Lehner Motoren Technik

Lise-Meitner-Strasse 1, 85662 Hohenbrunn / Germany
Phone: +49(0)8102/805537 FAX: +49(0)8102/805539
mail: vertrieb@lehner-motoren.com

Operating instruction and specifications

Series   30xx

1. Because of the high packing density of the motors the depth for the mounting screws is max. 4 mm (3/16") .

2. The motor controller wires should be soldered directly to 6 mm high current plugs of the motor.
   Do not turn the plugs when attaching or removing.

3. The turning direction can be reversed by swapping any two of the three wires at the motor, or by reprogramming the controller.

4. Rpm values of the motors are proportional to the DC voltage at the controller.
   The mechanical rpm limits for 30xx series motors is max. 50000 rpm.

5. The power increase is proportional to the rpm. Make sure there is good cooling.
   Max power of the series 30xx motors:

   3040   50000 rpm ca. 12 kW (at η / P_{max})
   3060   50000 rpm ca. 17 kW (at η / P_{max})
   3080   50000 rpm ca. 30 kW (at η / P_{max})

   Our rpm / power data have been determined by using 15° timing.

6. All efficiency figures (η) contain losses of motor and controller. Total efficiency of 94% contains a controller loss of ca. 1 - 2% which corresponds to a pure motor efficiency of ca. 95 - 96%.

7. Series 30xx motors are optimized for partial load through finely segmented rotors.

8. The temperature of the motor casing must not exceed 100°C because of the risk of thermal destruction.

9. Triangle or star configuration:
   Series 30xx motors can be used in triangle configuration or in star configuration. The 6 high current connectors of the motor can be used in two different ways (see pictures below). In star configuration the motor behaves as if it has 1.73 times the number of windings and an accordingly, by the same factor, lower rpm per volt.

   Example: In triangle configuration a 3060 / 8 has 875 rpm per volt, in star configuration the same motor has 506 rpm per volt.

triangle configuration

star configuration