2796 Culver Ave., Dayton, Ohio 45429
513/294-1041

DC PERMANENT MAGNET MOTORS
MILITARY QUALITY

MODEL CML
BULLETIN 120A105
120A106

ELECTRICAL SPECIFICATIONS

Rating: 0.017 hp continuous duty.

Voltage: 6, 12, 27, 50 and 75 VDC are standard. Other voltages available as required.

Speed: 4900 rpm to 17,300 rpm are standard, with other speeds available upon request.

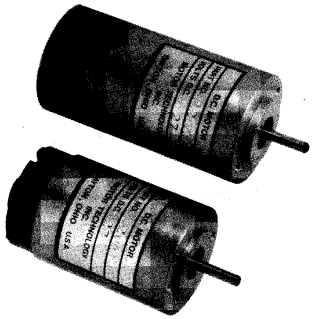
Connection Method: Shielded, double conductor leads for enclosed version. Solder terminals on open unit.

Rotation: Direction is CCW when positive terminal is plus and viewing shaft end.

Reversibility: Motor reverses when voltage is reversed.

Designed to meet military application demands, Model CML has a high power-to-weight ratio, reliability and excellent efficiency. It is designed to meet the applicable portions of MIL-M-8609 and MIL-E-5272, including the rugged environmental and explosion proof requirements.

Design options include special flanges, pinions, filters and brakes. For information on mating planetary gearmotors, see Bulletin 121A200.



MODEL CML

MECHANICAL SPECIFICATIONS

Frame: Machined aluminum impact extrusion for rigidity.

Armature: Varnish impregnated, precision balanced, with diamond turned commutator. Inertia is 9.8 x 10^{-5} oz.in. sec.^{2} (max.).

Magnet: Precision ground Alnico 5.

Brush-holder: Glass filled Diallyl Phthalate thermo-set, precision molded.

Bearings: Double shielded, life lubricated, R-2 precision ball bearings.

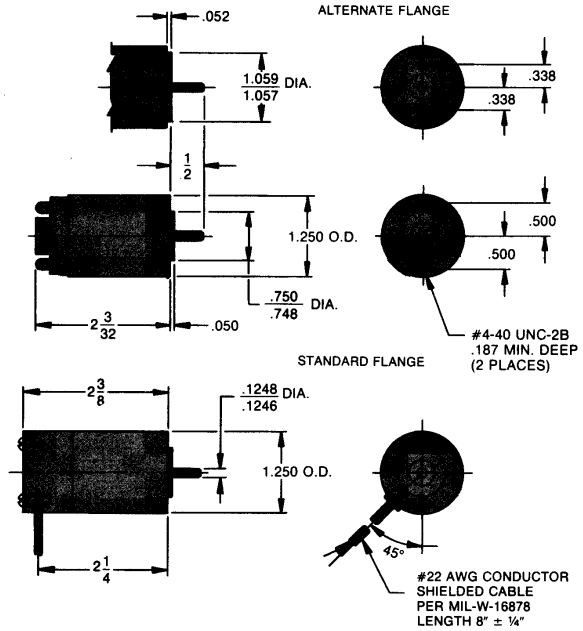
Lubrication: Grease per MIL-G-3278. Other lubricants available.

Shaft: Precision ground stainless 17-4 PH. Heat treated R_C 40-45.

Mounting Method: Two, #4-40 tapped holes in front E/B or non-magnetic clamp on frame O.D.

Weight: 4.9 oz. for open frame, 5.3 oz. for enclosed unit.

DIMENSIONS



MODEL CML
BULLETIN 120A105
120A106

DC PERMANENT MAGNET MOTORS
MILITARY QUALITY

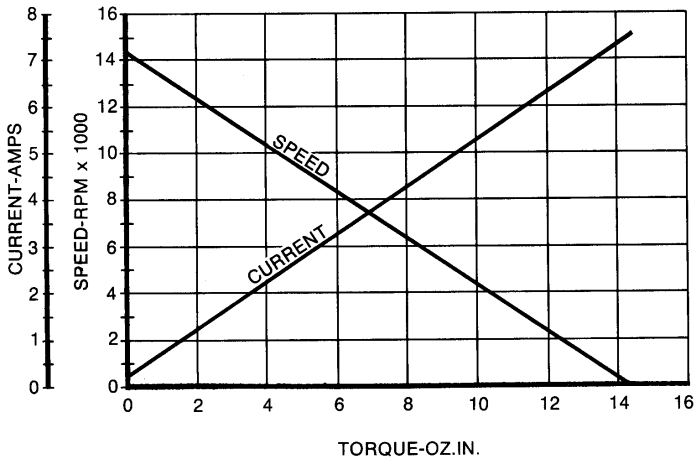
2796 Culver Ave., Dayton, Ohio 45429
513/294-1041

BASIC MOTOR DATA — STANDARD PART NUMBERS

INPUT VOLTAGE DC	NO-LOAD SPEED* RPM	RATED TORQUE OZ.IN.	STALL TORQUE* OZ.IN.	NO-LOAD CURRENT* AMPS	RATED TORQUE CURRENT* AMPS	STALL CURRENT* AMPS	STANDARD CML PART NUMBERS	
							OPEN	ENCLOSED
6	14,500	1.0	14.5	1.2	3.6	34	120A105-1	120A106-1
6	12,200	1.2	12.2	1.0	3.5	24	120A105-2	120A106-2
6	9,500	1.7	9.5	.79	3.3	14.5	120A105-3	120A106-3
12	15,100	1.1	15.1	.63	2.0	18.4	120A105-4	120A106-4
12	12,200	1.5	12.2	.51	2.0	12.0	120A105-5	120A106-5
12	9,700	2.0	9.7	.41	2.0	7.6	120A105-6	120A106-6
27	17,300	1.0	17.3	.32	.95	10.7	120A105-7	120A106-7
27	14,300	1.2	14.3	.26	.80	7.35	120A105-8	120A106-8
27	11,200	1.6	11.2	.21	.85	4.50	120A105-9	120A106-9
27	9,050	1.8	9.1	.17	.70	2.90	120A105-10	120A106-10
27	7,100	1.5	7.1	.13	.50	1.8	120A105-11	120A106-11
27	5,800	1.5	5.8	.11	.40	1.2	120A105-12	120A106-12
50	8,500	1.6	8.5	.085	.33	1.4	120A105-13	120A106-13
50	6,900	1.5	6.9	.069	.26	.92	120A105-14	120A106-14
75	7,800	1.6	7.8	.052	.20	.78	120A105-15	120A106-15
75	6,300	1.5	6.3	.042	.15	.51	120A105-16	120A106-16
75	4,900	1.3	4.9	.033	.10	.31	120A105-17	120A106-17

* The standard production tolerance on no-load speed, stall torque and stall current is ±10%.
The tolerance on no-load current is +25%.
The tolerance on current at rated torque is +15%.

NOMINAL PERFORMANCE CURVES
120A105-8 at 27 VDC



For complete engineering information on plotting speed/torque and current/torque curves for other armatures, see bulletin E-1. For Servo data, see bulletin E-2.

ORDERING

For standard motors, simply order by using the part number listed above corresponding to the performance required.

Special modifications to the CML motor are available and are ordered as follows:

1. Reference the closest standard P/N in your order.
2. Call out all the special requirements by stating exactly what is required.

We will then assign a special part number to identify your motor. For quick and accurate processing of future orders, just refer to this number.