

## SC1000

### RF System Test Controller

- M1-M5
- DC-40GHz

## Features

The Model SC1000 is an RF test system controller designed to facilitate the concurrent use of up to three signal generators, four power amplifiers, and four different RF loads for broadband RF testing. This device allows multiple pieces of field generation equipment to be integrated into one test set-up, alleviating the need to constantly change cables due to the frequency limitations of the individual pieces.



The export classification for this equipment is EAR99. These commodities, technology or

software are controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

The Model SC1000 offers IEEE-488, RS-232, and manual control of the RF signal routing, and provides front panel indication via a 4 line vacuum fluorescent display. System interlock capability is also provided by sensing a switch closure. If the closure is not detected, the input signal is interrupted. The input signal is also interrupted during signal re-routing in order to assure cold switching of amplifiers and loads.

Additionally, a switchable positive 12VDC signal and several open collector outputs are supplied. These signals can be used to provide external switch capability.

## Specifications

### Electrical:

**Input Power:** 90-260 VAC, 50-60 Hz

**Voltage Outputs:** +12 VDC (switchable), 1A  
+24 VDC (unswitched) 500mA

**Open Collector Outputs:** 4, 800mA current sinking each

**RF Connections:** Rear Panel bulkhead (See Model Configurations)

### RF Power Handling Capability

Connector Type	K	SMA	N
0-0.1 GHz	400W	450W	1200W
0.1-0.5 GHz	200W	275W	600W
0.5-1 GHz	150W	200W	450W
1-4 GHz	75W	100W	250W
4-8 GHz	55W	75W	175W
8-10 GHz	45W	55W	150W
10-18GHz	35W	50W	----
18-40GHz	25W	----	----

*NOTE: For VSWR above 1.1:1, Derate power according to the following*

VSWR	Derating Factor
1.5:1	.94
2.0:1	.88
2.5:1	.83
3.0:1	.78
3.5:1	.73
4.0:1	.70

**Remote Interfaces:** IEEE-488, RS-232

**Weight:** 6.8 kg (15.0 lb)

**Size (W x H x D):** 48.26 x 13.34 x 44.77 cm (19.0 x 5.25 x 17.625 in)

**Export Classification:** EAR99

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 RF System Test  
 Controller

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MODEL NUMBER	SWITCHES INSTALLED						
	1	2	3	4	5	6	7
SC1000	SMA	SMA	N	N	SMA		
SC1000M1	SMA	SMA	N	N	SMA	SMA	N
SC1000M2	SMA	SMA			SMA		
SC1000M3	SMA	SMA			SMA	SMA	
SC1000M4	K	K			K	K	
SC1000M5	SMA	SMA			SMA	SMA	N

SC1000	Controller designed for multi-amplifier/multi-load application where reverse power measurement is not necessary.
SC1000M1	Controller designed for multi-amplifier/multi-load applications with forward and reverse power measurement and emissions feedback.
SC1000M2	Controller accommodates forward power measurement and higher power/higher frequency amplifier and load combinations where switching and cable losses need to be minimized.
SC1000M3	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.
SC1000M4	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.
SC1000M5	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.

Block Diagram

