

BLWR11 - Brushless DC Motors



FEATURES

- **28mm Round Body**
- **Compact Size and Power Density**
- **Cost-Effective Replacement for Brush DC Motors**
- **Long Life and Highly Reliable**
- **Can be Customized for**
 - **Maximum Speed**
 - **Winding Current**
 - **Shaft Options**
 - **Cables and Connectors**
- **RoHS Compliant**



DESCRIPTION

The BLWR11 Series Brushless DC Motors come in a compact package with high power density. These motors are cost-effective solutions to many velocity control applications. The star wound motor comes in a standard 8-lead configuration. We can also customize winding to perfectly match your voltage, current, and maximum operating speed. Special shaft modifications, cables and connectors are also available upon request.

SPECIFICATIONS

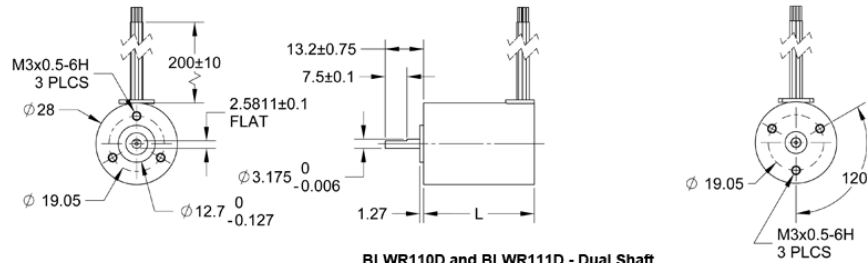
Model #	Rated Voltage (V)	Rated Speed (RPM)	Rated Power (W)	Rated Torque (oz-in)	Peak Torque (oz-in)	Rated Current (A)	Line to Line Resistance (ohms)	Line to Line Inductance (mH)	Torque Constant (oz-in/A)	Rotor Inertia (oz-in-sec ²)	Weight (lbs)	"L" Length (mm)
BLWR110S-15V-8000	15	8000	6	1.0	3.0	0.61	8	2.5	1.94	1.7x10 ⁻⁵	0.13	28
BLWR110D-15V-8000	15	8000	6	1.0	3.0	0.61	8	2.5	1.62	1.7x10 ⁻⁵	0.13	26
BLWR111S-24V-10000	24	10000	15	2.0	6.0	0.88	4.63	1.69	2.27	3.0x10 ⁻⁵	0.18	40
BLWR111D-24V-10000	24	10000	15	2.0	6.0	0.88	4.63	1.69	2.27	3.0x10 ⁻⁵	0.18	40
BLWR112S-24V-3700	24	3700	19	7.1	21	1.37	4.2	2.2	5.18	15.5x10 ⁻⁵	0.62	77
BLWR112D-24V-3700	24	3700	19	7.1	21	1.37	4.2	2.2	5.18	15.5x10 ⁻⁵	0.62	77
BLWR112D-24V-5000	24	5000	21	5.7	21.2	1.25	3.30	1.70	4.53	15.5x10 ⁻⁵	0.62	77
BLWR112S-24V-5000	24	5000	21	5.7	21.2	1.25	3.30	1.70	4.53	15.5x10 ⁻⁵	0.62	77
BLWR112D-36V-10000	36	10000	42	5.7	21.2	2.82	1.56	0.75	2.01	15.5x10 ⁻⁵	0.62	77
BLWR112S-36V-10000	36	10000	42	5.7	21.2	2.82	1.56	0.75	2.01	15.5x10 ⁻⁵	0.62	77

Note: Other speed options, custom leadwires, cables, connectors, and windings are available upon request.

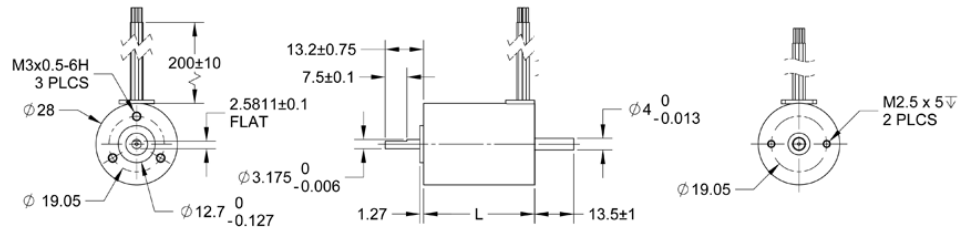
Winding Type:	Star, 4 Poles	Max. Radial Force:	15N @ 10mm from the flange
Hall Effect Angle:	120 degree electrical angle	Max. Axial Force:	10N
Shaft Run Out:	0.025mm	Insulation Class:	Class B
Radial Play:	0.02mm@450g	Dielectric Strength:	500VDC for one minute
End Play:	0.08mm@450g	Insulation Resistance:	100MOhm, 500VDC

L010234

BLWR110S and BLWR111S - Single Shaft

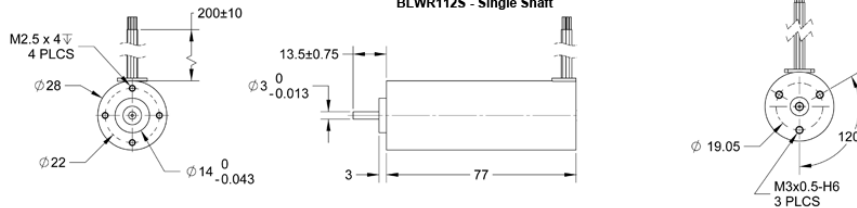


BLWR110D and BLWR111D - Dual Shaft

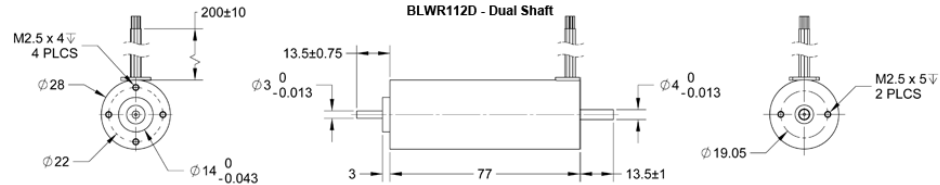


*All Units in mm

BLWR112S - Single Shaft

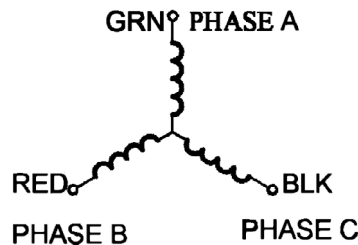


BLWR112D - Dual Shaft



*All Units in mm

Description	Motor Wire Color	Cable Adder Color
Hall Supply	Yellow	Red/White
Hall A	Blue	Orange/White
Hall B	Orange	Orange
Hall C	Brown	Yellow/White
Hall Ground	White	Black/White
Phase A	Green	Yellow
Phase B	Red	Red
Phase C	Black	Black



Hall Sensor Specifications

- Supply Voltage: 4.5VDC to 28VDC
- Current, I_{off} : 10mA max
- Current, I_{on} : 11.3mA max
- Rated Sinking Current: 20mA
- Saturation Voltage: 0.4VDC max @ 25°C
- Output Leakage Current: 10µA
- Output Switching Time @ 25°C
 - Rise, 10% to 90% 1.5µs
 - Fall, 90% to 10% 1.5µs
- Output Type: Open Collector

