

Electric Power Inc.

THE SHIELDING SPECIALISTS



SDS-100

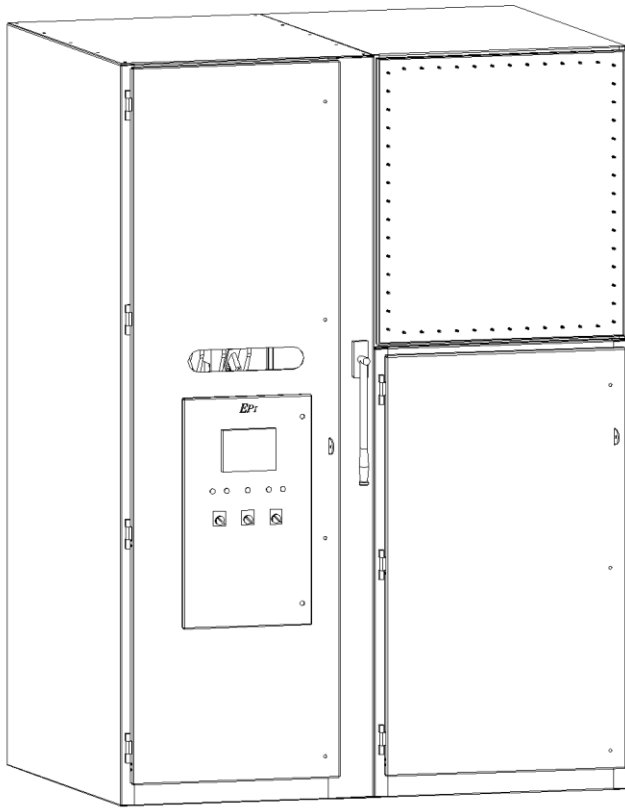
SHIELDED DISCONNECT SWITCH

Electric Power Inc.'s (EPI) Shielded Disconnect Switch (SDS-100) is a radio frequency (RF) isolating disconnect switch that provides an easy-to-use, effective and fast-operating means to provide High Altitude Electromagnetic Pulse (HEMP) protection on commercial power feeds ranging from 4160 V (5 kV class) to 17.5 kV (17.5 kV class). This device meets both the shielding effectiveness (SE) and pulsed current injection (PCI) performance requirements given in MIL-STD-188-125-1, and also provides a disconnect mechanism which is operated at the push of a button which thus meets strict mission timelines.

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EPI SDS contains two sections: a load break disconnect which is a traditional switch or breaker used to interrupt the designed load and open the circuit; and a shield disconnecting bus that is driven by an actuator into and out of a waveguide beyond cutoff (WBC) depending on the need for shielded or un-shielded power. During normal operation unshielded power is fed from a utility source to the SDS. Should it be deemed that shielded power is needed, the SDS is triggered either remotely or locally, and shielded power from an on-site source powers the site. Within 23 seconds the SDS is in fully open state and completely prevents HEMP-induced energy from entering the protected facility.

The EPI SDS can be operated locally using control switches mounted on the front of the switch, or remotely through the programable controller (SEL2411). The SDS is controlled electrically through the SEL2411 installed on all SDS's. Remote monitoring is available by communications (Fiber or Ethernet), or by physical I/O provided on a dedicated terminal block. All SDS's come with a manual means to open the load break switch via an operation handle on the 1200/600A, and a mechanical push button on the 1600/2000A models. The shield disconnecting switch can be manually operated by unbolting the motor on the actuator and using the provided manual operator in a drill to lower or raise the disconnecting rods.

SPECIFICATIONS

SDS-100

The EPI SDS comes in 3 or 4 pole configurations.

System Operating Voltage	5kV – 17.5kV
Maximum Amperage Rating	600A, 1200A, 1600A, 2000A
Control Voltage Required	90-265VAC or 110-350VDC
Communications Available	Single or Dual Ethernet, Fiber-Optic Serial, EIA-232, EIA-485 Modbus® RTU, Modbus TCP, DNP3, DNP3 LAN/WAN, MIRRORED BITS®, SEL ASCII and Binary Communications, and IEC 61850
Environmental Condition Limits	-22°F and +104°F Relative Humidity 10%-95%
Specifications	Electrical: IEEE C37.20.3-2001, C37.20.4-2013 Seismic: UFC 3-310-04, HEMP: MIL-STD-188-125