



general design specification

power rating: .015 hp (11.2 W)

voltage: 6 to 75 VDC

weight: Open type - 5.2 ounces
Enclosed type - 8.5 ounces

armature: Dynamically balanced

inertia: 7.4×10^{-5} oz. in. sec.²

electrical time constant: 0.5 milliseconds max

mechanical time constant: 15.0 milliseconds max

typical no load torque: 0.50 oz. in.

protection: Varnish impregnated

shaft: Precision-ground, through-hardened (RC 45-50) 420 stainless steel per ASTM A582. Options: length, smaller diameter, flats, pinions, gears, holes. 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" shielded cable per MIL-C-7078 #22 AWG leads per MIL-W-16878/4

cover: Open type - aluminum
Enclosed type - brass

frame: Die-cast aluminum

marking: Per MIL-STD-130

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

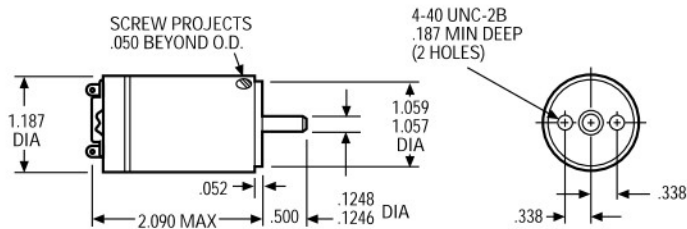
winding temperature rise: 7°C per watt w/8.00" x 8.00" x .25" aluminium heat sink

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

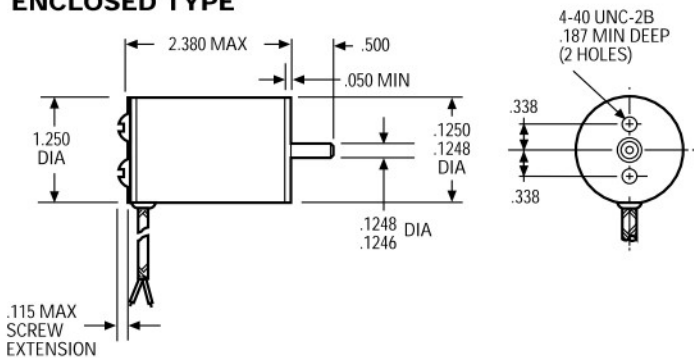
options available:
• Gear train (see A-2030 for details)

Dimensions

OPEN TYPE



ENCLOSED TYPE



A-2006

Standard Part Numbers and Data

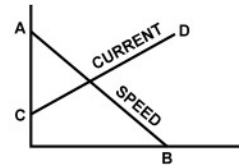
VOLTAGE (VDC)	SPEED no load (rpm)	TORQUE		CURRENT			CONSTANTS		STANDARD PART NO.*	
		max rated (oz. in.)	** theoretical stall (oz. in.)	max no load (amps)	max rated load (amps)	** nominal stall (amps)	K _t (oz. in./amp)	R (ohms)	open unit	enclosed unit
6	7,600-9,400	1.60	5.5	.70	2.00	7.00	.90	.80	3A999-5	3A1003-5
12	11,500-14,000	1.10	8.7	.52	1.70	8.40	1.20	1.35	3A999-24	3A1003-24
12	9,000-11,000	1.70	6.9	.42	1.50	5.30	1.51	2.13	3A999-3	3A1003-3
24	16,000-19,000	.75	11.0	.36	1.00	7.30	1.74	3.12	3A999-21	3A1003-21
24	14,400-17,000	.85	11.0	.32	.85	6.50	1.96	3.50	3A999-4	3A1003-4
24	12,000-14,500	1.00	8.7	.28	.80	4.50	2.26	5.08	3A999-7	3A1003-7
24	10,400-12,300	1.10	6.9	.23	.75	3.00	2.71	7.68	3A999-1	3A1003-1
24	7,400-8,900	1.60	5.5	.17	.70	1.70	3.77	13.43	3A999-2	3A1003-2
24	6,900-8,200	1.80	4.3	.16	.65	1.20	4.05	18.28	3A999-8	3A1003-8
24	6,200-7,400	1.80	3.4	.14	.60	.89	4.52	25.59	3A999-22	3A1003-22
24	5,200-6,200	1.20	3.4	.12	.45	.74	5.42	30.70	3A999-10	3A1003-10
50	7,600-9,400	1.50	5.7	.09	.25	.92	7.25	51.55	3A999-11	3A1003-11
75	14,000-17,000	1.00	8.6	.10	.29	1.60	6.33	45.10	3A999-25	3A1003-25
75	9,000-11,000	1.70	6.8	.07	.29	.85	9.63	84.10	3A999-16	3A1003-16
75	8,000-10,000	1.80	5.4	.06	.26	.60	10.56	119.40	3A999-12	3A1003-12
75	6,500-8,000	1.20	4.3	.05	.20	.37	13.58	194.00	3A999-15	3A1003-15
75	4,500-5,300	1.00	3.4	.04	.10	.23	16.89	303.00	3A999-13	3A1003-13

**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: 3A999-6

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.: 3A999-1, 3A1003-1

Voltage: 24 VDC

