

## Dynamic8 Series

1/8<sup>th</sup> Brushless Motor  
4-Pole Sintered Magnet  
HighTorque 12-Slot Stator  
Precision Balanced Rotor  
Sensored Technology



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## Warning Notes

### Do not use timing speed-control profiles with Dynamic8 motors!

Because of their unique design, 4-Pole/12-Slot motors are not suited for speed-controls with built in timing algorithms. Make sure you disable such functions on your speed-control as otherwise you may overheat the motor which can result to motor damage in the worst case!

No toy. Not suitable for children under 14 years.

Keep the product out of the reach of children.

**Pay close attention to the following points, as they can destroy the product and void your warranty. Non-observance of these points can lead to property damage, personal and severe injuries!**

- Never leave the product unsupervised while it is switched on, in use or connected with a power source. If a defect occurs, it could set fire to the product or the surroundings.
- Avoid incorrect connections or connections with reversed polarity of the product.
- All wires and connections have to be well insulated. Short-circuits can possibly destroy the product.
- Never allow this product or other electronic components to come in contact with water, oil or fuels or other electroconductive liquids, as these could contain minerals, which are harmful for electronic circuits. If this happens, stop the use of your product immediately and let it dry carefully.
- **Avoid overtightening the motor screws. Damaged threads are not covered under warranty!**
- Avoid overloading the motor due to wrong or too long gear ratios.
- **Never apply full throttle if the motor is not installed. Due to the extremely high RPMs without load, the motor can get damaged.**
- Always wire up all the parts of the equipment carefully. If any of the connections come loose as a result of vibration, you could lose control over your model.
- Avoid soldering longer than 5 seconds per soldering joint when replacing the power wires to prevent possible damage to the product due to overheating of the components. Use a high power soldering station with at least 60W for soldering.

**The manufacturer can not be held responsible for damages, which are a result of non-observance of the warning notes and security advices.**

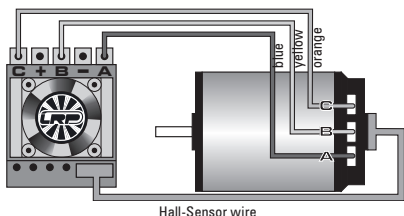
## Installation & Connections

**HALL-SENSOR WIRE:** This bi-directional multipole wire, which is supplied with all LRP sensed brushless speed-controls, connects the speedo and the motor. Do not alter or modify this cable! Make sure, that the plugs have a proper and tight fit and are always clean.

**POWER WIRES:** Your motor comes pre-wired using common motor connectors. It's simply „plug & play“ when you intend using a designated LRP iX8 speed-control. You can also solder the motor directly the power-wires if you prefer to use a „hardwired“ wire setup, the unique splitted solder-tabs allow easy and convenient replacement of the power wires. Nevertheless some soldering skills are required. Talk to your local hobbyshop if you are concerned about soldering the wires yourself.

**Caution:** Avoid soldering longer than 5sec per soldering joint to prevent possible damage to the motor due to overheating of the inner components!

- Install the motor in the model.  
**Caution:** The maximum length of the motor screws shall not exceed 8mm.
- Connect the power wires of the speed-control and the motor.  
Make sure, that the sequence is correct by checking the color code and the letters:  
- MOT.A = blue wire  
- MOT.B = yellow wire  
- MOT.C = orange wire
- If you're using a sensed speed-control: attach the hall-sensor wire to motor and speedo now.
- Finally check all the connections before using the motor.



## Repair Procedures / Limited Warranty

All products from LRP electronic GmbH (hereinafter called "LRP") are manufactured according to the highest quality standards. LRP guarantees this product to be free from defects in materials or workmanship for 90 days (non-european countris only) from the original date of purchase verified by sales receipt. This limited warranty doesn't cover defects, which are a result of misuse, improper maintenance, outside interference or mechanical damage. „This applies among other things on:

- Overload (for example: unsoldered wires inside motor)
- Excessive amounts of dirt inside the motor
- Rotor damage due to debris inside motor
- Mechanical damage due to external causes
- Rust"

To eliminate all other possibilities or improper handling, first check all other components in your model and the trouble shooting guide, if available, before you send in this product for repair. If products are sent in for repair, which do operate perfectly, we have to charge a service fee according to our pricelist.

With sending in this product, the customer has to advise LRP if the product should be repaired in either case. If there is neither a warranty nor guarantee claim, the inspection of the product and the repairs, if necessary, in either case will be charged with a fee at the customers expense according to our price list.

A proof of purchase including date of purchase needs to be included. Otherwise, no warranty can be granted. For quick repair- and return service, add your address and detailed description of the malfunction.

If LRP no longer manufactures a returned defective product and we are unable to service it, we shall provide you with a product that has at least the same value from one of the successor series.

The specifications like weight, size and others should be seen as guide values. Due to ongoing technical improvements, which are done in the interest of the product, LRP does not take any responsibility for the accuracy of these specs.

### LRP-Distributor-Service:

- Package your product carefully and include sales receipt and detailed description of malfunction.
- Send parcel to your national LRP distributor.
- Distributor repairs or exchanges the product.
- Shipment back to you by COD (cash on delivery), but this is subject to your countries LRP distributor's policy.

Thank you for your trust in this LRP product. We are proud to provide a LRP Dynamic8 brushless motor, which has been chosen a highly developed competition brushless motor full of innovative features. LRP's R&D team took all the experience and testing results from our worlds-winning motors to design these 1/8<sup>th</sup> Dynamic8 motor line. IFMAR World Champion Brushless Motor Technology!

- HeavyDuty XTEC B8 housing
- Precision balanced rotor
- Universal Fit
- Pre-Wired
- High Torque Design
- Oversized ball bearings
- Splitted soldertabs for easy installation
- LRP Sensored Technology

Please read the following instructions carefully before you start using your product. This user guide contains important notes for the installation, the safety, the use and the maintenance of this product. Thus protecting yourself and avoid damages of the product.

Proceed according to the user guide in order to understand your product better. Please take your time as you will have much more joy with your product if you know it exactly.

This user manual shall be kept in a safe place. If another customer is using this product, this manual has to be handed out together with it.

## Specifications

	1600kV	2000kV	2200kV	2600kV
<b>Order No.</b>	53230	53235	53240	53270
<b>Voltage input</b> [V]	7.4 - 25.2V	7.4 - 18.5V	7.4 - 14.8V	
<b>RPM</b> <sup>1</sup>	23'680	29'600	32'560	38'480
<b>Specific RPM/V</b> [kV]	1600	2000	2200	2600
<b>Power</b> <sup>1</sup> [W]	1750W	2120	2370	2710
<b>Efficiency</b> <sup>1</sup> [%]	91	90	90	88
<b>Magnet material</b>	4-Pole, Sintered			
<b>Winding</b>	12-Slot, low resistance			
<b>Weight</b> [g]	340			
<b>Diameter</b> [mm]	41.0			
<b>Length</b> [mm]	65.5			
<b>Output shaft</b> [mm]	D: 5.0 / L: 18.0			

<sup>1</sup>Specifications subject to change without notice.  
<sup>1</sup>Measured at 14.8V

## Gearing Advise

**Please pay special attention to our gear ratio recommendations!** A wrong gear-ratio causes excessive heating and may result in motor damage or thermal shutdown of your speed-control. Take your kits manual to find the correct pinion. Motor temperatures should be monitored, they should never exceed 100°C (= 210°F).

The following gear ratios are only a recommendation and a good starting point for use with 4S LiPo batteries (e.g. 14.8V). The perfect ratio may vary due to different speed-controls and it's profiles, track size, track conditions and batteries.

**IMPORTANT: Make sure you start with much smaller pinion when running higher number of cells!** As a rule of thumb you can increase/decrease pinion size by three teeth when changing battery cell number by one cell (e.g. if you're using 18T pinion with 4S, you should start with 15T pinion when changing to 5S and vice-versal).

**Also make sure you stay within the recommended voltage range for each motor type!**

Motor Type	Battery	Overall Gearing			Specific gearing (pinion/spur-gear) for popular cars				
		Buggy	Short Course	Truggy	LRP S8BXe	LRP S8TXe	AE RC8e	AE SC8e	Losi Eight-E
1600kV	4S LiPo	9.5:1	12.0:1	12.0:1	16/44	13/46	20/46	16/46	16/45
2000kV		11.0:1	14.0:1	14.0:1	14/44	11/46	18/46	14/46	14/45
2200kV		12.5:1	--	--	12/44	--	16/46	--	12/45
2600kV		14.0:1	--	--	11/44	--	14/46	--	10/45

## Disassembly & Maintenance

Due to the maintenance free design of the Dynamic8, it is not necessary to open the motor frequently under normal conditions. It is just recommended to check that the housing screws are always securely fastened and that you maintain the ball bearings frequently (clean, check, oil, replace if needed!) in order to achieve best performance. Of course you can also disassemble the motor entirely if you wish to do so.

### Disassembly of the motor:

1. loosen and remove the 5 front- and 3 rear-cover screws (using 2mm allen key).
2. carefully remove both endcovers.
3. remove the shims from the rotor shaft.
4. now you can carefully pull the rotor out of the housing, place the rotor in clean towel or designated container.
5. you have now access to the rotors insides for cleaning. You may also use compressed air to clean the inside of the motor after you have removed the bearings.

Be careful with correct shim position during re-assembly and make sure to tighten the screws carefully!

## Spare- and Optional-Parts

LRP offers a comprehensive line of accessories, as well as particular spare- and optional items. Here you find an overview, for a full picture please visit our website at [www.lrp.cc](http://www.lrp.cc):

### Spare parts:

- # 50628 MR115ZZ ABEC5 Ball Bearings (11x5x4mm, 2pcs)
- # 50648 Dynamic8 Spare Sintered Rotor
- # 50649 Dynamic8 Sensor Assembly (complete replacement sensor assembly, ready to use)

### Optional parts:

- # 819307 Sensor-Wire „HighFlex“ 70mm
- # 819310 Sensor-Wire „HighFlex“ 100mm
- # 819315 Sensor-Wire „HighFlex“ 150mm
- # 819320 Sensor-Wire „HighFlex“ 200mm
- # 81907 3.3mm² Powerwire black (1.0m)
- # 81908 3.3mm² Powerwire blue (1.0m)
- # 82506 Power-Wire Set Brushless 3.3mm² (red, black, blue, orange, yellow)
- # 65790 Works Team Tools, Motor Bearing Replacer

### 1/8th Brushless speed-control:

- # 80880 iX8 Competition Brushless



The crossed-out wheeled bin means that within the European Union the product must be taken to separate collection at the product end-of-life. Do not dispose of these products as unsorted municipal waste.