Model SCP2000

- Configurable Switch Control Platform
- DC – 40 GHz
- 25 – 1200 W

Features:

- Customizable to meet your needs
- Global support and service

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The SCP2000 switch control platform is designed for a multitude of switching applications in RF systems. The main chassis (SC2000) is equipped with five (5), rear-facing, user-configurable slots. Individual slots or groups of slots can be populated with a variety of SCM series RF switch modules.

The Model SCP2000 M1 – M6 is preconfigured for a variety of EMC immunity test systems.

The switch controller systems can be controlled either manually, using the provided color LCD touch display, or remotely, using any of the four provided remote ports (USB, GPIB, RS-232, and Ethernet).

System interlock capability is provided on the by sensing switch closures on three independent inputs. Three separate user definable configurations are provided for times when interlock switch closures are not sensed.

A user defined "safe" configuration is also provided for use during signal re-routing to assure cold switching of any attached amplifiers and loads. In addition to the three interlock configurations and single "safe" configuration, eight (8) user configurations can be saved and recalled for ease of use in complex systems.

A positive 24 VDC signal along with four (4) open drain outputs, and four (4) digital outputs (TTL) are supplied for applications such as external switch/relay control.

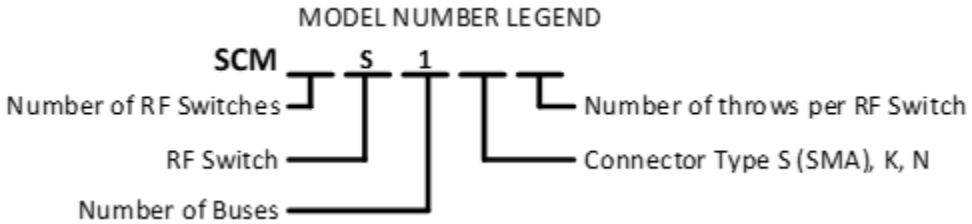
The export classification for this equipment is EAR99.

Model Configurations

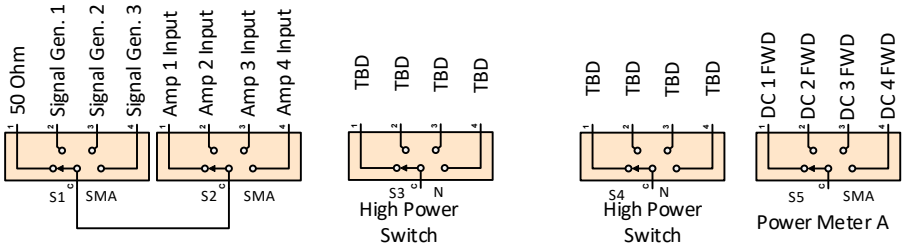
Model	Features
SCP2000	Controller designed for multi-amplifier/multi-load application where reverse power measurement is not necessary.
SCP2000M1	Controller designed for multi-amplifier/multi-load applications with forward and reverse power measurement and emissions feedback.
SCP2000M2	Controller accommodates forward power measurement and higher power/higher frequency amplifier and load combinations where switching and cable losses need to be minimized.
SCP2000M3	Controller accommodates forward and reverse power measurement and higher power/higher frequency amplifier and load combinations where switching and cable losses need to be minimized.
SCP2000M4	Controller accommodates forward and reverse power measurement and higher power/higher frequency (up to 40 GHz) amplifier and load combinations where switching and cable losses need to be minimized.
SCP2000M5	Controller accommodates forward and reverse power measurement, higher power/higher frequency amplifier and load combinations where switching and cable losses need to be minimized, and emissions feedback.
SCP2000M6	Same as SCP2000M3 but with six RF paths instead of four.

Model/Module Configurations

SLOT NUMBER	1		2	3	4	5	
	SWITCHES INSTALLED						
MODEL NUMBER	SW1	SW2	SW3	SW7	SW4	SW5	SW6
SCP2000	SCM2S1S4		SCM1S1N4	EMPTY	SCM1S1N4	SCM1S1S4	EMPTY
SCP2000M1	SCM2S1S4		SCM1S1N4	SCM1S1N2	SCM1S1N4	SCM2S1S4	
SCP2000M2	SCM2S1S4		EMPTY	EMPTY	EMPTY	SCM1S1S4	EMPTY
SCP2000M3	SCM2S1S4		EMPTY	EMPTY	EMPTY	SCM2S1S4	
SCP2000M4	SCM2S1K4		EMPTY	EMPTY	EMPTY	SCM2S1K4	
SCP2000M5	SCM2S1S4		EMPTY	SCM1S1N2	EMPTY	SCM2S1S4	
SCP2000M6	SCM2S1S6		EMPTY	EMPTY	EMPTY	SCM2S1S6	

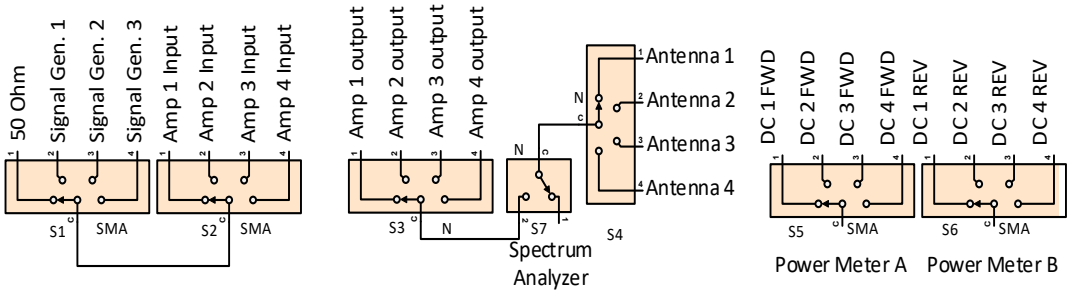


SCP2000 Typical Configuration



SCP2000 is generalized switch configuration. Switches 1 and 2 are always defaulted to be an RF drive safety interrupt. Switches 3 and 4 are high power switches available for user configuration. Switch 5 is typically used for forward power measurements.

SCP2000M1 Typical Configuration



SCP2000M1 is a typical configuration for EMC radiated and emissions test systems. Switches 1 and 2 are always defaulted to be an RF drive safety interrupt. Switches 3, 4 are high power switches able to apply rated power to antenna. Switch 7 toggles antennas between radiated amplifiers and a spectrum analyzer for emissions. Switches 5 and 6 is typically used for forward/reverse power measurements.

SCP2000M2 Typical Configuration

SCP2000M2 is a simplified configuration for EMC radiated test systems. Switches 1 and 2 are always defaulted to be an RF drive safety interrupt. Switch 5 is typically used for forward power measurements.

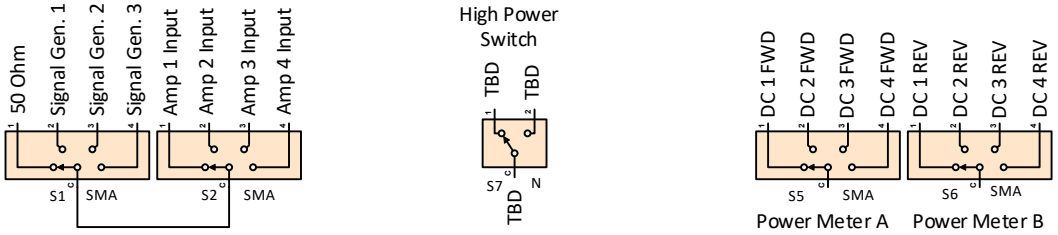
SCP2000M3 Typical Configuration

SCP2000M3 is a configured for EMC radiated test systems. Switches 1 and 2 are always defaulted to be an RF drive safety interrupt Switches 5 and 6 are typically used for forward/reverse power measurements.

SCP2000M4 Typical Configuration

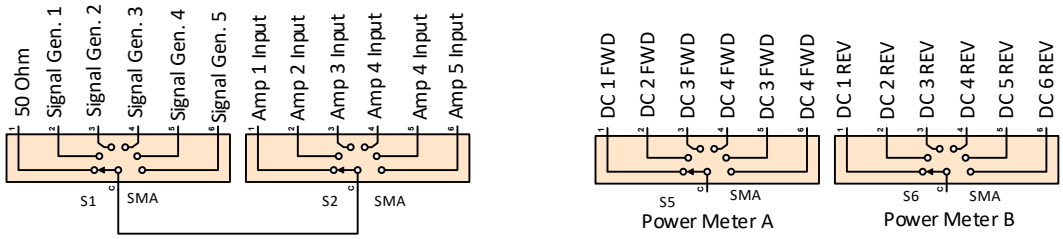
SCP2000M4 is a configured for high frequency (up to 40 GHz) EMC radiated test systems and uses K connectors. Switches 1 and 2 are always defaulted to be an RF drive safety interrupt Switches 5 and 6 are used for forward/reverse power measurements.

SCP2000M5 Typical Configuration



SCP2000M5 is a typical configuration for EMC test system. Switches 1 and 2 are always defaulted to be an RF drive safety interrupt. Switch 7 is a high power switch. It can be configured to toggle from a single amplifier to different antennas or toggle between radiated and emissions configuration. Switches 5 and 6 are used for forward/reverse power measurements.

SCP2000M6 Typical Configuration



Same as SCP2000M3 but with six RF paths instead of four.

SCP2000 Controller Specifications

Parameter			Unit
Rated Voltage	100-240		VAC
Rated Frequency	50-60		Hz
Rated Power	100		VA max.
Dimensions H x W x D	43.26 x 13.34 x 44.77		cm
	19 x 5.25 x 17.625		in
Weight	6.8		kg
	15		lbs
Single Slot Dimensions H x W x D	3.68 x 8.84 x 30.23		cm
	1.45 x 3.48 x 11.90		in
Double Slot Dimensions H x W x D	7.42 x 8.84 x 30.23		cm
	2.92 x 3.48 x 11.90		in
Interfaces	**Function**	**Classification**	**Qty**
USB	for remote control	Test and Measurement Class; Full Speed (12 Mbps); Type-B Connector	1
GPIB (IEEE-488)	for remote control	24-pin, Female Connector	1
RS-232	for remote control	9-pin, Subminiature D, Female Connector	1
Ethernet	for remote control	TCP/IP, 10 Mbps, RJ-45 Connector	1
Fiber-Optic Serial	connection of base unit with extension units	Separate Tx & Rx, SMA Connectors, 500 kbps	1
Interlock Connector 15 pin D type	safety interlocks	Active low, Internal 1k pull-up to +5 VDC	3
	open drain outputs	800 mA current sinking each*	4
	digital outputs	TTL	4
	voltage supply (use with open drain outputs)	+24 VDC, 1.5 A max (internally fused)	1
	ground return (use with open drain outputs)		2
Front Panel	480 x 272 pixel, resistive touch, LED backlight		1
Export Classification	EAR99		

***Open drains 3 and 4 have internal 10K Ohm pull-ups to 3.3V.**

RF Switch Nominal Power Handling and Maximum Insertion Loss

Frequency Range	Notes	K		SMA		N	
DC – 0.1 GHz	VSWR 1.1:1	400 W	0.20 dB	450 W	0.30 dB	1200 W	0.25 dB
DC – 0.5 GHz		200 W	0.20 dB	275 W	0.30 dB	600 W	0.25 dB
0.5 – 1 GHz		150 W	0.20 dB	200 W	0.30 dB	450 W	0.25 dB
1 GHz – 4 GHz		75 W	0.20 dB	100 W	0.30 dB	250 W	0.25 dB
4 GHz – 8 GHz		55 W	0.40 dB	75 W	0.35 dB	175 W	0.40 dB
8 GHz – 12 GHz		45 W	0.40 dB	55 W	0.40 dB	150 W	0.60 dB
12 GHz – 18 GHz		35 W	0.50 dB	50 W	0.50 dB	-	-
18 GHz – 40 GHz		25 W	1.00 dB	-	-	-	-

RF Switch Power Derating

VSWR	% of Power Handling
1.5:1	94
2.0:1	88
2.5:1	83
3.0:1	78
3.5:1	73
4.0:1	70