



APM600

FALCON SERIES

KEY FEATURES



Superior quality insulation provides long life and high reliability of windings



Designed to be lightweight with outstanding power density



Built for industrial strength



100% tested with individual performance reports



Active air-cooling system operates at high temperatures

DATASHEET

Fly Higher. Fly Longer. Fly Smarter.

ePropelled brushless air propulsion motors (APMs), with outstanding thrust-to-weight ratios, drive a wide range of uncrewed aerial vehicles (UAVs) applications where weight, size, energy efficiency, high heat tolerance, and rugged quality count most.

For new UAV designs or easy replacement uses, ePropelled Falcon APMs are designed from years of experience in magnetic engineering and materials science to deliver long life with ease of installation. When paired with our air motor controllers, gain high-performance, high-efficiency propulsion solutions for all manner of heavy-duty UAV designs.

Air Propulsion Motor

The frameless Falcon APM600 delivers the thrust agility to drive demanding payload UAVs and very large propellers with precise control across dynamic mission parameters in demanding thermal environments.

They make an excellent choice to swap out commodity propulsion motors and attain better performance, greater life, longer range, and far higher operational integrity.

Compact and energy efficient on demand, the heavy-duty APM600s have a proven record of durability, reliability, and easily optimized performance across most mainstream heavy-lift UAV uses.

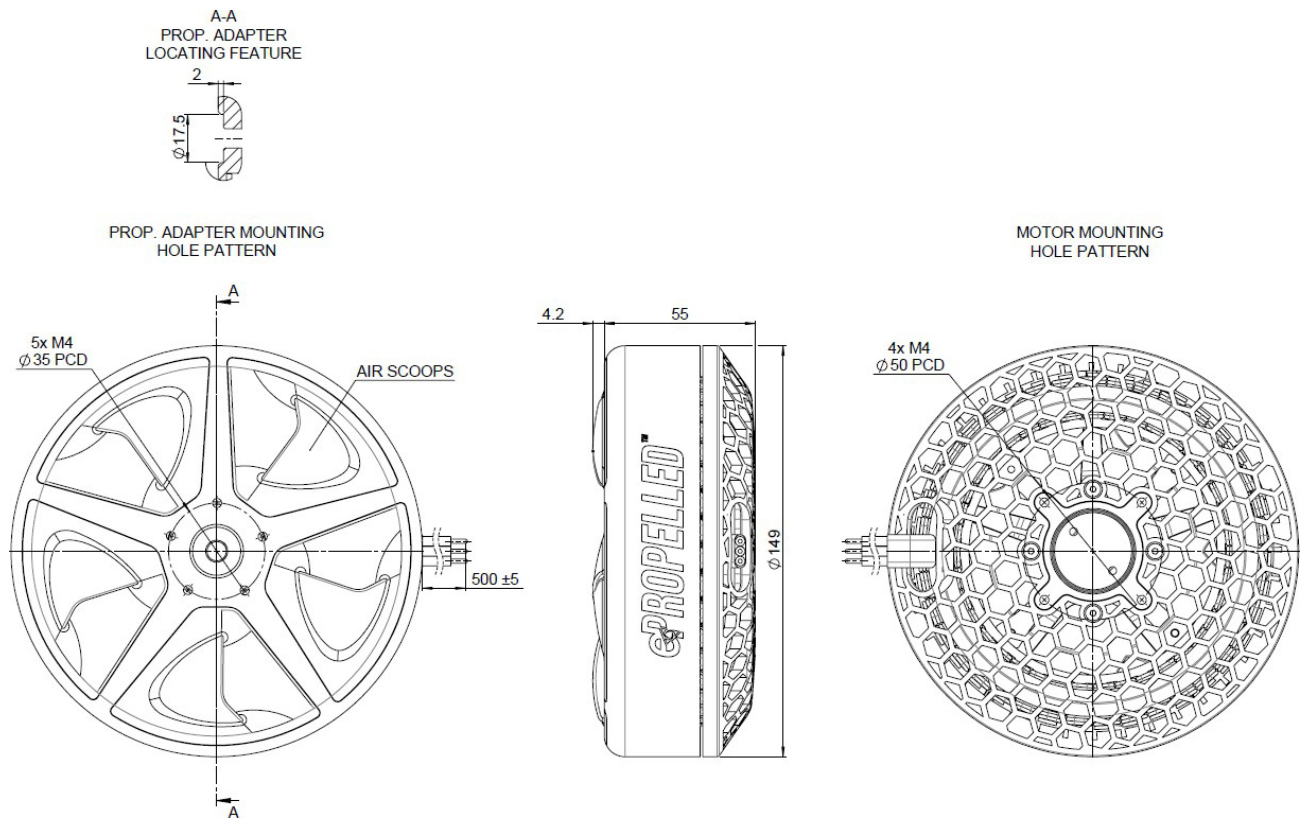


MOTOR PARAMETERS

PARAMETERS	MEASUREMENT
Kv (Velocity Constant)	87 Kv
Rated Voltage	14S – 24S
Peak Current (180s)	105 A
Maximum Power (180s)	10,000 W
Kt (Torque Constant)	0.13 Nm/A
Nominal Operational Speed	0 to 6,000 RPM
Maximum Speed Limit	8,000 RPM
Magnetic Poles	40
Stator Slots	36
Winding Operating Temperature Allowed up to	180°C/356°F
Rotor Operating Temperature Allowed up to	170°C/338°F
Motor Diameter	149 mm
Motor Length (With Airflow Inserts)	59.2 mm
Motor Weight (With Airflow Inserts)	1,840 g
Motor Mounting Pitch Circle Diameter (PCD) 4 x M4	50 mm
Propeller Mounting Pitch Circle Diameter (PCD)	Adaptor dependent
IP Rating	IP23
Recommended Propeller*	34” to 36” inch
Recommended ESC	iAMC600

Note: * Propeller diameter may be different due to higher altitudes.

MECHANICAL DIMENSIONS

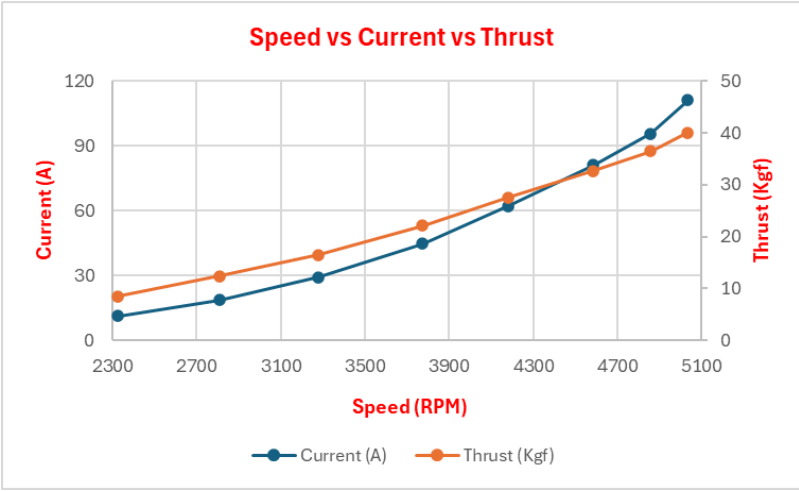
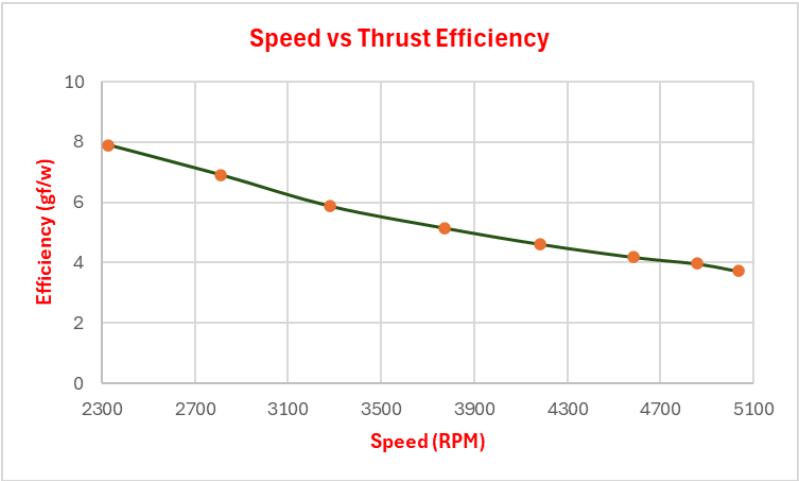


*All Dimensions are in mm

PERFORMANCE DATA: APM600 Kv87 (35.5” x 12.1”)

MOTOR Test Conditions	APM600 Kv87
Relative Humidity (%)	79
Ambient Temperature °C	28
Atmospheric Pressure (mB)	1013
Air Density (kg/m ³)	1.15

TYPE	PROPELLER	VOLTAGE	THROTTLE	MOTOR SPEED	SUPPLY CURRENT	ELECTRICAL POWER	THRUST	THRUST EFFICIENCY
		VOLTS	%	RPM	AMPS	WATT	KGF	GF/W
APM600	(35.5” x 12.1”)	96	30	2328	11.2	1073	8.47	7.90
		96	40	2809	18.6	1789	12.38	6.92
		96	50	3280	29.3	2811	16.52	5.88
		96	60	3775	44.7	4292	22.11	5.15
		96	70	4183	62.1	5958	27.55	4.62
		96	80	4584	81.2	7797	32.67	4.19
		96	90	4858	95.7	9187	36.50	3.97
		96	100	5034	111.2	10740	40.01	3.73



Note: All specifications are subject to change without notice. For more information, including ordering products, please contact us at info@epropelled.com | Phone: +1 (603) 236 7444

