

CONTROL INSTRUCTIONS

Check list for controller installation, startup and operation

CAUTION

Before installing in a nuclear application, determine that the product is intended for such use.

Install in conformance with NEC and any applicable local electrical codes. Branch circuit protection must be provided.

This list is a general guide for basic areas only. It is intended that this equipment be installed and maintained by competent and skilled workers.

1. Locate and read instructions, remove any packing in controller (each device). Go over wiring diagrams and thoroughly understand before proceeding.
2. Examine each device on panel for shipping damage. If any is noted, immediately notify the carrier for claim. Do not apply power to any damaged devices.
3. Cut any necessary openings to install line, load and control leads. Care must be exercised to keep any chips or pieces of metal out of all devices, bus and terminals. One method is to carefully cover the devices with plastic while working on enclosure.
4. Install conduits, raceways and necessary grounding means.
5. Install field wiring in strict accordance with the wiring diagram supplied with starter — do not energize. Use care in stripping wire. Do not allow pieces of insulation to fall inside the enclosure. These can cause jamming or binding of operating devices. Any trimmings from the conductors must be removed from enclosure as they may fall across live parts and cause a fault or malfunction.
6. See that all field wiring is dressed and secured to withstand fault currents. Secure cables well away from any devices or live parts on panel, and in particular, see that they are well away from any moving parts or resistors; this includes

door latching means when the door is in the closed position. A cable that touches a moving part can prevent that device from operating properly and can cause malfunction of the equipment, resulting in damage and hazard. Cables should never touch or be installed close to resistors as the heat may damage the insulation.

7. Be certain all wiring connections are tight.* Also inspect factory wiring at this time. These terminations occasionally loosen during severe shipment vibration and require retightening.
8. See that each device is free to operate and that no parts are sticking or binding — this may indicate all packing was not removed or internal wiring has shifted during shipment. Check questionable items against instruction for the particular device.
9. If thermal overload relays are used, install correct overload heaters for the specific motor being controlled.
10. If magnetic overloads are used, fill dashpots of relays with fluid supplied for this purpose, being certain that dashpot and fluid are clean and free of foreign materials. DO NOT interchange parts between overloads as each one is calibrated as a unit.
11. Give installation a final check for conformance with codes, branch circuit protection and remove any foreign material from enclosure. Also check to see that no tools have been left in panel during installation. Review diagrams for intended operation and function.
12. Before energizing, make final check to see that all power lines and terminals are free of metal or pieces of wire that could cause shorts to other parts or ground and additionally that wiring and equipment on load side of starter are free from grounds and shorts. An ohmmeter or other means, as appropriate, is recommended.

13. Follow any additional startup instructions supplied with associated equipment before operating.
14. Close and latch door before energizing.

* See item D under operation.

DANGER

Hazard of electrical shock or burn
Disconnect all power before servicing. Read instructions for this equipment.

Operation

A. When energizing, be certain all equipment is ready for power and that all personnel are clear. Always observe all safety rules when operating this equipment.

WARNING

The opening of the branch circuit protective device may be an indication that a fault has been interrupted. Following this or any other evidence of fault or unintended overcurrent condition, the following must be done before re-energization to provide continued protection against fire or shock hazard.

1. Examine all current-carrying parts and other components of the controller and replace if damaged.
 2. Examine all contacts to make certain they are not welded.
 3. If burn-out of the current element of an overload relay occurs, the complete overload relay must be replaced. Separate or isolated control circuits must be examined in the same manner.
- C. For detailed information on component maintenance or replacement, see instruction packet furnished with this device.
- D. Terminal tightness should be checked periodically as part of preventive maintenance. Many users with average conditions find an annual check is satisfactory. Any joint showing evidence of heating should immediately be checked for tightness.