REFLEX® DRIVE

MADE IN INDIA

INTEGRATED PROPULSION UNIT

RD R4 IPU

PRELIMINARY DATASHEET - SUBJECT TO CHANGE



FOC

Field oriented control

REFLEX® DRIVE

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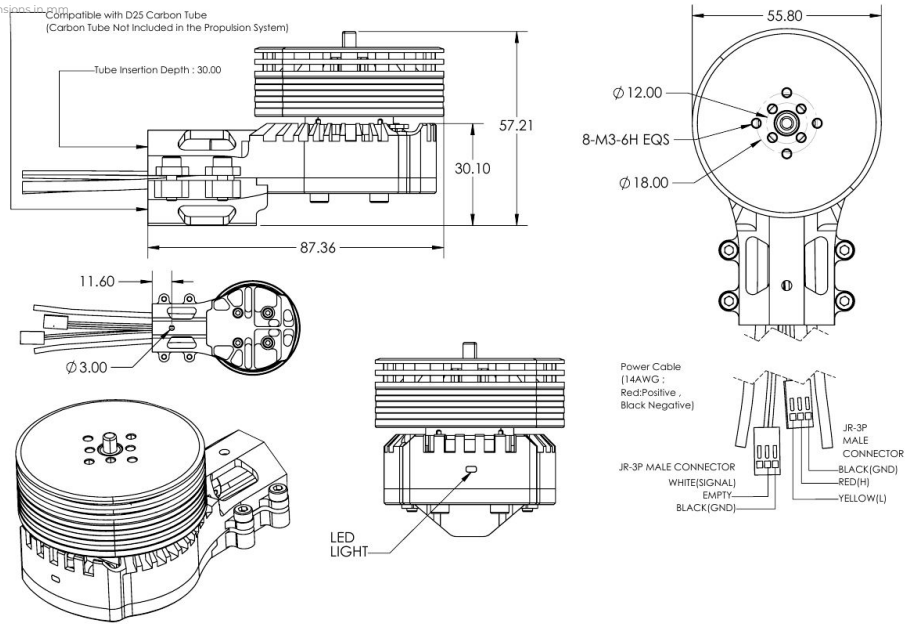
RD R4 IPU

INTEGRATED PROPULSION UNIT

- R4 IPU is a high-performance Integrated Propulsion Unit (IPU) specifically designed for drone applications.
- This all-in-one solution features a fully enclosed Electronic Speed Controller (ESC), ensuring optimal protection and reliability in demanding environments.
- The R4 IPU combines advanced propulsion technology with robust design, making it ideal for precision surveillance, payload, agriculture, crop monitoring, and spraying tasks.

PRODUCT DRAWING

Note: All dimensions in mm



BASIC PARAMETER

Product name	RD R4 IPU
Country of Origin	India
Throttle signal frequency	50-450Hz
Weight (incl. cables)	230 gm
Dimension (mm)	87.36 x 55.80 x 57.21
Arm tube compatibility	D25 carbon tube (not included)
Maximum Thrust	3.5 kg
Recommended take-off weight	TBD
Max. Power	TBD
Operating Temperature	-20~65°C
Compliant	TBD
Certification	TBD

ESC	A-Series FOC 35A
Voltage Range	4S-6S LiPo
Max. Input Current	30A peak (<15 s)
PWM Range	1050-1950us
BEC	No
PWM Input Signal	TBD
Communication Protocol	PWM, CAN
Telemetry (over CAN)	Over CAN

ESC	A-Series FOC 35A
Power Leads (AWG & Length)	14AWG
ESC Signal Control lead	JR-3P (White signal, Black GND)
ESC Telemetry lead	JR-3P (Yellow L, Red H, Black GND)
Protection/Warning	Over temperature warning (110°C)
	Over voltage protection (30V)
	Under voltage protection (12V)
	Stuck rotor at start-up, bad motor phase
	Over current, start-up protection

MOTOR	RD 5008
Motor KV Rating	340KV
Stator Poles / Magnet Poles	24/28
Motor Dimension	Ø55.80mm x 33mm
Recommended Propeller	1760

Safe Operating Notes

1. Ensure adequate air flow for ESC and motor cooling during continuous high-load operation.
2. Actual Performance may vary depending on altitude, ambient temperature , air density, propeller type, air flow conditions, and installation configuration.
3. Do not exceed rated voltage, current, and throttle limits. Exceeding limits may cause overheating or permanent damage
4. It is recommended to maintain a 20-30% safety margin below maximum tested values for reliable long term operation
5. Ensure all electrical connections (battery, motor, and signal wires) are properly secured and insulated. Loose or poor connections may cause voltage fluctuations, overheating, or malfunction of the ESC.

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