

# Nuclear Supplier of Specialty Struthers-Dunn Relay Products

AREVA is bringing highly reliable and low maintenance Struthers-Dunn specialty relays to the nuclear industry, including relays in the 219, 236/237 and 255 Series produced for unique nuclear power plant requirements.

AREVA provides safety-related relays from commercial OEM Struthers-Dunn under our 10CFR50 Appendix B nuclear Quality Assurance Program (QAP). AREVA can offer various models, contact configurations, and coil options via our best-in-class commercial grade dedication program and qualification test program in accordance with IEEE 323 and IEEE 344 standards.

The qualification test program envelops known plant applications of the model 219, 236/237 and 255 Series relays. Seismic testing applied conservative required response spectra (RRS) that integrates and envelops the RRS of prior qualification tests as well as the current (or revised) seismic requirements of many nuclear power plants.

These special nuclear-grade relays are identified by short-form model numbers that end in a three-digit code (e.g., 219AAX103). Some models have an "NE" appended to after the special model code, (e.g., 219BBX221NE.)



236/237 Series (Time Delay Relays)



219 Series (General Purpose)

## Why AREVA

If you have a special application or need to replace an existing alternative relay, AREVA can work closely with Struthers-Dunn and the nuclear user to develop a solution that meets your unique situation. This solution may include modified or custom designs to suit, which will be properly evaluated for installation in a nuclear environment.

You can be assured that any Struthers-Dunn nuclear qualified relays supplied by AREVA will possess complete component traceability and individual inspection and test data. Specific customer testing parameters, criteria or documentation can also be supported upon request.

## Features and Benefits

- All electrical contacts, standard and bifurcated, are silver alloy with diffused gold for increased shelf life and lower contact resistance that provides protection of the base silver alloy material at lower level switching.
  - Standard 10Amp Contacts size is .187dia. — best for use over 50mA.
  - Bifurcated 5Amp Contacts size is .125 dia. — best for use on currents below 50 mA.
  - The wiping action of the contact blades and the higher contact pressures used assure that oxidation, which is common on ordinary contacts over a period of time, is mechanically cleaned with each activation.
  - Versatile contact configurations available up to 4-pole double throw or 6-pole single throw.
- Coil construction is per Struthers-Dunn specification using 155°C Class F insulated copper wire and encapsulated molded with Fiberite E-8354 Molding compound.
  - Lead wires are UL 94V-O rated.
- Rated for continuous duty cycle.
- Relay able to function in severe ambient temperatures.
- Higher and longer reliability for critical nuclear applications and reduced maintenance.
- Blow out magnets can be added to increase DC switching capability.
- LED indication available as an option.
- 236 series on-delay and 237 series off-delay with interval timing is available.
- 236/237 time delay relay ranges are adjustable over a 1:100 range.
- 236/237 time delay relays have standard locking shaft potentiometers and integral hold down clips.



255 Series (Latching Relays)

- The 255 latching series can remain in state until released electrically or by using a reset button.
- If needed, both coils of the 255 latching series can be energized simultaneously because the operate coil is dominant. Interrupting the voltage to the operate coil will unlatch the relay.

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