

MOTOR CHARACTERISTICS

I T E M	SPECIFICATIONS	NOTE
RATED VOLTAGE	2.4 V	1
RATED CURRENT / PHASE	2.0 A	1
MAX. INPUT	9.6 W	
STEP ANGLE	1.8°	
STEP ACCURACY (POSITIONAL)	1.8° ±0.09°	3
MAX. HOLDING TORQUE	510 mNm { 5 204 gfcM } MIN.	3
PULL OUT TORQUE	— mNm { — gfcM } MIN. at — Hz	4, 10
PULL OUT TORQUE	— mNm { — gfcM } MIN. at — Hz	4, 10
PULL IN TORQUE	— mNm { — gfcM } MIN. at — Hz	4, 10
PULL IN TORQUE	— mNm { — gfcM } MIN. at — Hz	4, 10
MAX. NO LOAD RESPONSE	— Hz MIN.	10
MAX. SLEW SPEED	— Hz MIN.	10
WINDING RESISTANCE	1.2 Ω ±0.18 Ω	12
WINDING INDUCTANCE	2.6 mH REF.	5, 12
INSULATION RESISTANCE	100 MΩ MIN.	6
DIELECTRIC STRENGTH	AC 500 V	7
TEMPERATURE RISE	— °C MAX.	8, 13
CLASS OF INSULATION	B	
RADIAL PLAY	20 μm MAX. at 4.4 N [460 gf] [LOAD]	
END PLAY	0.2 mm MAX. at 49 N [5 kgf] [LOAD]	
ROTOR INERTIA	75 gcm <sup>2</sup> REF.	
DETENT TORQUE	16.7 mNm [ 170 gfcM ] REF.	
MASS	400 g REF.	
OPERATING TEMPERATURE	0 °C ~ 50 °C	14
STORAGE TEMPERATURE	-20 °C ~ 70 °C	14

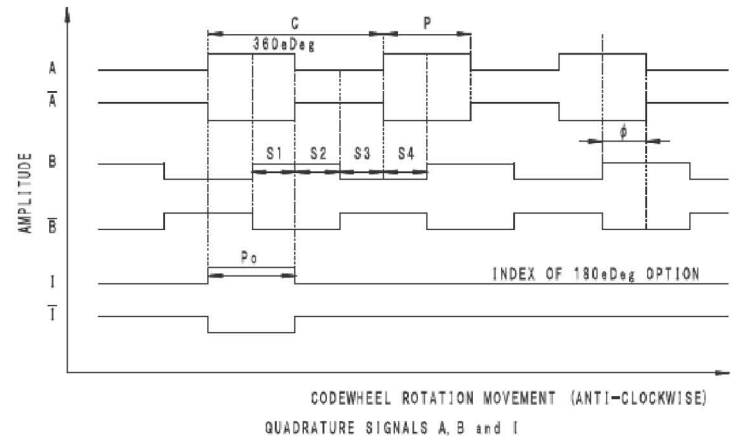
NOTE

1. AT 0 Hz
2. ROTATION OF SHAFT TO BE CW FACING MOUNTING END WHEN SEQUENCED AS FIG. 2.
3. AT RATED CURRENT AND 2 PHASES ON.
4. ALL SPECIFICATION APPLY OUR COMPANY DRIVER CIRCUIT SWITCHING SEQUENCE AS FIG. 2. MEASURED BY PV-900 OR PV-7300.
5. MEASURED AT 1 kHz 1 V [RMS].
6. WITH DC 500 V INSULATION RESISTANCE TESTER APPLIED BETWEEN WINDING AND CASE.
7. THERE SHALL BE NO BREAKDOWN AT (50 or 60) Hz APPLIED FOR 60 s BETWEEN WINDING AND CASE.
8. DETERMINED BY MEANS OF RESISTANCE METHOD WITH "A" PHASE AND "B" PHASE ENERGIZED SIMULTANEOUSLY AT RATED VOLTAGE.
9. ALL SPECIFICATIONS APPLY BEFORE TEMPERATURE RISE AT ROOM TEMPERATURE ONLY.
10. UNDER DRIVER CIRCUIT — AND AT POWER SUPPLY VOLTAGE DC — V , CURRENT — A PER PHASE.
11. COMPONENT PARTS ARE RoHS COMPLIANT.
12. WITH L/WIRE CONN. ASS'Y L=300mm.
13. DO NOT ALLOW THE SURFACE TEMPERATURE OF THE MOTOR TO RISE ABOVE 80°C TO PROTECT THE ENCODER.
14. NO DEW ALLOWED.

ENCODER CHARACTERISTICS

I T E M	SPECIFICATIONS	
ENCODER TYPE	AVAGO AEDR-8501 INCREMENTAL	
DETECTION METHOD	REFLECTIVE SURFACE	
OUTPUT SIGNAL	A, $\bar{A}$ , B, $\bar{B}$ , I, T (THREE CHANNEL) LINE DRIVER OUTPUT	
RESOLUTION	4 000 CPR (4X)	
SUPPLY VOLTAGE	DC 5 V $\pm$ 0.25 V	
SUPPLY CURRENT	25 mA REF.	
OUTPUT VOLTAGE	-0.5 V to +5.5 V	
WAVE FORM	RECTANGLE WAVE	
COUNT FREQUENCY	220 kHz MAX. (4X)	
CYCLE ERROR $\Delta C$	36 e deg.	(4X)
PULSE WIDTH ERROR $\Delta P$	30 e deg.	
PHASE ERROR $\Delta \phi$	18 e deg.	
STATE ERROR $\Delta S$	25 e deg.	

OUTPUT WAVE FORM



STEP	L/W COLOR			
	RED	BLU	YEL	ORG
1	+	+	-	-
2	-	+	+	-
3	-	-	+	+
4	+	-	-	+

FIG. 2

MOTOR AND L/WIRE CONN. ASS'Y ARE SEPARATED,  
BUT PACKED IN SAME BOX.

FOR ENCODER

PIN NO.	SIGNAL	L/W COLOR
1	V <sub>CC</sub>	RED
2	GND	BLK
3	PA	WHT
4	NA	GRN
5	PB	BRN
6	NB	YEL
7	PZ	BLU
8	NZ	ORG
9	-	-
10	-	-

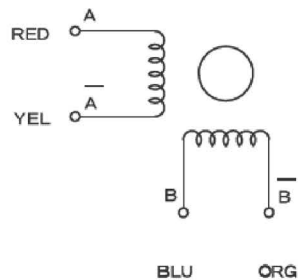


FIG. 1

