

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

**DC PERMANENT MAGNET MOTORS
INDUSTRIAL QUALITY**

**MODEL CIR
BULLETIN 125A100**

ELECTRICAL SPECIFICATIONS

Rating: 0.01 hp continuous duty.

Voltage: 3, 6, 12, 27, and 50 VDC are standard. Other voltages are available if required.

Speed: 6000 rpm to 16,400 are catalog standard. Other speeds are readily made.

Connection Method: Solder terminals.

Rotation: Direction of rotation is CCW when positive terminal is plus and viewed from shaft end.

Reversibility: Motor reverses upon reversal of applied voltage.

The model CIR permanent magnet motor was designed by Motor Technology, Inc. to meet industry's most demanding requirements. A one-piece Alnico magnet, an impact extruded aluminum frame, and an impregnated and finely balanced armature make this motor the obvious choice for most applications.

Consult our application engineers when you need special modifications. We regularly provide special flanges, pinions, brakes, lubes, and electronic controls. For mating planetary gearhead information see Bulletin 126A100/120.



MODEL CIR

MECHANICAL SPECIFICATIONS

Frame: Impact extrusion, fully machined.

Magnet: Precision ground Alnico 5.

Armature: Varnish impregnated, precision balanced, diamond turned commutator. Inertia is 6.4×10^{-5} oz. in. sec². (max.).

Brush-holder: Precision molded glass filled Diallyl Phthalate thermo-set plastic.

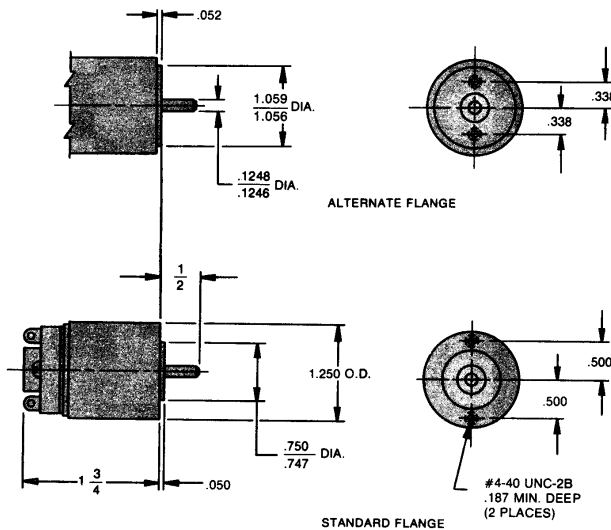
Bearings: Double shielded, life lubricated ball bearings.

Shaft: 17-4 PH stainless, hardened R_c 40-45.

Mounting Method: Two #4-40 tapped holes in front end-bell for screws or a non-magnet clamp around frame.

Weight: 3.9 oz. (max.)

DIMENSIONS



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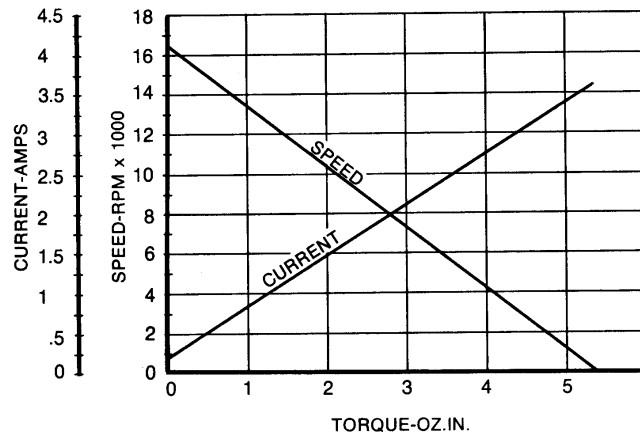
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BASIC MOTOR DATA — STANDARD PART NUMBERS

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 CIR PART NUMBERS
3	13,200	1.0	4.27	1.24	6.0	21.0	125A100-1
3	11,000	1.0	3.56	1.04	5.0	15.0	125A100-2
3	8,600	.7	2.78	.81	3.0	8.9	125A100-3
6	13,700	1.0	4.44	.85	3.0	11.1	125A100-4
6	11,000	1.0	3.56	.52	2.5	7.3	125A100-5
6	8,800	.7	2.85	.41	1.5	4.6	125A100-6
12	14,000	.9	4.54	.33	1.5	5.8	125A100-7
12	11,500	1.0	3.72	.27	1.3	4.0	125A100-8
12	9,000	.7	2.91	.21	.7	2.4	125A100-9
27	16,400	.7	5.31	.17	.6	3.6	125A100-10
27	12,800	1.0	4.15	.14	.5	2.2	125A100-11
27	10,500	.9	3.4	.11	.48	1.5	125A100-12
27	8,350	.6	2.7	.089	.28	.92	125A100-13
27	6,750	.5	2.18	.071	.20	.60	125A100-14
50	9,400	.7	3.05	.053	.19	.64	125A100-15
50	7,600	.6	2.46	.043	.13	.42	125A100-16
50	6,000	.5	1.94	.034	.08	.26	125A100-17

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

**NOMINAL PERFORMANCE CURVES
125A100-10 at 27 VDC**



For complete engineering information on plotting speed/torque, current/torque curves for other armatures, see Bulletin E-1. For Servo information, 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 CIR 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.