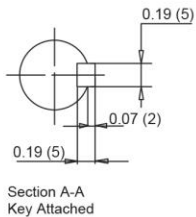
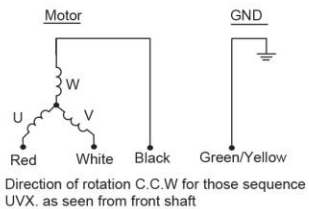


Oil Seal Eliminated



Connection

Drawing 106-8744



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		F F1
Radial Play	Trust Play (Kg)		Radial Play	Thrust Play	
Fa (Kg)	F	F1	Fa (Kg)	(Kg)	
60	80	30	35	20	

Sanyo Denki P5 Series Brushless 1000 watt AC Servomotor
P50B08100



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Santa Clarita, CA 91355
818-700-8600
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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	T_m	msec	1.2
★	Elect. Time Constant	T_e	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		

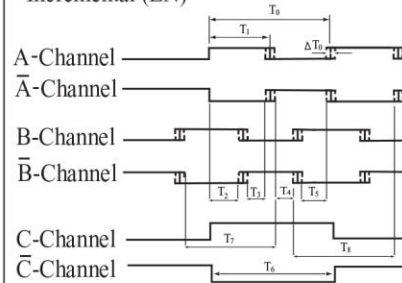
- Remarks 1. ★★ Indicates motor temperature rise saturation point combine with Amplifier. ★ Indicates coil temperature at 20 C. All values are at typical ones.
2. The ratings measured by alminum heat sink sized 305x305x12t.
3. Total rotor inertia and mass shall be added respectively.

2. Characteristics of Encoder

	Item	Rated Characteristics	Remarks
ENCODER	Pulse Per Revolution	See Outline Drawings	
	Frequency Response	0~300 kHz	
	Pulse Duty cycle	$T_1 = (1/2) T_0 \pm (1/8) T_0$	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.

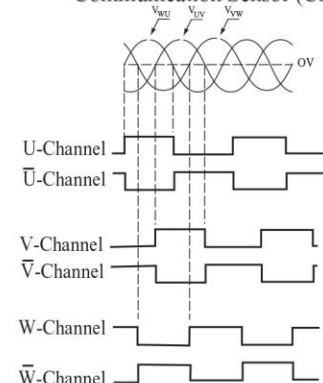
Incremental (EN)



(One pulse per revolution)

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

Communication Sensor (CS)



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