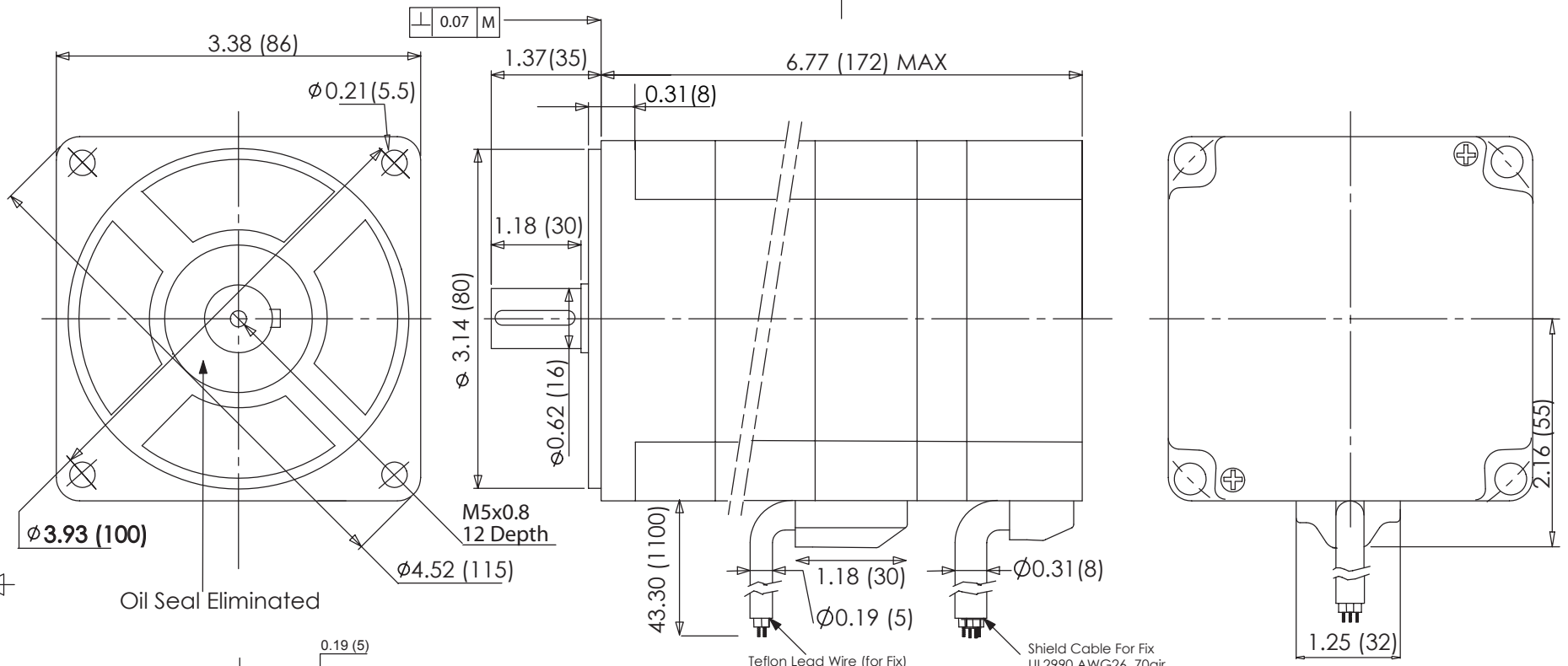
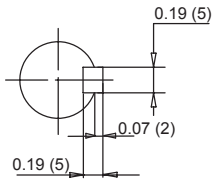




Section A-A
Key Attached

Sensor

Incremental Encoder Resolution 2000P/R
Rectangular Wave

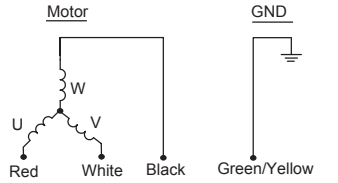
Signal	Color
+5 VDC	RED
GND	BLACK
A+ Channel	BLUE
A- Channel	BROWN
B+ Channel	GREEN
B- Channel	PURPLE
C+ Channel	WHITE
C- Channel	YELLOW
U+ Channel	BLUE/BLACK
U- Channel	BROWN/BLACK
V+ Channel	GREEN/BLACK
V- Channel	PURPLE/BLACK
W+ Channel	RED/BLACK
W- Channel	YELLOW/BLACK
Case Earth	SHIELD

Endurable Load on Motor Shaft

Assembling			Coaration		
Radial Play	Trust Play (Kg)		Radial Play	Thrust Play	F → F1 ←
Fa (Kg)	F	F1	Fa (Kg)	(Kg)	
60	80	30	35	20	

Connection

Drawing 106-8744



Direction of rotation C.C.W for those sequence
UVX. as seen from front shaft

Paint Color

MUNSELL N1.5 Equivalent

Option

Connector: SRCN6A21-10P. SRCN6A21-105
SRCN6A21-15P. SRCN6A21-165

Design	Check	Approve	File Name	Date	Scale
			P50B08100-2000_Rev1_2	04/20/05	1 : 1
Motion On Sale			OUTLINE	P50B08100-2000	
			UNITS: INCHES(MM)	Size / Edit / Sheet / Rev	
	SANYO DENKI			A3 / A1 / 1/1 / 1.2	

1. Characteristics of Motor

Servomotor Specifications				
Terms	Item	Symbol	Unit	Specification
★★	Continuous Stall Torque	T_S	N.m (lb-in)	3.92 (34.73)
★★	Peak Stall Torque	T_{PS}	N.m (lb-in)	8.82 (78.15)
★★	Maximum Speed	N.Max	Min^{-1}	8000
★★	Continuous Stall Current	I_S	Amps(rms)	11.7
★★	Peak Armature Current	I_{PS}	Amps(rms)	29.1
★	Torque Constant	K_T	N.m/A (lb-in/amp)	0.383± 10% (3.40)
★	Voltage Constant	K_E	mV/min^{-1}(V/krpm)	40.1± 10% (40.1)
	Rotor Inertia	J_M	$Kg.m^2$(lb-in-sec^2)	2.646 x 10^{-4} (0.234 x 10^{-2})
★	Resistance	R_a	Ohms, Ω	0.64
★	Inductance	L_a	mH	3.8
★	Mech. Time Constant	Tm	msec	1.2
★	Elect. Time Constant	Te	msec	5.9
	Insulation	-	-	F
★★	Max. Temperature Rise	θ	K	115
	Insulation Resistance	-	MΩ	10Min.(DC500V megger)
	Dielectric Strength	-	V	1500 (AC 1min)
	Mass	W	kg (lb)	4.7 (10.36)

Encoder Specifications				
	Pulses per Revolution		PPR	2000
	Encoder Channels			Complimentary w/ index
	Frequency Response		kHz	0 ~ 300
	Input Voltage		V	+5 ± 0.25 VDC
	Input Current		Amps	450 mA Max.
	Output Signal		Line Driver	AM26LS31 equivalent
	Operating Temperature		°C	-10 to 85
	Rotor Inertia		$kg-m^2$(lb-in-sec^2)	$0.005x10^{-4}$($0.443x10^{-7}$)
	Mass		Kg (oz)	0.35 (12.4)

3. Environmental Condition

Item	Operation	Storage
Temperature (°C)	0~40	-20~65
Humidity (%)	20~90	20~90
	No dew condensation required	

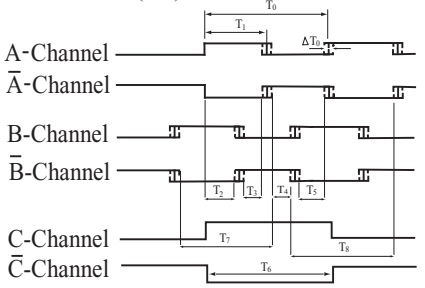
Remarks 1. ★★ Indicates motor temperature rise saturation point combine with Amplifier. ★ Indicates coil temperature at 20 C. All values are at typical ones.
2. The ratings measured by alminum heat sink sized 305x305x12t.
3. Total rotor inertia and mass shall be added respectively.

2. Characteristics of Encoder

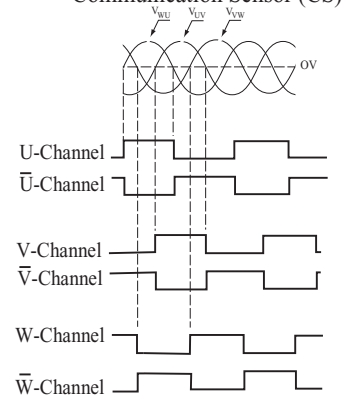
	Item	Rated Characteristics	Remarks
ENCODER	Pulse Per Revolution	See Outline Drawings	
	Frequency Response	0~300 kHz	
	Pulse Dutycycle	$T_1 = (1/2)\ T_0 \pm (1/8)\ T_0$	Above characteristics exclude motor flutter
	Interchannels Phase Relationship	$T_2 \sim T_5 = (1/4)\ T_0 \pm (1/8)\ T_0$	Above characteristics exclude motor flutter
	C-Channel	$T_6 = T_0 \pm 0.4\ T_0$	
CS	Pulse Per Revolution	2	
COMMON	Input Voltage	+5V ± 0.25V DC	
	Input Current	450 mA Max.	
	Output Signal	Line Driver AM26LS31 Equivalent	Recommendable line receiver :AM26LS32
	Insulation Resistance	50MΩMIN DC250V between frame and lead wire. (without shield wire)	To avoid circuit destruction, user's test prohibited.
	Operating Temp. Range	-10°C To 85°C	
	Rotor Inertia	$0.005x10^{-4}$ ($kg.m^2$)	
	Mass	0.35 (kg)	

Output waveform is C.C.W as viewed From Front Shaft.

Incremental (EN)



Communication Sensor (CS)



(One pulse per revolution)
(Ramp up and down of C-Channel, should be limited within T_7 or T_8)

				P50B08100-2000		
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Motion On Sale			OUTLINE	Characteristics		
				Size	Edit	Sheet	Rev
	SANYO DENKI			A3	A1	1/1	1.2