**Surgical Motor Solutions**

**B0612H1007 Cannulated Shaver/Microdebrider**

Ø 0.65 inch • Brushless Slotted • 24 V

**Dimensions in inches [mm]**

<table>
<thead>
<tr>
<th>Wire Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>Phase A</td>
</tr>
<tr>
<td>Brown</td>
<td>Phase B</td>
</tr>
<tr>
<td>Violet</td>
<td>Phase C</td>
</tr>
<tr>
<td>Red</td>
<td>4.5 to 24 Vdc</td>
</tr>
<tr>
<td>Yellow</td>
<td>Hall 1</td>
</tr>
<tr>
<td>Orange</td>
<td>Hall 2</td>
</tr>
<tr>
<td>White</td>
<td>Hall 3</td>
</tr>
<tr>
<td>Black</td>
<td>Supply RTN</td>
</tr>
</tbody>
</table>

**Electrical Data**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>SMX B0612H1007</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN</td>
<td>24.0</td>
<td>Volt</td>
</tr>
<tr>
<td>n0</td>
<td>35,597</td>
<td>rpm</td>
</tr>
<tr>
<td>IO</td>
<td>284</td>
<td>mA</td>
</tr>
<tr>
<td>Pmax</td>
<td>68.5</td>
<td>W</td>
</tr>
<tr>
<td>ICs</td>
<td>3.62</td>
<td>A</td>
</tr>
<tr>
<td>Tcs</td>
<td>19.8 (2.81)</td>
<td>mNm (oz-in)</td>
</tr>
<tr>
<td>kE</td>
<td>0.671</td>
<td>V/1000 rpm</td>
</tr>
<tr>
<td>kT</td>
<td>6.40 (0.907)</td>
<td>mNm/A (oz-in/A)</td>
</tr>
<tr>
<td>R/k2</td>
<td>13379</td>
<td>10³/Nms</td>
</tr>
<tr>
<td>Rm</td>
<td>8.69 (1.23)</td>
<td>mNm/W ³ (oz-in/W ³)</td>
</tr>
<tr>
<td>R</td>
<td>0.548</td>
<td>ohms</td>
</tr>
<tr>
<td>L</td>
<td>0.119</td>
<td>mH</td>
</tr>
<tr>
<td>τm</td>
<td>0.80</td>
<td>ms</td>
</tr>
<tr>
<td>τe</td>
<td>0.217</td>
<td>ms</td>
</tr>
</tbody>
</table>

**General Data**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gearhead Ratio</td>
<td>N/A</td>
</tr>
<tr>
<td>Ambient Working Temperature Range</td>
<td>°C (“F)</td>
</tr>
<tr>
<td>Max Operating Temperature Range</td>
<td>°C (“F)</td>
</tr>
<tr>
<td>Radial Static Force w/o Shaft Support (max)</td>
<td>lbs</td>
</tr>
<tr>
<td>Axial Static Force w/o Shaft Support (max)</td>
<td>lbs</td>
</tr>
<tr>
<td>Thermal Resistance</td>
<td>12.0</td>
</tr>
<tr>
<td>Thermal Time Constant</td>
<td>936</td>
</tr>
<tr>
<td>Weight</td>
<td>75.8 (2.67)</td>
</tr>
<tr>
<td>Rotor Inertia</td>
<td>9.79 (13.86)</td>
</tr>
</tbody>
</table>

**Notes:**
- Three phase motor with Wye connections
- Hall sensors: supply voltage 4.5 V - 24 V
- Typical housing material 303 SS
- Motor type has been designed and tested to achieve the stated number of autoclave cycles
- Above parameters specified for 25° C ambient temperature
- Typical shaft material 17-4 PH

**B0612H1007 Output - Efficiency Performance**

<table>
<thead>
<tr>
<th>Load mNm</th>
<th>Efficiency %</th>
</tr>
</thead>
<tbody>
<tr>
<td>275.0</td>
<td>0.0</td>
</tr>
<tr>
<td>270.0</td>
<td>0.0</td>
</tr>
<tr>
<td>265.0</td>
<td>0.0</td>
</tr>
<tr>
<td>260.0</td>
<td>0.0</td>
</tr>
<tr>
<td>255.0</td>
<td>0.0</td>
</tr>
<tr>
<td>250.0</td>
<td>0.0</td>
</tr>
<tr>
<td>245.0</td>
<td>0.0</td>
</tr>
<tr>
<td>240.0</td>
<td>0.0</td>
</tr>
<tr>
<td>235.0</td>
<td>0.0</td>
</tr>
<tr>
<td>230.0</td>
<td>0.0</td>
</tr>
<tr>
<td>225.0</td>
<td>0.0</td>
</tr>
<tr>
<td>220.0</td>
<td>0.0</td>
</tr>
<tr>
<td>215.0</td>
<td>0.0</td>
</tr>
<tr>
<td>210.0</td>
<td>0.0</td>
</tr>
<tr>
<td>205.0</td>
<td>0.0</td>
</tr>
<tr>
<td>200.0</td>
<td>0.0</td>
</tr>
<tr>
<td>195.0</td>
<td>0.0</td>
</tr>
<tr>
<td>190.0</td>
<td>0.0</td>
</tr>
<tr>
<td>185.0</td>
<td>0.0</td>
</tr>
<tr>
<td>180.0</td>
<td>0.0</td>
</tr>
<tr>
<td>175.0</td>
<td>0.0</td>
</tr>
<tr>
<td>170.0</td>
<td>0.0</td>
</tr>
<tr>
<td>165.0</td>
<td>0.0</td>
</tr>
<tr>
<td>160.0</td>
<td>0.0</td>
</tr>
<tr>
<td>155.0</td>
<td>0.0</td>
</tr>
<tr>
<td>150.0</td>
<td>0.0</td>
</tr>
<tr>
<td>145.0</td>
<td>0.0</td>
</tr>
<tr>
<td>140.0</td>
<td>0.0</td>
</tr>
<tr>
<td>135.0</td>
<td>0.0</td>
</tr>
<tr>
<td>130.0</td>
<td>0.0</td>
</tr>
<tr>
<td>125.0</td>
<td>0.0</td>
</tr>
<tr>
<td>120.0</td>
<td>0.0</td>
</tr>
<tr>
<td>115.0</td>
<td>0.0</td>
</tr>
<tr>
<td>110.0</td>
<td>0.0</td>
</tr>
<tr>
<td>105.0</td>
<td>0.0</td>
</tr>
<tr>
<td>100.0</td>
<td>0.0</td>
</tr>
<tr>
<td>95.0</td>
<td>0.0</td>
</tr>
<tr>
<td>90.0</td>
<td>0.0</td>
</tr>
<tr>
<td>85.0</td>
<td>0.0</td>
</tr>
<tr>
<td>80.0</td>
<td>0.0</td>
</tr>
<tr>
<td>75.0</td>
<td>0.0</td>
</tr>
<tr>
<td>70.0</td>
<td>0.0</td>
</tr>
<tr>
<td>65.0</td>
<td>0.0</td>
</tr>
<tr>
<td>60.0</td>
<td>0.0</td>
</tr>
<tr>
<td>55.0</td>
<td>0.0</td>
</tr>
<tr>
<td>50.0</td>
<td>0.0</td>
</tr>
<tr>
<td>45.0</td>
<td>0.0</td>
</tr>
<tr>
<td>40.0</td>
<td>0.0</td>
</tr>
<tr>
<td>35.0</td>
<td>0.0</td>
</tr>
<tr>
<td>30.0</td>
<td>0.0</td>
</tr>
<tr>
<td>25.0</td>
<td>0.0</td>
</tr>
<tr>
<td>20.0</td>
<td>0.0</td>
</tr>
<tr>
<td>15.0</td>
<td>0.0</td>
</tr>
<tr>
<td>10.0</td>
<td>0.0</td>
</tr>
<tr>
<td>5.0</td>
<td>0.0</td>
</tr>
<tr>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**B0612H1007 Speed - Current Performance**

<table>
<thead>
<tr>
<th>RPM</th>
<th>Amps</th>
</tr>
</thead>
<tbody>
<tr>
<td>480</td>
<td>0.0</td>
</tr>
<tr>
<td>470</td>
<td>0.0</td>
</tr>
<tr>
<td>460</td>
<td>0.0</td>
</tr>
<tr>
<td>450</td>
<td>0.0</td>
</tr>
<tr>
<td>440</td>
<td>0.0</td>
</tr>
<tr>
<td>430</td>
<td>0.0</td>
</tr>
<tr>
<td>420</td>
<td>0.0</td>
</tr>
<tr>
<td>410</td>
<td>0.0</td>
</tr>
<tr>
<td>400</td>
<td>0.0</td>
</tr>
<tr>
<td>390</td>
<td>0.0</td>
</tr>
<tr>
<td>380</td>
<td>0.0</td>
</tr>
<tr>
<td>370</td>
<td>0.0</td>
</tr>
<tr>
<td>360</td>
<td>0.0</td>
</tr>
<tr>
<td>350</td>
<td>0.0</td>
</tr>
<tr>
<td>340</td>
<td>0.0</td>
</tr>
<tr>
<td>330</td>
<td>0.0</td>
</tr>
<tr>
<td>320</td>
<td>0.0</td>
</tr>
<tr>
<td>310</td>
<td>0.0</td>
</tr>
<tr>
<td>300</td>
<td>0.0</td>
</tr>
<tr>
<td>290</td>
<td>0.0</td>
</tr>
<tr>
<td>280</td>
<td>0.0</td>
</tr>
<tr>
<td>270</td>
<td>0.0</td>
</tr>
<tr>
<td>260</td>
<td>0.0</td>
</tr>
<tr>
<td>250</td>
<td>0.0</td>
</tr>
<tr>
<td>240</td>
<td>0.0</td>
</tr>
<tr>
<td>230</td>
<td>0.0</td>
</tr>
<tr>
<td>220</td>
<td>0.0</td>
</tr>
<tr>
<td>210</td>
<td>0.0</td>
</tr>
<tr>
<td>200</td>
<td>0.0</td>
</tr>
<tr>
<td>190</td>
<td>0.0</td>
</tr>
<tr>
<td>180</td>
<td>0.0</td>
</tr>
<tr>
<td>170</td>
<td>0.0</td>
</tr>
<tr>
<td>160</td>
<td>0.0</td>
</tr>
<tr>
<td>150</td>
<td>0.0</td>
</tr>
<tr>
<td>140</td>
<td>0.0</td>
</tr>
<tr>
<td>130</td>
<td>0.0</td>
</tr>
<tr>
<td>120</td>
<td>0.0</td>
</tr>
<tr>
<td>110</td>
<td>0.0</td>
</tr>
<tr>
<td>100</td>
<td>0.0</td>
</tr>
<tr>
<td>90</td>
<td>0.0</td>
</tr>
<tr>
<td>80</td>
<td>0.0</td>
</tr>
<tr>
<td>70</td>
<td>0.0</td>
</tr>
<tr>
<td>60</td>
<td>0.0</td>
</tr>
<tr>
<td>50</td>
<td>0.0</td>
</tr>
<tr>
<td>40</td>
<td>0.0</td>
</tr>
<tr>
<td>30</td>
<td>0.0</td>
</tr>
<tr>
<td>20</td>
<td>0.0</td>
</tr>
<tr>
<td>10</td>
<td>0.0</td>
</tr>
<tr>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>