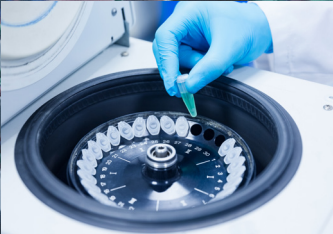


Brushless DC Gearmotors


MULTIPRODUCTS
C o m p a n y , I n c .
Your Partner. In Motion.

Highly efficient Brushless DC motors and gearmotors. Smooth, quiet operation. Integrated drive options make for precise controllability.



From Laboratory Equipment...



To Industrial Assembly...



To Foodservice Equipment...

Tailor-Engineered Gearmotors For Your Application.

High quality, attention to detail, on-time delivery, and quick lead times have been the pillars of Multi for over 60 years. We are committed to being the partner you can count on.



Precision Brushless DC Motors

Quiet, precise, and power-dense Brushless DC motor options

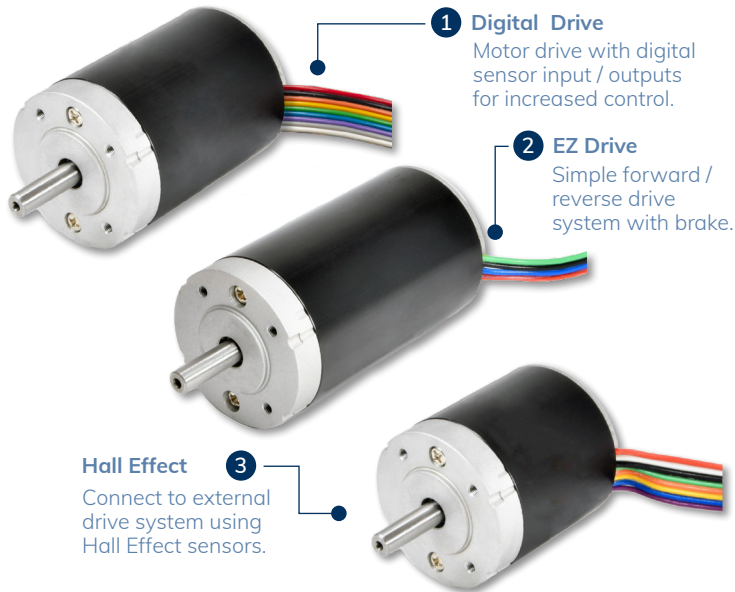
BRUSHLESS DC MOTOR LINE

Electronically Commutated, Long Lifespan



Integrated Drivers

Two Integral Drive System Options.



1 Digital Drive

Motor drive with digital sensor input / outputs for increased control.

2 EZ Drive

Simple forward / reverse drive system with brake.

Hall Effect

Connect to external drive system using Hall Effect sensors.

Multi Products Company offers precision, electronically commutated BLDC motors. Featuring a single frame size, neodymium magnet technology, 6 pole stator, and a slotless rotor design. Compared to brush DC motors, Multi's Brushless DC motors are quieter, have longer service life, greater power density, and need no maintenance, making them the best option for modernization and new design-in applications.

Compatible with a select range of available parallel shaft, miniature spur, and planetary gearboxes / reducers.

Applications: Medical / Laboratory Equipment, Foodservice Equipment, Sporting Goods, Agriculture, Industrial Machinery, Material Handling, and Robotics.

- Little-to-no-maintenance — 20,000+ hour lifespan*
- Zero electromagnetic interference
- Precision controllability across speed range
- Extruded and cast aluminum housing
- Heavy-duty ball bearings
- Three (3) Hall Effect sensors for positioning
- Three (3) motor lengths and power outputs
- Frame size: 42mm
- Output power up to 31 W

*Motor life dependent on duty cycle, application, and environment.

HALL EFFECT

Information & Specifications



The Hall Effect Brushless DC from Multi Products is compact, powerful, and precise. Featuring a 6 pole stator and slotless rotor design for high torque density. The Hall Effect BLDC motor is designed to connect to an external drive system utilizing the 3 onboard Hall Effect sensors for control and positioning. Reversible. Optional encoders and other accessories. Designed for continuous or intermittent duty.

Part Number	Voltage	Speed	Torque	Current	Power
DCM-1031 (L)	12-24V	4172 RPM	10.0 oz-in.	1.7 A	30.8 W
DCM-1031 (M)	12-24V	4619 RPM	6.21 oz-in.	1.2 A	21.2 W
DCM-1031 (S)	12-24V	4423 RPM	3.79 oz-in.	0.8 A	12.4 W

Hall Effect Connector Pin Out

Pin No.	Wire Color	Signification
1	Red	U Phase
2	White	V Phase
3	Black	W Phase
4	Green	GND
5	Orange	Vcc
6	Yellow	Hall U
7	Blue	Hall V
8	Purple	Hall W

Hall Effect Firing Sequence

	Hall Effect Sensors			CCW Phases			CW Phases		
	HU	HV	HW	U	V	W	U	V	W
1	1	0	1	+	-	0	-	+	0
2	1	0	0	0	-	+	0	+	-
3	1	1	0	-	0	+	+	0	-
4	0	1	0	-	+	0	+	-	0
5	0	1	1	0	+	-	0	-	+
6	0	0	1	+	0	-	-	0	+

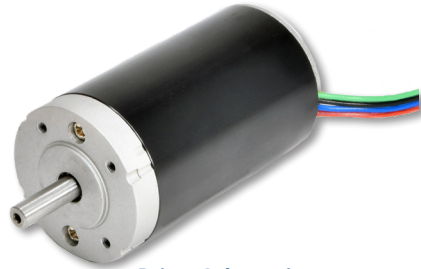
Part Number: **DCM - 1031**

High Controllability and Efficiency

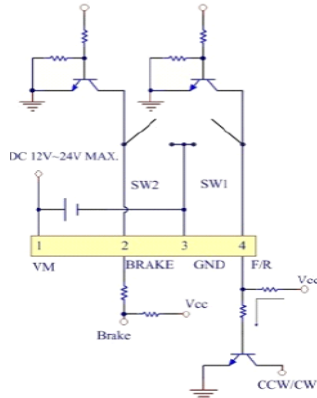
Extreme lifespans for demanding applications.

EZ DRIVE

Information & Specifications



Driver Schematic



The EZ Drive Brushless DC from Multi Products is compact, powerful, and precise. Featuring a 6 pole stator and slotless rotor design for high torque density. The EZ Drive BLDC motor utilizes an integral motor drive system. The simple on-board drive system features easy, 4-lead power, brake, forward / reverse wiring. Optional encoders and other accessories. Designed for continuous or intermittent duty.

Part Number	Voltage	Speed	Torque	Current	Power
DCM-1035 (L)	12-24V	4172 RPM	10.0 oz-in.	1.7 A	30.8 W
DCM-1035 (M)	12-24V	4619 RPM	6.21 oz-in.	1.2 A	21.2 W
DCM-1035 (S)	12-24V	4423 RPM	3.79 oz-in.	0.8 A	12.4 W

Full Driver Connector Pin Out					
Pin No.	Wire Color	Symbol	I/O	Function	Connection
1	Red	VM	Input	Power Supply - POS	DC12V-24V +
2	Blue	Brake	Input	Brake Operates	Open or to Ground
3	Black	Ground		Power Supply - NEG	DC12V-24V -
4	Green	For/Rev	Input	Open: CCW Ground: CW	Open or to Ground

Warning: The positive and ground wire connection is not reversible; damage to motor will result.

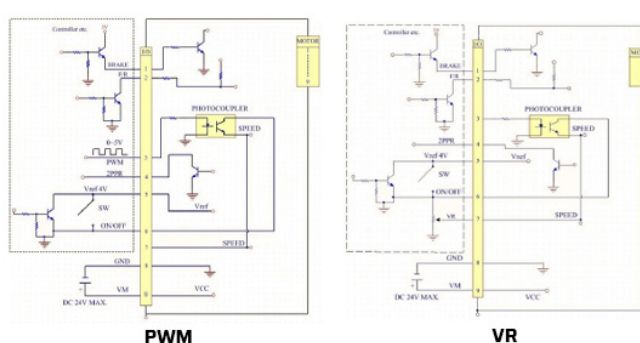
Part Number: **DCM - 1035**

DIGITAL DRIVE

Information & Specifications



Driver Schematic



The Digital Drive Brushless DC from Multi Products is the most controllable motor in our line. Compact, powerful, and precise. Featuring a 6 pole stator and slotless rotor design for high torque density. The motor utilizes an integral motor drive system capable of using digital input / output signals from external sensors to control the speed, torque, and position of the motor. Optional encoders and other accessories. Designed for continuous or intermittent duty.

Part Number	Voltage	Speed	Torque	Current	Power
DCM-1036 (L)	12-24V	4172 RPM	10.0 oz-in.	1.7 A	30.8 W
DCM-1036 (M)	12-24V	4619 RPM	6.21 oz-in.	1.2 A	21.2 W
DCM-1036 (S)	12-24V	4423 RPM	3.79 oz-in.	0.8 A	12.4 W

Digital Drive Connector Pin Out					
Pin No.	Wire Color	Symbol	I/O	Function	Standard Condition
1	White	Brake	Input	H: Brake Engages L: Brake Releases	H: $\geq 2.4V$ L: $\leq 0.4V$
2	Gray	F/R	Input	H: CCW L: CW	H: $\geq 2.4V$ L: $\leq 0.4V$
3	Purple	0-5V PWM	Input	Power Supply Positive for External Speed Setter	Pulse-Width Modulation Freq: $\leq 5K$ Hz
4	Blue	2 PPR	Output	Make a Full Circle 2 Pulse	Open Collector
5	Green	VREF 4V	Output	Driver 4V Output	Provide for High Signal
6	Yellow	On/Off	Input	Motor Rotates: 4V-5V Motor Stops: $\leq 0.4V$	Semiconductor Element or a Switch Gear On/Off
7	Orange	VR		Power Supply Positive for External Speed Setter	Variable Resistor 5K-10K
8	Black	GND		Power Supply GND	DC12V-24V Max
9	Red	VM	Input	Power Supply Positive for Drive	

Note: Select one of the PWM (Pin 3) or the VR (Pin 7) for speed control; connecting both simultaneously is not allowed

Part Number: **DCM - 1036**

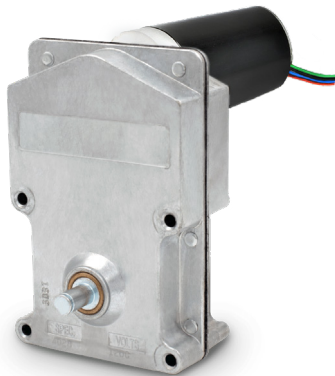
BLDC Motor Compatible Gearboxes

PERFORMANCE DATA - TORQUE/SPEED

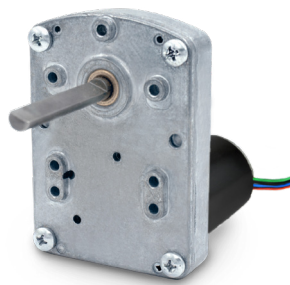
Data is based on in-lb running torque +/- 15%



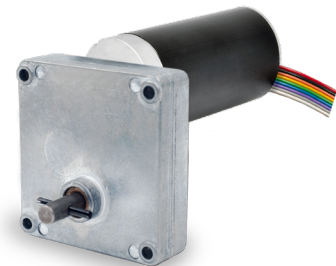
Gearbox Model	302	1600	3000	6000	7000	7000x	9000	GBN50	GBP41
Rated Torque	5.5 - 150 in-lbs.	5.5 - 150 in-lbs.	5 - 75 in-lbs.	9-75 in-lb	4-75 in-lb	4-75 in-lb	7-200 in-lb	13 - 52.1 in-lbs.	26.1 - 156.2 in-lbs.
Rated Speed	10-400 RPM	4-200 RPM	4-50 RPM	8-25 RPM	4-200 RPM	4-200 RPM	4-40 RPM	1 - 400 RPM	3.3 - 400 RPM
Shaft Size	1/4" to 3/8"	1/4" to 1/2"	1/4" to 3/8"	1/4" to 3/8"	1/4" to 3/8"	1/4" to 3/8"	3/8" to 1/2"	6mm (1/4")	8mm



1600 Series w/ EZ Drive



6000 Series w/ EZ Drive



7000 Series w/ Digital Drive



GBP41 Series w/ Digital Drive



GBN50 Series w/ EZ Drive

Contact Us for a Consultation

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