHANICAL SPECIFICATIONS:**

- 4.1 MECHANICAL ANGLE: 100° ±5°
- 4.2 TORQUE, RETURN SPRING: 100 gf-cm MIN.
- 4.3 STOPPER STRENGTH: 5 kg-cm MIN.
- 4.4 ROTATIONAL LIFE: 2 million CYCLES
- 4.5 STOPPER STRENGTH: 5 kgf-cm MIN.
- 4.6 WEIGHT: APPROX. 40 g

**5.0 ELECTRICAL CONNECTION:**

SEE FIGURES 1, 2 AND 3.

**6.0 MARKING:**

SENSOR SHALL BE LABELED WITH MIDORI MODEL NO. AND SERIAL NO. (OR MANUFACTURING LOT NO.).

**7.0 MATERIAL:**

- HOUSING: POLYBUTYLENE TEREPHTHALTE
- SHAFT: STAINLESS STEEL
- INSULATED WIRE: AVX-0.5f (NO. 20AWG, 20 STRANDED CONDUCTORS, VINYL SLEEVE)

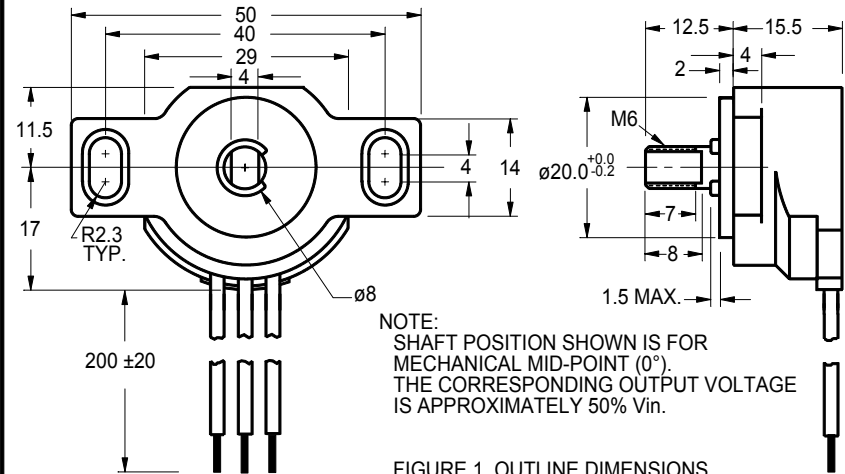


FIGURE 1 OUTLINE DIMENSIONS

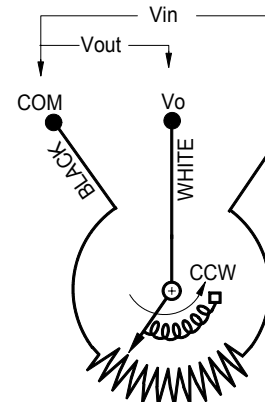
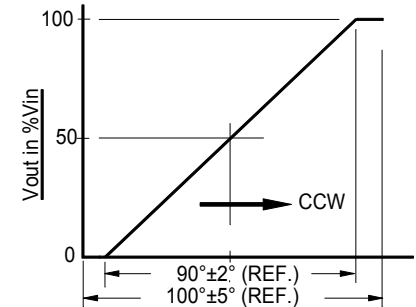


FIGURE 2 SCHEMATIC



SHAFT POSITION  
FIGURE 3 TYPICAL OUTPUT CHARACTERISTICS



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

TOLERANCES:

DRAWN	T.TSUGAWA	DATE	9/17/97
CHECKED		DATE	
APPROVED		DATE	
APPROVED		DATE	

SCALE:

**SPECIFICATION DWG**  
FOR  
**MODEL QP-3F**  
POSITION SENSOR, SEALED,  
QUARTER TURN

FILE: QP-3F

**Midori America Corporation**  
FULLERTON, CA

**B-MAC-B02**

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