

NOVA Series

NOVA 4-30-B12 P20 LW

Inrunner BLDC motor with closed housing

Overview

The NOVA 4 Light-Weight ("LW") 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

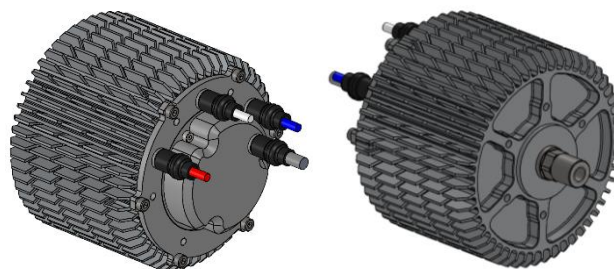
Specifications

Part number	02-029.030.12-000-048
Peak output power	2.4 kW
Peak torque (max. 5s) ⁽¹⁾	4 Nm
Max. speed	11,000 rpm
Voltage range	15-60 V
Speed constant (kV)	186 rpm/V
Diameter	79 mm
Length	61 mm
Weight	700 g
Phase cable length	100 mm
Sensor cable length	400 mm
Recommended phase cable extension	2.5 mm ² AWG
Protection class	IP54
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	20
Number of windings	12
Phase resistance ⁽²⁾	59 mΩ
Phase inductance ⁽²⁾	65 μH
Peak thrust	12.5 kg with 22x7.4" prop

Notes:

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

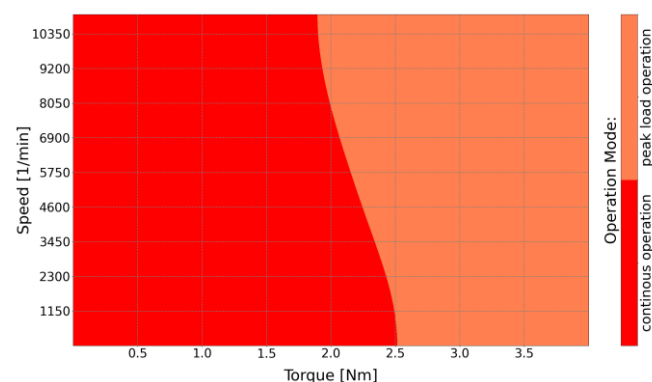
⁽²⁾ Phase-to-phase value



Complementary Products

- Plettenberg propeller coupling: PC LW 6K 10mm
- Plettenberg gold connectors: GC6-00 / GC6-90

Heatmap



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

Options & Customization

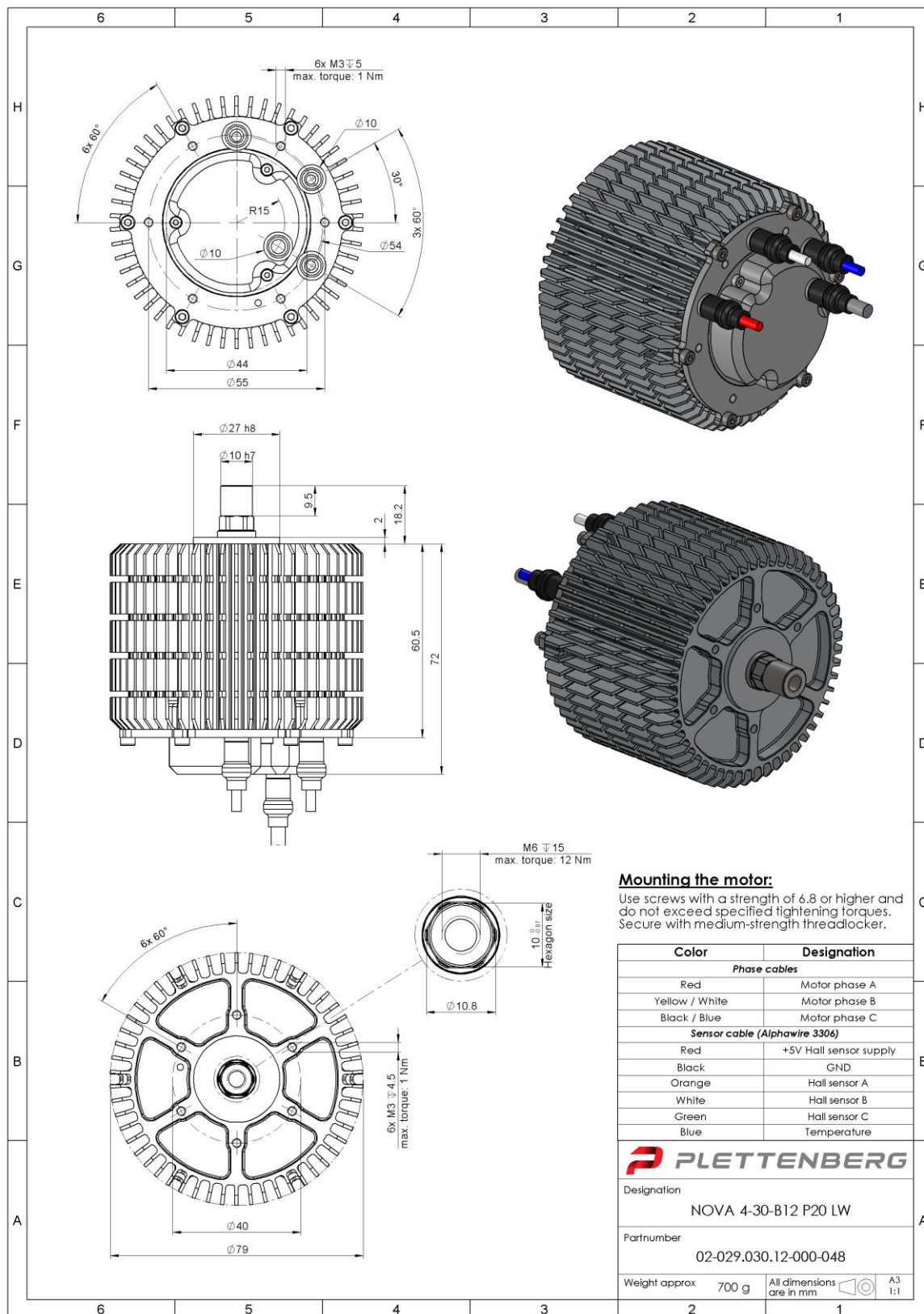
- Custom winding/kV versions
- MIL-STD 810H test reports
- MTBF/S report
- IP67 protection class
- Aerospace or MIL-DTL-38999 connectors
- Mechanical customization or frameless kits
- High/low temperature versions
- High RPM versions
- Propeller study
- RTCA DO160 qualification

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