

BD MOTORS W/TACHOMETER

DC Permanent Magnet Motors

A-2415



general design specification

power rating: .022 hp (16.4 W)

voltage: 6 to 115 VDC

weight: 13 ounces

armature: Dynamically balanced and skewed for low-speed operation

inertia: 3.94×10^{-4} oz. in. sec.²

protection: Varnish impregnated

shaft: Precision-ground, through-hardened (RC 40-50) 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 $+85^{\circ}\text{C}$ operation. Special lubricants available for temperature extremes

cables/leads: 12" tach leads #26 AWG double conductor shielded cable conductor per MIL-W-16878/4. Shielding per MIL-C-7078 white/red, white/black. Motor leads #22 AWG double conductor shielded cable conductor per MIL-W-16878/4. Shielding per MIL-C-7078 red & black

cover: Aluminum

frame: Die-cast aluminum

marking: Per MIL-STD-130

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

winding temperature rise: 5.5°C per watt w/8.00" x 8.00" x .25" aluminum heat sink

no load torque: 0.9 oz. in.

winding insulation rating: 180°C

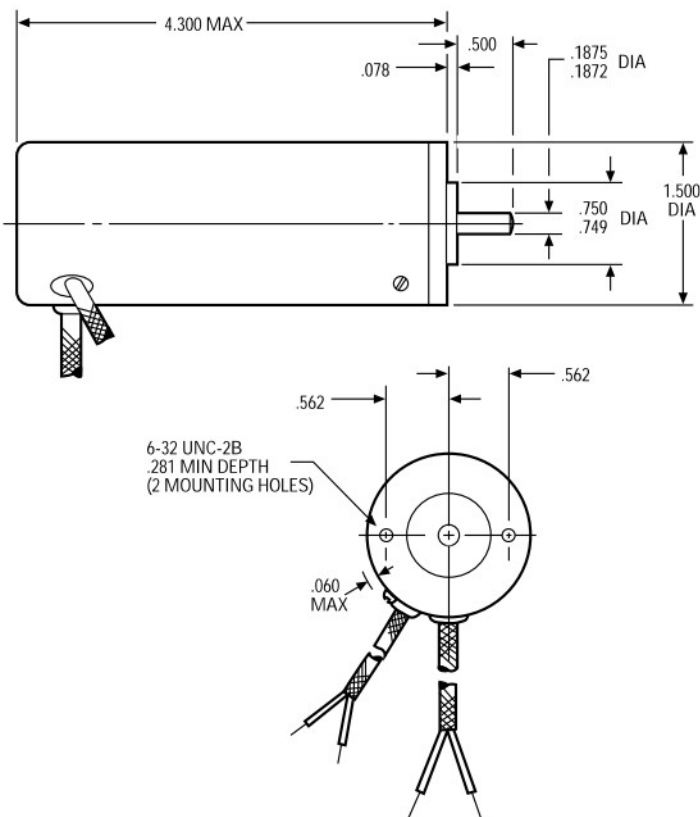
tachometer output:

- 1.5 VDC/1,000 rpm tach
- 5.4 VDC \pm .27 @ 3,600 rpm with 10,000 ohm load
- 3.0 VDC/1,000 rpm tach
- 10.8 VDC \pm .54 @ 3,600 rpm with 10,000 ohm load

options available:

- Gear train (see A-2430 for details)

Dimensions



A-2415

Standard Part Numbers and Data

VOLTAGE (VDC)	SPEED no load (rpm)	TORQUE		CURRENT			CONSTANTS		STANDARD PART NUMBER*	
		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)	1.5 VDC/ 1,000 rpm tachometer	3.0 VDC/ 1,000 rpm tachometer
6	10,000-12,000	2.1	19.0	1.70	4.6	35.00	.67	.18	100A753-3	100A754-3
6	8,000-9,500	3.0	15.0	1.30	4.6	22.00	.86	.29	100A753-4	100A754-4
12	12,500-14,500	1.6	24.0	1.00	2.3	27.00	1.10	.46	100A753-5	100A754-5
12	10,000-12,000	2.2	19.0	.81	2.3	17.00	1.39	.74	100A753-6	100A754-6
12	8,000-9,500	3.0	15.0	.65	2.3	11.00	1.74	1.13	100A753-7	100A754-7
12	6,200-7,300	3.3	11.0	.51	2.5	7.00	2.22	1.88	100A753-8	100A754-8
27	11,000-13,000	1.8	22.0	.40	1.0	9.80	2.79	3.04	100A753-9	100A754-9
27	9,000-10,500	2.6	17.0	.32	1.0	6.40	3.47	4.82	100A753-10	100A754-10
27	7,000-8,500	3.4	14.0	.26	1.0	3.90	4.35	7.58	100A753-11	100A754-11
50	10,500-12,500	1.9	20.0	.21	.5	5.45	12.20	12.20	100A753-12	100A754-12
50	8,000-9,500	2.6	16.0	.16	.5	2.90	6.85	19.10	100A753-13	100A754-13
50	6,500-8,000	3.5	13.0	.13	.5	1.80	8.64	30.80	100A753-14	100A754-14
50	5,000-6,000	3.3	10.0	.10	.4	1.20	10.87	48.30	100A753-15	100A754-15
115	13,000-15,500	1.4	18.0	.11	.3	2.30	9.95	56.30	100A753-16	100A754-16
115	11,000-13,000	2.0	14.0	.09	.3	1.50	12.17	87.00	100A753-17	100A754-17
115	9,000-10,500	2.6	11.0	.08	.3	.95	14.87	135.00	100A753-18	100A754-18
115	7,000-8,500	3.4	9.0	.06	.3	.61	18.79	207.00	100A753-19	100A754-19
115	6,000-7,000	2.7	7.0	.05	.2	.40	22.46	332.00	100A753-20	100A754-20
115	4,500-5,500	2.5	6.5	.04	.2	.26	27.29	507.00	100A753-21	100A754-21

**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: 100A753-7

Typical Performance

Part No.: 100A753-7

Voltage: 12 VDC

