

# BLWS6523 Series - Brushless DC Motors



## FEATURES

- **NEMA Size 23 BLDC Motors**
- **IP65 Rating, Sealed Shaft**
- **Compete Protection from Dust Particles**
- **Can be Subjected to Moist or Humid Environments**
- **Can be Customized for**
  - **Maximum Speed**
  - **Winding Current**
  - **Shaft Options**
  - **Cables and Connectors**
- **CE Certified and RoHS Compliant**



## DESCRIPTION

The compact BLWS6523 Series are NEMA 23 Brushless DC Motors that are IP65 rated which meet the splash-proof requirements for most applications. The sealed shafts further protect the motor, which in turn provides for longer life cycles. These round-bodied motors have a square-mounting flange, making them easy to install. The popular BLWS6523 series motors are available in five stack lengths, rated from 25 to 185 ounce-inches of torque, and offer an 8-lead configuration standard. Customization to perfectly match a specific voltage, current, and maximum operating speed, as well as special shaft modifications, cables and connectors, is available.

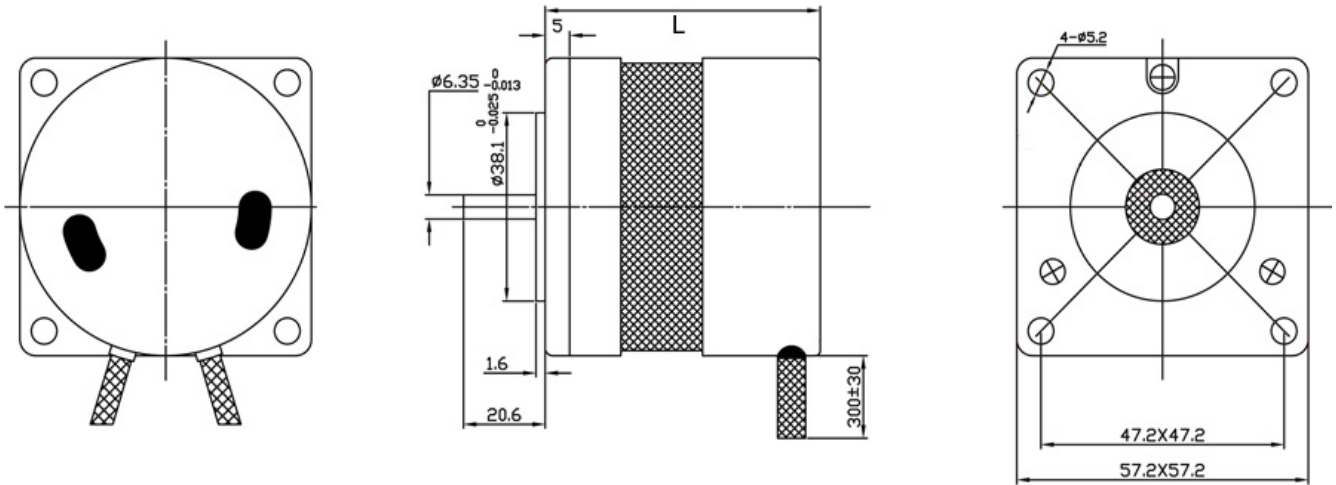
## SPECIFICATIONS

Model #	Frame Size	Rated Voltage (VDC)	Rated Speed (RPM)	Rated Power (W)	Peak Torque (oz-in)	Peak Current (A)	Line to Line Resistance (ohms)	Line to Line Inductance (mH)	Torque Constant (oz-in/A)	Back EMF Voltage (V/kRPM)	Rotor Inertia (oz-in-sec <sup>2</sup> )	Weight (lb)	"L" Length (mm)
BLWS65235S-24V-4000	NEMA 23	24	4000	185	186	22.5	0.20	0.435	5.52	4.28	0.00326	2.8	118
BLWS65231S-36V-4000	NEMA 23	36	4000	25	25	3.5	4.3	8.6	7.5	5.5	0.00042	0.6	48
BLWS65232S-36V-4000	NEMA 23	36	4000	50	55	7.0	1.5	4.2	9.0	6.6	0.00106	1.1	58
BLWS65233S-36V-4000	NEMA 23	36	4000	95	100	15.0	0.7	2.2	9.0	6.6	0.00169	1.7	78
BLWS65234S-36V-4000	NEMA 23	36	4000	135	145	18.0	0.45	1.4	9.0	6.6	0.00245	2.2	98
BLWS65235S-36V-4000	NEMA 23	36	4000	180	185	22.5	0.35	1.0	9.0	6.6	0.00326	2.8	118

Notes: The 8<sup>th</sup> character "S" denotes a single shaft, use "D" for double shaft. Custom leadwires, cables, connectors, and windings are available upon request.

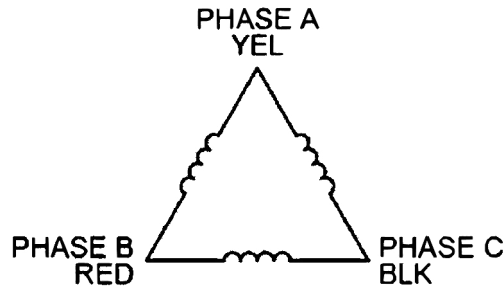
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DIMENSIONS



WIRING INFORMATION

Wire Color	Description
Red	Hall Supply
Blue	Hall A
Green	Hall B
White	Hall C
Black	Hall Ground
Yellow	Phase A
Red	Phase B
Black	Phase C



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

SPECIFICATIONS

Winding Type:	Delta, 4 Poles	Max. Radial Force:	75N @ 20mm 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