PM4 motor data

**MOTOR POWER:** 45 - 260 Watts
**TYPE:** Permanent magnet DC brushed motor
**SPEED:** 1500 - 5000 rpm
**VOLTAGE:** 12V - 220V DC available range
**CONNECTION:** Flying leads 30cm flexible
**SHAFT:** Single or double ended on request
**INERTIA:** $2.83 \times 10^{-4}$ kgm$^2$
**WEIGHT:** 2.46 kg
**RADIAL LOAD:** 180 N
**INSULATION CLASS:** F
**IP PROTECTION:** Totally enclosed (IP54)
**STARTING CURRENT:** Approx 3 times full load current
**ROTATION:** Reversible two leads as standard
**OPTIONS:** See page 36

<table>
<thead>
<tr>
<th>SPEED (Rpm)</th>
<th>MOTOR POWER (WATTS)</th>
<th>TORQUE (NM)</th>
<th>CURRENT (A)**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CONT 1 HOUR 15 MIN</td>
<td>CONT 1 HOUR 15 MIN</td>
<td>12V</td>
</tr>
<tr>
<td>1500</td>
<td>45 60 80</td>
<td>0.3 0.4 0.5</td>
<td>0.58</td>
</tr>
<tr>
<td>2000</td>
<td>60 80 120</td>
<td>0.3 0.4 0.5</td>
<td>5.4 2.7 1.4</td>
</tr>
<tr>
<td>3000</td>
<td>90 120 160</td>
<td>0.3 0.4 0.5</td>
<td>1.1 0.38 0.33</td>
</tr>
<tr>
<td>4000</td>
<td>120 160 200</td>
<td>0.3 0.4 0.5</td>
<td>7.4 3.5 1.7</td>
</tr>
<tr>
<td>5000</td>
<td>150 200 260</td>
<td>0.3 0.4 0.5</td>
<td>2.3 1.1 0.7</td>
</tr>
</tbody>
</table>

**PM4 pictured with Parvalux standard flange**

**PM4 • 3000 rpm • 24V • 90W**

Motor Enclosures
To IEC 34-5 and EN 60034: part 5 and IEC 34-6 and B.S. EN 60034-6. Please refer to the individual product pages to identify the corresponding ingress protection level (IP rating).

Bearings
We fit only first class shielded ball bearings into our motor and gearboxes which are spring loaded for quiet running. Typical operating temperatures range from -30°C to +120°C.

Brush gear
We provide an adjustable rocker type for maximum brush life and good commutation with easily accessible brushes. To achieve maximum brush life a form factor on the supply voltage as near to 1 as possible would be required.

Temperature
The PM4 is built with Class “F” insulation to EN60085:2004 which allows a temperature rise of 115°C based on an ambient of 40°C. These figures are with the motor running in normal working conditions in free air and not in any form of enclosure. Caution: Under full load the heat of the motor casing will be such that it is NOT possible to physically handle for any length of time.

Motor construction
The motor frame comprises pressure die castings accurately located together ensuring a concentric air gap with correct bearing alignment. The armature laminations are pressed onto a precision steel shaft and are then statically and dynamically balanced. The armature is wound with first class quality synthetic covered copper wire manufactured to EN60085:2004 class “F” and then impregnated and baked in our automatic plant and accordingly can be considered to be tropically impregnated for all practical purposes.