



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 01-4050-12-D-WG |              |
|------------------------|--------------|
| Nominal voltage        | 12 V         |
| No load speed          | 7600 rpm     |
| No load current        | 260 mA       |
| Nominal speed          | 6612 rpm     |
| Nominal torque         | 57.790 mNm   |
| Nominal current        | 4.130 A      |
| Stall torque           | 444.500 mNm  |
| Stall current          | 30.000 A     |
| Max. efficiency        | 82.200 %     |
| Terminal resistance*   | 0.400 Ω      |
| Terminal inductance*   | 0.043 mH     |
| Torque constant        | 14.950 mNm/A |
| Speed constant         | 633 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 01-4050-12-D-WG   |                         |
|--------------------------|-------------------------|
| Speed/torque gradient    | 17.10 rpm/mNm           |
| Mechanical time constant | 6.000 ms                |
| Rotor inertia            | 33.540 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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