

# 8 KW BLDC MOTOR SPECIFICATION



# JR120-8000W-4000RPM

## Highlights

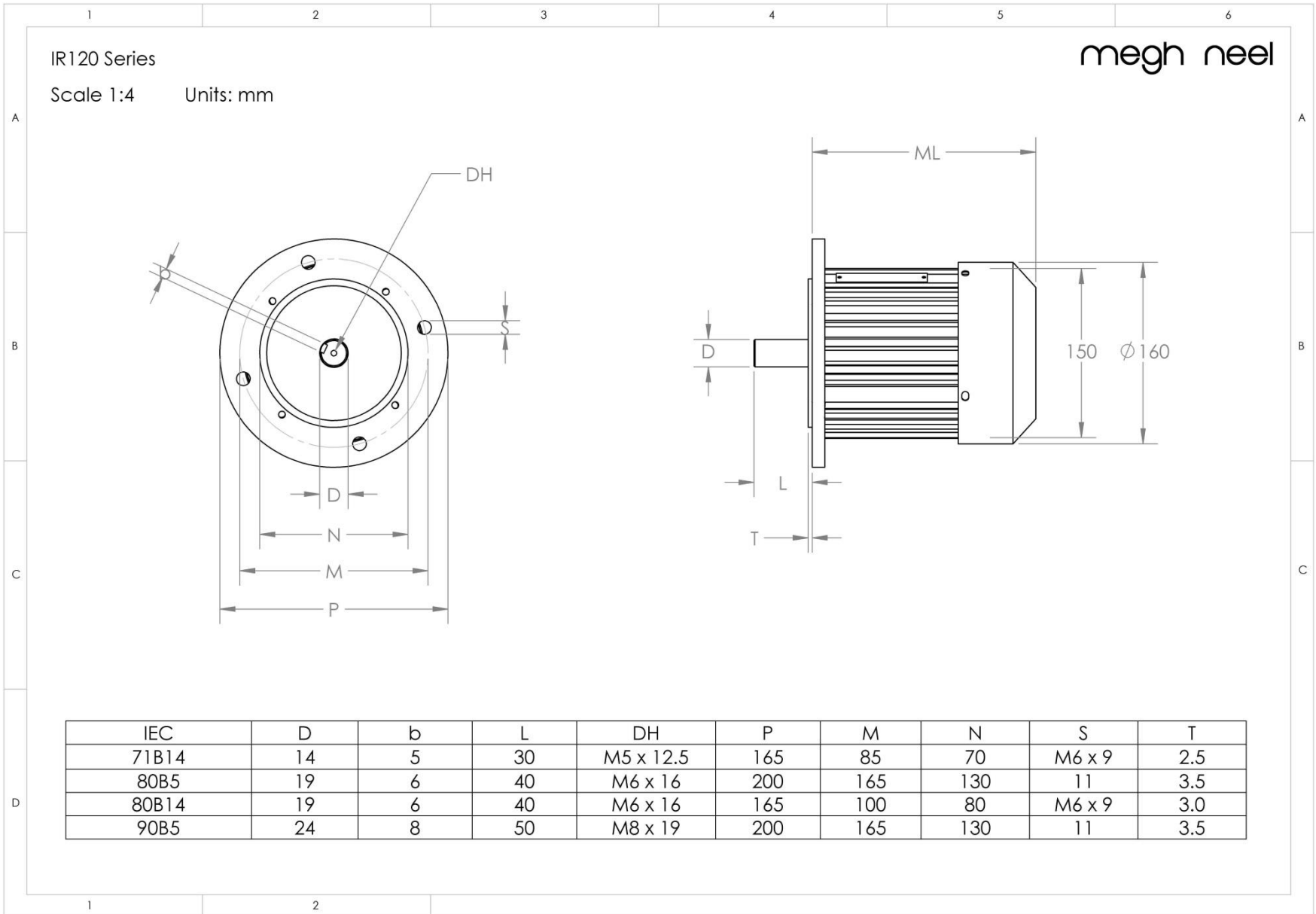
- ✓ 72VDC, 8000 Watts, 4000 RPM, 6 Phase Brushless DC Motor
- ✓ In-runner with shaft output and keyway or Hollow shaft with internal splines suitable for differential gear box
- ✓ External Control
- ✓ Built in Hall Sensors with Hall Effect Angle of 120 degrees
- ✓ Rectangular Winding Wire
- ✓ Insulation Class F
- ✓ Maximum operating temperature of 150°C with magnet grade 45SH

## Specifications

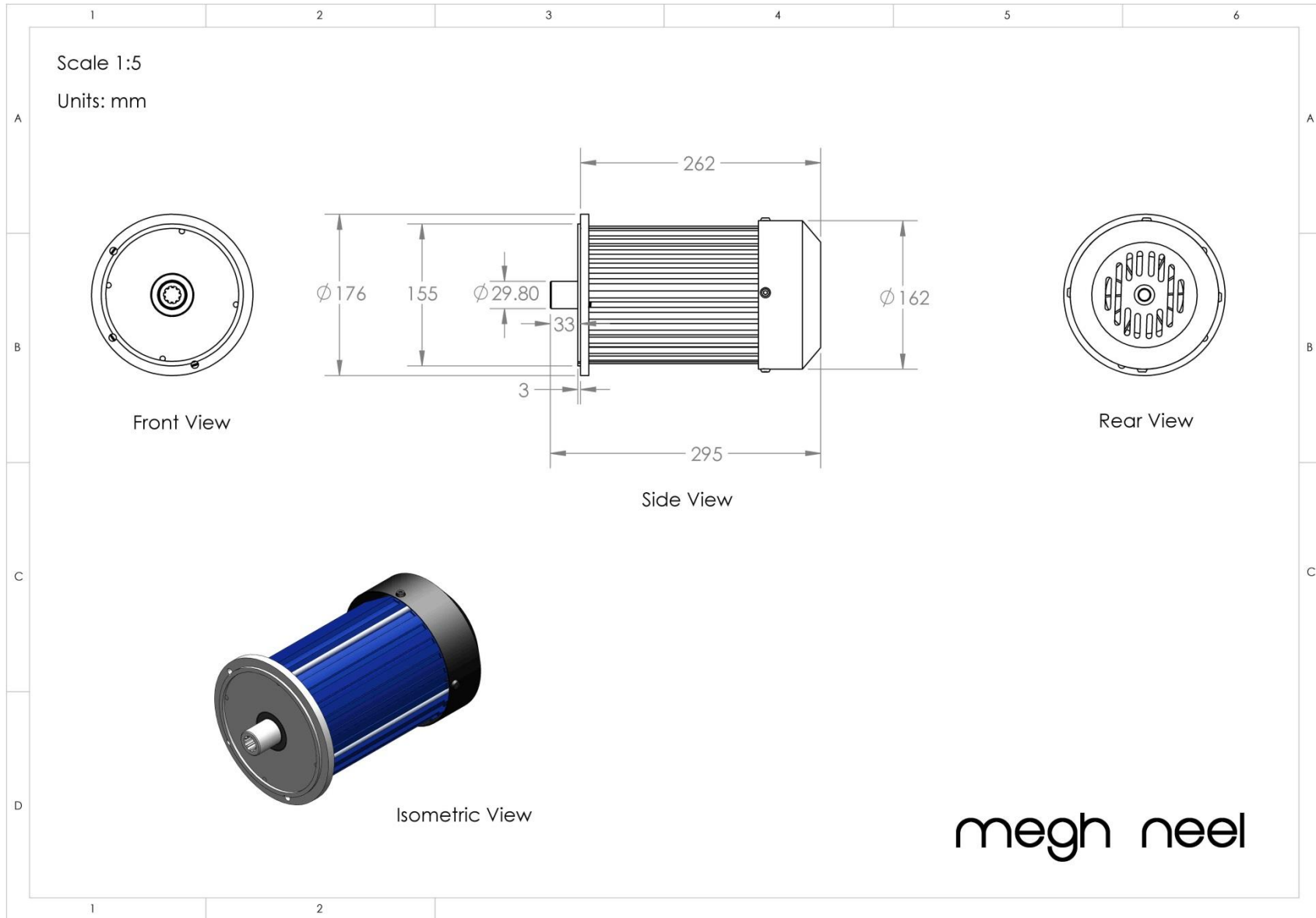
Parameter	Value
Rated Voltage	72 VDC
Rated Current	112 A
Rated Power	8000 Watts
Rated Speed (RPM)	3600 RPM
Rated Torque (Nm)	18.0 Nm
Peak Torque (Nm)	45 Nm
No Load Current (A)	8.5 A
No Load RPM	4600 RPM
Current Density (A/square mm)	6 A/square mm
Variable Speed Range	0-4600 RPM
Motor Mounting	Flange / Face only
Frame Size	IEC 90B5 (See below)
Motor Diameter	160 mm
Motor Length (ML)	265 mm (With cooling fan)
Shaft Diameter	24 mm diameter
Shaft Length	52 mm
Finish	Powder Coated



# Dimensions



# Dimensions – Suitable for 3W & 4W Rear Wheel Axle

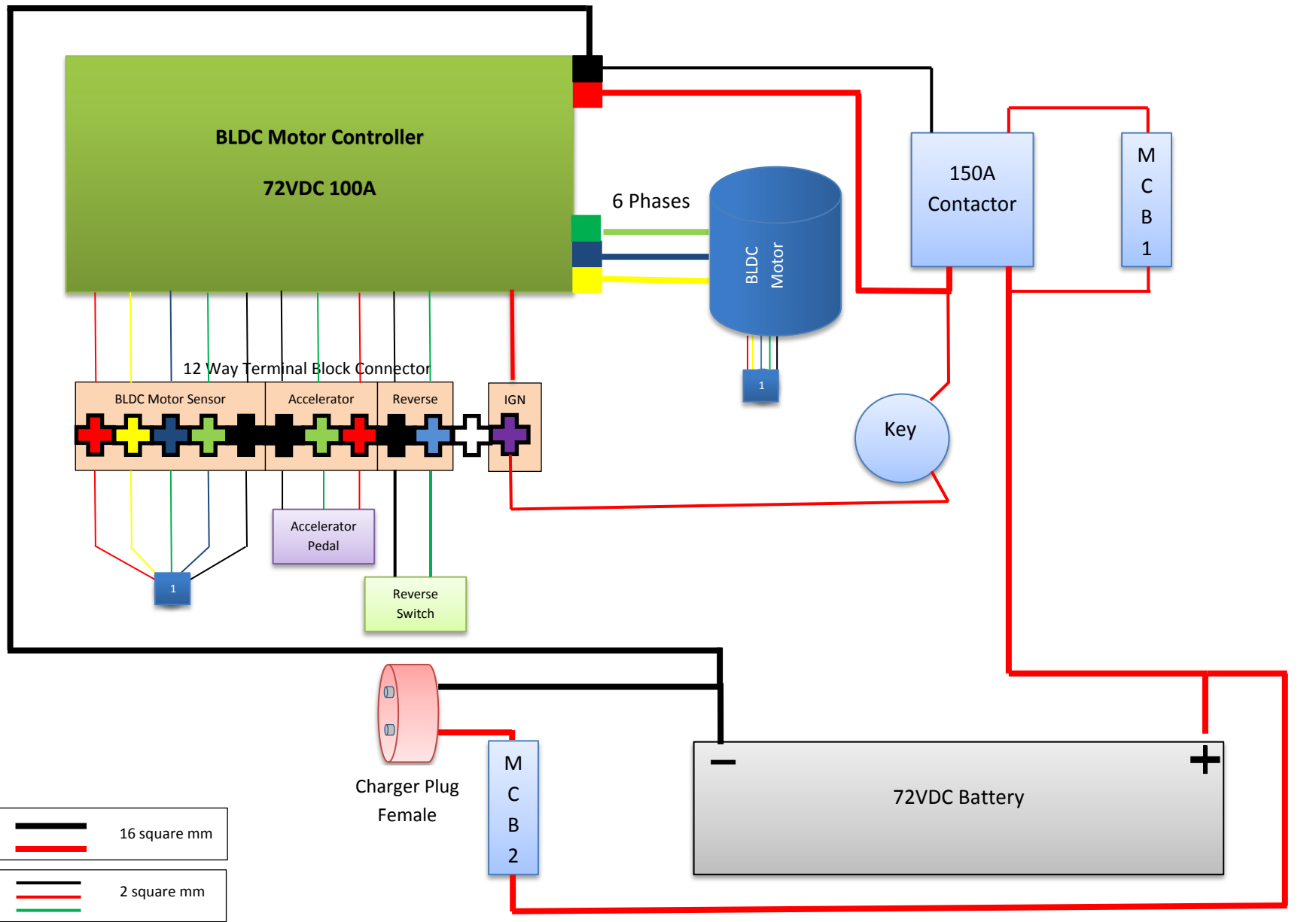


## BLDC Motor Controller Technical Specifications

Parameter	Value
Working Voltage	48/60/72 VDC*
Phase Angle	120°
Motor Control Scheme	Trapezoidal Commutation
Rated Current	120 A
Max Output Power	10800 W
Cooling	Air Cooled
Peak Current Limit	150 A
IP Protection	IP54
Throttle Voltage	1.2 – 4.3V
Under Voltage	41.0 +/- 0.5V
Weight	2.63 Kg



# Wiring Diagram



# Controller-Motor Connections

**Ignition:** Connect the 72V Battery Positive to the Controller Red Wire Bullet Connector via a key switch.

## Motor Direction:

Connect the Controller Phase Wires and the Hall Sensor wires to the respective wires from the motor as given below to achieve the desired direction

### Direction – Clockwise (From the Shaft Side)

Motor Phase Connection	Long Yellow	Long Green	Long Blue	Short Yellow	Short Blue	Short Green
Controller Phase Connection	Yellow	Blue	Green	White	Grey	Brown
Motor Hall Sensor Connection	Yellow	Blue	Green	Red	Black	
Controller Hall Sensor Connection	Blue	Yellow	Green	Red	Black	

## Throttle / Accelerator

Connect the 3 pin female connector (Red, Black, Green) to the throttle/accelerator plug. Ensure that the color codes match while connecting.

Red: +5 VDC, Black: Ground, Green: 0-3.4 VDC

## Reverse

From the BLDC Motor Controller, use the 3 pin connector (White, Black & Blue). Connect the 2 pins (Black & Blue) to achieve reverse direction.

## Low Level Brake

From the BLDC Motor Controller, use the 2 pin connector (Black & White). Short the black with White using brake switch to brake the motor.



## Important Instructions for handling Megh Neel 8000 Watts

### (Inner runner, 72VDC, 150A, 4000 RPM)

1. Handle the motor with due care. Please ensure the following
  - a. Do not drop the motor or cause severe physical shock to the outer casing of the motor.
  - b. Do not use a hammer on the motor to prevent damage to the outer casing and the flange that mounts the motor. Use a wooden mallet.
  - c. While installing the motor do not use a hammer on the shaft to prevent the shaft from bending or to prevent damage to the wires.
  - d. Do not lift the motor using the wires as it can damage the wires/short the motor windings.

Failure to ensure the above instructions can cause severe damage to motor.

2. Do not attempt to open the motor casings as special fixtures are required to open the same without causing any damage. In case of any problems with the motor - contact us. Do not attempt to service the motor by using the services of local technicians / consultants.
3. Do not attempt to run the motor using the wrong hall sensor or phase wire sequence. As under extreme conditions it can cause the following
  - a. Heat the motor windings
  - b. Fail the motor controller
4. Please ensure that motor is not overloaded. Use appropriate gear ratios to ensure that the motor is not loaded above the rated limit during normal operating condition.





## Contact Information

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