

NOVA 30-50-B4 P50

Inrunner BLDC motor with closed housing

Overview

The NOVA 30 is from our family of super rugged inrunner BLDC motors and has been specifically designed for mission critical applications, including uncrewed systems and aerospace.

Features

- Super robust housing for applications in the harshest environments
- Designed for high shock and vibration loads
- Best power-to-weight-to-robustness ratio in its class
- Wear-free position and temperature sensors included in standard
- Optimized shaft for Plettenberg propeller coupling



Specifications

Part number	02-043.050.10-000-096	
Peak output power	30	kW
Peak torque (max. 5s) ⁽¹⁾	80	Nm
Max. speed	5,000	rpm
Voltage range	30-120	V
Speed constant (kV)	37	rpm/V
Diameter	198	mm
Length	93	mm
Weight	5,600	g
Phase cable length	100	mm
Sensor cable length	400	mm
Recommended phase cable extension	16	mm ²
	5	AWG
Protection class	IP53	
Mounting	Front & back	
Direction of rotation	Both	
Cooling	Air cooled	
Ambient temperature range	-20 to +60	°C
Max. temperature of stator (as measured by sensor)	+100	°C
Position sensor types	Hall effect sensor with UVW-commutation signals	
Temperature sensor	NTC 47 kΩ	
Number of poles	50	
Number of windings	4	
Peak thrust	115 kg with 60x21" prop	

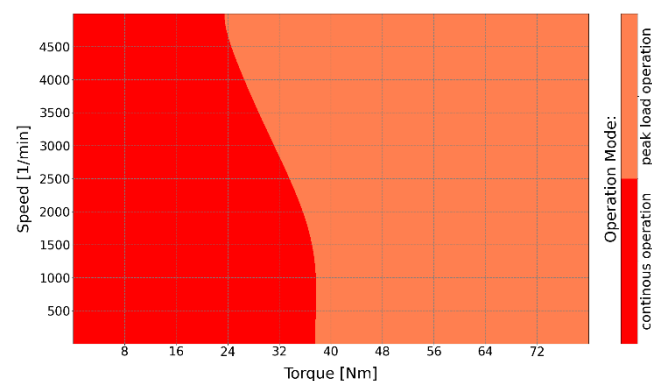
Notes:

⁽¹⁾ Peak torque with sensor-guided ESC. If using sensorless ESC, peak torque may be 10-20% lower.

Complementary Products

- Plettenberg propeller coupling: PC LW 6K 16
- Plettenberg ESCs: MST 140-200, MST 140-250 WK
- Third party ESC from Allocortech
- Plettenberg gold connectors: GC6-00 / GC6-90

Heatmap



Note: Assuming 25°C ambient temperature and 10 m/s airflow.

Options & Customization

- Custom winding/kV versions
- MIL-STD 810H or RTCA DO160 qualification
- MTBF/S report
- IP67 protection class
- Aerospace or MIL-DTL-38999 connectors
- Mechanical customization or frameless kits
- High/low temperature versions
- High RPM versions
- Propeller study



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