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# DSR

## User Manual

**General Description:** The DSR or “Distributed Series Reactance” is a critical part of the Smart Wire Grid system to assist utilities and other industrial customers with retrofitting existing power line infrastructure and allow power flow control for the grid. The DSR is the workhorse of the system which is mounted on the power line and controlled through the RF link to enable and disable the control system of the DSR and provide telemetry back to the base station.

**Installation:** The DSR is typically installed on a high-tension power line by first shutting down the power line, attaching the DSR, and then returning power to the line. The DSR mounts to the power line by placing the bottom housing underneath the line then capturing the power line with the top housing, then bolting the two housings together to clamp onto the power line. Once bolted together, the DSR is ready for use.

**Operation:** The DSR turns on automatically when the power line is powered on. Once powered on, the DSR communicates to a base station using the RF link. The RF link is then used to turn the control system of the DSR on and off to allow for smart power flow control for the grid. In addition to enabling and disabling the features of the DSR, the radio link communicates the current status of the DSR to the base station.

**Lifespan & Service:** The DSR unit is designed to withstand a 20 year installation life. In the event of malfunction, the DSR may remain on the power line until the next service interval. DSR units may be serviced by removing them from the power line and replacing the unit.

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***Power flow control for the Grid***