



general design specification

power rating: .083 hp (61.9 W)

voltage: 6 to 115 VDC

weight: 1 lb. 13 oz.

armature: Dynamically balanced

inertia: 2.3×10^{-3} oz. in. sec.²

electrical time constant: 0.5 milliseconds max

mechanical time constant: 20.0 milliseconds max

typical no load torque: 2.25 oz. in.

protection: Varnish impregnated

shaft: Precision-ground, through-hardened (RC 45-55) 420 stainless steel per ASTM A582. Options: length, smaller diameter, flats, pinions, gears, holes (through or tapped), threaded ends and tapers. Type of steel used may change depending upon variation selected

magnets: Alnico V

bearings: Double shielded, life-lubricated for -55°C to +85°C operation. Special lubricants available for temperature extremes

cables/leads: 8" #20 AWG lead wire per MIL-W-16878/4

cover: Aluminum

frame: Die-cast aluminum alloy

marking: Per MIL-STD-130

life: 1,000 hours continuous duty for 27 VDC units

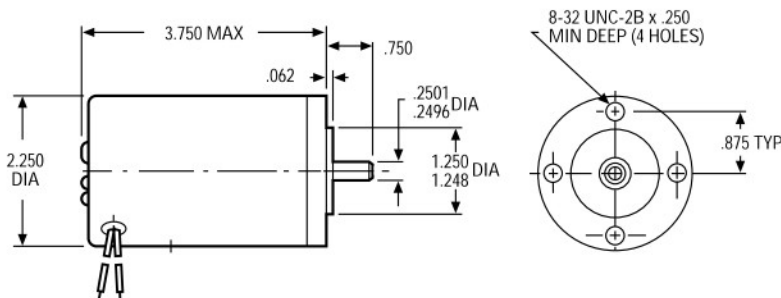
winding temperature rise: 3°C per watt w/8.00" x 8.00" x .25" aluminum heat sink

winding insulation rating: 130°C (higher temperature windings available)

options available:

- Integral tachometer generators
- Electromechanical brakes
- RFI filters to meet MIL-I-6181, MIL-I-26600 or MIL-STD-461
- Gearheads (see A-2430 for details)

Dimensions



A-3600

Standard Part Numbers and Data

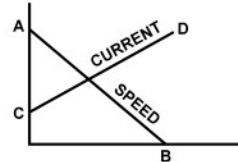
VOLTAGE (VDC)	SPEED no load (rpm)	TORQUE		CURRENT			CONSTANTS		STANDARD PART NUMBERS*
		max rated (oz. in.)	** theoretical stall (oz. in.)	max no load (amps)	max rated load (amps)	** nominal stall (amps)	K_T (oz. in./amp)	R (ohms)	
6	4,700-5,300	8.0	40	2.00	7.00	45.0	1.6	.15	166A100-4
12	6,300-7,000	8.0	54	1.34	6.00	47.0	2.4	.28	166A100-5
12	4,700-5,300	12.0	50	1.00	5.80	28.0	3.2	.47	166A100-6
27	8,500-9,500	10.0	99	.80	3.40	40.0	4.0	.75	166A100-7
27	6,500-7,300	13.0	96	.62	3.40	25.0	5.2	1.23	166A100-8
27	5,300-5,900	16.0	89	.50	3.30	16.0	6.4	1.92	166A100-9
27	4,200-4,800	16.0	72	.40	2.70	10.0	8.0	3.01	166A100-10
50	6,300-7,100	14.0	107	.32	1.90	11.8	10.0	4.77	166A100-11
50	4,900-5,500	14.5	83	.25	1.50	7.5	12.8	7.59	166A100-12
50	3,900-4,400	15.0	66	.20	1.20	4.7	16.0	12.12	166A100-13
115	7,300-8,100	12.0	123	.16	.90	6.8	20.0	19.12	166A100-14
115	5,900-6,500	15.5	99	.14	.85	4.4	24.8	29.36	166A100-15
115	4,700-5,300	16.0	80	.12	.70	2.8	30.8	46.30	166A100-16
115	3,700-4,100	15.0	62	.09	.50	1.8	38.8	74.10	166A100-17
115	3,000-3,400	14.5	51	.07	.45	1.2	48.0	115.90	166A100-18
115	2,400-2,700	14.0	41	.06	.35	.8	59.6	180.00	166A100-19

**Because of brush drop and field distortion, current and torque indicated will not always be attainable

*When You Order

Units shown above are standard and may be ordered by part number. Remember to include armature winding dash number. EXAMPLE: 166A100-8

How To Draw Speed Torque Curve



- A no load speed (nominal) (rpm)
- B stall torque (oz. in.)
- C no load current (amps)
- D stall current (amps)

Typical Performance

Part No.: 166A100-8

Voltage: 27 VDC

