The new “R2” operating mechanism for S&C Scada-Mate Switching Systems brings you manual, non-electrical closing capability—and much more.

Users have frequently requested manual, non-electrical closing capability for S&C Scada-Mate Switching Systems. In response, S&C has developed the improved “R2” mechanism. The new design offers manual closing capability along with a number of other benefits.

The efficient “R2” design uses the same stored-energy quick-make quick-break mechanism furnished with S&C Mini-Rupter® Switches. This time-proven device has shown that it can endure one of the harshest of utility environments: pad-mounted gear. And the gear-motor is similar to the one provided in S&C Remote Supervisory Pad-Mounted Gear. This motor too has proven itself through years of reliable operation.

### Key Features and Benefits of “R2” Mechanism

- Manual, non-electrical opening and closing capability.
- Fully retrofittable to most existing Scada-Mate Switches.
- Robust interlock blocks operation of visible air-gap disconnect until interrupters are opened manually via the pull-ring, or electrically via the local push button or SCADA.
- Improved manufacturability, for enhanced reliability.
- Advanced composite-material mechanism cover provides added strength.
Simple Hookstick Operation
A standard or extendible hookstick is used to open and close the interrupters in the event electrical power is lost. Approximately seven to nine pulls on the mechanism pull-ring will effect a change of state if the spring is fully discharged. If the spring is partially charged, just a single pull will change interrupter position.

Retrofittability
With the exception of vertical mounting configuration switches and early-production 14.4-kV “R0” switches, the “R2” mechanism is fully retrofittable to all existing Scada-Mate installations. The retrofit kit includes an interlock to prevent opening of the visible air-gap disconnect when the interrupters are closed.

Operational Features of the “R2” Design
Unlike previous-design Scada-Mate Switch mechanisms—in which the stored-energy spring is fully charged—the “R2” mechanism uses a unique ratchet arrangement. This arrangement allows the gear-motor to partially wind the spring just short of its release point and hold it there reliably. Upon discharge of the spring—and interrupter operation—the motor immediately winds the spring to its partially charged state, in preparation for the next operation.

As discussed above, the “R2” design includes an interlock which prevents opening of the visible air-gap disconnect until the interrupters are opened manually via the pull-ring, or electrically via the local push button or SCADA. And when the visible air-gap disconnect is not fully closed and latched, interlocks disable both electrical and mechanical operation of the mechanism to prevent damage to the switch. Additionally, the remote disconnect-close-latch indicator, previously the “-D2” option, is now a standard part of the switch.

Advanced Materials
S&C has taken advantage of the latest composite-material technology for the “R2” mechanism cover. It’s made of Sheet Molding Compound (SMC)—a compound formulated to withstand the ultraviolet light that can damage many plastic materials. This composite provides substantial strength across the entire operating temperature range of the Scada-Mate Switch. There’s no need to worry about the minor bumps and bangs the switch will endure during normal installation and use.

Inside the cover, S&C has chosen materials and components that have a proven track record of holding up against the moisture, heat and cold in which the Scada-Mate Switch must operate reliably, year after year.