

# HVLS Fan Motors and Controls

## Sensorless Brushless Permanent Magnet Motors



Nidec HVLS (high volume, low speed) fan motors are designed to meet the most demanding market requirements. System can be used as-is or integrated into your specific fan application. High efficiency, high torque and robust design for extended life.

*Designed for improved performance, reliability and/or cost reduction versus gear-driven solution.*

**Torque Range (Continuous):** 10 – 200 Nm

**Speed Range:** 0 – 215 RPM (variable)

**Mounting:** NEMA 5.5 and 10.5 Frames

**Rated Voltages:** 115, 230, 277 & 460Vac 1/3PH

**Power:** Up to 1650 Watts

**Warranty:** One-year limited warranty\*



### Product Features

- High torque-to-weight ratio
- High torque density
- Ultra-smooth, high-precision motion quality
- Rigorous testing for performance and reliability
- Customizable for drop-in applications
- Long life ball bearing system
- High ingress protection available for harsh environments
- Hollow shaft available for lighting and accessories
- Advanced sensorless algorithm

#### Integrated Motors with Drives:

5.5 HVLS



10.5 Motor with Drive

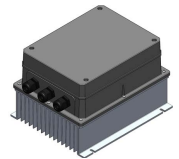
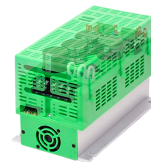


#### Modular Motors and Drives:

10.5 Motor (IP55)



Sensorless Variable Frequency Drives (IP20) (IP56)



### Product Overview and Options

#### Platform Designed to Provide:

- Maximum torque density
- High efficiency
- Advanced sensorless FOC algorithms
- Variability to meet specific application needs
- Performance in high ambient conditions (50°C)
- Improved performance, reliability or cost-reduction compared to gear-driven solution
- Low cogging torque (noise)
- UL Class F insulation system (155°C)
- RoHS and REACH compliant

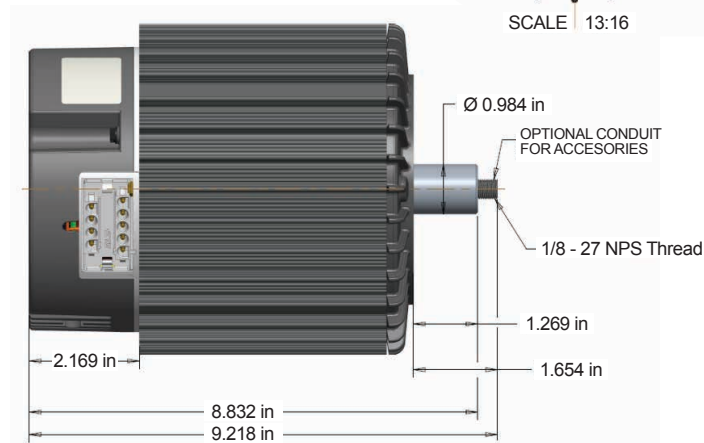
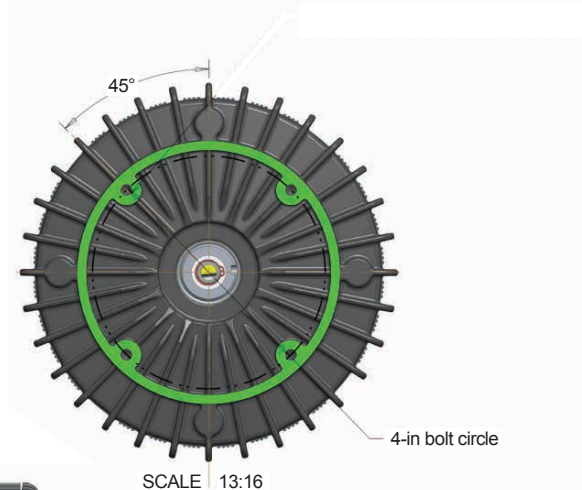
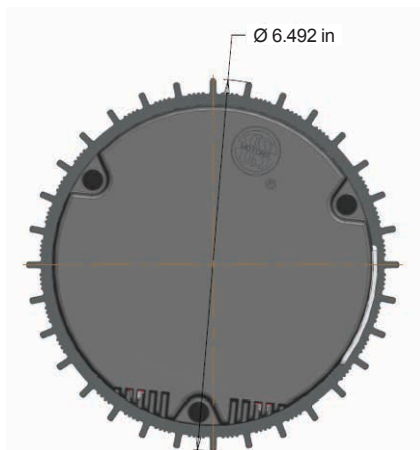
#### Typical Applications:

- High volume, low speed fans
- Various ventilation applications
- Wind Energy
- Agricultural
- General purpose high torque, low speed equipment

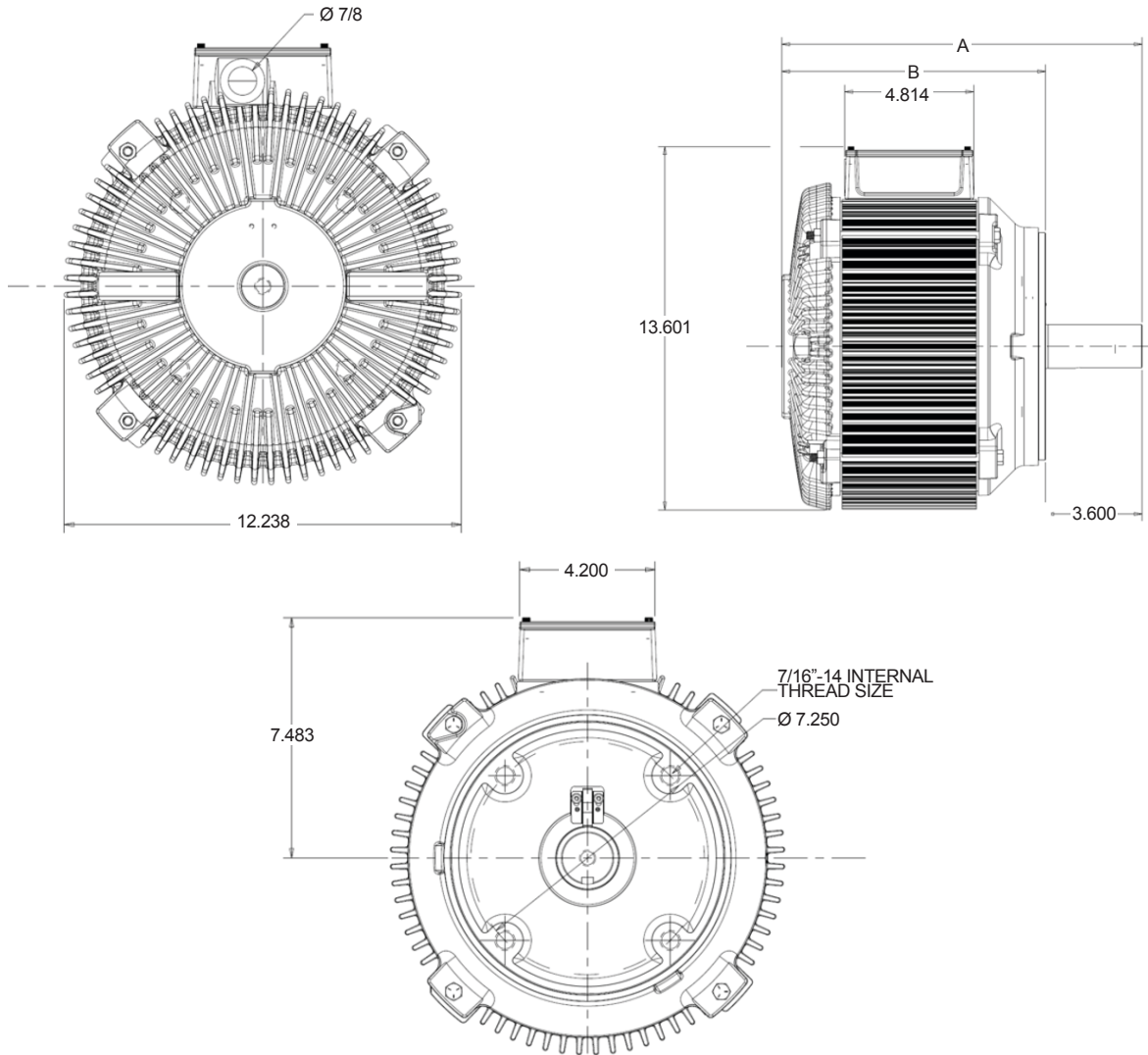
## Ratings and Specifications

Motor	Full Load Torque (Nm)	Full Load Speed (rpm)	Full Load Amps @ 230Vac	Motor Mounting	Control	Nominal Voltage (Vac)	Communication
5.5 Commercial	12	125	1.4	NEMA 48	Integrated Sensorless Sine Wave	115, 208-230 & 277 Single Phase	RS-232 5 Programmable Taps (24Vac) Bluetooth PWM
10.5 Industrial 50	50	110	4.5	NEMA 250	Integrated Sensorless Sine Wave	115, 208-230 & 277 Single Phase	RS-232 5 Programmable Taps (24Vac) Bluetooth PWM
10.5 Industrial 90	90	64	3.8	NEMA 250	Integrated Sensorless Sine Wave	115, 208-230 & 277 Single Phase	RS-232 5 Programmable Taps (24Vac) Bluetooth PWM
10.5 Industrial 85	85	90	3	NEMA 250	Modular Sensorless Sine Wave	115V & 230V Single Phase	RS-485 Modbus RTU Standard 0-5V / 10-V Isolated
						277V Single Phase	
						230V & 460V Three Phase	
10.5 Industrial 185	185	60	6.2	NEMA 250	Modular Sensorless Sine Wave	115V & 230V Single Phase	RS-485 Modbus RTU Standard 0-5V / 10-V Isolated
						277V Single Phase	
						230V & 460V Three Phase	

### 5.5 Commercial Fan Motor



### 10.5 Industrial Fan Motor



10.5 Model	Dimension A [Inches]	Dimension B [Inches]
1 H.P.	13.448	9.84774
2 H.P.	14.670	11.06974

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