

PRODUCT SPECIFICATION

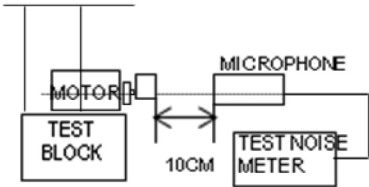
1. CONSTRUCTION-FORM

NO.	ITEM	CONTENTS
1--1	MOTOR CONSTRUCTION	4 CYLINDRICAL DC CORELESS MOTOR
1--2	NUMBER OF PHASES	3-PHASES (-CONNECTION)
1--3	NUMBER OF MAGNET POLES	2-POLES (INNER MAGNET TYPE)
1--4	COIL CONSTRUCTION	CYLINDRICAL MOVING COIL
1--5	RECTIFYING METHOD	PRECIOUS BRUSH AND COMMUTATOR

2. STANDARD OPERATING CONDITION

NO.	ITEM	SPECIFICATION
2--1	RATED VOLTAGE	DC 3.0V
2--2	RETED LOAD	VIBRATION WEIGHT (AS SPECIFIED IN OUTLINE DRAWING)
2--3	ROTATION DIRECTION	CW/CCW-FROM THE COUNTER WEIGHT
2--4	MOTOR POSITION	ANY POSITION IS AVAILABLE
2--5	VOLTAGE RANGE FOR USE	DC2.4~3.3V
2--6	ALLOWABLE TEMPERATURE RANGE	1) WORKING TEMPERATURE:-10° C~60° C
2--7	RELATIVE HUMIDITY RANGE	1) WORKING TEMPERATURE:-10° C~60° C

3. ELECTRICAL CHARACTERISTICS

NO.	ITEM	MEASURING CONDITION	SPECIFICATION
3--1	RATED SPEED	AT RATED VOLTAGE AND RATED LOAD	13000+ <u>2000</u> RPM
3--2	RATED CURRENT	AT RATED VOLTAGE AND RATED LOAD	80MA MAX
3--3	STALL CURRENT	AT RATED VOLTAGE AND SHAFT LOCK	100MA MAX
3--4	STARTINGVOLTAGE	MIN STARTING VOLTAGE AT RATED LOAD	2. 0V MAX
3--5	INSULATION RESISTANCE	100 V DC BETWEEN LEAD WIRE AND CASE	100 M MIN
3---6	INSULATION VOLTAGE	200V DC BETWEEN LEAD WIRE AND MOTOR CASE DURING ONE MINUTE	1MA MAX CUT OFF CURRENT
3--7	MECHANICAL NOISE	AT RATED VOLTAGE AND RATED LOAD BACK GROUD NOISE: 23DB (A) MAX	50DB (A) MAX
			

ADD: MEASURING CONDITION:

- 1:MEASURING TEMPERATURE:20+2° C
- 2:MEASURING RELATIVE HUMIDITY:65+5%

4. MECHANICAL CHARACTERISTICS

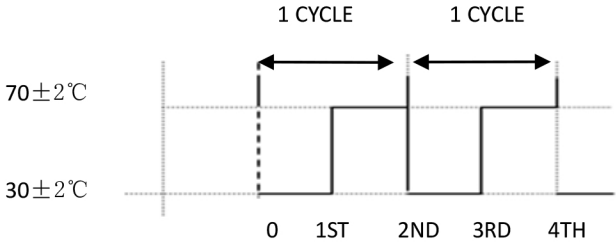
NO.	ITEM	MEASURING CONDITION	SPECIFICATION
4--1	CONFIGURATION	VERNIER CALIPER	AS SPECIFIED IN OUTLINE DRAWING
4--2	APPEARANCE	VISUAL EXAMINATION	SHOULD BE NO EVIDENCE OF MECHANICAL DAMAGE, CRACK., RUST, AND STAIN
4--3	WEIGHT	BALANCE	1. 1G (APPROX)
4--4	SHAFT END PLAY	DISTANCE OF AXIAL PLAY ON SHAFT	0. 3 MM MAX

5. RELIABILITY TEST

SHOULD BE SATISFIED WITH THE REQUIREMENTS OF TABLE 1 AFTER TEST.

TABLE 1. REQUIREMENTS ITEM

NO.	ITEM	SPECIFICATION
5--1	RATED CURRENT	INITIAL DATA: $\pm 30\%$ MAX
5--2	RATED SPEED	INITIAL DATA: $\pm 30\%$ MAX
5--3	STARTING VOLTAGE	2. 4 V DC MAX
5--4	OTHERS	1) SHOULD NOT FAIL IN STARTING 2) SHOULD NOT BE UNUSUAL MECHANICAL NOISE

NO.	ITEM	TEST CONDITION
6--1	LIFE TEST	1)VOLTAGE:3.0V 2)LOAD:COUNTER WEIGHT 3)TEMPERATURE:20±2 ° C 4)RELATIVE HUMIDITY:65+5% TEST MODE:2000 TIMES AFTER OPERATION CONDITIONS AS SEC. ON 1 SEC . OFF
6--2	HIGH TEMPERATURE EXPOSURE	EXPOSURE TO 80° C FOR 96 HOURS, THEN RETURN TO ORDINARY TEMPERATURE AND HUMIDITY FOR 2 HOURS.
6--3	LOW TEMPERATURE EXPORSURE	EXPOSURE TO -40° C FOR 96 HOURS, THEN RETURN TO ORDINARY TEMPERATURE AND HUMIDITY FOR 2 HOURS.
6--4	HUMIDITY TEST	EXPOSURE TO 60+2° C, 90+5%RH(RELATIVE HUMIDITY) FOR 96 HOURS, THEN RETURN TO ORDINARY TEMPERATURE AND HUMIDITY FOR 2 HOURS.
6--5	HEAT CYCLE TEST	EXPOSURE TO HEAT TEST CONDITION UNDERLINE FOR 5 TIMES, THEN RETURN TO ORDINARY TEMPERATURE AND HUMIDITY FOR 24 HOURS. 
6--6	VIBRATION TEST	VIBRATE WITH 3 MM, 10HZ-55HZ-10HZ PER MINUTE, X-Y-Z EACH DIRECTION FOR 30 MINUTES AT STANDARD PACKING CONDITION.
6--7	DROP TEST	SET THE MOTOR TO THE APPROXIMATELY 100 G (INCLUDING THE MOTOR) WEIGHT OF BLOCK, FREE DROP DIRECTION 3 TIME ON THE CONCRETE FLOOR.

6. CAUTIONS

1) ALLOWABLE RANGE FOR USE

PAY ATTENTION TO VOLTAGE AND CURRENT RANGES FOR USE, AND USE THE VIBRATION MOTOR IN THE CONDITION ACCORDANCE WITH THIS SPECIFICATIONS, OR THE LIFE AND PERFROMANCE SHOULD BE CONSIDERABLY REDUCED.

2) STORAGE

STORAGE TEMPERATURE: $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$

STORAGE RALATIVE HUMIDITY: $10 \sim 90\%$

AVOIDS STORING IN HIGH TEMPERATURE, HIGH HUMIDITY OR CORROSIVE GAS ENVIRONMENT.

3) HANDLING OF MOTOR

-TO HANDLE AND HOLD THE VIBRATION MOTOR CASE SOFTLY.

-DO NOT BRING A MAGNETIZED OBJECT NEAR OR CONTACT WITH THE SURFACE OF MOTOR TO AVOID OF PERFORMANCE BEING DETERIORATED.

-PAY ATTENTION MUST TO THE HANDLING AND WORKING ENVIROMENTS OF MOTOR, BECAUSE SUCH OBJECTS AS IRON POWDER IF ATTRACTED BY MOTOR MAGNET, WILL CAUSE NOISE CHARACTERISTIC DETERIORATION, THUS REDUCING THE RELIABILITY.

7. MOTOR OUTLINE DRAWING

- 1) Rated voltage : 3.0 V
- 2) Rated current : 80 MA MAX
- 3) Rated speed : 13000 RPM
- 4) Insulation resistance : 100 M MIX
- 5) Starting voltage : 2 V
- 6) Wire specifications : AWG 32 UL1571

