AEROFLEX WEINSCHEL

Programmable Switches

Model 8512 Programmable Switch Unit

NEW

up to 26.5 GHz

Local, Ethernet, USB & RS-232 Control

RoHS

Features

- Can be configured with up to 14 each, SP3T, SP4T, SP5T or SP6T Switches.
- Front panel local control and display make it ideal for lab and manual test environments.
- Up to 26.5 GHz Operating Frequency Range.
- Integrated Switch Cycle Counter.
- Failsafe (break-before-make) & Latching (make-before-break) switching functionality available.
- Easily expandable - additional switches can be quickly installed by the customer.
- Low Insertion Loss and High Isolation.
- Supplied with industry standard communication interfaces:
  - Ethernet (10/100 BaseT)
  - USB 2.0
  - RS-232 (Serial)
  - GPIB/IEEE-488 (HS-488 ready) optional
- LabVIEW™ based Switch Control Software included.
- Compact 2 RU, 19" Rack Mount Configuration. Other configurations avaible.

Applications

- Wi-Fi, WiMAX, 4G LTE Base Station Testing.
- Signal routing from multiple instruments to single or multiple DUTs.
- Production Testing - Multiple tests can be performed using the same test setup.
- ATE and STE applications requiring configuration flexibility.

Control Software Included

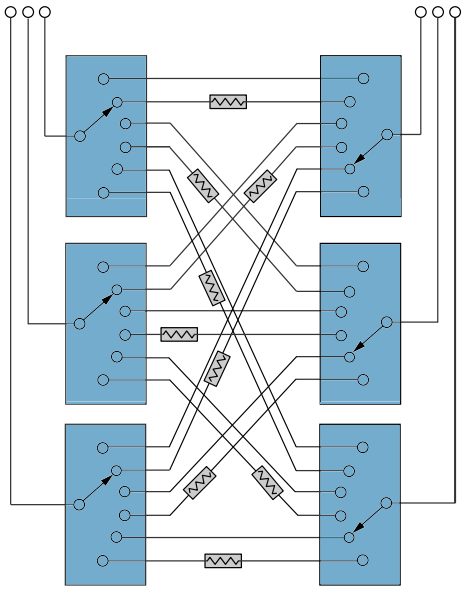
Aeroflex / Weinschel's LabVIEW™ based Switch Control Center Software (SCCS) is to be used in conjunction with the operation of the Aeroflex / Weinschel 8512 series of programmable switch units. The SCCS will allow the user setup, control and perform tests and measurements using these programmable switch units over standard communication interfaces.

Description

Aeroflex / Weinschel's Model 8512 Series of Programmable Switch Units offers a compact, yet expandable, rack mount solution for a variety of test, subsystem, and system applications. The Model 8512 Series operates over the DC to 18/26.5 GHz frequency range, with SP3T to SP6T configurations with up to 14/6 switches respectively. Ethernet, USB, and RS-232 control interfaces are standard, along with LabView based control software. A GPIB/IEEE-488 interface is also available as an option.

Using the Switch Control Center Software supplied with each unit, the user can quickly set up and operate the unit's switches independently, or using the Configure Virtual Switch option, create custom "tree" or "matrix" configurations by assigning input, output, and path labels as required.

Aeroflex / Weinschel also provides custom configurations where a variety of configurations can be incorporated within a single unit. Please contact us with your specialized needs.



Redundant 3x3 matrix with fixed attenuators in the redundant paths as an example of an 8512-A6-06-F application.

For additional information on the Model 8512, visit our website @ www.aeroflex.com/AW8512

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Revision Date: 5/7/2015

Specifications

SPECIFICATION	DESCRIPTION
Input Power Requirements	AC 100 to 240 VAC, 50/60 Hz, 100 Watts
Environmental	Operating Temperature: 0° to +50°C Storage Temperature: -40° to +75°C (-40° to +167°F) Humidity: up to 90% (non-condensing) Operating Altitude: 10,000 ft. (3,048M) Non-Operating Altitude: 40,000 ft. (12,192M)
RS-232 Bus (1) **Serial I/O**	Connector: 9-pin male D Signals: TXD, RXD, RTS, CTS, GND Baud Rates: 9600 to 230400 Data Bits: 8 Handshaking: None, RTS/CTS Parity: None
USB 2.0	Connector: Mini B
Ethernet	10/100 Base T Connector: Standard RJ45
IEEE-488 Bus (2) (GPIB option)	Connector: 24-pin per IEEE-488.1 Protocols: per IEEE-488.2
RF Characteristics	Nominal Impedance: 50 Ω **Option A & B:** Frequency Range: DC - 18 GHz

	DC-3	3-8	8-12.4	12.4-18
VSWR (maximum):	1.2:1	1.3:1	1.4:1	1.5:1
Insertion Loss (dB) maximum:	0.2	0.3	0.4	0.5
Isolation (dB) minimum:	75	70	60	60
Average Power (Watts Typical)(3):	95	55	45	35

Switching Speed (maximum): 15 msec

Life (minimum per position)(3): 1,000,000 cycles

Option C:

Frequency Range: DC - 26.5 GHz

	DC-4	4-8	8-12	12-18	18-24	24-26.5
VSWR (maximum):	1.2:1	1.3:1	1.4:1	1.5:1	1.6:1	1.7:1
Insertion Loss (dB maximum):	0.2	0.25	0.3	0.4	0.5	0.8
Isolation (dB minimum):	80	80	80	80	75	70
Average Power (Watts Typical): NO HOT SWITCHING (3)	75	50	45	40	35	30

Switching Speed (maximum): 15 msec

Life (minimum per position)(3): 5,000,000 cycles

1. RS-232 can be used with standard PC serial port for short and medium distances (up to approximately 50 ft.)
2. GPIB/IEEE-488 model allows user-selectable addresses, (Not included on standard models, must be ordered as an option).
3. Hot switching is limited to 1 W CW maximum. Switching at higher power levels will reduce the life of the switch.

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Model Number Configuration Matrix

8512 - XX - XX - X G

- 8512 — Basic Model Number
- XX — Switch Designation (See Table)
- XX — Number of Switches Installed (01 to 14)*
- X — Connector Location: F = Front, R = Rear
- G — GPIB (IEEE-488) Option: Blank = Not Installed, G = Installed

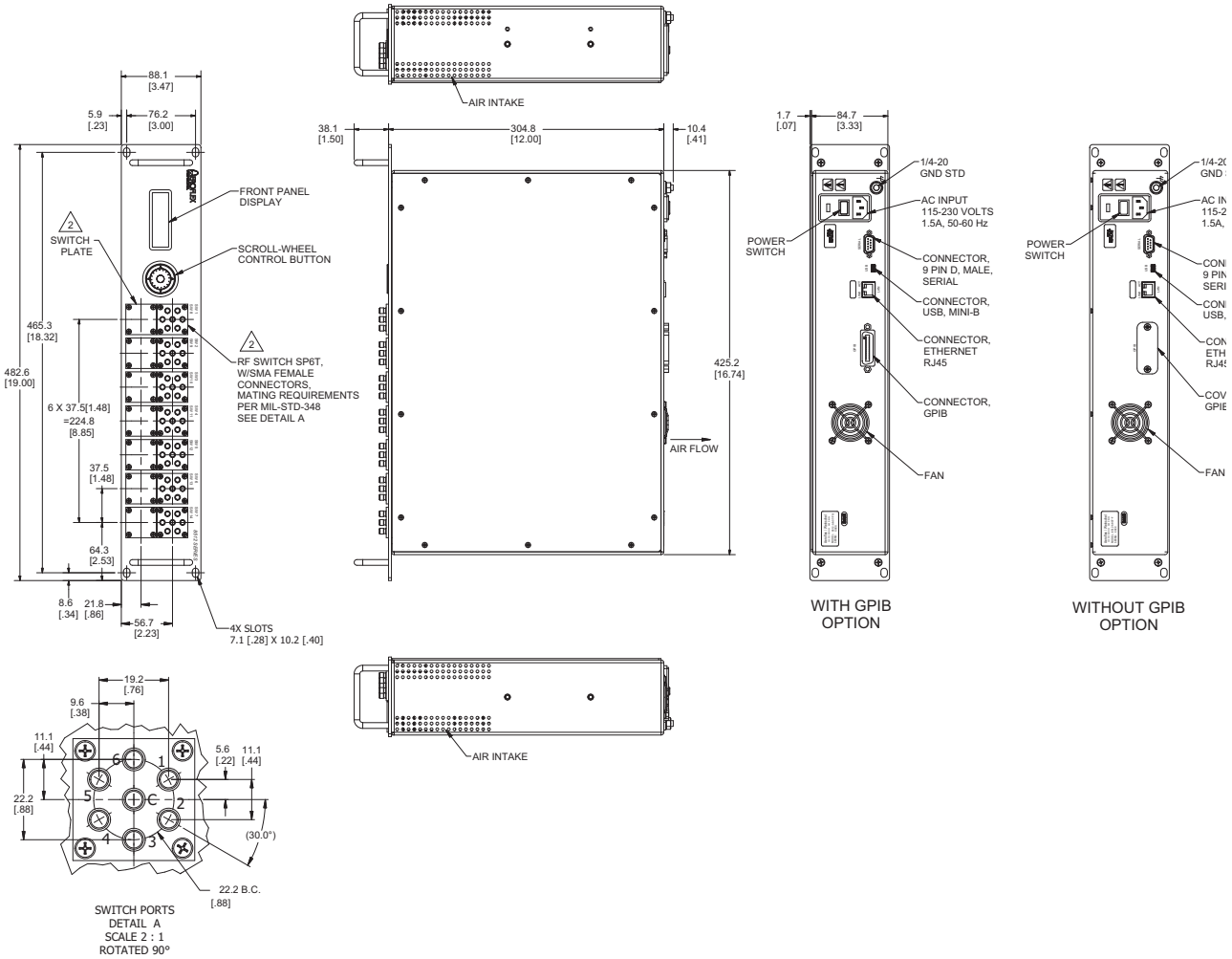
* Up to 6 Channels for Option C

Example: 8512-A6-07-F

Electro-mechanical			
Switch Description	**Switch Designation**		**# of Positions**
DC-18 GHz, Failsafe to open, Make Before Break, SMA Female	A	3	SP3T
		4	SP4T
		5	SP5T
		6	SP6T
DC-18 GHz, Latching, Make Before Break, SMA Female	B	3	SP3T
		4	SP4T
		5	SP5T
		6	SP6T
DC-26.5 GHz, Failsafe to open, Break Before Make, SMA Female	C	3	SP3T
		4	SP4T
		5	SP5T
		6	SP6T

Physical Dimensions

Options A & B:



NOTE:

1. All dimensions are given in mm (inches).
2. RF Switches and switch plates as required and determined by configuration. Seven switch unit configuration shown.

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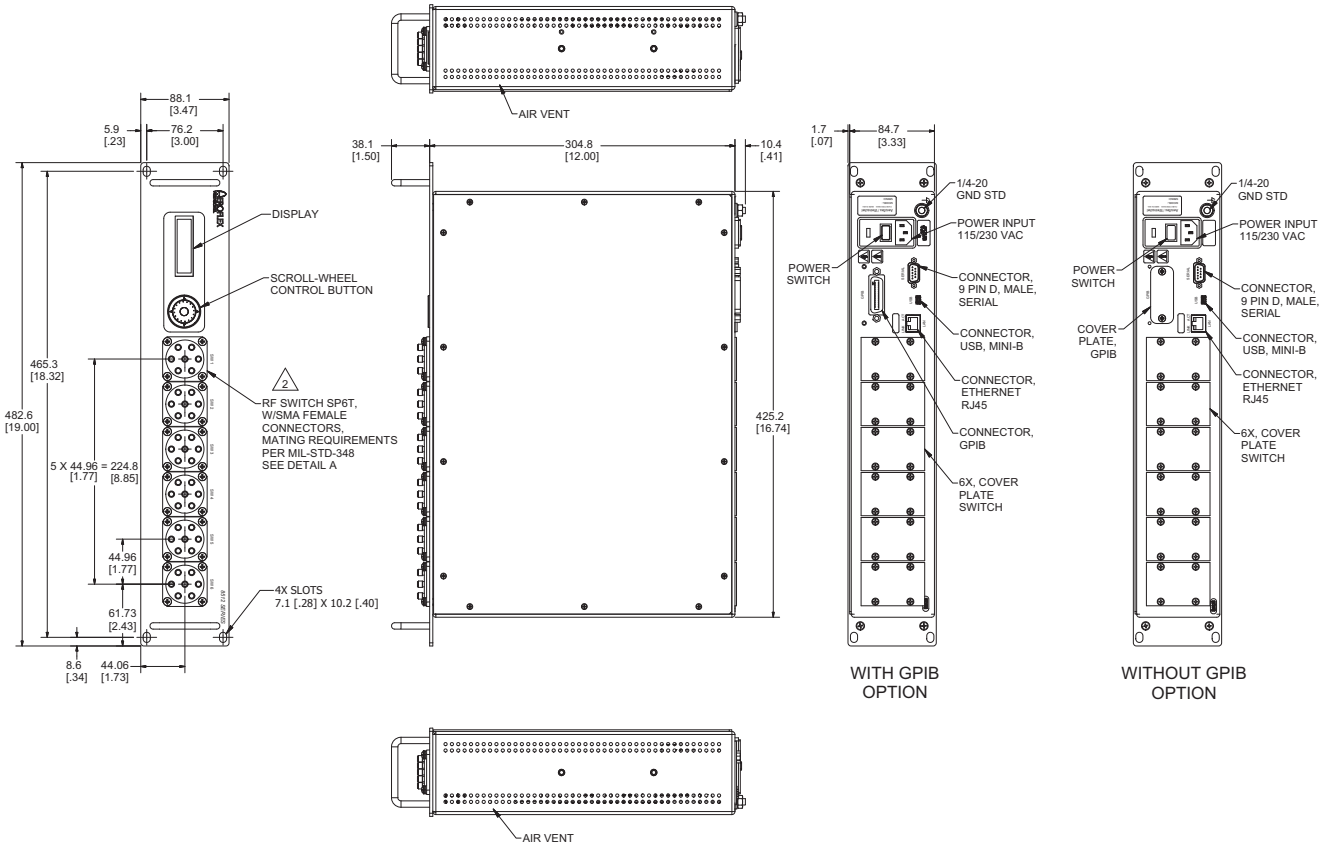
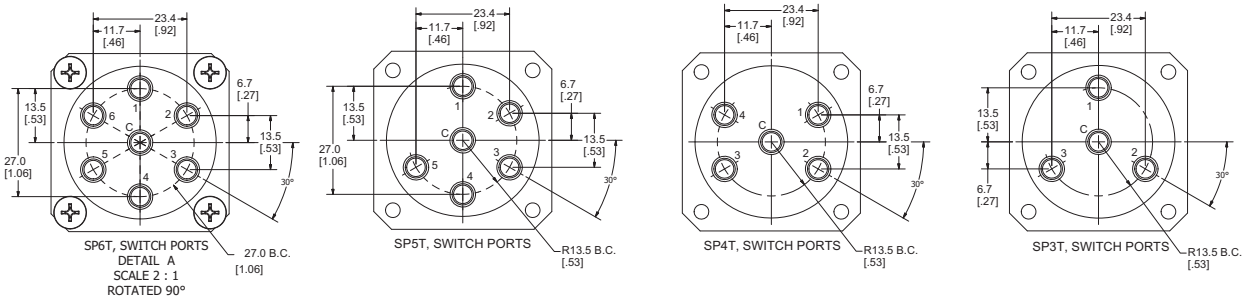
Physical Dimensions - Con't

Options C:





NOTE:

1. All dimensions are given in mm (inches).
2. RF Switches and switch plates as required and determined by configuration. Six switch unit configuration shown.

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