

NOVA Series

NOVA 15-50-B4 P30 WK

Inrunner BLDC motor with closed housing

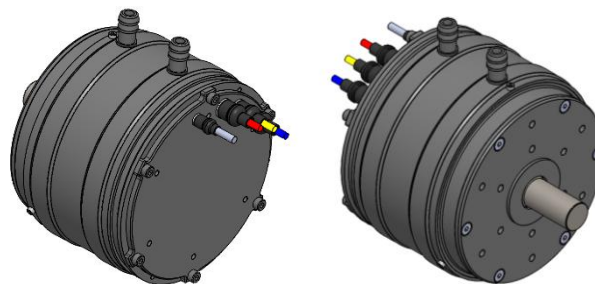


Overview

The NOVA 15 Water-Cooled ("WK") 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
- Wear-free position and temperature sensors included in standard



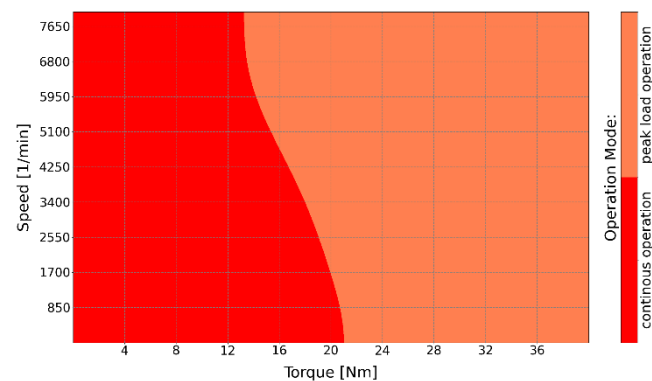
Specifications

Part number	02-044.050.01-000-350	
Peak output power	15	kW
Peak torque (max. 5s) ⁽¹⁾	40	Nm
Max. speed	8,000	rpm
Voltage range	15-80	V
Speed constant (kV)	99	rpm/V
Diameter (ex. water inlet)	131	mm
Length	97	mm
Weight	3,200	g
Phase cable length	100	mm
Sensor cable length	400	mm
Recommended phase cable extension	10	mm ²
	7	AWG
Protection class	IP54	
Mounting	Front & back	
Direction of rotation	Both	
Cooling	Water 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	30	
Number of windings	4	
Phase resistance ⁽²⁾	13	mΩ
Phase inductance ⁽²⁾	19	μH
Recommendations for water cooling	Flow of 7 liters-per-minute at max. 40°C inlet temp.; coolant pressure shall not exceed 2 bar/ 29 PSI.	

Complementary Products

- Plettenberg gold connectors: GC6-00 / GC6-90

Heatmap



Note: Assuming water temperature of 40°C and 7 l/min flow.

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
- High RPM versions
- RTCA DO160 qualification

Notes:

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

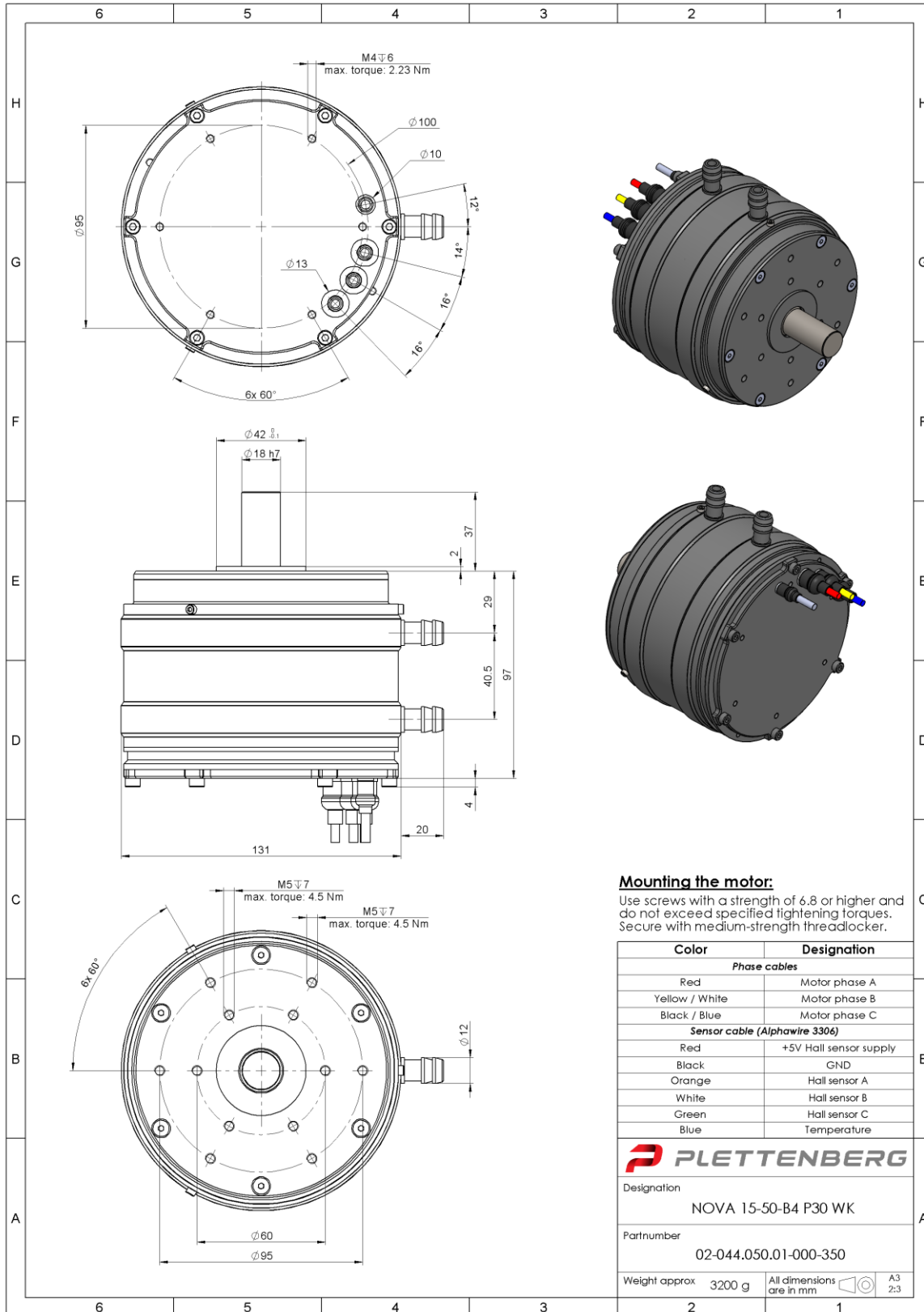
⁽²⁾ Phase-to-phase value

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