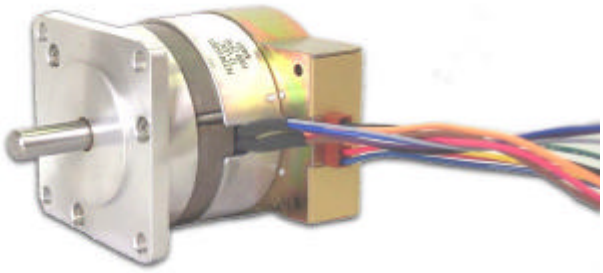
N2341S001

Brushless DC Servo Motor



Assembly Data	Symbol	Units	Value	
Reference Voltage	E	V	12	
No-Load Speed	S_{NL}	rpm (rad/s)	7,197	(754)
Continuous Torque (Max.)[1]	T_C	oz-in (N-m)	16	(1.1E-01)
Peak Torque (Stall)[1, 2]	T_{PK}	oz-in (N-m)	32	(2.3E-01)
Weight	W_M	oz (g)	16	(439)
Motor Data				
Torque Constant	K_T	oz-in/A (N-m/A)	2.16	(1.53E-02)
Back-EMF Constant	K_E	V/krpm (V/rad/s)	1.60	(1.53E-02)
Resistance	R_T	Ω	0.26	
Inductance	L	mH	0.49	
No-Load Current	I_{NL}	A	0.10	
Peak Current (Stall)[1, 2]	I_P	A	14.7	
Motor Constant[1, 2]	K_M	oz-in/√W (N-m/√W)	3.50	(2.47E-02)
Friction Torque	T_F	oz-in (N-m)	0.80	(5.6E-03)
Rotor Inertia	J_M	oz-in-s^2 (kg-m^2)	1.2E-03	(8.5E-06)
Electrical Time Constant	τ_E	ms	1.85	
Mechanical Time Constant	τ_M	ms	13.5	
Viscous Damping	D	oz-in/krpm (N-m-s)	0.15	(9.8E-06)
Damping Constant	K_D	oz-in/krpm (N-m-s)	0.013	(8.8E-07)
Maximum Winding Temperature	θ_{MAX}	ºF (ºC)	266	(130)
Thermal Impedance	R_{TH}	ºF/watt (ºC/watt)	41	(4.9)
Thermal Time Constant	τ_{TH}	min	13.0	
Gearbox Data				
Encoder Data				
Channels			3	
Resolution		CPR	1000	

1 - Specified at max. winding temperature at 25ºC ambient without heat sink. 2 - Theoretical values supplied for reference only.

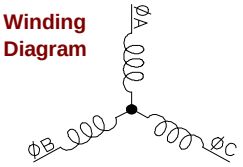
Included Features

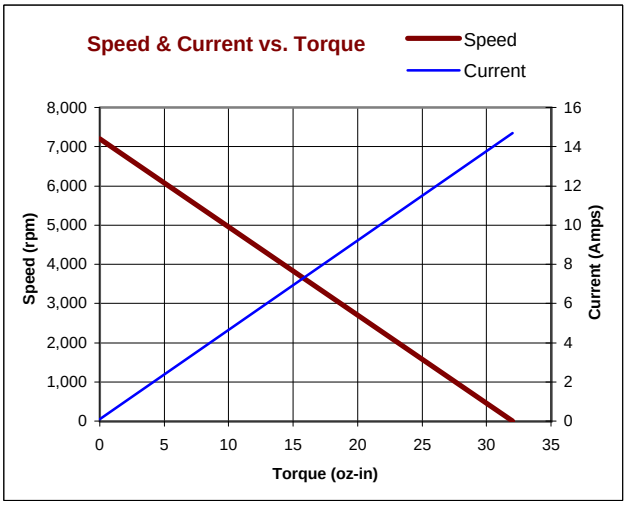
4-Pole Rotor
Neodymium Magnets
3-Phase Slotted Stator
6-Slot Laminations
Stainless Steel Shaft
NEMA 23 Mounting
Ball Bearings
Hall Sensors

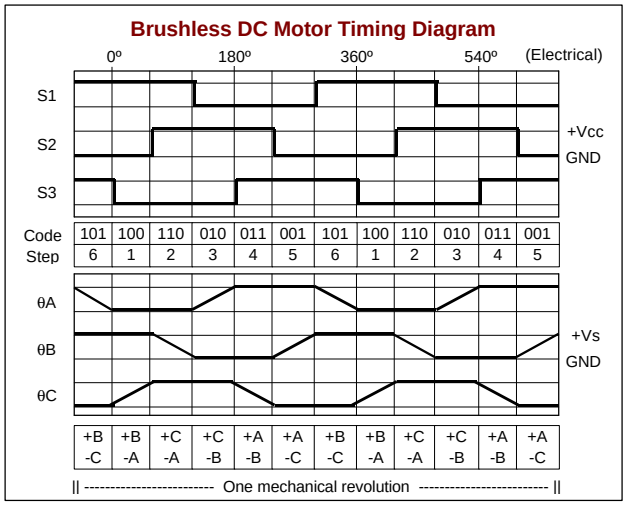
Customization Options

Alternate Winding
Modified Output Shaft
Custom Cable Assembly
Spur or Planetary Gearbox
Optional Encoder
Fail-Safe Brake
Integral Electronics

Winding Diagram







All values are nominal. Specifications subject to change without notice.
Graphs are shown for reference only at maximum winding temperature.

PITTMAN, 343 Godshall Drive, Harleysville, PA 19438, Phone: 877-PITTMAN, Fax: 215-256-1338, E-mail: info@pittmannet.com, Web Site: www.pittmannet.com

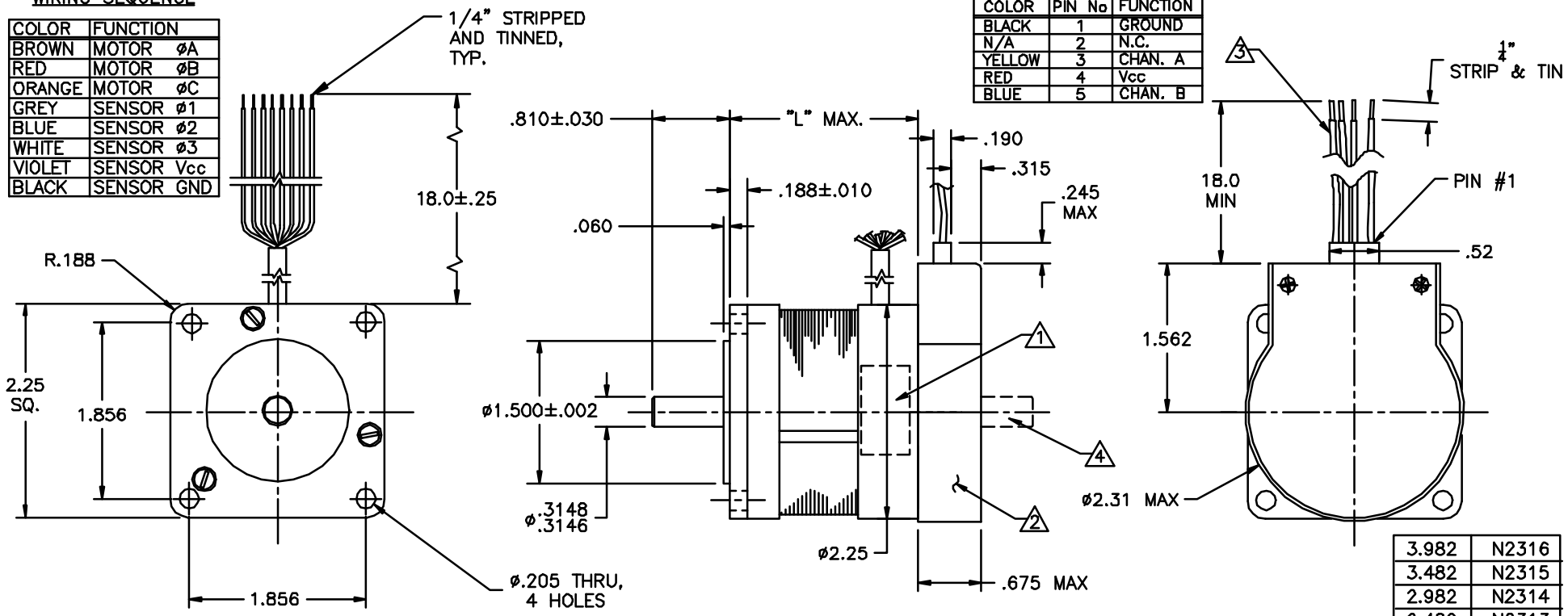
UNCONTROLLED

REVISIONS				
LTR	DESCRIPTION	DRFT/ENGR	DATE	APPR
A	PRODUCTION RELEASE	KJP		

WIRING SEQUENCE

COLOR	FUNCTION
BROWN	MOTOR øA
RED	MOTOR øB
ORANGE	MOTOR øC
GREY	SENSOR ø1
BLUE	SENSOR ø2
WHITE	SENSOR ø3
VIOLET	SENSOR Vcc
BLACK	SENSOR GND

ENCODER CONNECTION CHART		
COLOR	PIN No	FUNCTION
BLACK	1	GROUND
N/A	2	N.C.
YELLOW	3	CHAN. A
RED	4	Vcc
BLUE	5	CHAN. B



3.982	N2316
3.482	N2315
2.982	N2314
2.482	N2313
1.982	N2312
1.532	N2311
"L"	MOTOR

NOTES:
1. UNITS LABELED AS FOLLOWS WITH LABEL PLACED ON SIDE OF REAR ENDBELL. ROTATIONAL ORIENTATION VARIABLE.
   MODEL No.
   LOT No.
   DATE CODE
2. ENCLOSED IS A H.P. HEDS-90X0 OPTICAL ENCODER MODULE.
3. OPTIONAL LEAD WIRE PACKAGE IS AVAILABLE, P/N 82-167-☐ & 82-65-☐ REFER TO DATA SHEET FOR PART NUMBERS.
4. OPTIONAL REAR SHAFT EXTENSION AVAILABLE, .3146/.3148 DIA.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTION ±1/64 DECIMAL .X ±.016 .XX ±.010 .XXX±.005 ANGLES ±1°
BREAK ALL SHARP EDGES
MATERIAL:
FINISH:

FILE: 150/663
DRAFTED BY KJP DATE 7/12/00
ENGINEERED BY KJP 7/12/00
APPROVED BY
NEXT ASSY:
USED ON:

PITTMAN

TITLE: N2300 MOTOR OUTLINE WITH 9000 ENCODER

DWG. NO. B- 150-663 REV. A

SCALE: SHEET 1 OF 1