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› Square D 5KVA General Purpose Transformer User Manual

Square D 5S40F

Square D General Purpose Transformer User Manual

Model: 5S40F

INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the Square D General Purpose Transformer, Model 5S40F. This transformer is designed for various industrial and commercial applications, converting electrical voltage to suit specific equipment requirements.

The Square D 5S40F is a 5KVA general purpose transformer with a 480Vac input voltage and 120/240Vac output voltage. It features a robust NEMA 3R enclosure, suitable for both indoor and outdoor wall mounting, and is designed to operate at 60 Hz with a 115-degree Celsius temperature rise. Its powder-coated steel enclosure ensures durability and protection.

IMPORTANT SAFETY INFORMATION

DANGER: HAZARDOUS VOLTAGE. Will result in death or serious injury.

Always **TURN OFF POWER** before servicing or installing the transformer. Installation and maintenance should only be performed by qualified personnel in accordance with all local and national electrical codes.

- Ensure proper grounding of the transformer.
- Verify input and output voltages match the requirements of your application.
- Use wires insulated for a minimum of 90°C and sized on the basis of 75°C ampacity for field connections.
- Do not operate the transformer if it is damaged or has exposed wiring.
- Keep the enclosure doors closed and secured during operation.

SETUP AND INSTALLATION

The Square D 5S40F transformer is designed for wall mounting. Follow these steps for proper installation:

1. **Site Selection:** Choose a location that is dry, well-ventilated, and provides adequate clearance for maintenance and heat dissipation. Ensure the mounting surface can support the transformer's weight (approximately 122 lbs). The NEMA 3R enclosure allows for both indoor and outdoor installation.
2. **Mounting:** Securely mount the transformer to a sturdy wall using appropriate fasteners through the mounting holes provided on the enclosure. Ensure the transformer is level.
3. **Wiring (Primary Side - Input):**

- Before connecting any wires, ensure the main power supply is **OFF**.
- Connect the 480Vac input lines to the primary terminals (H1, H2, H3, H4) as per the wiring diagram on the transformer's nameplate. For 240V primary, connect H1-H4 and H2-H3. For 120V primary, connect H1-H3 and H2-H4.
- Ensure all connections are tight and secure.

4. **Wiring (Secondary Side - Output):**

- Connect the load to the secondary terminals (X1, X2, X3, X4). For 240V output, connect X1-X4. For 120V output, connect X1-X3 and X2-X4.
- Verify that the output voltage matches the requirements of the connected equipment.
- Ensure all connections are tight and secure.

5. **Grounding:** Properly ground the transformer enclosure and the secondary neutral (if applicable) according to local and national electrical codes.

6. **Inspection:** After wiring, visually inspect all connections to ensure they are correct and secure. Close and secure the enclosure cover.



Image: Square D General Purpose Transformer, Model 5S40F. The image displays the gray metal enclosure of the transformer with mounting brackets on the side. A white label on the front provides product details including the Square D logo, model number (1S43F, though product is 5S40F, this is likely a variant or part number on the label), KVA rating, frequency, insulation class, primary and secondary voltage connections, and safety warnings in English, Spanish, and French. The label also indicates "Rainproof Type 3R Enclosure".

OPERATING INSTRUCTIONS

Once the transformer is properly installed and all safety checks are complete, it is ready for operation.

1. **Power On:** Carefully restore power to the primary side of the transformer.
2. **Verification:** Use a multimeter to verify the correct output voltage at the secondary terminals before connecting

sensitive equipment.

3. **Normal Operation:** The transformer is designed for continuous operation within its specified ratings. Monitor for any unusual noises, excessive heat, or odors, which may indicate a problem.

MAINTENANCE

Regular maintenance helps ensure the longevity and reliable operation of your Square D transformer. Always **TURN OFF POWER** before performing any maintenance.

- **Periodic Inspection:** Annually inspect the transformer for any signs of physical damage, corrosion, or loose connections.
- **Cleaning:** Keep the transformer enclosure clean and free of dust, dirt, and debris. Use a dry, non-abrasive cloth. Do not use liquids or solvents.
- **Ventilation:** Ensure that ventilation openings (if any) are not obstructed to allow for proper heat dissipation.
- **Connection Checks:** Periodically check all electrical connections for tightness. Loose connections can cause overheating and potential failure.

TROUBLESHOOTING

If you encounter issues with your transformer, consider the following common troubleshooting steps. Always **TURN OFF POWER** before investigating any problems.

- **No Output Voltage:**
 - Check if the input power supply is active.
 - Verify all primary and secondary connections are secure.
 - Check for tripped circuit breakers or blown fuses in the input circuit.
- **Overheating:**
 - Ensure adequate ventilation around the transformer.
 - Verify the load connected to the transformer does not exceed its 5KVA rating.
 - Check for loose connections, which can generate heat.
- **Unusual Noise:**
 - A slight hum is normal. Excessive buzzing or rattling may indicate loose internal components or an overloaded condition.
 - Turn off power and inspect for any loose parts or debris inside the enclosure (if safe to do so).

If problems persist after performing these checks, contact a qualified electrician or Square D customer support.

SPECIFICATIONS

Feature	Detail
Brand	Square D
Model Number	5S40F

Feature	Detail
VA Rating	5 KVA
Input Voltage	480 Vac
Output Voltage	120/240 Vac
Frequency	60 Hz
Enclosure Type	Indoor/Outdoor (NEMA 3R)
Mounting Type	Wall Mount
Dimensions (L x W x H)	10 x 15 x 14 inches
Weight	122 Pounds
Temperature Rise	115 Degrees C
IP Rating	14
Enclosure Material	Steel (Powder Coated)
Standards	NEMA ST-20, UL Listed, CSA Certified, cULus Label
Country of Manufacture	Mexico

WARRANTY INFORMATION

The Square D General Purpose Transformer, Model 5S40F, comes with a manufacturer's warranty. Please refer to the official Square D warranty documentation for complete terms and conditions.

- **Warranty Length:** 1 Year

For warranty claims or detailed information, please contact Square D customer support.

CUSTOMER SUPPORT

For technical assistance, product inquiries, or support, please contact Square D directly. Visit their official website for the most up-to-date contact information, including phone numbers and online support resources.

Manufacturer: **Square D**

Always provide your model number (5S40F) and serial number (if applicable) when contacting support.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question

and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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