

REV	NOTES	DATE

Fig. 1

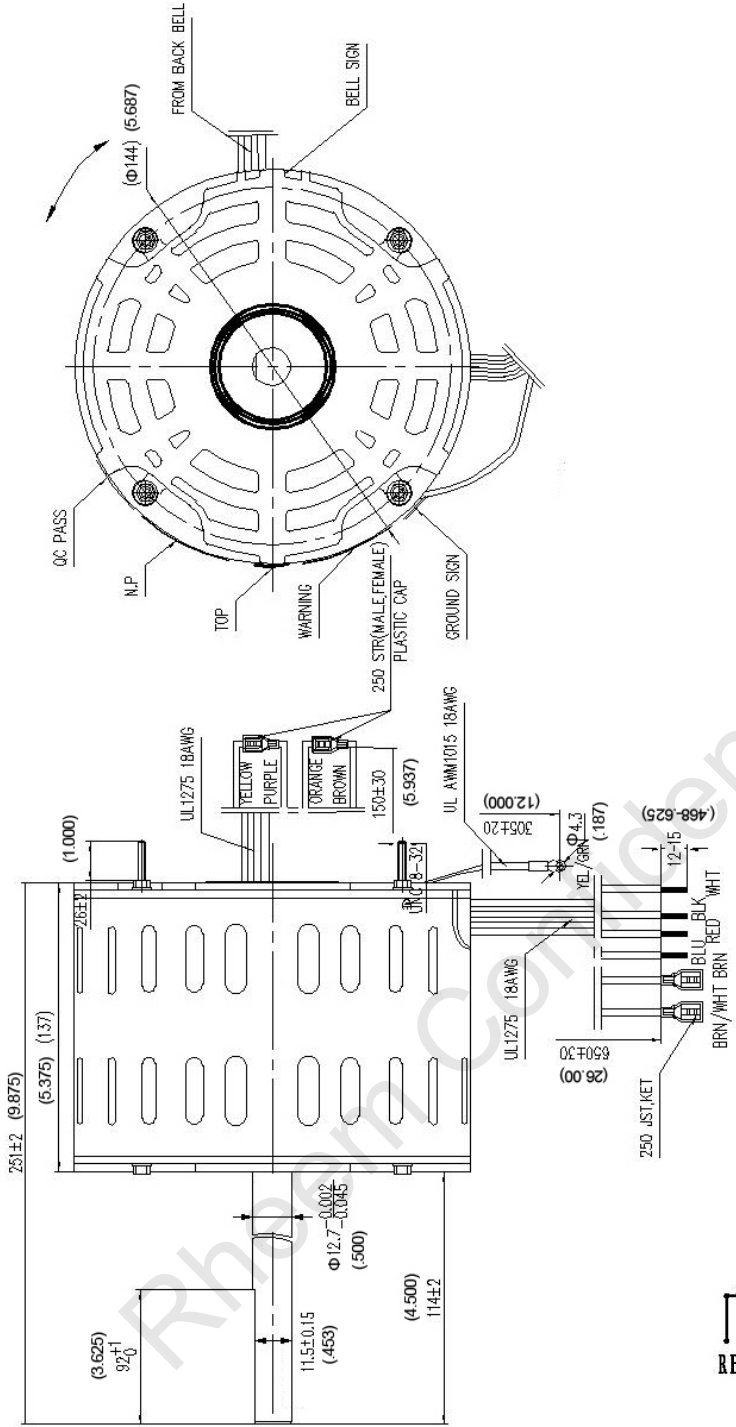


Fig. 2

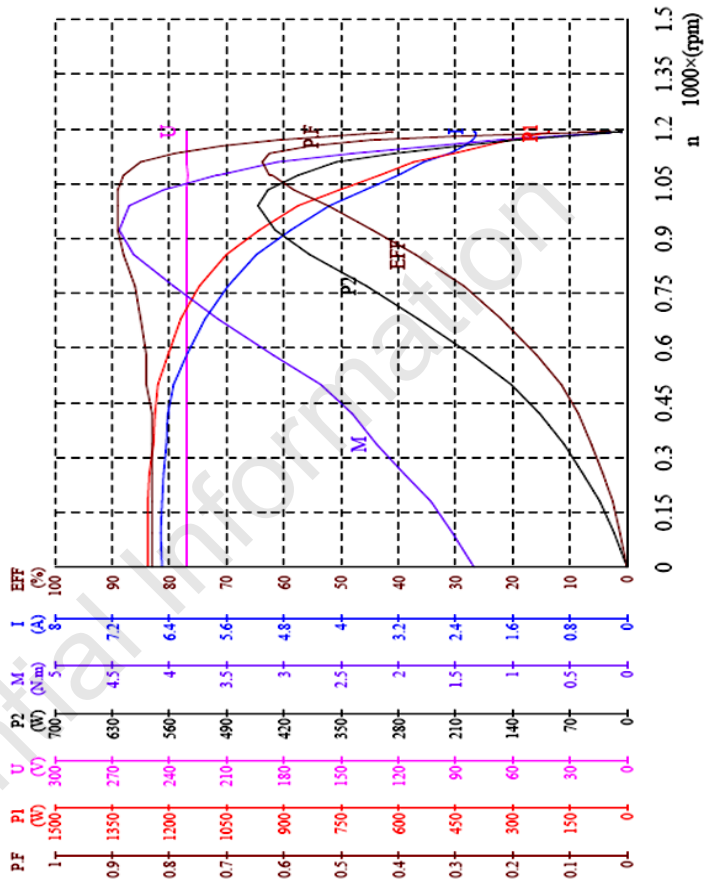
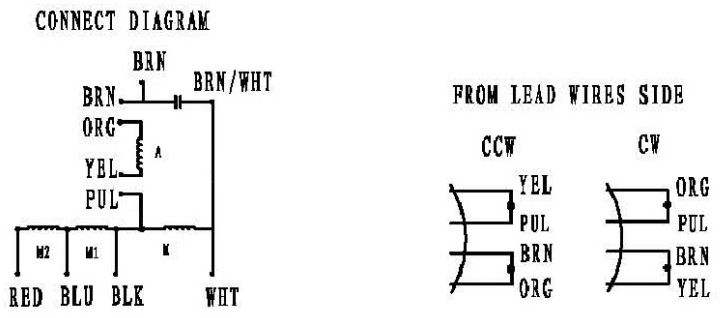


Fig. 3



Part No. [s]

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PROTECH UNIVERSAL 1/2 HP Direct Drive Indoor Blower Motor – 208-240 V


W51-12BJA3-01

Sheet 1 of 3

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1. **Description** - 1/2 HP, 208-240 V, indoor blower motor suitable for residential and light commercial HVAC applications. Three speeds with reversible rotation.
2. **Physical Characteristics:**
 - a. Dimensions - See Fig. 1. Primary dimensions and tolerances are in millimeters. Parenthetical reference dimensions are in inches.
 - b. Frame Designation - NEMA 48
 - c. Design Type - Permanent split capacitor (PSC) six pole induction motor.
 - d. Overload Protection - Automatic reset thermal protector in series with motor windings. Protector is embedded in direct contact within motor windings.
 - e. Insulation System - Class B (130 °C)
 - f. Winding Resistance at 25 °C - 11.1/52.9/4.1/2.8 ohms nominal
 - g. Endplates - Cast aluminum
 - h. Shell - Cold-rolled painted steel. Corrosion protection system shall comply with ASTM B117.
 - i. Motor shaft - Cold-rolled steel
 - j. Bearings - One provided in each end plate. Brass sleeve bearings. Permanent hydrodynamic lubrication. Bearing design shall comply with Rheem qualification tests CQP-12.4 and CQP-12.6.
 - k. Thru-bolts - Four 6.25 in. [15.8 cm] long 8-32 threaded bolts
3. **Application/Performance Characteristics:**
 - a. Mounting Methods - Thru-bolt or belly-band
 - b. Mounting Orientation - Shaft-up or Shaft-down
 - c. Rotation Direction - Reversible (controlled via reversing leads)
 - d. Nominal RPM - 1075/950/850
 - e. Number of speeds - Three
 - f. Torque-Speed Curve - Reference Fig. 2
4. **Electrical Ratings:**
 - a. Horsepower - 1/2 HP
 - b. Voltage - 208-240 VAC (Single Phase)
 - c. Frequency - 60Hz
 - d. Full Load Amps (FLA) - 3.2 A
 - e. Locked Rotor Amps (LRA) - 6.5 A
 - f. Required Run Capacitor - 5uF/370V
5. **Electrical Connections:**
 - a. Conductors - All conductors shall be 18 AWG stranded copper wire. Minimum length 25 in. [65.0 cm], except ground lead, minimum 12 in. [30.5 cm]. Length of reversing leads is not specified.
 - b. Insulation:
 - i. Type - UL Recognized Appliance Wiring Material, with minimum ratings of 600V, 105C, VW-1.
 - ii. Thickness - Min 3/64 in. [1.19 mm], except ground lead, min. 1/32 in. [0.79 mm]
 - iii. Color - See Fig. 3. Ground lead shall be green or green with a yellow stripe.
 - c. Terminations:
 - i. Capacitor Leads - 1/4 in. fully insulated quick connect terminals
 - ii. Ground Lead - Ring terminal
 - iii. Reversing Leads - Mating male/female fully insulated quick connect terminals

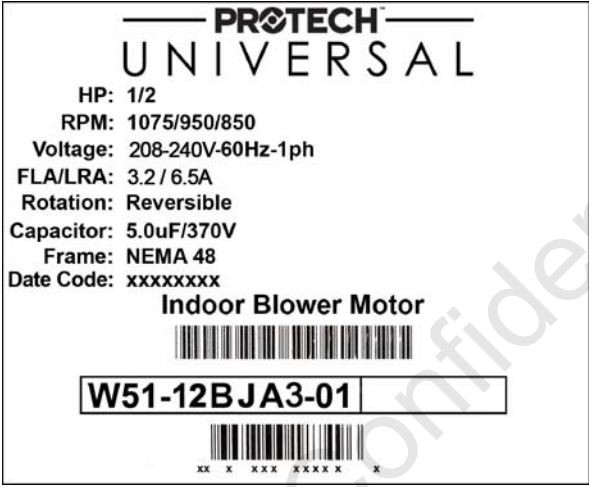
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 Parts Engineering	PROTECH UNIVERSAL 1/2 HP Direct Drive Indoor Blower Motor – 208-240 V	W51-12BJA3-01
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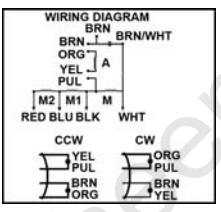
- 6. **Agency Certifications** - The motor shall comply with the requirements of UL 1004 and UL 2111, and be UL Recognized under the PRGY2 and XEWR2 product categories. UL File Number E256965.
- 7. **Marking/Labeling** - The labels shown in Fig. 5 and Fig. 6 shall be provided on the motor shell. Labels shall be provided on a UL Recognized Component Marking and Labeling System (PGDQ2 product category) suitable for outdoor use on a painted steel surface, with a rated temperature range of -35°F to 130°F [-37C to 55C]. A date or batch code shall be provided in the area marked "xxxxxxx". The vendor part number shall be provided in the area marked "Yxxxxxxx".
- 8. **Individual Packaging:**
 - a. Carton Material:
 - i. Outside linerboard to be white
 - ii. Double wall construction
 - iii. Complies with ECT (edge crush test) of at least 32 pounds/in.
 - iv. Minimum 1 ¼" glue tab; manufacturer's joint to be stitched or glued
 - v. Gross weight capacity should be at least 65 pounds
 - b. Each box shall be provided with internal packing or support adequate to prevent motor movement within box.
 - c. Label - The label shown in Fig. 4 shall be provided on the end face of each box. Bar Code shall be in 3 of 9 format. UPC number is 662766406610. A date or batch code shall be provided in the area marked "xxxxxxx".

Fig. 4



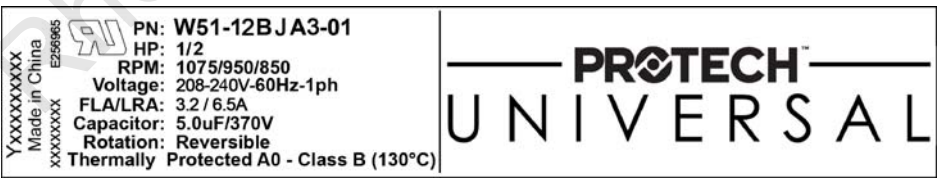
Label size:
3.50 in. x 4.25 in.

Fig. 5



Label size:
1.375 in. x 1.5 in.

Fig. 6



Label size:
1.375 in. x
7.00 in.

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