

# 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 designed for a wide range of mission critical applications.

## Features

- Super robust housing for applications in the harshest environments
- 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) <sup>(1)</sup>	80	Nm
Max. speed	5,000	rpm
Voltage range	30-120	V
Speed constant (kV)	37	rpm/V
Diameter	198	mm
Length	96	mm
Weight	5,600	g
Phase cable length	100	mm
Sensor cable length	400	mm
Recommended phase cable extension	16	mm <sup>2</sup>
	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	
Phase resistance <sup>(2)</sup>	15	mΩ
Phase inductance <sup>(2)</sup>	31	μH
Peak thrust	115 kg with 60x21" prop	

### Notes:

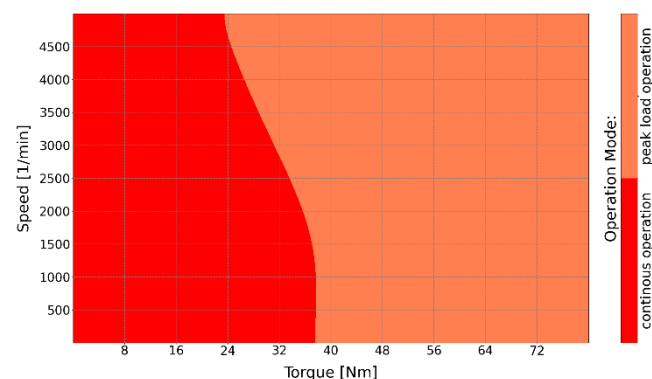
<sup>(1)</sup> Peak torque with sensor-guided ESC. If using sensorless ESC, peak torque may be 10-20% lower.

<sup>(2)</sup> Phase-to-phase value

## Complementary Products

- Plettenberg propeller coupling: PC LW 6K 16
- Plettenberg gold connectors: GC6-00 / GC6-90

## Heatmap



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

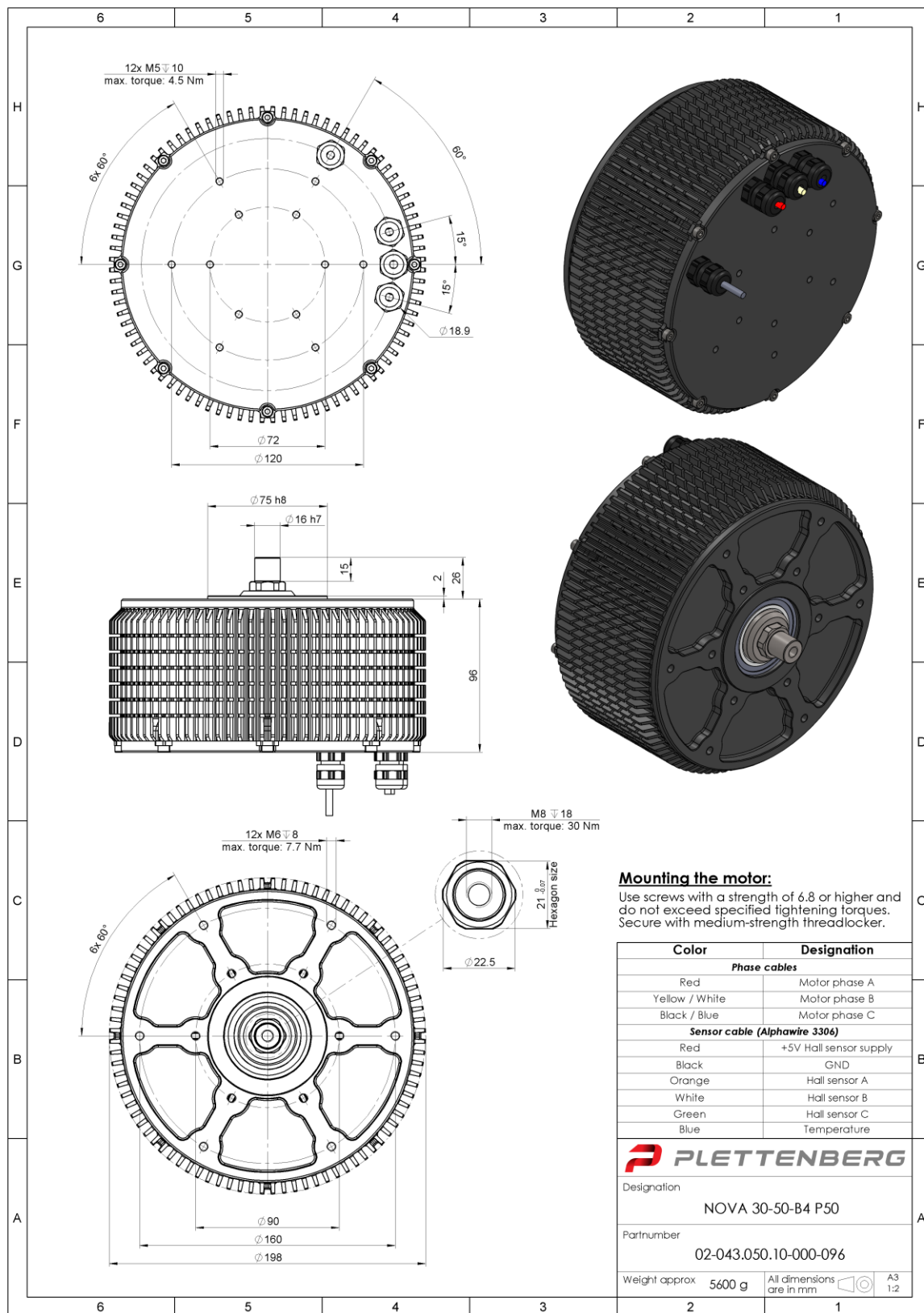
## Options & Customization

- 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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