

5971-160 Current Reversal Switch



OVERVIEW

If field reversal is required when using a unipolar Power Supply, we offer the 5971-160 Current Reversal Switch. This Switch provides a safe way of reversing the magnets current under either manual or computer control. The built-in USB Interface provides control for the Power Supply current, and read back of the Power Supply current and voltage, and magnet water flow and coil temperature interlock status. It will also provide field read back from a Senis Field Transducer if installed.

A complete system typically consists of an appropriate SGA series DC power supply, the GMW 5971-160 Reversal Switch, a Senis magnetic field transducer, an electromagnet and an appropriate computer and software or an external analog programming signal.

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5971-160 General Specifications

Electrical

Power Input (From DC Supply)	160A maximum
Recommended DC Power Supplies	Sorensen DLM40-75E Sorensen SGA 60/83 60V, 83A Sorensen SGA 100/150 100V, 150A Sorensen SGA 160/31 160V, 31A Sorensen SGA 160/62 160V, 62A Sorensen SGA 160/156 160V, 156A Sorensen SGA 200/75 200V, 75A
Power Input (Aux Power Supply)	115-220VAC, 50/60Hz, 2A
Power Output	200V, 160A maximum
Switch Voltage Drop (at 20°C)	< 440mV at 150A
Switch Resistance at 150A (at 20°C)	< 3mΩ

Control Modes

Manual Control	Manual control of the DC current via the DC Power Supply's front panel controls Manual control of the current polarity via the Current Reversal Switch's front panel controls
Computer Control	National Instruments Multifunction DAQ, Model USB-6351 Current Control Resolution: 16 bits Current & Voltage Monitor Resolution: 16 bits Digital read back of amplifier and magnet interlock status Magnetic field read back resolution: 16 bits

Mechanical

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Form Factor	3U rack mount fully enclosed chassis
Overall Dimensions	482mm (19")W x 132.0mm (5.20")H x 586.1mm (23.0")D
Weight	15.75 kg (35lbs)

5971-160 Current Reversal Switch & SGA Power Supply in Optima Rack

Overall Dimensions	560.5 (22") W x 1,058 (41.6") H x 823 (32.4") D
Weight (with Sorensen SGA 60/83)	105.75kg (235lbs)
Weight (with Sorensen SGA 100/150)	115kg (250lbs)