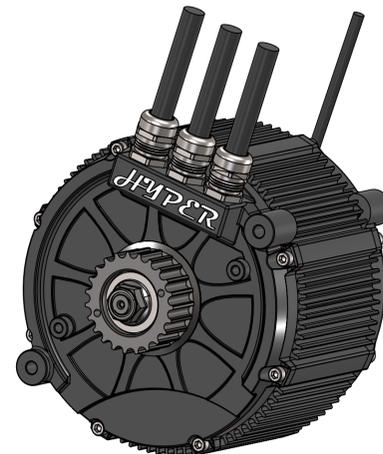
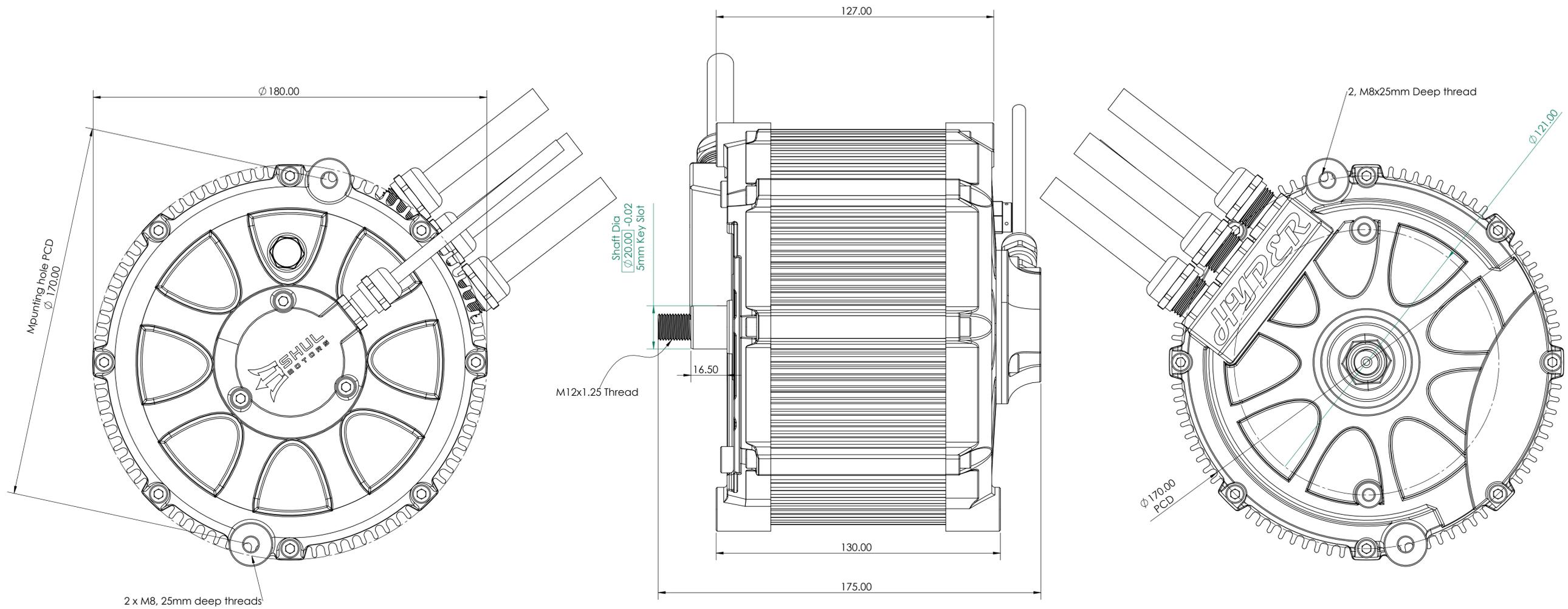


SLB 65MX MOTOR FOR SURRON LIGHT BEE

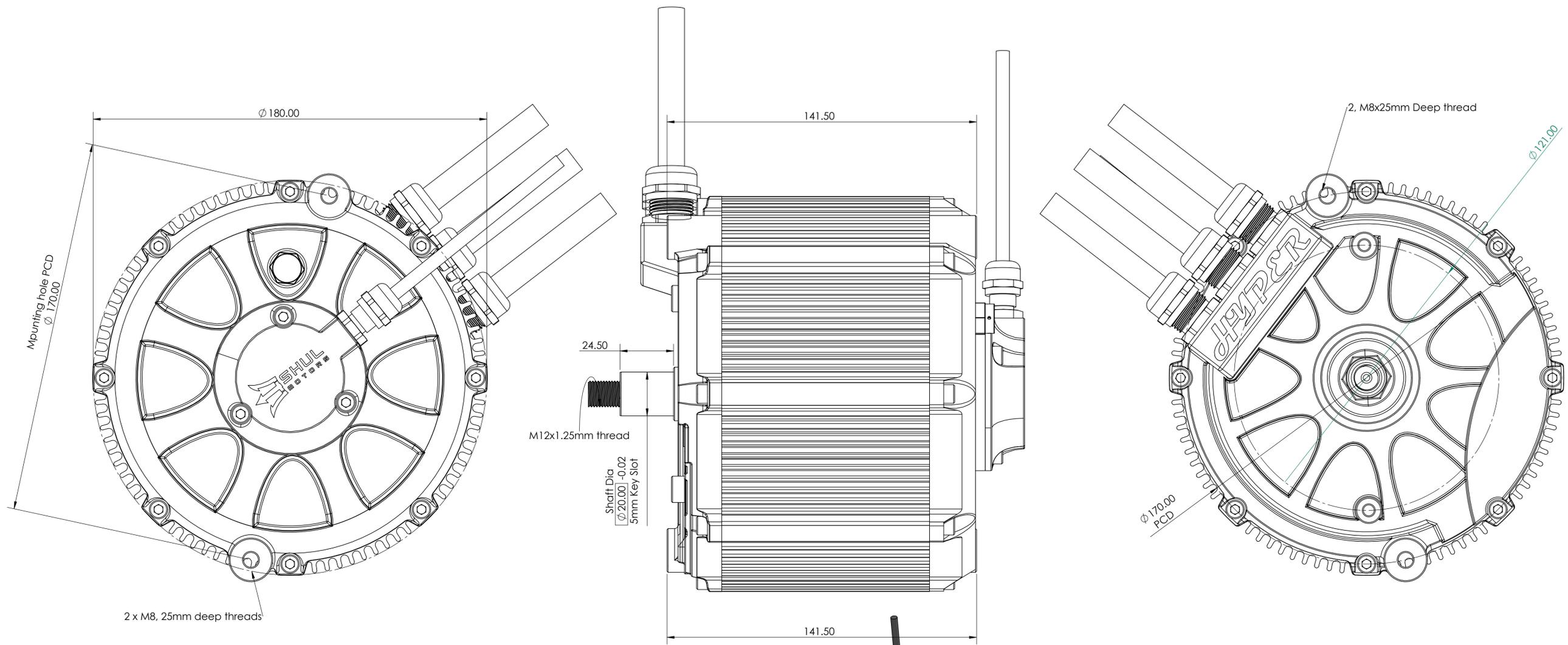


UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN mm		DRAWN	
TOLERANCES: ± 0.05 mm		CHECKED	
FRACTIONAL ± 0.05 mm		ENG APPR.	
ANGULAR: ± 0.10 deg		MFG APPR.	
INTERPRET GEOMETRIC TOLERANCING PER:		G.A.	
MATERIAL		TITLE:	
FINISH		SLB 65MX LIGHT BEE MOTOR	
NEXT ASSY	USED ON	SIZE	DWG. NO.
APPLICATION	DO NOT SCALE DRAWING	D	REV
		SCALE: 1:1	WEIGHT: 12.5KG SHEET 1 OF 5

PROPRIETARY AND CONFIDENTIAL
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SUB 80MX MOTOR FOR SURRON ULTRA BEE



PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SHUL. NO PART OF THIS DRAWING OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SHUL IS PROHIBITED.		UNLESS OTHERWISE SPECIFIED:	NAME	DATE	TITLE: SUB 80MX MOTOR for ULTRA BEE
		DIMENSIONS ARE IN mm TOLERANCES: ±0.05mm FRACTIONAL ±0.05mm ANGULAR: ± 0.1deg	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		SIZE DWG. NO. REV D
		MATERIAL	ENG APPR.		
		FINISH	MFG APPR.		
		DO NOT SCALE DRAWING	G.A.		
NEXT ASSY	USED ON	APPLICATION			SCALE: 1:1 WEIGHT: 14.2KG SHEET 2 OF 5

Motor Installation Guide

(Phase Wire Connection for SurRon Bike)

Phase Wire Identification

The motor uses **three phase wires**.

The phase wires are **not labeled**, but their **lengths are different** to ensure correct installation.

- **Longest phase wire** → Top controller terminal
- **Medium length phase wire** → Middle controller terminal
- **Shortest phase wire** → Bottom controller terminal

This design ensures the wires naturally reach the correct controller terminals when routed properly.

Controller Phase Connection

Follow these steps when connecting the motor to the controller:

Step 1 — Power Off

Ensure the bike battery is **completely disconnected** before installation.

Step 2 — Route Phase Wires

Route the motor phase wires along the **factory cable path** toward the controller.

Step 3 — Connect by Wire Length

Connect the phase wires to the controller terminals as follows:

Wire Length	Controller Terminal
Longest wire	Top terminal
Medium wire	Middle terminal
Shortest wire	Bottom terminal

Step 4 — Tighten Terminals

Secure the phase wire lugs firmly to the controller terminals using the appropriate bolts.

Recommended torque:

- **8–10 Nm for M6 terminals** (adjust if different hardware is used).

Encoder Connection

Connect the **motor encoder connector** to the controller encoder input port.

Ensure the following:

- The connector is **fully inserted and locked**
- No pins are bent or damaged
- The cable is routed safely away from moving parts or sharp edges

The encoder provides **precise rotor position feedback**, which is required for correct motor operation and controller tuning.

Important Notes

⚠ Do not swap phase wires after controller tuning or programming is completed.

Once the motor has been tuned or programmed with the controller, the **phase wire order becomes fixed**.

If the customer swaps any phase wires after tuning:

- Motor operation may become incorrect
- Encoder position will no longer match the phase sequence
- The motor may run roughly or not operate properly

In such cases, **complete motor retuning or recalibration with the controller is required**.

⚠ Ensure clean connections.
<ul style="list-style-type: none">• Remove oxidation from terminals• Use flat washers where required• Ensure no phase wire touches another terminal

First Power-On Procedure

1. Lift the rear wheel off the ground.
2. Turn on the bike ignition.
3. After turning on the ignition for the **first time**, the customer must open the **controller mobile application**.
4. Follow the instructions in the mobile app to **perform the motor tuning / setup procedure**.

This tuning process allows the controller to:

- Detect the motor parameters
- Calibrate the encoder position
- Configure the correct phase sequence

⚠ Do not ride the bike before completing the tuning process in the mobile app.

After tuning is completed:

5. Slowly apply throttle.
6. Verify:
 - Smooth rotation
 - No abnormal noise
 - Correct wheel direction

If the motor spins backwards or behaves abnormally, the controller setup may need to be **rechecked or retuned**.

1. Warranty Coverage (Warranty is Valid When)

The warranty will be honored under the following conditions:

Manufacturing Defects: Defects in materials or workmanship under normal use, material such as external casing, end caps, shaft etc.

Rotor or Stator Manufacturing Defects: Magnet bonding failure due to manufacturing issues.

Bearing Failure (Within Normal Use)

Bearing failure not caused by water ingress, crash damage, or contamination.

Connector or Internal Wiring Defects

Faulty encoder or internal wiring defects originating from manufacturing.

Normal Riding Conditions: Motor used within recommended voltage, current, and temperature limits.

Warranty Period: Motor is within the defined warranty period (24 months)

Warranty Does NOT Cover

The warranty becomes void under the following conditions:

1. Electrical Misuse / Overvoltage: Operating the motor above the rated voltage.
2. Overcurrent: Controller current exceeding specified limits.
3. Improper Controller Settings: Incorrect FOC parameters or field weakening settings that cause overheating.
4. Thermal Overload: Motor operated continuously above recommended temperature limits.
5. Mechanical Damage, Crash Damage: Damage caused by accidents, crashes, or external impacts, running the Motor above it's rated speed.
6. Improper Installation: Incorrect mounting, misalignment, or improper torque on fasteners.
7. Damage caused by incorrect gearing, chain tension, or drivetrain misalignment.
8. Water Damage: Submersion beyond rated IP level.
9. Mud, Dust, or Debris Ingress: Failure due to contamination inside the motor.
10. Corrosion: Damage due to salt water, chemicals, or corrosive environments.
11. Unauthorized Modifications / Motor Disassembly: Opening the motor housing without authorization.
12. Internal Modifications: Changing windings or sensors.
13. External Modifications: Modifying the motor shaft, mounting, or connectors [lugs].
14. Operational Abuse - Continuous Overheating: Operating the motor above rated temperature for prolonged periods.

Additional Conditions

Warranty covers repair or replacement only, not refund.

Shipping costs for warranty claims may be the responsibility of the customer.

Warranty applies only to the original purchaser.

Warranty Claim Requirements

Customer must provide: Purchase proof / invoice, Motor serial number, Description of failure, Photos or videos of the issue