

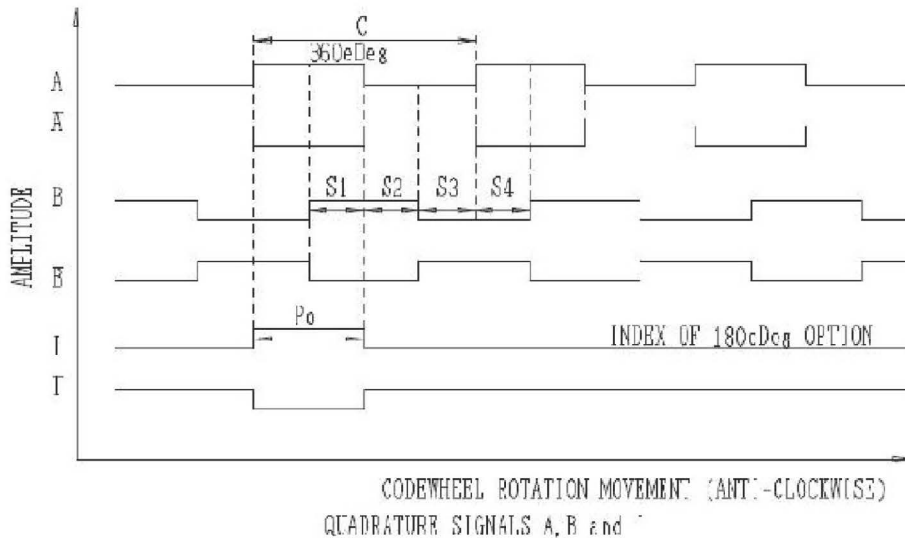
Electrical characteristics	
Rated voltage	2.1 V
Rated current	3.0 A
Max. input	12.6 W
Step angle	1.8 °
Step accuracy(positional)	1.8 ° ± 0.09 ° at Rated current DUAL
Max. holding torque	1.53 Nm [15.6 kgfcm] MIN. at Rated current DUAL
Detent torque	60 mNm [610 gfcm] REF.
Pull out torque	- mNm [- gfcm] MIN. at - Hz
Pull in torque	- mNm [- gfcm] MIN. at - Hz
Max. no load response	- Hz MIN.
Max. slew speed	- Hz MIN.
Driving condition	DC 24 V 3 A [φ] DUAL STK682-001-E
Winding resistance	0.7 Ω ± 0.1 Ω
Winding inductance	2.7 mH REF. at 1 kHz, 1 V[RMS]
Insulation resistance	100M Ω MIN. with DC 500 V insulation resistance tester applied between winding and case.
Dielectric strength	There shall be no breakdown at AC500 V (50 or 60) Hz applied for 60 s between winding and case.
Temperature rise	80°C MAX. determined by means of resistance method with "A" phase and "B" phase energized simultaneously at rated voltage.
Class of insulation	JIS B
Ambient temperature	-10 °C ~ +50 °C
Mechanical characteristics	
Direction of shaft rotation	Rotation of shaft to be CW facing mounting end when connection FIG.1 and sequenced as FIG. 2.
Radial play	20 μm MAX. at 4.4 N[450 gf] LOAD
End play	0.2 mm MAX. at 49 N[5 kgf] LOAD
Rotor inertia	490 gcm ² REF.
Mass	1150 g REF.
Environmental harmony	
Composed parts are RoHS compliant.	

Special specifications

(i) Encoder specifications

ITEM	Specifications
Encoder type	AVAGO AEDR-8501 Incremental
Detection method	Reflective surface
Output seal	A, \bar{A} , B, \bar{B} , I, \bar{I} (Three channel) Line driver output
Resolution	4,000 CPR
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)
State S_1, S_2, S_3, S_4	$(C/4) \pm (C/8)$
Index pulse width P_0	$(C/4) \leq P_0 \leq (3C/4)$
Duty	$(C/2) \pm (C/4)$

出力波形図 OUTPUT WAVE FORM



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

FIG. 2

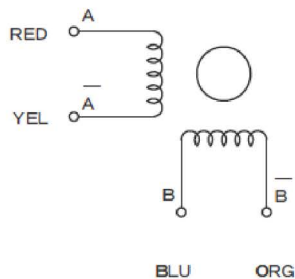
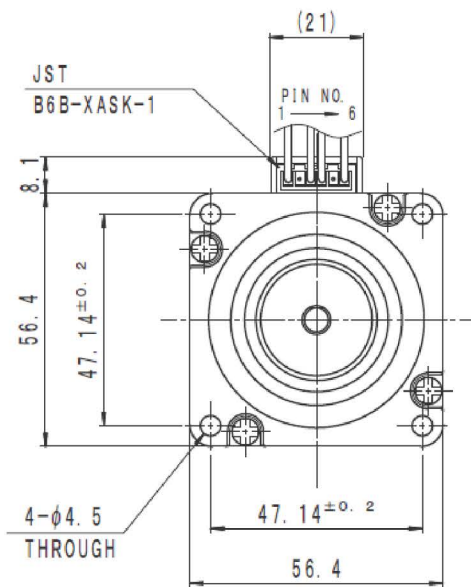


FIG. 1



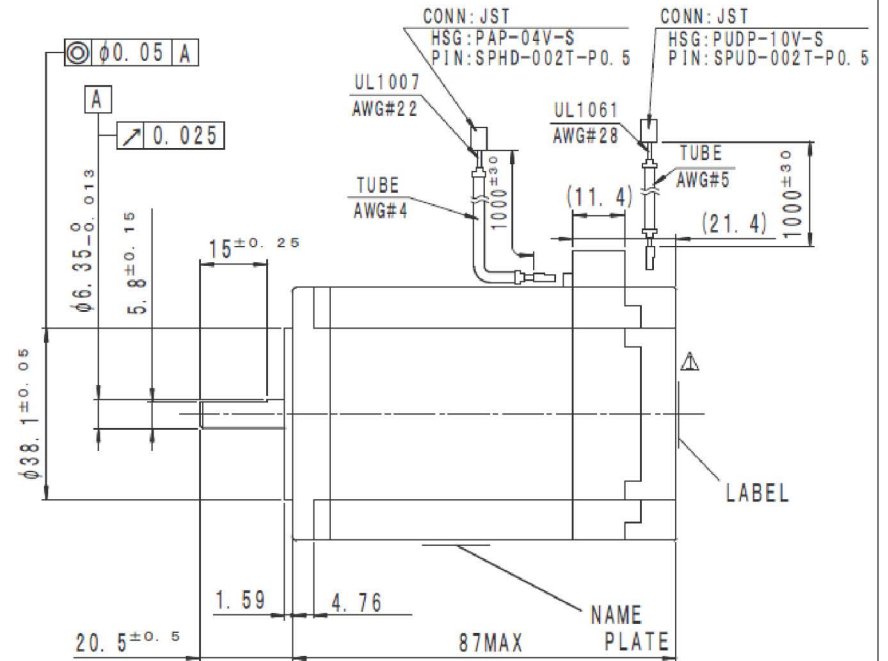
FOR MOTOR

PIN NO.	L/W COLOR
1	RED
2	YEL
3	BLU
4	ORG

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

FOR ENCODER

PIN NO.	SIGNAL	L/W COLOR
1	V _{CC}	RED
2	GND	BLK
3	CH. A	WHT
4	CH. \bar{A}	GRN
5	CH. B	BRN
6	CH. \bar{B}	YEL
7	CH. I	BLU
8	CH. \bar{I}	ORG
9	-	-
10	-	-



REFERENCE

				APPROVED			UNIT		MATERIAL		DATE	
				HSD			mm		SURF. ROUGH		MAR. /08 /17	
				MTK			SCALE		HEAT TREAT		DESCRIPTION	
				SMZ			FINISH		DRAWING NO.		HYBRID STEP MOTOR	
MARK	DATE	REASON	ECN NO.	ENGINEER	APPROVED							
△ ¹	WAR/21/17	CHANGE ENCODER TYPE		SMZ	HSD							
											PART NO. (MODEL NO.)	SHEET
											A23KM744CNVA0578	1 / 1
											REV.	
											A	

