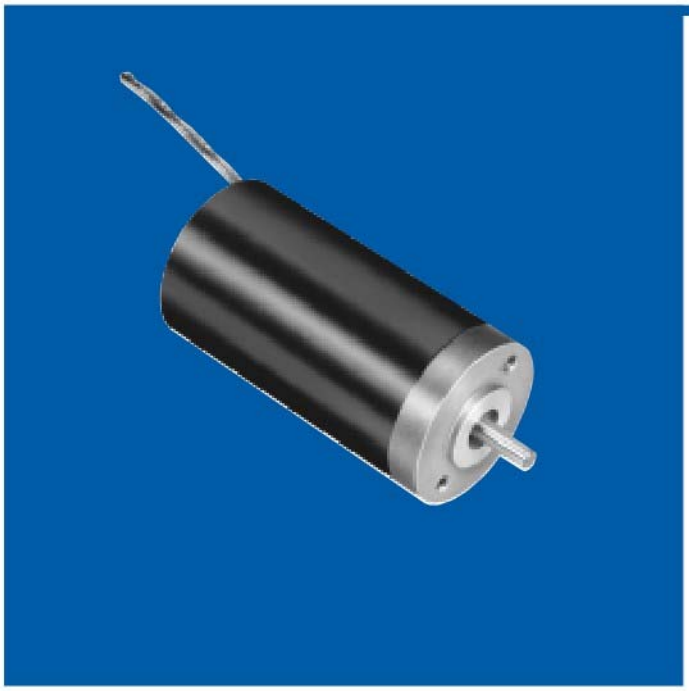
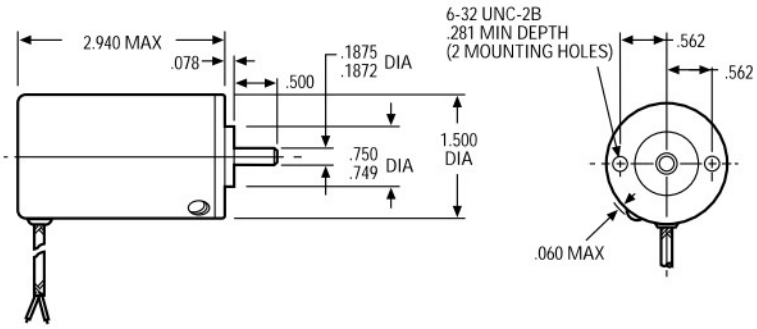
BL MOTORS

DC Permanent Magnet Motors

A-2406



Dimensions



general design specification

power rating: .033 hp (24.6 W)

voltage: 6 to 115 VDC

weight: 11.3 ounces

armature: Dynamically balanced

inertia: 5.7 x 10^{-4} oz. in. $sec.^2$

electrical time constant: 0.5 milliseconds max

mechanical time constant: 25.0 milliseconds max

typical no load torque: 0.75 oz. in.

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°C operation. Special lubricants available for temperature extremes

cables/leads: 8" shielded cable per MIL-C-7078 #22 AWG conductors per MIL-W-16878/4

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°C per watt w/8.00" x 8.00" x .25" aluminum heat sink

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

options available:

- Gear train (see A-2430 for details)
- RFI filters to meet MIL-I-6181, MIL-I-26600 or MIL-STD-461
- Integral tachometer generators (see Bulletin A-2420)

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Standard Part Numbers and Data

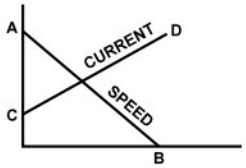
VOLTAGE (VDC)	SPEED no load (rpm)	TORQUE max rated (oz. in.)	TORQUE ** theoretical stall (oz. in.)	CURRENT max no load (amps)	CURRENT max rated load (amps)	CURRENT ** nominal stall (amps)	CONSTANTS K_T (oz. in./ amp)	CONSTANTS R (ohms)	STANDARD PART NUMBERS*
6	8,500-10,500	4.0	29.0	1.200	6.50	45.00	.80	.14	100A108-2
6	6,500-8,000	5.0	23.0	.930	6.50	28.00	1.01	.24	100A108-3
12	10,000-12,500	3.3	37.0	.710	3.50	36.00	1.30	.39	100A108-4
12	8,500-10,500	4.4	29.0	.560	3.50	22.00	1.66	.62	100A108-5
12	6,500-8,000	5.0	23.0	.440	3.50	14.00	2.10	1.00	100A108-6
12	5,100-6,200	5.5	18.0	.400	3.00	9.00	2.63	1.50	100A108-7
27	9,200-11,000	3.7	33.0	.280	1.40	12.00	3.35	2.50	100A108-8
27	7,000-9,000	5.0	27.0	.220	1.40	8.00	4.21	4.10	100A108-9
27	5,500-7,000	6.0	21.0	.180	1.40	5.20	5.24	6.40	100A108-10
50	8,500-10,500	3.8	31.0	.150	.72	5.90	6.57	10.10	100A108-11
50	6,500-8,000	5.0	25.0	.120	.74	3.70	8.23	16.00	100A108-12
50	5,500-7,000	6.5	20.0	.090	.73	2.40	10.34	25.00	100A108-13
50	4,500-5,500	7.5	16.0	.075	.66	1.50	13.05	41.00	100A108-14
50	3,500-4,500	6.0	12.5	.055	.43	.94	16.41	65.00	100A108-15
115	8,500-10,500	4.2	22.0	.065	.34	1.90	15.02	75.00	100A108-16
115	7,000-9,000	5.0	17.0	.055	.40	1.20	18.38	116.00	100A108-17
115	5,500-7,000	5.0	14.0	.045	.28	.77	22.60	180.00	100A108-18
115	4,500-5,500	4.2	11.0	.035	.19	.50	28.37	267.00	100A108-19
115	4,000-5,000	3.5	8.8	.030	.14	.33	33.91	420.00	100A108-20
115	3,000-4,000	2.9	8.1	.025	.10	.21	41.21	645.00	100A108-21

**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: 100A108-8

How To Draw Speed Torque Curve

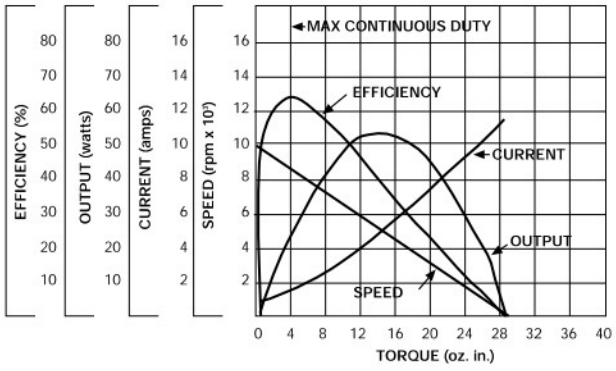


A no load speed (nominal) (rpm)
B stall torque (oz. in.)
C no load current (amps)
D stall current (amps)

Typical Performance

Part No.: 100A108-8

Voltage: 27 VDC



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