



Coreless DC Motor

High Power Density - High Efficiency - High Reliability  
 Low Inductance - Low Inertia - Good Heat Dissipation  
 Long Operational Lifetime - Cost Effective - No Cogging

 Feature

SVTN B 01-4050-48-D-OG	
Nominal voltage	48 V
No load speed	9500 rpm
No load current	40 mA
Nominal speed	8075 rpm
Nominal torque	75.410 mNm
Nominal current	1.610 A
Stall torque	502.800 mNm
Stall current	10.500 A
Max. efficiency	88.000 %
Terminal resistance*	4.600 Ω
Terminal inductance*	0.510 mH
Torque constant	48.100 mNm/A
Speed constant	197 mNm/V

**Notice :** The provided technical data are the higher limits recommended in static condition. To obtain the correct dimensioning of the product, it is necessary to hold account of all the applicable dynamic forces, including the inertia of the manipulator, the configuration of the tools and the external forces applied.

## 2 POLE BRUSHED DC MOTORS

SVTN B 01-4050-48-D-OG

Speed/torque gradient	18.90 rpm/mNm
Mechanical time constant	6.940 ms
Rotor inertia	35.080 gcm <sup>2</sup>

The specific design construction of a coreless DC motor provides several advantages over the traditional, iron core, technology. A first added value it is given by rotor lower mass and inertia, so very rapid acceleration and deceleration rates are possible. Furthermore, the lack of iron reduces "iron losses" to provide higher efficiencies (up to 90 percent) than traditional DC motors. Last, but not least, the coreless design reduces winding inductance, so sparking between the brushes and commutator is reduced, increasing motor life and reducing electromagnetic interference (EMI). Our Coreless DC Motors are available on a wide range of sizes and we can show high flexibility on custom requirements.



### Advantages

Winding technology without metal bodies

Good heat dissipation and high overload capacity

Long life expectancy



### Benefits

Light and compact, easy integration

High reliability

Good return on investment



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