

IMT Instructions for Use



and technical data for brushless, sensorless electric motors of the:

Series “30”

1. The wires for the three phases from the motor controller should be soldered **directly** to the provided 6 mm high current plugs of the motor. The turning direction can be reversed (a) by swapping any two of the three wires at the motor, or (b) through reprogramming the controller.
2. Because of the high packing density of the motors the thread depth for the mounting screws is **max. 4 mm**.
3. The rpm of the motors is proportional to the applied DC voltage at the controller. The mechanical rpm limit is approx. **50.000 rpm!**
4. **The power increase is proportional to the rpm, i.e.:**
 1. **Motor type 3060: 50000 rpm, approx. 8 KW** (at η / Pmax)
 2. **Motor type 3080: 50000 rpm, approx. 11 KW** (at η / Pmax)
5. The temperature of the motor casing must not exceed **100°C** because of the risk of **thermal destruction**.
6. All efficiency figures (η) contain losses of motor and controller. For example, total efficiency **94%** contains a controller loss of approx.. 1-2%, which corresponds to a pure motor efficiency of approx. **95-96%**.
7. All Hi-Amp motors are also **optimized for partial load** through **finely segmented** rotors.

Star/triangle despite “Hi-Amp”?

These motors can be switched between star and triangle configuration, because all 6 contacts are separate. Please see the pictures below.

ATTENTION:

Do not turn the provided plugs when attaching or removing!

Example:

In triangle configuration a 3060/8 has **981 rpm** per Volt.

In star configuration the 3060/8 (14 windings) has **569 rpm** per Volt.

This yields, like with the motor series 10/15/19/22,

two usable rpm values!

Factory configuration is, unless ordered otherwise, the

Triangle configuration:



This is the star configuration:



More information at: www.lehner-motoren.com