

GENERAL DESCRIPTION:

QP-3HB(x)-200 SERIES, MIDORI "ORANGE POT", DUAL OUTPUT CONTACTLESS POSITION SENSORS ARE DESIGNED WITH A METAL HOUSING, $\phi 6$ mm SHAFT AND ADVANCED SENSING CIRCUITS, FEATURING SUPERIOR PERFORMANCE IN SEVERE ELECTRICAL, MECHANICAL, AND ENVIRONMENTAL OPERATING CONDITIONS. THE "DUAL OUTPUT" FEATURE ALLOWS A USER TO HAVE MORE DESIGN FLEXIBILITY FOR APPLICATIONS IN AUTOMOTIVE, OFF-ROAD, MARINE AND CONSTRUCTION EQUIPMENT.

MODEL NO. DESIGNATION:

QP-3HB(x)-2xx-xx

SHAFTBEARING TYPE: SEAL TYPE: RETURN SPRING: SHAFT STYLE:
 m -OILLESS METAL 0 -DUST PROOF 0 -NO 01 -FLAT ("D" CUT)
 b -BALL BEARING 1 -WATER RESISTANT 1 -YES 02 -FLAT, DOUBLE SIDED, THREADED

ENVIRONMENTAL SPECIFICATIONS:

OPERATING TEMPERATURE: -40°C to +125°C
 STORAGE TEMPERATURE: -40°C to +125°C
 VIBRATION: 20 G's, 5 Hz to 400 Hz
 SHOCK: 50 G's, 11 ms

ELECTRICAL SPECIFICATIONS: (UNLESS OTHERWISE SPECIFIED, $T_A=25^\circ\text{C}$, $V_{in}=5$ Vdc. REFER TO FIGURES 1, 2 AND 3)

ELECTRICAL ANGLE: $\pm 45^\circ$ (FS= 90°)
 INPUT VOLTAGE (V_{in}): 5.0 ± 0.5 Vdc
 SUPPLY CURRENT: 20 mA MAX.
 OUTPUT SENSITIVITY:

OUTPUT 1: 44.4 ± 3.5 mV/1°
 OUTPUT 2: -44.4 ± 3.5 mV/1°

LOAD RESISTANCE (R_L): 10 kOHMS MIN.
 INDEPENDENT LINEARITY: $\pm 2\%$ FS
 EMS: 50 mV MAX. OUTPUT DEVIATION @100 V/m, 10 kHz to 1GHz
 TEMPERATURE EFFECT: ($T_{REF}=25^\circ\text{C}$, $T_A=-40^\circ\text{C}$ to $+125^\circ\text{C}$)

@ 0° SHAFT POSITION: $\pm 1.5\%$ FS
 @ $\pm 45^\circ$ SHAFT POSITION: $\pm 3\%$ FS

INSULATION RESISTANCE: 100 meg OHMS @50 Vdc

OPERATIONAL LIFE: 50 X 10⁶ CYCLES (NO SHAFT LOAD, $\pm 30^\circ$ TRAVEL @ 5Hz)

MECHANICAL SPECIFICATIONS:

MECHANICAL ANGLE:
 QP-3HB(x)-2x0-xx: 360° (CONTINUOUS)
 QP-3HB(x)-2x1-xx: 120° $\pm 5^\circ$

BEARING:
 QP-3HB(m)-2xx-xx: OILLESS METAL
 QP-3HB(b)-2xx-xx: BALL BEARING

TORQUE:
 QP-3HB(m)-2x0-xx: 3 mN-m MAX.
 QP-3HB(b)-2x0-xx: 0.5 mN-m MAX.
 QP-3HB(x)-2x1-xx: 5 mN-m to 15 mN-m (SPRING FORCE)

STOPPER STRENGTH: 1 N-m MAX. (QP-3HB(x)-2x1-xx ONLY)

SHAFT LOAD:
 AXIAL: 3 N MAX.
 RADIAL: 6 N MAX.

SEAL COMPLIANT:
 QP-3HB(x)-20x-xx: IP-50 (DUST PROOF)
 QP-3HB(x)-21x-xx: IP-65 (WATER RESISTANT)

WIRE PULL STRENGTH: 98 N MAX.
 WEIGHT: APPROX. 35 g

MATERIAL:
 HOUSING: ANODIZED ZINC
 SHAFT: STAINLESS STEEL



GUEMISA
 Sta. Virginia 3-b; 1°F 28033 Madrid
 Tfn.: 91 764 21 00 Fax.: 91 764 21 32
 Email: info@guemisa.com

PRELIMINARY INFORMATION

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

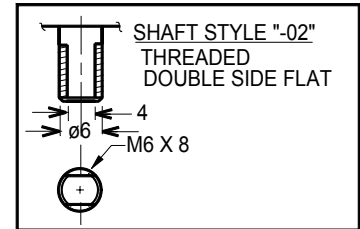
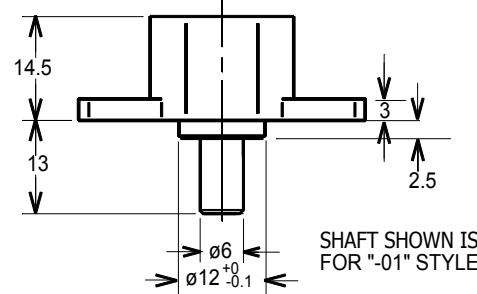
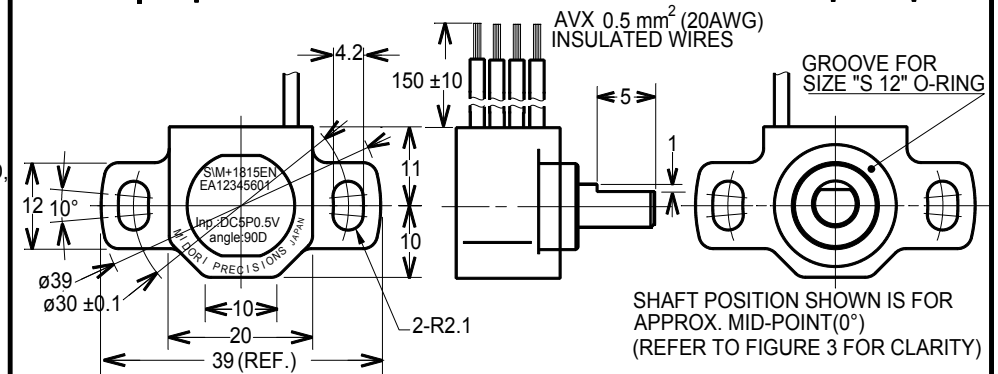


FIGURE 1 OUTLINE DIMENSIONS

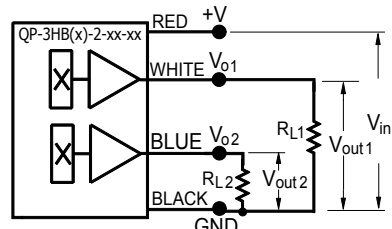


FIGURE 2 SCHEMATIC

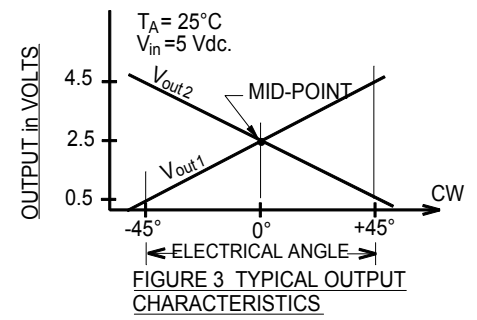


FIGURE 3 TYPICAL OUTPUT CHARACTERISTICS

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	DRAWN T.TSUGAWA	DATE 11/05/02	SPECIFICATION DWG FOR MODEL QP-3HB(x)-2xx-xx CONTACTLESS ROTARY POSITION SENSOR DUAL OUTPUTS	Midori America Corporation FULLERTON, CA
	CHECKED	DATE		
	APPROVED	DATE		
	APPROVED	DATE		
SCALE:	FILE:	QP-3HB(x)-2xx-xx	B-MAC-B64	1 OF 1