



RFB 6000A RF SWITCH NETWORK

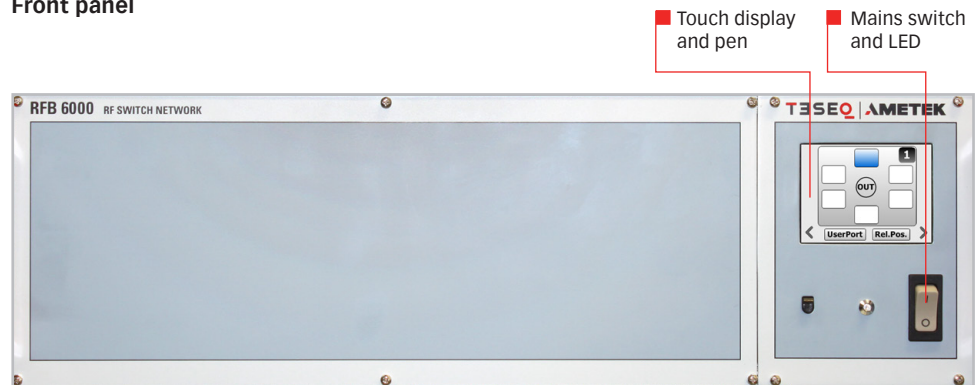


RF Switch network example with switches on the back

- Freely configurable main frame for up to 8 RF switches
- Optical remote control for system integration
- Touch panel for manual operation and system integration
- Connectors for up to 8 power meters and TTL control port e.g. for power amplifiers
- High quality switches

The RF switch network can be configured to switch RF signals in a wide range of automatic test systems. Various switch configurations are available, connecting one input to either two or six outputs. The 3HU main frame consists of a power supply and remote interface and can accept any combination of plug-in modules up to the maximum dimension of the main frame. In addition up to 8 power meters can be connected to measure the forward power close to the antenna, e.g. in a separate amplifier room. A control signal port (User port) allows switching of amplifiers and other functions. Each switch as well as the additional functions can be individually controlled through the front panel touch screen, e.g. for installation and maintenance purpose. An USB to serial / optical converter with 20 m optical cable allows always a safe and secure remote control of the device, also in a noisy and electromagnetically disturbed environment. All RF switches are high quality with an operating lifetime of at least one million operations. While able to pass high power levels, they are designed to switch only during absence of RF power.

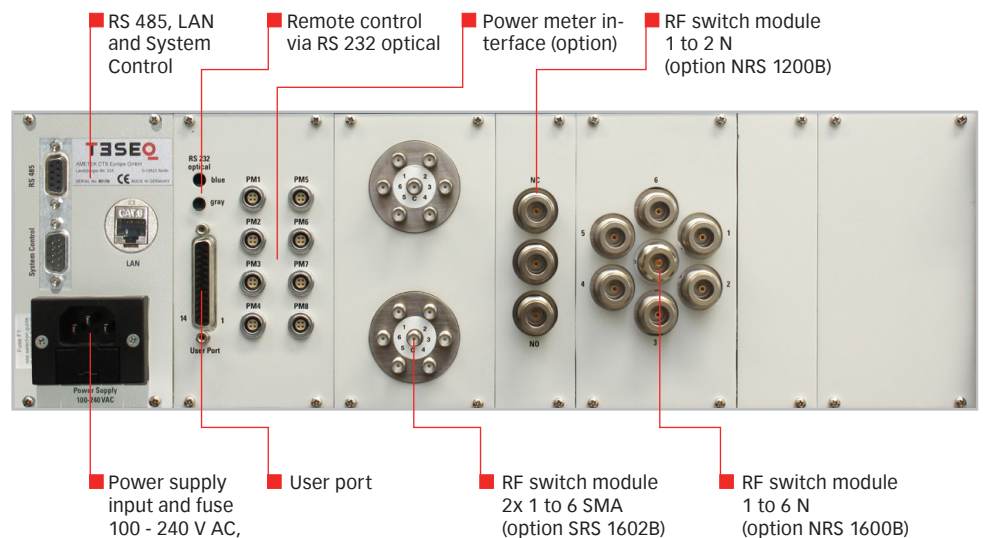
Front panel








Back panel



View to the back panel, example with power meter interface RFI 6008, RF switch SRS 16002B: 2x 1 to 6 SMA type, RF switch NRS 1200B: 1 to 2 N type, RF switch SRS 1600B: 1 to 6 N type

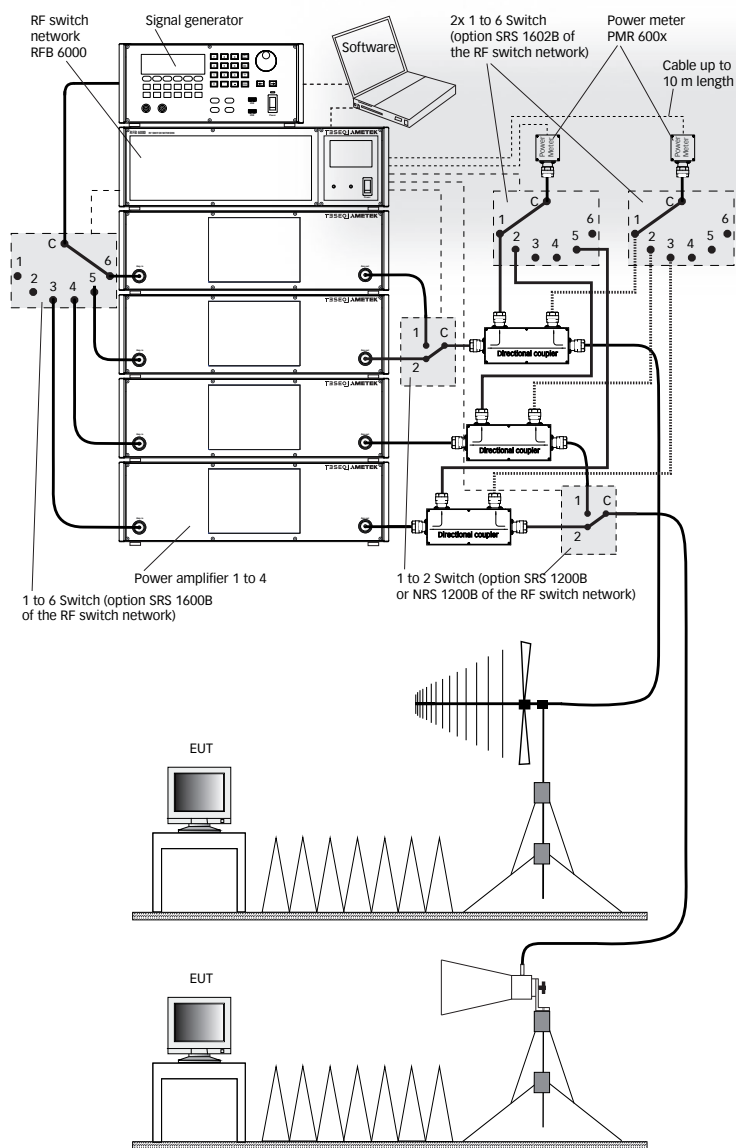


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Switch type	Drawing	Connectors	Back panel	
			Switch type	Max. possible switches of this type at the back
1 to 2		N type	NRS 1200B	8
1 to 2		SMA type	SRS 1200B	8
1 to 6		N type	NRS 1600B	4
1 to 6		SMA type	SRS 1600B	4
2x 1 to 6		SMA type	SRS 1602B	4

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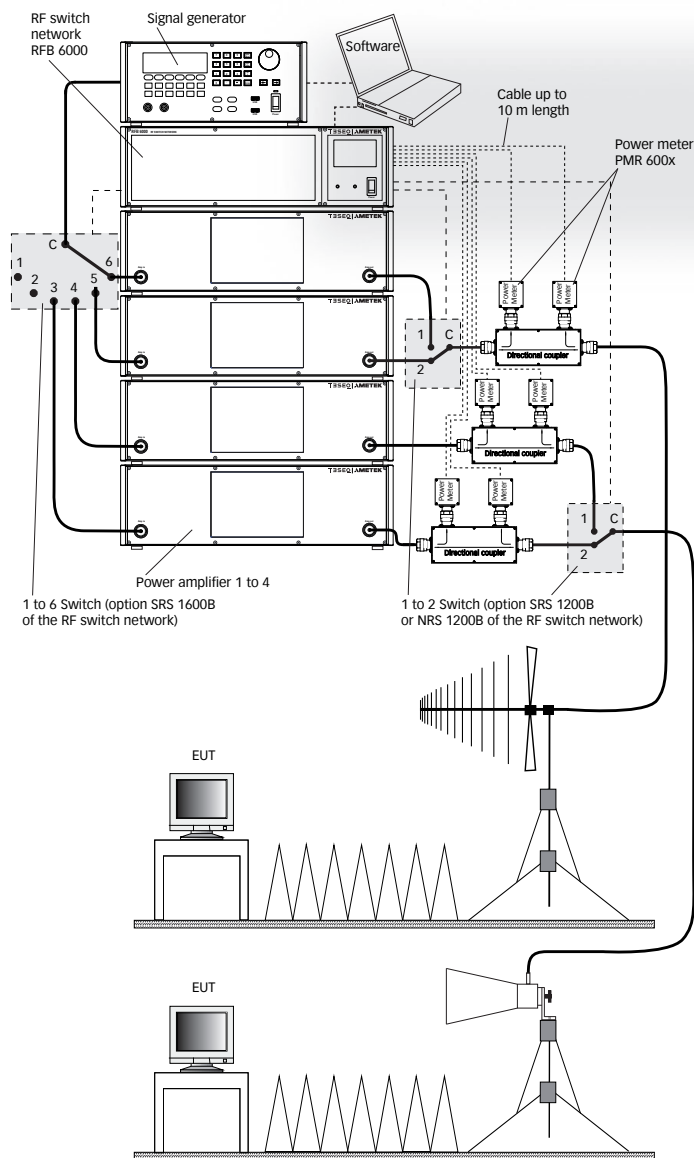
Example of a setup with 4 power amplifier, 3 directional couplers, 2 power meters and 2 antennas



Teseq recommends a short distance between directional coupler and power meter for all applications above 1 GHz. The best solution is a direct mounted power meter on the directional coupler port.

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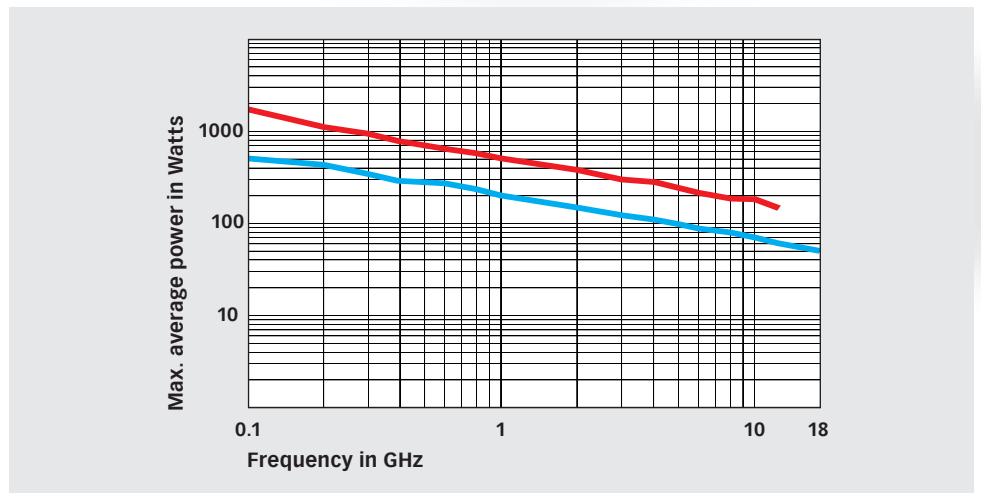
Example of a setup with 4 power amplifier, 3 directional couplers, 6 power meters and 2 antennas



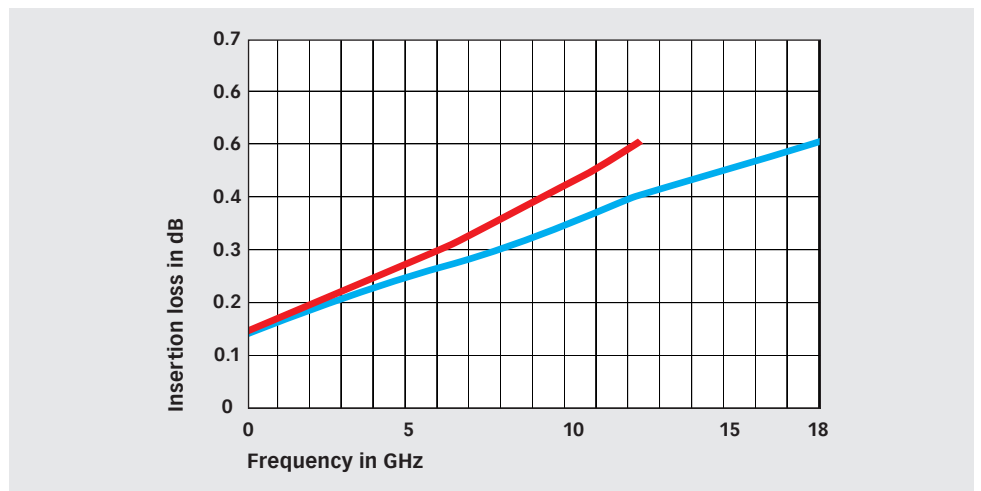
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RF switch: Max. average power — N type, — SMA type

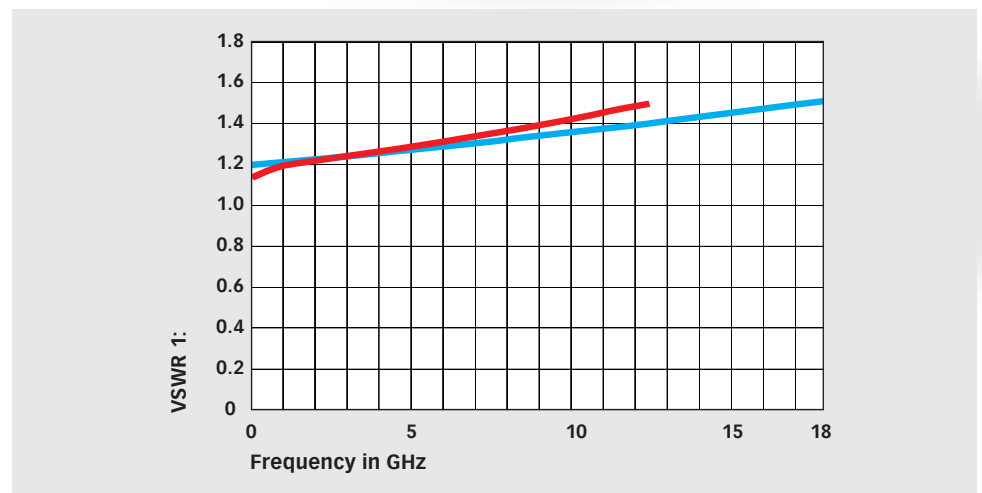


RF switch: Insertion loss — N type, — SMA type



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RF switch: VSWR — N type, — SMA type



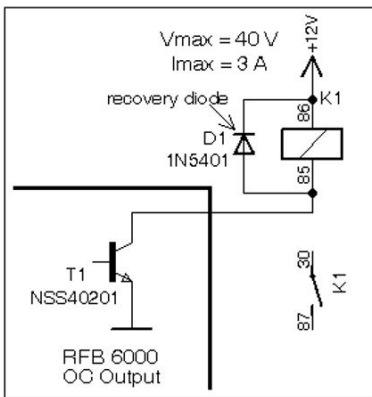
Technical specification

Power supply:	100 - 240 V AC / 47 - 63 Hz
Display:	3" TFT with touch, 320x240 pix.
Remote control	
LAN:	RJ45, Ethernet 10 / 100 BASE-T
RS485:	Connector D-Sub 9 pole, up to 9600 Bd (for RF switches only)
RS232 optical:	Connector 2 x HFBRx523 socket for 1 mm fiber optic cable with standard length of 20 m, for other distances on request 115200 Bd, 8, N, 1
User port:	D-Sub 25 pole 4 TTL inputs 10 TTL outputs 4 open drain outputs 40 V, 3 A +12 V / 700 mA, +5 V / 700 mA power supply
RF Impedance of the switches:	50 Ω
RF Isolation between the ports:	≥ 55 dB
Switch life time:	1M switch cycles (absence of RF power during switching required)
Operating temperature:	5 - 40 $^{\circ}$ C
Humidity:	< 80% (not condensation)
Dimensions (W/H/D in mm):	483 x 150 x 423
Weight:	approx. 10 kg

RFB 6000A RF SWITCH NETWORK

User port specification

Pin Nr.	Name	Description
1	DI_0	User Port input 0 (TTL level)
2	DI_1	User Port input 1 (TTL level)
3	DI_2	User Port input 2 (TTL level)
4	DI_3	User Port input 3 (TTL level)
5	GND	Supply voltage
6	DO_7	User Port output 7 (LV logic, 1.5/3.5 V, ±16 mA)
7	DO_6	User Port output 6 (LV logic, 1.5/3.5 V, ±16 mA)
8	DO_5	User Port output 5 (LV logic, 1.5/3.5 V, ±16 mA)
9	DO_4	User Port output 4 (LV logic, 1.5/3.5 V, ±16 mA)
10	DO_3	User Port output 3 (LV logic, 1.5/3.5 V, ±16 mA)
11	DO_2	User Port output 2 (LV logic, 1.5/3.5 V, ±16 mA)
12	DO_1	User Port output 1 (LV logic, 1.5/3.5 V, ±16 mA)
13	DO_0	User Port output 0 (LV logic, 1.5/3.5 V, ±16 mA)
14	GND	Supply voltage
15	DOC_3	User Port output Open Drain 3 (max. 40 V; 3 A)
16	DOC_2	User Port output Open Drain 2 (max. 40 V; 3 A)
17	DOC_1	User Port output Open Drain 1 (max. 40 V; 3 A)
18	DOC_0	User Port output Open Drain 0 (max. 40 V; 3 A)
19	DO_9	User Port output 9 (LV logic, 1.5/3.5 V, ±16 mA)
20	DO_8	User Port output 8 (LV logic, 1.5/3.5 V, ±16 mA)
21	RxD	RS232 receive data (parallel to LWL)
22	TxD	RS232 transmit data (parallel to LWL)
23	+5V	Supply voltage (max. 0.7 A)
24		
25	+12V	Supply voltage (max. 0.7 A)



Example circuit for using the open drain output of RFB 6000A

RFB 6000A RF SWITCH NETWORK

Model No. and options

Part number	Description
258150	RFB 6000A RF switch network, main unit with power supply, remote ports, 3" touch display and user port, 19" rack version, includes USO 4013, (RF switch plug-in module and power meter interface to be ordered separately)
258106	RFI 6008 Option for RFB 6000A: Power meter interface with 8 ports (factory fitted, power meter heads e.g. PMR 6003, PMR 6006 to be ordered separately)
258101	SRS 1200B Option for RFB 6000A: Plug-in module for rear panel with switch 1 to 2, SMA, (factory fitted)
258102	NRS 1200B Option for RFB 6000A: Plug-in module for rear panel with switch 1 to 2, N, (factory fitted)
258103	NRS 1600B Option for RFB 6000A: Plug-in module for rear panel with switch 1 to 6, N, (factory fitted)
258104	SRS 1600B Option for RFB 6000A: Plug-in module for rear panel with switch 1 to 6, SMA, (factory fitted)
258105	SRS 1602B Option for RFB 6000A: Plug-in module for rear panel with 2x switch 1 to 6, SMA, control as two separate switches, (factory fitted)

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82-258150 E01 July 2022