ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Parker / Compumotor DR-1045B-230*1C* at our website: *Click HERE*



Dynaserv Drive/Controller

The Dynaserv M2 drive/controller is a single-axis servo motor programmable drive/controller, designed to optimize the use of the Dynaserv direct drive motors. It incorporates a completely digital motion and position programmable controller with the well-established Dynaserv drive in a single package. It was designed to simplify the use of Dynaserv direct-drive servo motor system, especially in rotary indexing applications. The M2 uses the I-PD control algorithm for precise motion and position control. The "auto tuning" feature simplifies servo tuning and decreases system setup time. Improved settling time is realized due to the use of position feed forward and the close proximity of the controller and drive.

The Dynaserv M2 can be used with all the Dynaserv motors except the DR5000A series. RS232C and the PLC mode allow the user to manipulate the controller, with either a computer or a Programmable Logic Controller. Programs, parameters, configurations, and data settings can be stored in the Flash Read Only Memory (ROM). (Since Flash ROM does not require battery backup, it makes for a very safe method for storing valuable setup information).

The M2 Drive can be used to replace mechanical cam indexers and have the flexibility to change index number, index distance, acceleration, speed, etc., electronically, without replacing the dial indexer.

Features

- Auto Tuning
- Position Feed Forward
- RS232 Communication
- PLC Mode
- LED Diagnostic Display
- Indicator Lamps
- Controls most DR or DM series motors
- Flash Read Only Memory(ROM)
- Windows 95/98 Utility Software (M2 Utility)

Accessories

- CP7576S-020 RS232C 2 meter cable (IBM compatible)
- CP7802S-020 PLC 2 meter cable
- CP7902S-020 Sensor (Home, travel limits, etc.) 2-meter cable
- Teach Box wired remote control

Please refer to the ordering information matrix on page 159

Integrate Direct Drive Servo Systems Into Your Next Application. Call 1-800-358-9070 Today.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

General Specifications

Type	500W type		2kW type			
Input power supply voltage	100 to 115V AC + 10%, -15% 50Hz/60Hz	200 to 230V AC + 10%, -15% 50Hz/60Hz	100 to 115V AC + 10%, -15% 50Hz/60Hz	200 to 230V AC + 10%, -15% 50Hz/60Hz	100 to 115V AC + 10%, -15% 50Hz/60Hz	200 to 230V AC + 10%, -15% 50Hz/60Hz
Maximum current consumption (KVA)	0.8		3.4		3.4	
Ambient operating air temperature and humidity	0 to 50°C, 20 to 90% RH, without condensation					
Ambient storage air temperature and humidity	-20 to 85°C, 20 to 90% RH, without condensation					
Operating environment	No corrosive gases and dust should be present.					
Mass (kg)	1.7		3.6		3.2	

* Input voltage 100 to 115V AC: 1, 200 to 230V AC: 2

Function Specifications

Item		Specifications
Higher interface		RS232C interface (single channel communication, multi-channel communication) PLC interface (can be selected from the following four types at ordering: contact I/O, PROFIBUS-DP, CC-LINK, DeviceNet)
Input signal	Control input signal	Emergency stop, servo command, start, stop, operation number, code input (BCD 2-digit), error reset, integral position control operation disable, interlock, velocity override selection, jog (+) command, job (–) command, M answer input etc.
	Mechanical input signal	Homing signal, (+) direction hardware over-travel signal, (-) direction hardware over-travel signal
Output signal	Control input signal	CPU ready, servo ready, operation under execution, error status, alarm status, position settling status, area signal 0, area signal 1, M code enable, code output (BCD 2-digit) etc.
	Mechanical input signal	Brake signal
Position detector resolution		Rotating type DMA series: 4,096,000 pusles/rev DMB series: 2,621,440 pulses/rev DM1004 series: 2,621,440 pulses/rev DRA series: 1638400 pulses/rev DRB series: 1015808 pulses/rev DRE series: 1228800 pulses/rev DR5000B & C series: 557056 pulses/rev Linear Type Standard, high-stiffness series: 0.25 μm, high-speed, high-speed/high-stiffness series: 0.5 μm,
Coordinate system		Either rotational coordinates or linear coordinates can be selected. Command unit coordinate (rotating type): pulse, angle (1/100, 1/1000, 1/10000 degree), user setting unit (linear): pulse, angle (10μm, 1μm, 0.1μm), user setting units Operation unit: command unit, index Type A, index Type B
Control Algorithm	Method	I-PD position control (position: integral proportional control, velocity: proportional control) Feed forward functions (position, velocity, acceleration) Filters (velocity command filter, velocity feedback filter, first order delay filter, notch filters)
	Adjustment	Position control bandwidth:1 Hz to 32Hz, Velocity control loop width: 5Hz to 200Hz Position integral limiter setting Feed forward percentages (position, velocity, acceleration) Filter settings (velocity command filter bandwidth, velocity feedback filter enable/disable, bandwidth, first order delay filter setting, notch filter setting) Calculates proportional gain and acceleration feed forward gain of the velocity control part automatically based on measurement by the auto-tuning operation or manual setting of the load inertia/weight with respect to the settings of velocity control bandwidth and acceleration feed forward percentage. Calculates position control bandwidth, velocity control loop bandwidth, and position integral limiting value automatically during execution of the auto-tuning operation or by manual setting of the servo stiffness.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Specifications, continued

Acceleration/deceleration control		Trapezoidal move: Acceleration curve and deceleration curve can be selected individually. Acceleration time or deceleration time can be selected individually (with respect to the maximum velocity). Cam profile move: Cam profile selection (8 standard parts and 8 user parts) Acceleration curve or deceleration curve at velocity override change can be selected individually. Acceleration time or deceleration time at velocity override change can be selected individually (ratio to override is 100%). Feed time setting or maximum velocity setting Real time velocity override
Operation function		Jog move operation, test operation, auto-tuning operation, homing operation, signal search operation, index operation A, index operation B, table reference operation, program operation, MDI operation
	Program operation	No. of program blocks:1000, No. of programs:100 (including 10 fixed programs). Parameters and reference monitors within a program. IF statements, FOR statements, WHILE statements, and subprogram calls. Variables (50 registration variables and 50 volatile variables). Step execution and repetitive.

Item	Specifications
Protection functions	Encoder/resolver error, power module error (over-voltage and over current), main power supply error, overload, maximum velocity, excessive position deviation, hardware over-travel, software over-travel (only for linear coordinate)
Others	M function (2-digit) Support software PC utility running under Windows Possible to connect the operation display pendant (optional)
Monitor	Analog signal monitor (velocity, general, torque/thrust command) For general monitoring, what is shown by the monitor can be selected by setting (position error, test operation response, position command value, current position value, position command differential value) Digital signal monitor (settling signal) Monitoring internal information by higher interface

Integrate Direct Drive Servo Systems Into Your Next Application. Call 1-800-358-9070 Today.

Parker Automation
Parker Hannifin Corporation
Compumotor Division
compumotor.com
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

DR Series Motor Data

		Model 1008B	Model 1015B	Model 1030B	Model 1045B	Model 1060B	Model 1070E	Model 1100E	Model 1130E	Model 1160E
Peak torque	ft-lbs (Nm)	6 (8)	11 (15)	22 (30)	33 (45)	44 (60)	52 (70)	74 (100)	96 (130)	118 (160)
Rated speed 115/230VAC	rps	2.0/2.0	2.0/2.0	1.5/2.0	1.0/2.0	1.0/1.5	1.5/2.0	1.0/1.5	0.5/1.0	0.5/1.0
Maximum power consumption 115/230VAC	KVA	0.7	1.0	1.8	1.8	1.8	2.0	2.3	2.5	2.8
Rotor inertia	oz-in^2 x 10^2 (Kgm^2 x 10^{-3})	7.9 (15)	11 (21)	13 (24)	14 (26)	18 (33)	46 (85)	55 (100)	68 (125)	77 (140)
Max resolution		507,904	507,904	507,904	507,904	507,904	614,400	614,400	614,400	614,400
Motor weight	lbs (kg)	13 (6)	20 (9)	24 (11)	29 (13)	35 (16)	49 (22)	57 (26)	70 (32)	79 (36)
Maximum static axial load*										
• Compression	lbs	6,744	6,744	6,744	6,744	6,744	8,992	8,992	8,992	8,992
• Tension	lbs	2,248	2,248	2,248	2,248	2,248	4,496	4,496	4,496	4,496
Maximum static overhung load*	ft-lb	148	148	148	148	148	295	295	295	295

DR Series Motor Data

		Model 1100A	Model 1200A	Model 1300A	Model 1400A
Peak torque	ft-lbs (Nm)	74 (100)	148 (200)	221 (300)	295 (400)
Rated speed, 115/230VAC	rps	1.0/1.0	0.5/1.0	0.25/0.5	0.25/0.5
Maximum power consumption, 115/230VAC	KVA	2.5	3.0	3.2	3.2
Rotor inertia	oz-in^2 x 10^2 (Kgm^2 x 10^{-3})	109 (200)	156 (285)	186 (340)	219 (400)
Maximum resolution		819,200	819,200	819,200	819,200
Motor weight	lbs (kg)	68 (31)	101 46)	125 (57)	150 (68)
Maximum static axial load**					
• Compression	lbs	8,992	8,992	8,992	8,992
• Tension	lbs	4,496	4,496	4,496	4,496
Maximumum Static Overhung Load*	ft-lb	295	295	295	295

* When designing a system, de-rate the maximum load to the values shown below:

Application	De-rate Factor
Smooth, rotary motion	1/3
Intermittent press loading	1/5
Repetitive shock loading	1/10

Parker Automation
Parker Hannifin Corporation
Compumotor Division
compumotor.com
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

DR5000 Series–Motor Data

		Model 5005C	Model 5010C	Model 5015C	Model 5030B	Model 5070B	Model 5300A	Model 5500A
Peak torque	ft-lbs (Nm)	2.8 (3.8)	5.9 (8)	10.3 (14)	22 (30)	52 (70)	221 (300)	369 (500)
Rated speed	rps	6	6	6	4	4	1.5	1.5
Rotor inertia	oz-in^{2}x10^2 (kgm^2)x10^{-3}	3.28 (0.006)	3.83 (0.007)	4.37 (0.008)	4.4 (8)	19.7 (36)	185.9 (340)	251.5 (460)
Resolution	Steps/rev	212,992	212,992	212,992	278,528	278,528	425,984	425,984
Motor weight	lbs (kg)	11.0 (5.0)	13.2 (6.0)	15.4 (7.0)	15.4 (7.0)	38.5 (17.5)	121 (55)	165 (75)
Maximum static axial load**								
• Compression	lbs	1124	1124	1124	6600	6600	8800	8800
• Tension	lbs	674	674	674	2200	2200	4400	4400
Maximum static overhung load**	ft-lb	15	15	15	148	148	296	296
Maximum power consumption	KVA	1.0	1.0	1.0	3.1	3.1	5.5	7.5

Application	De-rate Factor
Smooth, rotary motion	1/3
Intermittent press loading	1/5
Repetitive shock loading	1/10

** When designing a system, de-rate the maximum load to the value as shown at the left:

DM Series – Motor Data

		Model 1015B	Model 1030B	Model 1045B	Model 1050A	Model 1100A	Model 1150A	Model 1200A
Peak torque	ft-lbs (Nm)	11 (15)	22 (30)	33 (45)	37 (50)	74 (100)	111 (150)	148 (200)
Rated speed	115VAC	2.0	2.0	1.0	1.0	1.0	0.5	0.5
• rps	230VAC	2.0	2.0	2.0	1.0	1.0	1.0	1.0
Rotor inertia	oz-in^2 x 10^2 (Kgm^2) x 10^{-3}	6.6 (12)	8.2 (15)	10.4 (19)	52.5 (96)	65.1 (119)	77.6 (142)	91.3 (167)
Maximum steps/rev		655,360	655,360	655,360	1,024,000	1,024,000	1,024,000	1,024,000
Motor weight*	lbs (kg)	12 (5.5)	17 (7.5)	21 (9.5)	32 (14.5)	42 (19)	53 (24)	64 (29)
Maximum static axial load**								
•Compression	lbs	6,600	6,600	6,600	8,800	8,800	8,800	8,800
•Tension	lbs	2,200	2,200	2,200	4,400	4,400	4,400	4,400
Max. static overhung load**		148	148	148	296	296	296	296
Max. power consumption	KVA	1.6	2.0	2.0	2.4	2.7	3.0	3.0

*** When designing a system, de-rate the maximum load to the values shown at the right:*

Application	De-rate Factor
Smooth, rotary motion	1/3
Intermittent press loading	1/5
Repetitive shock loading	1/10

Integrate Direct Drive Servo Systems Into Your Next Application. Call 1-800-358-9070 Today.

Parker Automation
Parker Hannifin Corporation
Compumotor Division
compumotor.com

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

DM1004 Motor Data Specifications

		DM1004B	DM1004C
Peak torque	ft-lbs (N-m)	3 (4)	3 (4)
Rated speed • rps	115VAC 230VAC	2.5 2.5	2.5 2.5
Rotor inertia	oz-in^2 x 10^2 (Kgm^2) x 10^{-3}	3.01 (5.5)	1.37 (2.5)
Maximum step	s/rev	655,360	655,360
Motor weight*	lbs (kg)	6.6 (3)	6.6 (3)
Maximum static axial load** • Compression • Tension	 lbs (kg) lbs (kg)	 440 (200) 154 (70)	 770 (350) 770 (350)
Maximum static overhung load**	ft-lb (kg-m)	20 (2.7)	24.4 (3.3)
Maximum power consumption	KVA	0.3	0.3

** *When designing a system, de-rate the maximum load to the values specified here:*

Application	De-rate Factor
Smooth, rotary motion	1/3
Intermittent press loading	1/5
Repetitive shock loading	1/10

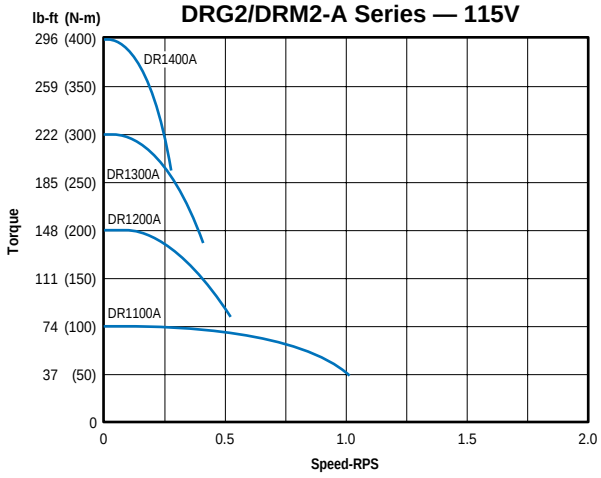
Please refer to the ordering information matrix on page 159

Parker Automation
Parker Hannifin Corporation
Compumotor Division
compumotor.com
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

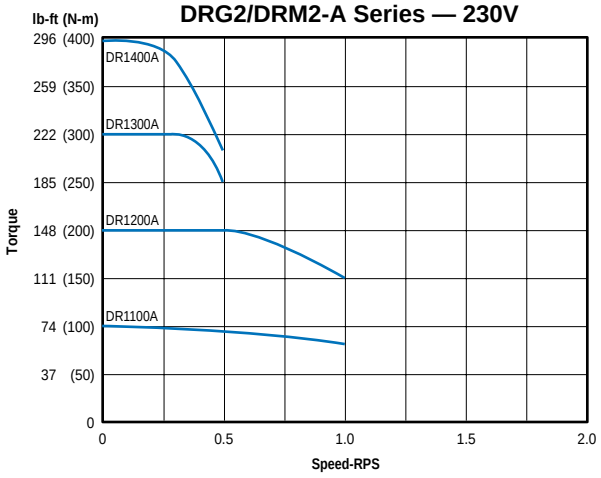
Motor Speed-Torque Performance Curves

The speed-torque curves represent peak torque available.

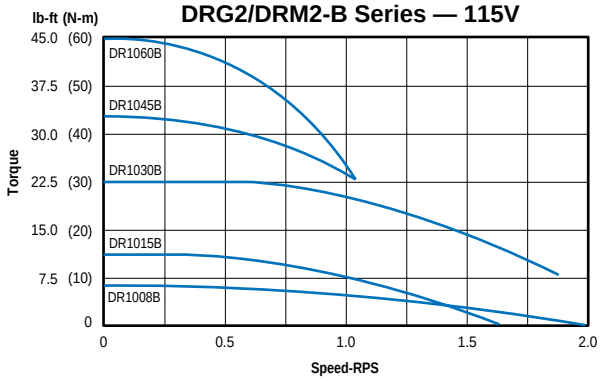
DRG2/DRM2-A Series — 115V



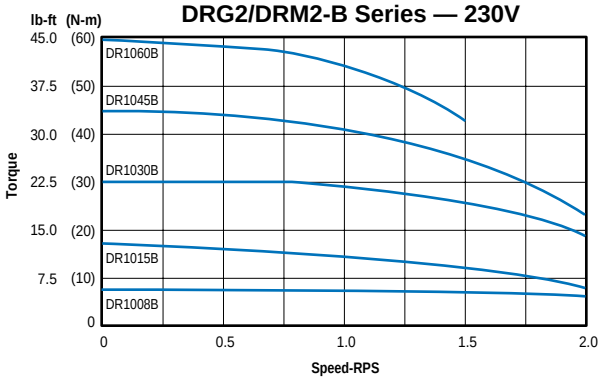
DRG2/DRM2-A Series — 230V



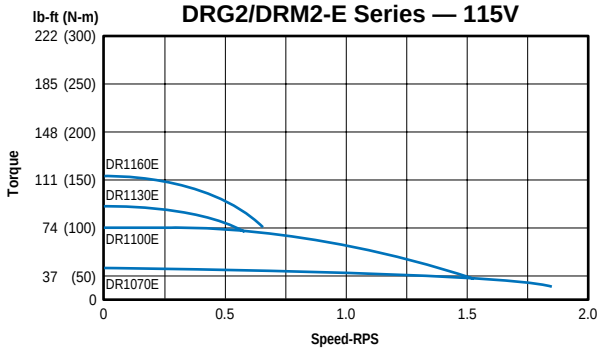
DRG2/DRM2-B Series — 115V



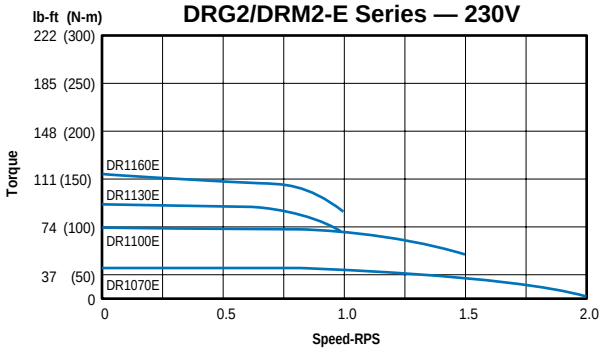
DRG2/DRM2-B Series — 230V



DRG2/DRM2-E Series — 115V



DRG2/DRM2-E Series — 230V



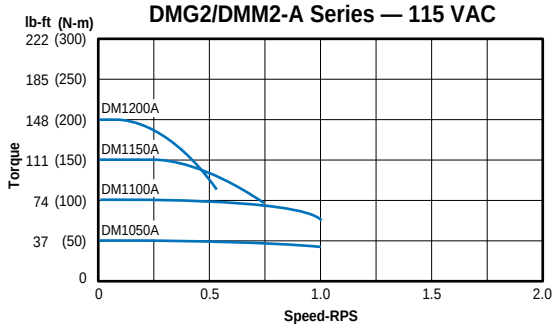
Integrate Direct Drive Servo Systems Into Your Next Application. Call 1-800-358-9070 Today.

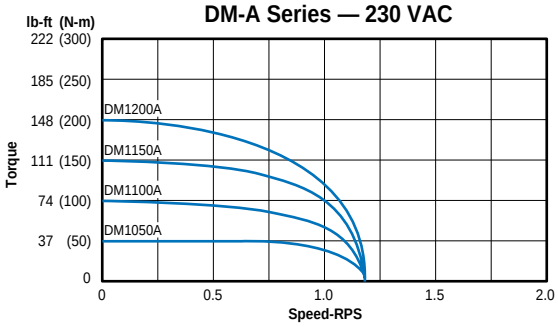
Parker Automation
Parker Hannifin Corporation
Compumotor Division
compumotor.com

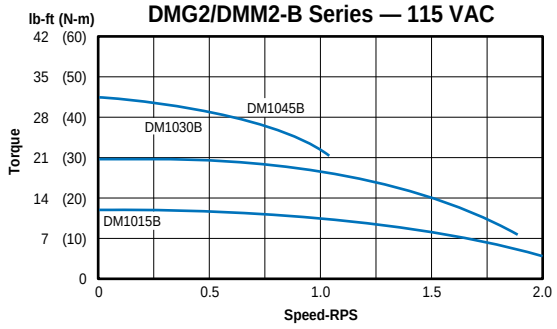
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

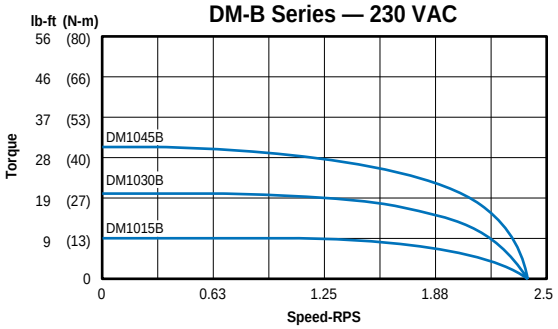
Motor Speed-Torque Performance Curves

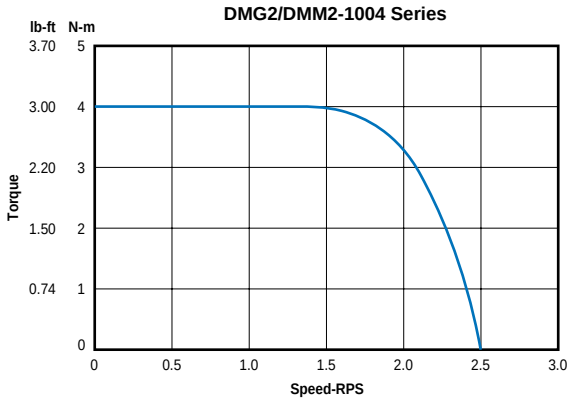
The speed-torque curves represent peak torque available.









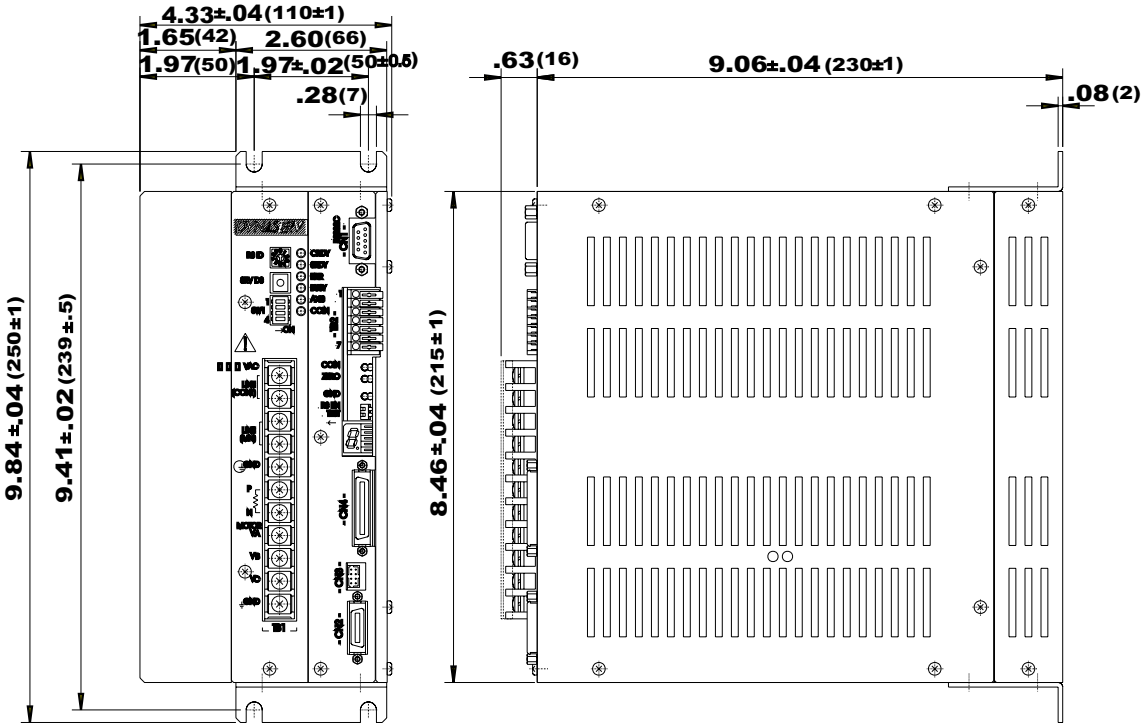


Parker Automation
Parker Hannifin Corporation
Compumotor Division
compumotor.com
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

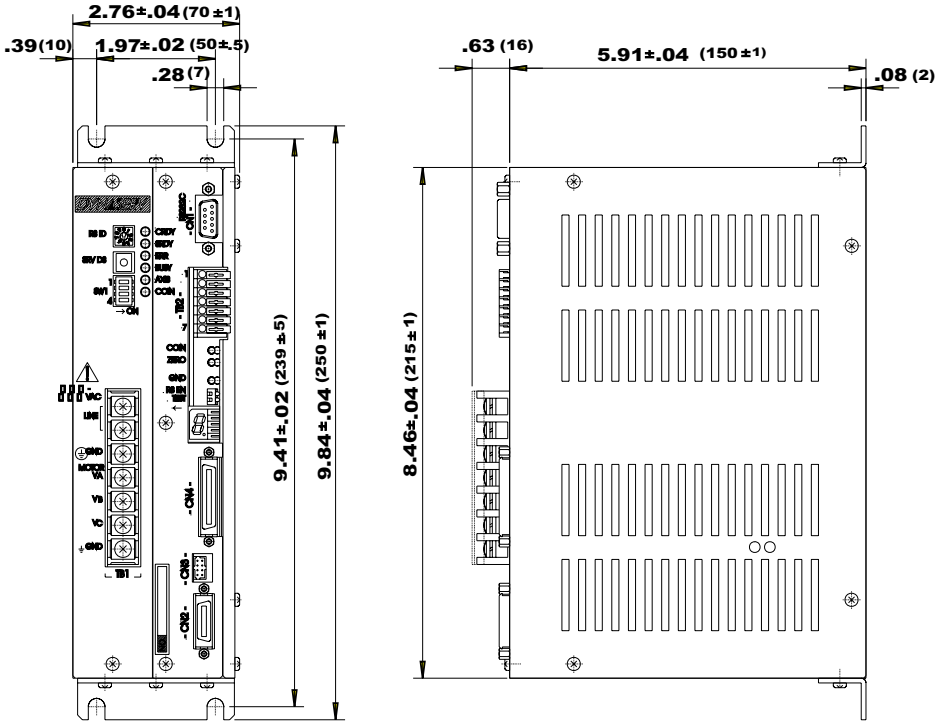
G2 Drive Dimensional Drawings

Dimensions in inches (mm)

Dynaserv G2/M2 2kW with Regen



Dynaserv G2/M2 2kW with Regen



Integrate Direct Drive Servo Systems Into Your Next Application. Call 1-800-358-9070 Today.

Parker Automation
Parker Hannifin Corporation
Compumotor Division
compumotor.com
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP