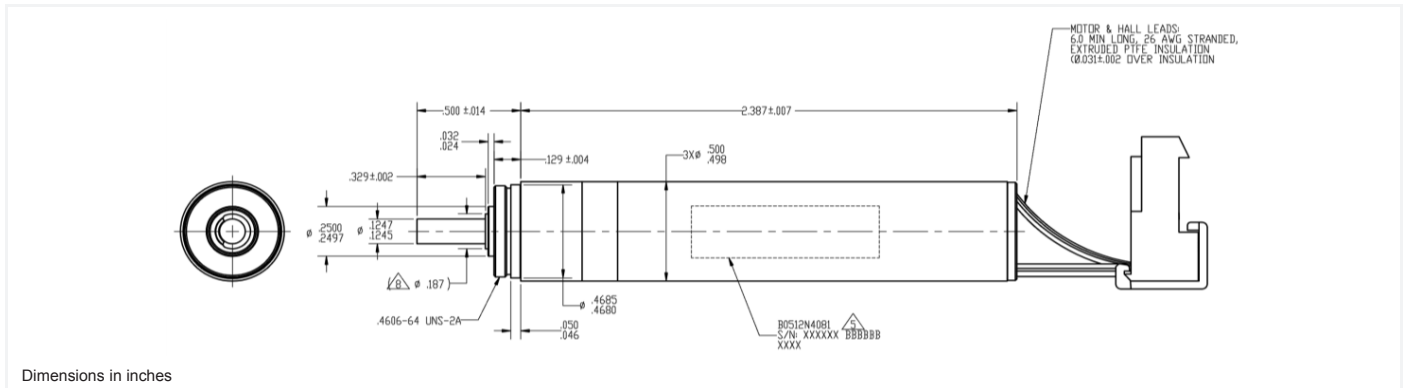


ENT MICRODEBRIDER (48V) – Brushless Slotted

Ø 0.5 in.



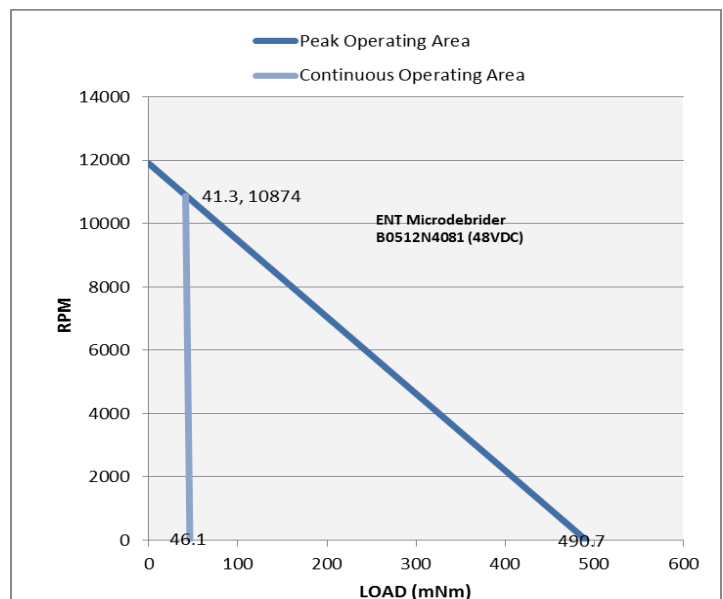
B0512N4081

Electrical Data	Part Number	B0512N4081	Units
1 Nominal Voltage	U_N	48	Volt
2 Max No-Load Current (±50%)	I_{nl}	375	mA
3 No-Load Speed	W_{nl}	11,910	rpm
4 Resistance - Phase to Phase	R	3.34	ohm
5 Continuous Stall Torque	T_{cs}	41.3 (5.9)	mNm (oz-in)
6 Continuous Stall Current	I_{cs}	1.27	A
7 Peak Torque for 1s	T_{pk}	490.7 (69.5)	mNm (oz-in)
8 Peak Current	I_{pk}	14.4	A
9 Back EMF Constant	K_e	3.965	v/1000 rpm
10 Torque Constant	K_t	37.85 (5.35)	mNm/A (oz.-in/A)
11 Motor Regulation R/K_t^2	-	2.3	10^9 Nms
12 Motor Regulation $K_t/R^{1/2}$	-	20.7	mNm/W ^{1/2}
13 Inductance - Phase to Phase	L	0.250	mH @1Khz
General Data			
14 Thermal Resistance (winding to ambient)	R_{th}	15.9	°C/W
15 Thermal Time Constant	t_w	490	s
16 Mechanical Time Constant	t_m	2.77	ms
17 Electrical Time Constant	t_e	0.07	ms
18 Rotor Inertia	J	3.15 (4.46)	kgm ² 10 ⁻⁸ (oz-in-sec ² 10 ⁻⁶)
19 Max Winding Temperature	-	155 (311)	°C (°F)
20 Shaft Load Max.:	-	19.25 (4.3), @ 5mm from front of bearing	N (lb)
radial (static)	-	3.27 (0.74)	N (lb)
axial (static)	-		
21 Mass	M	48 (1.7)	g (oz)
22 Length	L	61 (2.39)	mm (in)
23 Tolerances	-	Tolerances on all values ±10% unless otherwise specified.	

Lead color	Function
Blue	Phase A
Brown	Phase B
Violet	Phase C
Red	4.5 to 24 vdc
Yellow	Hall 1
Orange	Hall 2
White	Hall 3
Black	Supply RTN

Notes

- Solution includes a BLDC motor and 5:1 gearhead
- Three phase motor with Wye connections
- Designed for sterilization in an autoclavable
- Hall sensors: supply voltage 4.5V - 24V
- Typical housing material 303 SS
- Typical shaft material 17-4 PH
- Motor is RoHS Compliant
- Above parameters specified for 25 Deg C ambient temperature



V121616