



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 01-4070-48-D-WM |               |
|------------------------|---------------|
| Nominal voltage        | 48 V          |
| No load speed          | 2200 rpm      |
| No load current        | 18 mA         |
| Nominal speed          | 1606 rpm      |
| Nominal torque         | 172.370 mNm   |
| Nominal current        | 0.850 A       |
| Stall torque           | 638.400 mNm   |
| Stall current          | 3.100 A       |
| Max. efficiency        | 85.300 %      |
| Terminal resistance*   | 15.500 Ω      |
| Terminal inductance*   | 4.080 mH      |
| Torque constant        | 207.100 mNm/A |
| Speed constant         | 45 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 01-4070-48-D-WM   |                          |
|--------------------------|--------------------------|
| Speed/torque gradient    | 3.40 rpm/mNm             |
| Mechanical time constant | 4.310 ms                 |
| Rotor inertia            | 119.520 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



**pes**

product  
engineering  
services

Zoning de la Rivière, 65  
7330 Saint-Ghislain (Belgium)

T : +32 (0)65 76 40 40  
E : service@pes-sa.com