

The Maximum Flexibility in EMC Test Systems

Flexible · Versatile · Extensible

EMC test systems are complex installations with many test and measurement instruments connected. In order to enable full automated testing, these devices and measuring instruments as well as the connections made between amplifiers, power meters, antennae and EMI receivers should be controlled in an automated manner. To enable switching these signals DARE!! Instruments developed the RadiSwitch plug-in cards that can be used with the RadiCentre modular multifunctional EMC test system.

Flexible

The RadiSwitch RF coaxial relay plug-in cards are able to switch RF signals from DC until 50 GHz and with RF power up to 700 Watts directly, or any high RF power indirect using externally controlled switches. RadiSwitch plug-in cards are available in several versions, with one, two or four SPDT coaxial relays or SP6T coaxial relays. Any combination of plug-in cards is allowed, making the system the most flexible switching systems in the world!

Extensible

RadiSwitch plug-in cards are designed to fit in the RadiCentre modular EMC test systems. This system has a backplane that will fit one, two or seven plug-in cards, bringing the maximum capacity of the system to 28 relays in the RadiCentre 7-slot system. Of course it is possible to build even larger switching systems by combining any number of RadiCentre systems.

Easy to use

The system is "Plug and Play", which means that every board is automatically recognised, initialised and ready for use. The user can configure and control the functionality of every individual plug-in card by means of external software or using the RadiCentre colour TFT touch screen display.

Hardware interlock

The first relay of the RadiSwitch plug-in card can either be used as a standard relay or as a safety interlock relay. When

using this relay as a safety interlock, this enables the function to switch OFF the RF input to the amplifier, in order to prevent personnel to be subjected to high radiated RF fields. The RF interlock input can be connected to a switch on the entrance door of the test chamber.

External switch control

High power RF amplifiers are normally placed in separate test rooms with appropriate cooling facilities. To control these amplifiers the RSW2002E RadiSwitch plug-in card can be connected to an external high power switch system which has an internal power supply to power 12VDC/24VDC/28VDC external (high power) relays.

Software support

The RadiSwitch plug-in cards are software controllable. Besides the RadiMation integral EMC measurement software the system can be controlled by any EMC measurement package using control commands.





Performance	
Frequency Band	DC - 18 GHz / 50 GHz

Versions	
RSW1022S	2 coaxial switches SPDT, SMA 18GHz, 240 W (1 slot)
RSW1024S	4 coaxial switches SPDT, SMA 18GHz, 240 W (1 slot)
RSW1061S	1 coaxial switch SP6T, SMA 18GHz, 240 W (2 slots)
RSW1062S	2 coaxial switches SP6T, SMA 18GHz, 240 W (2 slots)
RSW1022K	2 coaxial switches SPDT, 2.92mm (k) 40 GHz, 80 W (1 slot)
RSW1024K	4 coaxial switches SPDT, 2.92mm (k) 40 GHz, 80 W (1 slot)
RSW1061K	1 coaxial switch SP6T, 2.92mm (k) 40 GHz, 40 W (2 slots)
RSW1062K	2 coaxial switches SP6T, 2.92mm (k) 40 GHz, 40 W (2 slots)
RSW1021N	1 coaxial switch SPDT, N-type 12.4 GHz, 700 W (1 slot)
RSW1021B	1 coaxial switch SPDT, BNC-type 3 GHz, 400 W (1 slot)
RSW2002E	2 coaxial switches SP6T, external relay driver card 12/24/28VDC
RSW1022Q	2 Coaxial switches SPDT, 2.4mm (Q) 50GHz, 80W (1 slot)
RSW1024Q	4 Coaxial switches SPDT, 2.4mm (Q) 50GHz, 80W (1 slot)
RSW1061Q	1 coaxial switch SP6T, 2.4mm (Q) 50GHz 40W (2 slots)
RSW1062Q	2 coaxial switch SP6T, 2.4mm (Q) 50GHz 40W (2 slots)

Environmental conditions	
Temperature range	0 °C - 40 °C
Relative humidity	10% - 90% (non-condensing)

Life time relays	
SMA 18 GHz, SPDT	10.000.000 cycles
SMA 18 GHz, SP6T	5.000.000 cycles
K 2.92mm 40 GHz, SPDT	10.000.000 cycles
K 2.92mm 40 GHz, SP6T	2.000.000 cycles
Q 2.44mm 50GHz, SPDT	2.000.000 cycles
Q 2.44mm 50GHz, SP6T	2.000.000 cycles
N-type 12.4 GHz, SPDT	1.000.000 cycles
BNC 3 GHz, SPDT	1.000.000 cycles

Connectors	
RF connectors	SMA, N-type, BNC, k-type or Q-type

Safety	
Interlock	Each card can be used with the Relay interlock

Warranty	
Warranty	3 years (misuse excluded)

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