

Features

- Permanent Magnet Brush-Type motor
- High Efficiency approaching 90%
- Brush life of 1500 hours at 200 Amps
- Open Frame, Fan Cooled design
- Adjustable Brush Timing
- Speed range 0-5000 RPM
- Easy removal of Brush Holder without disturbing the motor bearings
- Neodymium magnets rated for 150 C.

Applications

- Electric motorcycle
- Electric golf car or utility vehicle
- Electric outboard and inboard boat drive
- Micro car
- Hydraulic pumps
- Floor burnishers



Description

The ME1003 is an Open Frame, Fan Cooled version of the 8" diameter family of brush-type dc motors. The motor offers a small volume and a high power to weight ratio.

The ME1003 can be used in 96V, 72V, 60V, 48V, 36V and 24V DC application with and without a speed controller.

Some applications require variable speed and a speed control is required. For constant speed operation, a contactor is all that is required to run the motor.

This motor has two brushes per holder to carry more current than the standard brush-type dc motors.

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Motenergy, Inc	Product Information ME1003	Rev:	
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		Check By:	JF

Motor Electrical Parameters

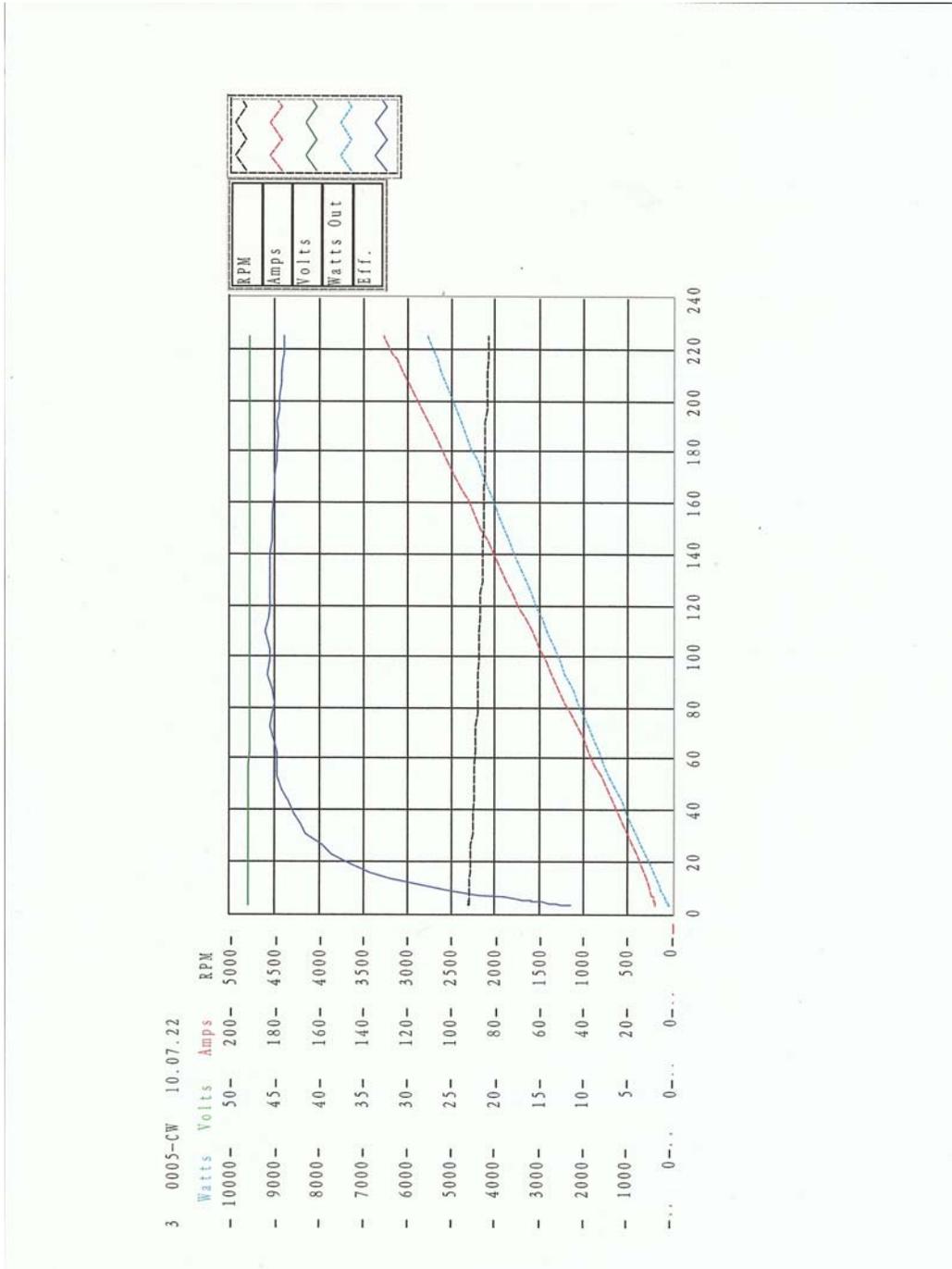
Electrical Parameter	Unit	Parameter
Operating Voltage Range	VDC	0 minimum to 96 maximum
Rated Continuous Current	ADC	200
Peak Current	ADC	500 (10 sec) 400 (30 sec), 300 (1 minute)
No Load Current (I _{NL})	ADC	6 amps typical at neutral timing
Peak Stalled Current	Arms	500
Voltage Constant	V/RPM	0.02
Armature Resistance (L-L)	Ohm	0.01
Turns	Turns	1
Inductance	uH	93 at 120 Hz
Torque Constant	Nm/A	0.2
Maximum Continuous Power	KW	16 (96V), 14.3 (84V), 12.6 (72V)
Macimum Case Temperature	F	250

Motor Mechanical Parameters

Mechanical Parameter	Unit	Parameter
Rated Speed	RPM	3000 (at 72 VDC0)
Maximum Speed	RPM	5000
Rated Torque	Lb-in	39 (200 amps)
Continuous Stalled Torque	Lb-in	20 (100 amps)
Peak Torque	Nm	98 (at 500 amps)
Operating Ambient Temperature	C	-40 to 40 (for these ratings)
Armature Inertia	kg.cm ²	268
Motor Winding Insulation	Class	F
Max. Winding Operating Temperature	C	155
Shaft Configuration		See Drawing
Face Mounting Details		See Drawing
Tightening Torque for Terminals		See Drawing
Weight	lb	39
Direction of Rotation	I	Bi-directional fan (CCW Timed)
Storage Temperature	C	-30 to 150
Materials of Construction		Standard
Number of Brushes		16

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Typical Motor Performance Data



Data taken with 48 VDC Power Supply, constant voltage.

X-Axis is Torque in Pound Inches. (1 Pound Inch equals 0.11 Nm)

Maximum speed is set by the motor control.

The speed is proportional to the applied voltage. For 24 VDC, the speed is ½. For 96 VDC, the speed is double.

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