

Keysight Technologies

11713B/C Attenuator/Switch Drivers

Configuration Guide



This configuration guide will assist you through the process of configuring a switching system using the Keysight Technologies, Inc. 11713B/C attenuator/switch drivers.

Key Features

The 11713B attenuator/switch driver is a GPIB compatible instrument that concurrently drives up to two four-section programmable step attenuators and two microwave coaxial switches, or up to 10 SPDT switches². The 11713B is fully backward compatible with the 11713A in terms of functionality and fit. Connectivity using USB and LAN are optional.

The 11713C attenuator/switch driver is a GPIB/USB/LAN compatible instrument that concurrently drives up to four programmable step attenuators and four microwave coaxial switches, or up to 20 SPDT switches². The 11713C comes with tri-voltage selection of 5 V, 15 V and 24 V and also permits user-defined voltage supply capability.

- Programming via GPIB/USB can be accomplished in simple one-line statements.
- Control the attenuator/switch drivers through LAN using a web-based interface.
- An integrated LCD display eases menu selection and instrument configuration.
- Inclusion of solenoid arc suppression diodes with three pre-defined common terminal supplies allow the instrument to be used with wide variety of attenuators and switches.

| Key features | 11713B | 11713C |
|---|----------|--------|
| Manually-controlled using front panel pushbuttons | Yes | Yes |
| Automatically-control through: | | |
| – GPIB | Yes | Yes |
| – USB | Optional | Yes |
| – LAN | Optional | Yes |
| Integrated LCD display | Yes | Yes |
| Self-contained power supply with current limiting | Yes | Yes |
| Common terminal supplies of | | |
| – +5 Vdc | No | Yes |
| – +15 Vdc | No | Yes |
| – +24 Vdc | Yes | Yes |
| – User-defined | No | Yes |
| TTL control | No | Yes |

Note 1: 11713B/C attenuator/switch drivers output continuous current and do not support pulse drive. Please ensure your switching devices can withstand continuous current or have a built-in current interrupt feature.

Note 2: The amount of switches and attenuators that can be driven will depend on the type of switch configuration and attenuator section configuration. The 11713C can drive twice as many devices as the 11713B; however, the total load current that can be consumed is still 1.7 A.

Specifications

Drive power supply specifications

Specifications below describe warranted performance over the temperature range of 0 to 50 °C after one hour of continuous operation, unless otherwise noted.

| | |
|---------|--|
| Voltage | +24 ± 8% Vdc |
| | +5 ± 5% Vdc |
| | +15 ± 12% Vdc |
| Current | 1.7 A maximum continuous current |
| | Contact pairs 1 through 8, 9 and 0, maximum current of 0.7 A per contact |

Supplemental characteristics

Supplemental characteristics are intended to provide useful information and are typical but non-warranted performance parameters.

| | |
|--------------------------|---|
| Power | 100 or 240 Vac, automatic selection, 50/60 Hz |
| | 100 VA maximum |
| Response time | 100 µs maximum for contact pairs 1 through 8 |
| | 20 ms maximum for contact pairs 9 and 0 |
| Driver life | 2,000,000 switchings at 0.7 A for contact pairs 9 and 0 |
| Maximum load inductance | 500 mH |
| Maximum load capacitance | < 0.01 µF for contact pairs 9 and 0 |

Physical specifications

| | |
|---|--|
| Net weight | 3.2 kg (7.1 lbs) |
| Dimensions (H x W x D) with handle and rubber bumper | 130 mm x 250 mm x 462 mm (5.1 inches x 9.8 inches x 18.2 inches) |
| Dimensions (H x W x D) without handle and rubber bumper | 88 mm x 212 mm x 348 mm (3.5 inches x 8.5 inches x 13.7 inches) |

Product Configurations

The 11713B/C attenuator/switch drivers can be configured easily. The connection between the driver and switching devices is intuitive and direct. Simply select the appropriate interface cable and you can make point-to-point connection from the driver to the attenuator(s) and/or switch(es). Details such as pin numbers and wires color are provided in the tables found in *Configuration Information for Switches* and *Configuration Information for Attenuators* sections.

Note 1: The maximum quantity orderable for each cable option is 9.

Note 2: The length of cables below is 60 inches (5 ft).

| 11713B | | |
|---|--------------------------|---|
| Connectivity options | | |
| Option STD | | Standard configuration, full backward compatibility to 11713A |
| Option LXI | | LXI Class-C configuration, additional USB/LAN connectivity, full backward compatibility to 11713A |
| Cable options | Part number | |
| Option 001 | 11764-60004 | Viking connector to 10-pin DIP connector |
| Option 101 | 8120-2703 | Viking connector to viking connector |
| Option 201 | 5061-0969 | Viking connector to 12-pin conductor cable, bare wire |
| Option 301 | 11761-60001 | Viking connector to 4 ribbon cables |
| Option 401 | 11713-60042 | Dual-viking connector to 16-pin DIP connector |
| Option 501 | 11713-60043 | Viking connector to (4) 9-pin Dsub connectors |
| Option 502 | 11713-60049 | Viking connector to (2) 9-pin Dsub connectors |
| Option 601 | 11713-60044 | Viking connector to 16-pin DIP connector |
| Option 701 | 5064-7848 | Viking connector to 14-pin DIP connector |
| Option 801 | 11713-60047 | Viking connector to (4) 10-pin DIP connectors |
| Rack mount kit options (optional) | Part number | |
| Option 908 | 5063-9240 | Rack mount kit for one instrument |
| Option 909 | 5061-9694 & 5063-9212 | Rack mount kit for two instruments |
| 11713C | | |
| Cable options | Part number | |
| Option 001 | 11764-60004 | Viking connector to 10-pin DIP connector |
| Option 101 | 8120-2703 | Viking connector to viking connector |
| Option 201 | 5061-0969 | Viking connector to 12-pin conductor cable, bare wire |
| Option 301 | 11761-60001 | Viking connector to 4 ribbon cables |
| Option 401 | 11713-60042 | Dual-viking connector to 16-pin DIP connector |
| Option 501 | 11713-60043 | Viking connector to (4) 9-pin Dsub connectors |
| Option 502 | 11713-60049 | Viking connector to (2) 9-pin Dsub connectors |
| Option 601 | 11713-60044 | Viking connector to 16-pin DIP connector |
| Option 701 | 5064-7848 | Viking connector to 14-pin DIP connector |
| Option 801 | 11713-60047 | Viking connector to (4) 10-pin DIP connectors |
| Rack mount kit options (optional) | Part number | |
| Option 908 | 5063-9240 | Rack mount kit for one instrument |
| Option 909 | 5061-9694 & 5063-9212 | Rack mount kit for two instruments |
| Cable and rack mount kit can be ordered separately with the part numbers below. | | |
| 11713B-001/11713C-001 | | Viking connector to 10-pin DIP connector |
| 11713B-101/11713C-101 | | Viking connector to viking connector |
| 11713B-201/11713C-201 | | Viking connector to 12-pin conductor cable, bare wire |
| 11713B-301/11713C-301 | | Viking connector to 4 ribbon cables |
| 11713B-401/11713C-401 | | Dual-viking connector to 16-pin DIP connector |
| 11713B-501/11713C-501 | | Viking connector to (4) 9-pin Dsub connectors |
| 11713B-502/11713C-502 | | Viking connector to (2) 9-pin Dsub connectors |
| 11713B-601/11713C-601 | | Viking connector to 16-pin DIP connector |
| 11713B-701/11713C-701 | | Viking connector to 14-pin DIP connector |
| 11713B-801/11713C-801 | | Viking connector to (4) 10-pin DIP connectors |
| 11713B-908/11713C-908 | | Rack mount kit for one instrument |
| 11713B-909/11713C-909 | | Rack mount kit for two instruments |

Five Simple Steps to Configure your Switching System

1. Determine the switching device's model and option (DC connector).

Example

Model: 87104A (SP4T switch)
Option: 100 (solder terminal)

2. Determine the attenuator/switch driver's model and option (interface cable).

Example

Model: 11713B
Option: 201 (Viking connector to 12-pin conductor cable, bare wire)

3. Use the selection guide, Table A (page 6) for switches and Table B (page 7) for attenuators,

Example

Selection guide: Table A (for switches)
Configuration table: Table F-1

Table A. Selection guide for switches

| Switch family | Switch model number | Switch option | 11713B/C | | | | | | | | |
|---------------|----------------------|---------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | | Option 001 | Option 101 | Option 201 | Option 301 | Option 401 | Option 501 | Option 601 | Option 701 | Option 801 |
| Bypass | 8763A/B/C | No option | | | Table D-2 | | | | | | |
| | 8764A/B/C | No option | | | Table D-3 | | | | | | |
| | N1811TL | 202 | | | Table O-3 | | | | | | |
| | | 201 | | | | | | Table O-4 | | | |
| N1812UL | 202 | | | | Table O-1 | | | | | | |
| | 201 | | | | | | Table O-2 | | | | |
| SPDT | 8761A/B ¹ | No option | | | Table C-1 | | | | | | |
| | 8762A/B/C/F | No option | | | Table D-1 | | | | | | |
| | 8765A/B/C/D/F | 3xx | | | | | Table E-2 | | | | |
| | | 3xx | | | | | | | | | |
| | N1810UL | 202 | | | | Table O-1 | | | | | |
| | | 201 | | | | | | Table O-2 | | | |
| N1810TL | 202 | | | | Table O-3 | | | | | | |
| | 201 | | | | | | Table O-4 | | | | |
| SP3T | 8766K | 016 | Table J-1 | | | | | | | | |
| | | 060 | | Table J-2 | | | | | | | |
| SP4T | 87104A/B/C/D | 100 | | | Table F-1 | | | | | | |
| | | 161 | | | | | | Table F-2 | | | |
| | 87204A/B/C | 100 | | | Table G-1 | | | | | | |
| | | 161 | | | | | | Table G-2 | | | |

4. Configure your switching system using Table F-1 (page 16) as a reference.

Table F-1. Configuration of 11713B/C (Option 201) to 87104A/B/C/D, L7104A/B/C & L7204A/B/C SP4T switches (Optional 100)

| From 11713B/C (Option 201) | | | | To 87104A/B/C/D, L7104A/B/C & L7204A/B/C (Option 100) | |
|----------------------------|-----|-----------------------------|-----------------|---|---------------|
| Front panel pushbutton | | Interface cable | | Solder terminal number | RF path |
| Attenuator X | LED | Viking connector pin number | Bare wire color | | |
| — | — | 1 (VCC) | Red | 1 | — |
| — | — | 2 (GND) | White/Brown | 15 | — |
| 1 | OFF | 5 | Violet | 5 | 2 to C closed |
| 2 | OFF | 7 | Black | 7 | 3 to C closed |
| 3 | OFF | 9 | Orange | 11 | 5 to C closed |
| 4 | OFF | 11 | Brown | 13 | 6 to C closed |

5. Operate your system.

Table A: Selection guide for switches

| Switch family | Switch model number | Switch option | 11713B/C | | | | | | | | | |
|---------------|--|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | | Option 001 | Option 101 | Option 201 | Option 301 | Option 401 | Option 501 | Option 502 | Option 601 | Option 701 | Option 801 |
| Bypass | 8763A, 8763B, 8763C | 011/015/024 | | | Table D-2 | | | | | | | |
| | | T15/T24 | | | Table D-5 | | | | | | | |
| | 8764A, 8764B, 8764C | 011/015/024 | | | Table D-3 | | | | | | | |
| | | T15/T24 | | | Table D-6 | | | | | | | |
| | N1811T, N1811TL | 202 | | | Table O-11 | | | | | | | |
| | | 201 | | | | | Table O-12 | | | | | |
| | | 202/401 | | | Table O-15 | | | | | | | |
| | | 201/401 | | | | | | Table O-16 | | | | |
| | N1812U, N1812UL | 202 | | | Table O-9 | | | | | | | |
| | | 201 | | | | | Table O-10 | | | | | |
| 202/401 | | | | Table O-13 | | | | | | | | |
| 201/401 | | | | | | | Table O-14 | | | | | |
| SPDT | 8761A, 8761B ¹ | No option | | | Table C-1 | | | | | | | |
| | | 011/015/024 | | | Table D-1 | | | | | | | |
| | 8762A, 8762B, 8762C, 8762F | T15/T24 | | | Table D-4 | | | | | | | |
| | | 305/310/315/324 | | | Table E-1 | | | | | | | |
| | 8765A, 8765B, 8765C, 8765D, 8765F ² | 005/010/015/024 | | | | Table E-2 | | | | | | |
| | | 202 | | | Table O-1 | | | | | | | |
| | | 201 | | | | | Table O-2 | | | | | |
| | | 202/401 | | | Table O-5 | | | | | | | |
| | N1810U, N1810UL | 201/401 | | | | | | Table O-6 | | | | |
| | | N1810T, N1810TL | 202 | | | Table O-3 | | | | | | |
| 201 | | | | | | | Table O-4 | | | | | |
| 202/401 | | | | | Table O-7 | | | | | | | |
| SP3T | 8766K | 016 | Table J-1 | | | | | | | | | |
| | | 060 | | Table J-2 | | | | | | | | |
| SP4T | 87104A, 87104B, 87104C, 87104D, 87104P, 87104Q, 87104R | 100 | | | Table F-1 | | | | | | | |
| | | 161 | | | | | | Table F-2 | | | | |
| | 87204A, 87204B, 87204C | 100 | | | Table G-1 | | | | | | | |
| | | 161 | | | | | | Table G-2 | | | | |
| | L7104A, L7104B, L7104C | 100 | | | Table F-1 | | | | Table F-2 | | | |
| | | 161 | | | | | | | | | | |
| | L7204A, L7204B, L7204C | 100 | | | Table F-1 | | | | Table F-2 | | | |
| | | 161 | | | | | | | | | | |
| | 8767K | 016 | Table J-1 | | | | | | | | | |
| | | 060 | | Table J-2 | | | | | | | | |
| 8767M | No option | Table L | | | | | | | | | | |
| SP5T | 8768K | 016 | Table J-1 | | | | | | | | | |
| | | 060 | | Table J-2 | | | | | | | | |
| | 8768M | No option | Table L | | | | | | | | | |
| SP6T | 87106A, 87106B, 87106C, 87106D, 87106P, 87106Q, 87106R | 100 | | | Table H-1 | | | | | | | |
| | | 161 | | | | Table H-2 | | | | | | |
| | 87206A, 87206B, 87206C | 100 | | | Table I-1 | | | | | | | |
| | | 161 | | | | | Table I-2 | | | | | |
| | L7106A, L7106B, L7106C | 100 | | | Table H-1 | | | Table H-2 | | | | |
| | | 161 | | | | | | | | | | |
| | L7206A, L7206B, L7206C | 100 | | | Table H-1 | | | Table H-2 | | | | |
| | | 161 | | | | | | | | | | |
| | 8769K | 060 | | Table K | | | | | | | | |
| | 8769M | No option | | | | | | | Table M | | | |
| Matrix | 87406B, 87406Q | 100 | | | Table H-1 | | | | | | | |
| | | 161 | | | | Table H-2 | | | | | | |
| | 87606B, 87606Q | 100 | | | Table I-1 | | | | | | | |
| | | 161 | | | | | Table I-2 | | | | | |
| Transfer | 87222C, 87222D, 87222E, 87222R | 100 | | | Table N-1 | | | | | | | |
| | | 161 | | | | | | | Table N-2 | | | |
| | L7222C | 100 | | | Table N-1 | | | | | | | |
| | | 161 | | | | | | | | Table N-2 | | |

1. Refer to Table C-2 if a cable with banana jacks is used to make a connection between 8761A/B and 11713B/C.
 2. 8765A/B/C/D/F require continuous current to latch. The number of switches for connection depends on option selection.

Switch Option Descriptions

011: 5 Vdc
 015: 15 Vdc
 024: 24 Vdc
 T15: TTL/5V CMOS compatible logic with 15 Vdc supply
 T24: TTL/5V CMOS compatible logic with 24 Vdc supply
 201: D-submini 9 pin (f)
 202: Solder lug
 401: TTL/5V CMOS compatible
 305: 5 Vdc with solder terminals
 310: 10 Vdc with solder terminals
 315: 15 Vdc with solder terminals
 324: 24 Vdc with solder terminals
 005: 5 Vdc with 3-inch ribbon cable
 010: 10 Vdc with 3-inch ribbon cable
 016: 16-inch ribbon cables
 060: Viking cable connector
 100: Solder terminals
 161: Ribbon receptacle

Table B: Selection guide for attenuators

| Attenuator model number | Attenuator option | 11713B/C | |
|-------------------------|-------------------|------------|------------|
| | | Option 001 | Option 101 |
| 8494G, 8494H | 016 | Table P-1 | |
| | 060 | | Table P-2 |
| 8495G, 8495H | 016 | Table P-1 | |
| | 060 | | Table P-2 |
| 8496G, 8496H | 016 | Table P-1 | |
| | 060 | | Table P-2 |
| 8495K | 016 | Table P-1 | |
| | 060 | | Table P-2 |
| 8497K | 016 | Table P-1 | |
| | 060 | | Table P-2 |
| 84904K, 84904L, 84904M | No option | Table Q | |
| 84905M | No option | Table Q | |
| 84906K, 84906L | No option | Table Q | |
| 84907K, 84907L | No option | Table Q | |
| 84908M | No option | Table Q | |

Attenuator Option Description

Option 060: 12-pin Viking connector
 Option 016: 16-inch ribbon cable with 14-pin DIP plug

Configuration Information for Switches

Note 1: Each table below illustrates the configuration of two switches to the 11713B/C.

Note 2: For 8761A, V = 15 V.

Note 3: For 8761B, V = 24 V.

Note 4: 2,000,000 switching cycles at 0.7 A for contact pairs 9 and 0. For more details, please refer to the “Supplemental characteristics” table on page 3.

Table C-1: Configuration of 11713B/C (Option 201) to 8761A/B SPDT switches

| From 11713B/C (Option 201) | | | | To 8761A/B | | |
|----------------------------|-----|-----------------------------|-----------------|------------------------|---------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | | |
| Switches | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path | Device under test (DUT) |
| 9 | OFF | Cable 1-3 | Gray | <+> | 2 to C closed | DUT 1 |
| | | Cable 1-4 | White/Red | <-> | | |
| | ON | Cable 1-3 | Gray | <+> | 1 to C closed | |
| | | Cable 1-4 | White/Red | <-> | | |
| 0 | OFF | Cable 2-3 | Gray | <+> | 2 to C closed | DUT 2 |
| | | Cable 2-4 | White/Red | <-> | | |
| | ON | Cable 2-3 | Gray | <+> | 1 to C closed | |
| | | Cable 2-4 | White/Red | <-> | | |

Table C-2: Configuration of 11713B/C (any option) to 8761A/B SPDT switches

| From 11713B/C (any option) | | | | To 8761A/B | | |
|----------------------------|-----|--------------------------|---------|------------------------|---------------|-------------------------|
| Front panel pushbutton | | Banana jack (rear panel) | | | | |
| Switches | LED | Pin number | Voltage | Solder terminal number | RF path | Device under test (DUT) |
| 9 | OFF | S9-A | +V | <+> | 2 to C closed | DUT 1 |
| | | S9-B | 0 | <-> | | |
| | ON | S9-A | 0 | <+> | 1 to C closed | |
| | | S9-B | +V | <-> | | |
| 0 | OFF | S0-A | +V | <+> | 2 to C closed | DUT 2 |
| | | S0-B | 0 | <-> | | |
| | ON | S0-A | 0 | <+> | 1 to C closed | |
| | | S0-B | +V | <-> | | |

Note 1: Each table below illustrates the configuration of five switches to the 11713B/C.

Note 2: Five additional switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7, 8 & 0) using the same configuration as Attenuator X.

Note 3: 2,000,000 switching cycles at 0.7 A for contact pairs 9 and 0. For more details, please refer to the “Supplemental characteristics” table on page 3.

Table D-1: Configuration of 11713B/C (Option 201) to 8762A/B/C/F SPDT switches (Option 005/011/024)

| From 11713B/C (Option 201) | | | | To 8762A/B/C/F (Option 005/011/024) | | |
|----------------------------|-----|-----------------------------|-----------------|-------------------------------------|-----------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | Solder terminal number | RF path | Device under test (DUT) |
| Attenuator X | LED | Viking connector pin number | Bare wire color | | | |
| – | – | 1 (VCC) | Red | C | – | VCC for all 5 DUTs |
| 1 | OFF | 5 | Violet | 1 | 1 to C closed, 2 terminated | DUT 1 |
| | ON | 6 | Yellow | 2 | 2 to C closed, 1 terminated | |
| 2 | OFF | 7 | Black | 1 | 1 to C closed, 2 terminated | DUT 2 |
| | ON | 8 | Green | 2 | 2 to C closed, 1 terminated | |
| 3 | OFF | 9 | Orange | 1 | 1 to C closed, 2 terminated | DUT 3 |
| | ON | 10 | Blue | 2 | 2 to C closed, 1 terminated | |
| 4 | OFF | 11 | Brown | 1 | 1 to C closed, 2 terminated | DUT 4 |
| | ON | 12 | White | 2 | 2 to C closed, 1 terminated | |
| 9 | OFF | 4 | Gray | 1 | 1 to C closed, 2 terminated | DUT 5 |
| | ON | 3 | White/Red | 2 | 2 to C closed, 1 terminated | |

Table D-2: Configuration of 11713B/C (Option 201) to 8763A/B/C bypass switches (Option 005/011/024)

| From 11713B/C (Option 201) | | | | To 8763A/B/C (Option 005/011/024) | | |
|----------------------------|-----|-----------------------------|-----------------|-----------------------------------|-------------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | Solder terminal number | RF path | Device under test (DUT) |
| Attenuator X | LED | Viking connector pin number | Bare wire color | | | |
| – | – | 1 (VCC) | Red | C | – | VCC for all 5 DUTs |
| 1 | OFF | 5 | Violet | 1 | 1 to 2 closed, 3 to 4 closed | DUT 1 |
| | ON | 6 | Yellow | 2 | 1 terminated, 2 to 3 closed, 4 open | |
| 2 | OFF | 7 | Black | 1 | 1 to 2 closed, 3 to 4 closed | DUT 2 |
| | ON | 8 | Green | 2 | 1 terminated, 2 to 3 closed, 4 open | |
| 3 | OFF | 9 | Orange | 1 | 1 to 2 closed, 3 to 4 closed | DUT 3 |
| | ON | 10 | Blue | 2 | 1 terminated, 2 to 3 closed, 4 open | |
| 4 | OFF | 11 | Brown | 1 | 1 to 2 closed, 3 to 4 closed | DUT 4 |
| | ON | 12 | White | 2 | 1 terminated, 2 to 3 closed, 4 open | |
| 9 | OFF | 4 | Gray | 1 | 1 to 2 closed, 3 to 4 closed | DUT 5 |
| | ON | 3 | White/Red | 2 | 1 terminated, 2 to 3 closed, 4 open | |

Table D-3 Configuration of 11713B/C (Option 201) to 8764A/B/C bypass switches (Option 005/011/024)

| From 11713B/C (Option 201) | | | | To 8764A/B/C (Option 005/011/024) | | |
|----------------------------|-----|-----------------------------|-----------------|-----------------------------------|--------------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | Solder terminal number | RF path | Device under test (DUT) |
| Attenuator X | LED | Viking connector pin number | Bare wire color | | | |
| – | – | 1 (VCC) | Red | C | – | VCC for all 5 DUTs |
| 1 | OFF | 5 | Violet | 1 | 1 open, 2 to 3 closed, 4 to 5 closed | DUT 1 |
| | ON | 6 | Yellow | 2 | 1 to 2 closed, 3 to 4 closed, 5 open | |
| 2 | OFF | 7 | Black | 1 | 1 open, 2 to 3 closed, 4 to 5 closed | DUT 2 |
| | ON | 8 | Green | 2 | 1 to 2 closed, 3 to 4 closed, 5 open | |
| 3 | OFF | 9 | Orange | 1 | 1 open, 2 to 3 closed, 4 to 5 closed | DUT 3 |
| | ON | 10 | Blue | 2 | 1 to 2 closed, 3 to 4 closed, 5 open | |
| 4 | OFF | 11 | Brown | 1 | 1 open, 2 to 3 closed, 4 to 5 closed | DUT 4 |
| | ON | 12 | White | 2 | 1 to 2 closed, 3 to 4 closed, 5 open | |
| 9 | OFF | 4 | Gray | 1 | 1 open, 2 to 3 closed, 4 to 5 closed | DUT 5 |
| | ON | 3 | White/Red | 2 | 1 to 2 closed, 3 to 4 closed, 5 open | |

Note 1: Each table below illustrates the configuration of five switches to the 11713B/C.

Note 2: Five additional switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7, 8 & 0) using the same configuration as Attenuator X.

Note 3: 2,000,000 switching cycles at 0.7 A for contact pairs 9 and 0. For more details, please refer to the "Supplemental characteristics" table on page 3.

Table D-4: Configuration of 11713B/C (Option 201) to 8762A/B/C SPDT switches (Option T15/T24)

| From 11713B/C (Option 201) | | | | To 8762A/B/C (Option T15/T24) | | |
|----------------------------|-----|-----------------------------|-----------------|-------------------------------|-----------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | Solder Terminal Number | RF Path | Device Under Test (DUT) |
| Attenuator X | LED | Viking Connector Pin Number | Bare Wire Color | | | |
| – | – | 1 (VCC) | Red | C | – | VCC for all 5 DUTs |
| – | – | 2 (GND) | White/Brown | 2 | – | GND for all 5 DUTs |
| 1 | OFF | 5 | Violet | 1 | 1 to C closed, 2 terminated | DUT 1 |
| | ON | | | | 2 to C closed, 1 terminated | |
| 2 | OFF | 7 | Black | 1 | 1 to C closed, 2 terminated | DUT 2 |
| | ON | | | | 2 to C closed, 1 terminated | |
| 3 | OFF | 9 | Orange | 1 | 1 to C closed, 2 terminated | DUT 3 |
| | ON | | | | 2 to C closed, 1 terminated | |
| 4 | OFF | 11 | Brown | 1 | 1 to C closed, 2 terminated | DUT 4 |
| | ON | | | | 2 to C closed, 1 terminated | |
| 9 | OFF | 4 | Gray | 1 | 1 to C closed, 2 terminated | DUT 5 |
| | ON | | | | 2 to C closed, 1 terminated | |

Table D-5: Configuration of 11713B/C (Option 201) to 8763A/B/C bypass switches (Option T15/T24)

| From 11713B/C (Option 201) | | | | To 8763A/B/C (Option T15/T24) | | |
|----------------------------|-----|-----------------------------|-----------------|-------------------------------|-------------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | Solder Terminal Number | RF Path | Device Under Test (DUT) |
| Attenuator X | LED | Viking Connector Pin Number | Bare Wire Color | | | |
| – | – | 1 (VCC) | Red | C | – | VCC for all 5 DUTs |
| – | – | 2 (GND) | White/Brown | 2 | – | GND for all 5 DUTs |
| 1 | OFF | 5 | Violet | 1 | 1 to 2 closed, 3 to 4 closed | DUT 1 |
| | ON | | | | 1 terminated, 2 to 3 closed, 4 open | |
| 2 | OFF | 7 | Black | 1 | 1 to 2 closed, 3 to 4 closed | DUT 2 |
| | ON | | | | 1 terminated, 2 to 3 closed, 4 open | |
| 3 | OFF | 9 | Orange | 1 | 1 to 2 closed, 3 to 4 closed | DUT 3 |
| | ON | | | | 1 terminated, 2 to 3 closed, 4 open | |
| 4 | OFF | 11 | Brown | 1 | 1 to 2 closed, 3 to 4 closed | DUT 4 |
| | ON | | | | 1 terminated, 2 to 3 closed, 4 open | |
| 9 | OFF | 4 | Gray | 1 | 1 to 2 closed, 3 to 4 closed | DUT 5 |
| | ON | | | | 1 terminated, 2 to 3 closed, 4 open | |

Table D-6: Configuration of 11713B/C (Option 201) to 8764A/B/C bypass switches (Option T15/T24)

| From 11713B/C (Option 201) | | | | To 8764A/B/C (Option T15/T24) | | |
|----------------------------|-----|-----------------------------|-----------------|-------------------------------|--------------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | Solder Terminal Number | RF Path | Device Under Test (DUT) |
| Attenuator X | LED | Viking Connector Pin Number | Bare Wire Color | | | |
| – | – | 1 (VCC) | Red | C | – | VCC for all 5 DUTs |
| – | – | 2 (GND) | White/Brown | 2 | – | GND for all 5 DUTs |
| 1 | OFF | 5 | Violet | 1 | 1 open, 2 to 3 closed, 4 to 5 closed | DUT 1 |
| | ON | | | | 1 to 2 closed, 3 to 4 closed, 5 open | |
| 2 | OFF | 7 | Black | 1 | 1 open, 2 to 3 closed, 4 to 5 closed | DUT 2 |
| | ON | | | | 1 to 2 closed, 3 to 4 closed, 5 open | |
| 3 | OFF | 9 | Orange | 1 | 1 open, 2 to 3 closed, 4 to 5 closed | DUT 3 |
| | ON | | | | 1 to 2 closed, 3 to 4 closed, 5 open | |
| 4 | OFF | 11 | Brown | 1 | 1 open, 2 to 3 closed, 4 to 5 closed | DUT 4 |
| | ON | | | | 1 to 2 closed, 3 to 4 closed, 5 open | |
| 9 | OFF | 4 | Gray | 1 | 1 open, 2 to 3 closed, 4 to 5 closed | DUT 5 |
| | ON | | | | 1 to 2 closed, 3 to 4 closed, 5 open | |

Note 1: Each table below illustrates the configuration of five switches to the 11713B/C.

Note 2: The number of switches available for connection depends on option selection.

Note 3: Five switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7, 8 & 0) using the same configuration as Attenuator X.

Note 4: 2,000,000 switching cycles at 0.7 A for contact pairs 9 and 0. For more details, please refer to the “Supplemental characteristics” table on page 3.

Table E-1: Configuration of 11713B/C (Option 201)
to 8765A/B/C/D/F SPDT switches (Options 3xx)

| From 11713B/C (Option 201) | | | | To 8765A/B/C/D/F (Option 305/310/315/324) | | |
|----------------------------|-----|-----------------------------|-----------------|---|-----------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path | Device under test (DUT) |
| - | - | 1 (VCC) | Red | 2 and 3 | - | VCC for all 5 DUTs |
| 1 | OFF | 5 | Violet | 1 | 2 to C closed, 1 open | DUT 1 |
| | ON | 6 | Yellow | 4 | 1 to C closed, 2 open | |
| 2 | OFF | 7 | Black | 1 | 2 to C closed, 1 open | DUT 2 |
| | ON | 8 | Green | 4 | 1 to C closed, 2 open | |
| 3 | OFF | 9 | Orange | 1 | 2 to C closed, 1 open | DUT 3 |
| | ON | 10 | Blue | 4 | 1 to C closed, 2 open | |
| 4 | OFF | 11 | Brown | 1 | 2 to C closed, 1 open | DUT 4 |
| | ON | 12 | White | 4 | 1 to C closed, 2 open | |
| 9 | OFF | 4 | Gray | 1 | 2 to C closed, 1 open | DUT 5 |
| | ON | 3 | White/Red | 4 | 1 to C closed, 2 open | |

Table E-2: Configuration of 11713B/C (Option 301)
to 8765A/B/C/D/F SPDT switches (Options 0xx)

| From 11713B/C (Option 301) | | | | To 8765A/B/C/D/F (Option 005/010/015/024) | | |
|----------------------------|-----|---|-----------------------------|---|-----------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | | |
| Attenuator X | LED | Viking connector pin number/ banana jack (rear panel) | 5-pin receptacle pin number | Ribbon cable connector pin number | RF path | Device under test (DUT) |
| - | - | 1 (VCC)/VDC COM | 3 and 4 | 3 and 4 | - | VCC for all 5 DUTs |
| 1 | OFF | 5 | 1 | 1 | 2 to C closed, 1 open | DUT 1 |
| | ON | 6 | 5 | 5 | 1 to C closed, 2 open | |
| 2 | OFF | 7 | 1 | 1 | 2 to C closed, 1 open | DUT 2 |
| | ON | 8 | 5 | 5 | 1 to C closed, 2 open | |
| 3 | OFF | 9 | 1 | 1 | 2 to C closed, 1 open | DUT 3 |
| | ON | 10 | 5 | 5 | 1 to C closed, 2 open | |
| 4 | OFF | 11 | 1 | 1 | 2 to C closed, 1 open | DUT 4 |
| | ON | 12 | 5 | 5 | 1 to C closed, 2 open | |
| 9 | OFF | S9-A | — | 1 | 2 to C closed, 1 open | DUT 5 |
| | ON | S9-B | — | 5 | 1 to C closed, 2 open | |

Note 1: Each table below illustrates the configuration of one switch to the 11713B/C.

Note 2: For switches with Option 161, ground pin 16 opens all paths. Use S9 for Attenuator X or S0 for Attenuator Y.*

* Do not close any path and ground pin 16 simultaneously as this makes the switch buzz.

Note 3: For switches with Option 100, there are no solder terminals available to open all paths.

Note 4: Solder terminal/DIP connector with pin numbers 6, 8, 12 & 14 provides indicator function.

Note 5: Applies to both Option 024 (standard/non-TTL drive) and Option T24 (TTL drive).

Note 6: One additional switch can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7 & 8) using the same configuration as Attenuator X.

Table F-1: Configuration of 11713B/C (Option 201)
to 87104A/B/C/D, 87104P/Q/R, L7104A/B/C & L7204A/B/C SP4T switches (Option 100)

| From 11713B/C (Option 201) | | | | To 87104A/B/C/D, 87104P/Q/R, L7104A/B/C & L7204A/B/C SP4T (Option 100) | |
|----------------------------|-----|-----------------------------|-----------------|--|---------------|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path |
| – | – | 1 (VCC) | Red | 1 | – |
| – | – | 2 (GND) | White/Brown | 15 | – |
| 1 | OFF | 5 | Violet | 5 | 2 to C closed |
| 2 | OFF | 7 | Black | 7 | 3 to C closed |
| 3 | OFF | 9 | Orange | 11 | 5 to C closed |
| 4 | OFF | 11 | Brown | 13 | 6 to C closed |

Table F-2: Configuration of 11713B/C (Option 601)
to 87104A/B/C/D, 87104P/Q/R, L7104A/B/C & L7204A/B/C SP4T switches (Option 161)

| From 11713B/C (Option 601) | | | | To 87104A/B/C/D, 87104P/Q/R, L7104A/B/C & L7204A/B/C SP4T (Option 161) | |
|----------------------------|-----|-----------------------------|-----------------------|--|--|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number | 16-pin DIP pin number | RF path | |
| – | – | 1 (VCC) | 1 | – | |
| – | – | 2 (GND) | 15 | – | |
| 1 | OFF | 5 | 5 | 2 to C closed | |
| 2 | OFF | 7 | 7 | 3 to C closed | |
| 3 | OFF | 9 | 11 | 5 to C closed | |
| 4 | OFF | 11 | 13 | 6 to C closed | |

Note 1: Each table below illustrates the configuration of one switch to the 11713B/C.

Note 2: For switches with Option 161, ground pin 16 opens all paths. Use S9 for Attenuator X or S0 for Attenuator Y.*

* Do not close any path and ground pin 16 simultaneously as this makes the switch to buzz.

Note 3: For switch with Option 100, no solder terminal available to open all paths.

Note 4: Applies to both Option 024 (standard/non-TTL drive) and Option T24 (TTL drive).

Note 5: One additional switch can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7 & 8) using the same configuration as Attenuator X.

Table G-1: Configuration of 11713B/C (Option 201) to 87204A/B/C SP4T switches (Option 100)

| From 11713B/C (Option 201) | | | | To 87204A/B/C (Option 100) | |
|----------------------------|-----|-----------------------------|-----------------|----------------------------|---------------|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path |
| – | – | 1 (VCC) | Red | 1 | – |
| – | – | 2 (GND) | White/Brown | 15 | – |
| 1 | OFF | 5 | Violet | 5 | 2 to C closed |
| | ON | 6 | Yellow | 6 | 2 to C opened |
| 2 | OFF | 7 | Black | 7 | 3 to C closed |
| | ON | 8 | Green | 8 | 3 to C opened |
| 3 | OFF | 9 | Orange | 11 | 5 to C closed |
| | ON | 10 | Blue | 12 | 5 to C opened |
| 4 | OFF | 11 | Brown | 13 | 6 to C closed |
| | ON | 12 | White | 14 | 6 to C opened |

Table G-2: Configuration of 11713B/C (Option 601) to 87204A/B/C SP4T switches (Option 161)

| From 11713B/C (Option 601) | | | | To 87204A/B/C (Option 161) | |
|----------------------------|-----|-----------------------------|-----------------------|----------------------------|--|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number | 16-pin DIP pin number | RF path | |
| – | – | 1 (VCC) | 1 | – | |
| – | – | 2 (GND) | 15 | – | |
| 1 | OFF | 5 | 5 | 2 to C closed | |
| | ON | 6 | 6 | 2 to C opened | |
| 2 | OFF | 7 | 7 | 3 to C closed | |
| | ON | 8 | 8 | 3 to C opened | |
| 3 | OFF | 9 | 11 | 5 to C closed | |
| | ON | 10 | 12 | 5 to C opened | |
| 4 | OFF | 11 | 13 | 6 to C closed | |
| | ON | 12 | 14 | 6 to C opened | |

Note 1: Each table below illustrates the configuration of one switch to the 11713B/C.

Note 2: For switches with Option 161, ground pin 16 opens all paths. Use S9 for Attenuator X or S0 for Attenuator Y.*

* Do not close any path and ground pin 16 simultaneously as this makes the switch to buzz.

Note 3: For switch with Option 100, no solder terminal available to open all paths.

Note 4: Solder terminal/DIP connector with pin numbers 4, 6, 8, 10, 12 & 14 provides indicator function.

Note 5: Applies to both Option 024 (standard/non-TTL drive) and Option T24 (TTL drive).

Table H-1: Configuration of 11713B/C (Option 201)
to 87106A/B/C/D, 87106P/Q/R, L7106A/B/C & L7206A/B/C SP6T switches (Option 100)
and 87406B/Q matrix switch (Option 100)

| From 11713B/C (Option 201 - quantity 2) | | | | To 87106A/B/C/D, 87106P/Q/R, L7106A/B/C & L7206A/B/C SP6T and 87406B/Q (Option 100) | |
|---|-----|-----------------------------|-----------------|---|---------------|
| Front panel pushbutton | | Interface cable | | Solder terminal number | RF path |
| Attenuator X/Y | LED | Viking connector pin number | Bare wire color | | |
| – | – | 1 (VCC) | Red | 1 | – |
| – | – | 2 (GND) | White/Brown | 15 | – |
| 1 | OFF | Cable 1-5 | Violet | 3 | 1 to C closed |
| 2 | OFF | Cable 1-7 | Black | 5 | 2 to C closed |
| 3 | OFF | Cable 1-9 | Orange | 7 | 3 to C closed |
| 4 | OFF | Cable 1-11 | Brown | 9 | 4 to C closed |
| 5 | OFF | Cable 2-5 | Violet | 11 | 5 to C closed |
| 6 | OFF | Cable 2-7 | Black | 13 | 6 to C closed |

Table H-2: Configuration of 11713B/C (Option 401)
to 87106A/B/C/D, 87106P/Q/R, L7106A/B/C & L7206A/B/C SP6T switches (Option 161)
and 87406B/Q matrix switch (Option 161)

| From 11713B/C (Option 401) | | | | To 87106A/B/C/D, 87106P/Q/R, L7106A/B/C & L7206A/B/C SP6T and 87406B/Q (Option 161) | |
|----------------------------|-----|-----------------------------|-----------------------|---|--|
| Front panel pushbutton | | Interface cable | | RF path | |
| Attenuator X/Y | LED | Viking connector pin number | 16-pin DIP pin number | | |
| – | – | 1 (VCC) | 1 | – | |
| – | – | 2 (GND) | 15 | – | |
| 1 | OFF | P1-5 | 3 | 1 to C closed | |
| 2 | OFF | P1-7 | 5 | 2 to C closed | |
| 3 | OFF | P1-9 | 7 | 3 to C closed | |
| 4 | OFF | P1-11 | 9 | 4 to C closed | |
| 5 | OFF | P2-5 | 11 | 5 to C closed | |
| 6 | OFF | P2-7 | 13 | 6 to C closed | |

Note 1: Each table below illustrates the configuration of one switch to the 11713B/C.

Note 2: For switches with Option 161, ground pin 16 opens all paths. Use S9 for Attenuator X or S0 for Attenuator Y.*

* Do not close any path and ground pin 16 simultaneously as this makes the switch to buzz.

Note 3: For switch with Option 100, no solder terminal available to open all paths.

Note 4: Applies to both Option 024 (standard/non-TTL drive) and Option T24 (TTL drive).

Table I-1: Configuration of 11713B/C (Option 201)
to 87206A/B/C SP6T switches (Option 100) & 87606B/Q matrix switch (Option 100)

| From 11713B/C (Option 201 - quantity 2) | | | | To 87206A/B/C & 87606B/Q (Option 100) | |
|---|-----|-----------------------------|-----------------|---------------------------------------|---------------|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X/Y | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path |
| – | – | 1 (VCC) | Red | 1 | – |
| – | – | 2 (GND) | White/Brown | 15 | – |
| 1 | OFF | Cable 1-5 | Violet | 3 | 1 to C closed |
| | ON | Cable 1-6 | Yellow | 4 | 1 to C opened |
| 2 | OFF | Cable 1-7 | Black | 5 | 2 to C closed |
| | ON | Cable 1-8 | Green | 6 | 2 to C opened |
| 3 | OFF | Cable 1-9 | Orange | 7 | 3 to C closed |
| | ON | Cable 1-10 | Blue | 8 | 3 to C opened |
| 4 | OFF | Cable 1-11 | Brown | 9 | 4 to C closed |
| | ON | Cable 1-12 | White | 10 | 5 to C opened |
| 5 | OFF | Cable 2-5 | Violet | 11 | 5 to C closed |
| | ON | Cable 2-6 | Yellow | 12 | 5 to C opened |
| 6 | OFF | Cable 2-7 | Black | 13 | 6 to C closed |
| | ON | Cable 2-8 | Green | 14 | 6 to C opened |

Table I-2: Configuration of 11713B/C (Option 401)
to 87206A/B/C SP6T switches (Option 161) & 87606B/Q matrix switch (Option 161)

| From 11713B/C (Option 401) | | | | To 87206A/B/C & 87606B/Q (Option 161) | |
|----------------------------|-----|-----------------------------|-----------------------|---------------------------------------|--|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X/Y | LED | Viking connector pin number | 16-pin DIP pin number | RF path | |
| – | – | 1 (VCC) | 1 | – | |
| – | – | 2 (GND) | 15 | – | |
| 1 | OFF | P1-5 | 3 | 1 to C closed | |
| | ON | P1-6 | 4 | 1 to C opened | |
| 2 | OFF | P1-7 | 5 | 2 to C closed | |
| | ON | P1-8 | 6 | 2 to C opened | |
| 3 | OFF | P1-9 | 7 | 3 to C closed | |
| | ON | P1-10 | 8 | 3 to C opened | |
| 4 | OFF | P1-11 | 9 | 4 to C closed | |
| | ON | P1-12 | 10 | 4 to C opened | |
| 5 | OFF | P2-5 | 11 | 5 to C closed | |
| | ON | P2-6 | 12 | 5 to C opened | |
| 6 | OFF | P2-7 | 13 | 6 to C closed | |
| | ON | P2-8 | 14 | 6 to C opened | |

Note 1: Each table below illustrates the configuration of one switch to the 11713B/C.

Note 2: With assumption that the initial state of switch's RF path is thru.

Note 3: One additional switch can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7 & 8) using the same configuration as Attenuator X.

Table J-1: Configuration of 11713B/C (Option 001) to 8766K, 8767K & 8768K switches (Option 016)

| From 11713B/C (Option 001) | | | | To 8766K, 8767K & 8768K (Option 016) | | |
|----------------------------|-----|-----------------------------|-----------------------|--------------------------------------|---------------|---------------|
| Front panel pushbutton | | Interface cable | | 8766K | 8767K | 8768K |
| Attenuator X | LED | Viking connector pin number | 10-pin DIP pin number | RF path | RF path | RF path |
| – | – | 1 (VCC) | 10 | – | – | – |
| 1 | OFF | 5 | 1 | Bypass 1 | Bypass 3 | Bypass 4 |
| | ON | 6 | 2 | 1 to C closed | 3 to C closed | 4 to C closed |
| 2 | OFF | 7 | 5 | Bypass 2 | Bypass 1 | Bypass 2 |
| | ON | 8 | 8 | 2 to C closed | 1 to C closed | 2 to C closed |
| 3 | OFF | 9 | 4 | – | Bypass 2 | Bypass 3 |
| | ON | 10 | 9 | – | 2 to C closed | 3 to C closed |
| 4 | OFF | 11 | 6 | – | – | Bypass 1 |
| | ON | 12 | 7 | – | – | 1 to C closed |

Table J-2: Configuration of 11713B/C (Option 101) to 8766K, 8767K & 8768K switches (Option 060)

| From 11713B/C (Option 101) | | | | To 8766K, 8767K & 8768K (Option 060) | | |
|----------------------------|-----|-----------------------------|-----------------------------|--------------------------------------|---------------|---------------|
| Front panel pushbutton | | Interface cable | | 8766K | 8767K | 8768K |
| Attenuator X | LED | Viking connector pin number | Viking connector pin number | RF path | RF path | RF path |
| – | – | 1 (VCC) | 1 | – | – | – |
| 1 | OFF | 5 | 5 | Bypass 1 | Bypass 3 | Bypass 4 |
| | ON | 6 | 6 | 1 to C closed | 3 to C closed | 4 to C closed |
| 2 | OFF | 7 | 7 | Bypass 2 | Bypass 1 | Bypass 2 |
| | ON | 8 | 8 | 2 to C closed | 1 to C closed | 2 to C closed |
| 3 | OFF | 9 | 9 | – | Bypass 2 | Bypass 3 |
| | ON | 10 | 10 | – | 2 to C closed | 3 to C closed |
| 4 | OFF | 11 | 11 | – | – | Bypass 1 |
| | ON | 12 | 12 | – | – | 1 to C closed |

Note 1: Each table below illustrates the configuration of one switch to the 11713B/C.

Note 2: With assumption that initial state of switch's RF path is thru.

Note 3: One additional switch can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7 & 8) using the same configuration as Attenuator X. Use S0 for Attenuator Y and S9 for Attenuator X.

Table K: Configuration of 11713B/C (Option 101) to 8769K SP6T switch (Option 060)

| From 11713B/C (Option 101) | | | | To 8769K (Option 060) |
|----------------------------|-----|-----------------------------|-----------------------------|-----------------------|
| Front panel pushbutton | | Interface cable | | |
| Attenuator X | LED | Viking connector pin number | Viking connector pin number | RF path |
| – | – | 1 (VCC) | 1 | – |
| S9 | OFF | 4 | 4 | Bypass 5 |
| | ON | 3 | 3 | 5 to C closed |
| 1 | OFF | 5 | 5 | Bypass 4 |
| | ON | 6 | 6 | 4 to C closed |
| 2 | OFF | 7 | 7 | Bypass 2 |
| | ON | 8 | 8 | 2 to C closed |
| 3 | OFF | 9 | 9 | Bypass 3 |
| | ON | 10 | 10 | 3 to C closed |
| 4 | OFF | 11 | 11 | Bypass 1 |
| | ON | 12 | 12 | 1 to C closed |

Table L: Configuration of 11713B/C (Option 001) to 8767M & 8768M switches

| From 11713B/C (Option 001) | | | | To 8767M and 8768M | |
|----------------------------|-----|-----------------------------|-----------------------|--------------------|---------------|
| Front panel pushbutton | | Interface cable | | RF path | RF path |
| Attenuator X | LED | Viking connector pin number | 10-pin DIP pin number | RF path | RF path |
| – | – | 1 (VCC) | 10 | – | – |
| 1 | OFF | 5 | 1 | Bypass 3 | Bypass 4 |
| | ON | 6 | 2 | 3 to C closed | 4 to C closed |
| 2 | OFF | 7 | 5 | Bypass 1 | Bypass 2 |
| | ON | 8 | 8 | 1 to C closed | 2 to C closed |
| 3 | OFF | 9 | 4 | Bypass 2 | Bypass 3 |
| | ON | 10 | 9 | 2 to C closed | 3 to C closed |
| 4 | OFF | 11 | 6 | – | Bypass 1 |
| | ON | 12 | 7 | – | 1 to C closed |

Table M: Configuration of 11713B/C (Option 701) to 8769M SP6T switches

| From 11713B/C (Option 701) | | | | To 8769M |
|----------------------------|-----|-----------------------------|-----------------------|---------------|
| Front panel pushbutton | | Interface cable | | |
| Attenuator X | LED | Viking connector pin number | 14-pin DIP pin number | RF path |
| – | – | 1 (VCC) | 12 | – |
| S9 | OFF | 4 | 14 | Bypass 5 |
| | ON | 3 | 13 | 5 to C closed |
| 1 | OFF | 5 | 3 | Bypass 4 |
| | ON | 6 | 4 | 4 to C closed |
| 2 | OFF | 7 | 7 | Bypass 2 |
| | ON | 8 | 10 | 2 to C closed |
| 3 | OFF | 9 | 6 | Bypass 3 |
| | ON | 10 | 11 | 3 to C closed |
| 4 | OFF | 11 | 8 | Bypass 1 |
| | ON | 12 | 9 | 1 to C closed |

Note 1: Each table below illustrates the configuration of four switches to the 11713B/C.

Note 2: For standard/non-TTL drive only.

Note 3: Four additional switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7 & 8) using the same configuration as Attenuator X.

Note 4: Do not drive using S9 or S0 outputs from either the banana plug outputs, or from pins 3 or 4 within the Attenuator X and Y Viking sockets, both located on the rear panel of the 11713B/C

Table N-1: Configuration of 11713B/C (Option 201)
to L7222C & 87222C/D/E/R DPDT switches (Option 100)

| From 11713B/C (Option 201) | | | | To L7222C & 87222C/D/E/R (Option 100) | | |
|----------------------------|-----|-----------------------------|-----------------|---------------------------------------|------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path | Device under test (DUT) |
| – | – | 1 (VCC) | Red | 1 | – | VCC for all 4 DUTs |
| – | – | 2 (GND) | White/Brown | 9 | – | GND for all 4 DUTs |
| 1 | OFF | 5 | Violet | 3 | 1 to 2 closed, 3 to 4 closed | DUT 1 |
| | ON | 6 | Yellow | 5 | 1 to 4 closed, 2 to 3 closed | |
| 2 | OFF | 7 | Black | 3 | 1 to 2 closed, 3 to 4 closed | DUT 2 |
| | ON | 8 | Green | 5 | 1 to 4 closed, 2 to 3 closed | |
| 3 | OFF | 9 | Orange | 3 | 1 to 2 closed, 3 to 4 closed | DUT 3 |
| | ON | 10 | Blue | 5 | 1 to 4 closed, 2 to 3 closed | |
| 4 | OFF | 11 | Brown | 3 | 1 to 2 closed, 3 to 4 closed | DUT 4 |
| | ON | 12 | White | 5 | 1 to 4 closed, 2 to 3 closed | |

Table N-2: Configuration of 11713B/C (Option 801)
to L7222C & 87222C/D/E/R DPDT switches (Option 161)

| From 11713B/C (Option 801) | | | | To L7222C & 87222C/D/E/R (Option 161) | |
|----------------------------|-----|-----------------------------|-----------------------|---------------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number | 10-pin DIP pin number | RF path | Device under test (DUT) |
| – | – | 1 (VCC) | 1 | – | VCC for all 4 DUTs |
| – | – | 2 (GND) | 9 | – | GND for all 4 DUTs |
| 1 | OFF | 5 | 3 | 1 to 2 closed, 3 to 4 closed | DUT 1 |
| | ON | 6 | 5 | 1 to 4 closed, 2 to 3 closed | |
| 2 | OFF | 7 | 3 | 1 to 2 closed, 3 to 4 closed | DUT 2 |
| | ON | 8 | 5 | 1 to 4 closed, 2 to 3 closed | |
| 3 | OFF | 9 | 3 | 1 to 2 closed, 3 to 4 closed | DUT 3 |
| | ON | 10 | 5 | 1 to 4 closed, 2 to 3 closed | |
| 4 | OFF | 11 | 3 | 1 to 2 closed, 3 to 4 closed | DUT 4 |
| | ON | 12 | 5 | 1 to 4 closed, 2 to 3 closed | |

Note 1: Each table below illustrates the configuration of five switches to the 11713B/C.

Note 2: For standard/non-TTL drive only.

Note 3: Five additional switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7, 8 & 0) using the same configuration as Attenuator X.

Note 4: 2,000,000 switching cycles at 0.7 A for contact pairs 9 and 0. For more details, please refer to the "Supplemental characteristics" table on page 3.

Table O-1: Configuration of 11713B/C (Option 201) to N1810U/UL SPDT switch (Option 202)

| From 11713B/C (Option 201) | | | | To N1810U/UL (Option 202) | | |
|----------------------------|-----|-----------------------------|-----------------|---------------------------|-----------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path | Device under test (DUT) |
| – | – | 1 (VCC) | Red | +V | – | VCC for all 5 DUTs |
| – | – | 2 (GND) | White/Brown | GND | – | GND for all 5 DUTs |
| 1 | OFF | 5 | Violet | A | 1 to C closed, 2 open | DUT 1 |
| | ON | 6 | Yellow | B | 2 to C closed, 1 open | |
| 2 | OFF | 7 | Black | A | 1 to C closed, 2 open | DUT 2 |
| | ON | 8 | Green | B | 2 to C closed, 1 open | |
| 3 | OFF | 9 | Orange | A | 1 to C closed, 2 open | DUT 3 |
| | ON | 10 | Blue | B | 2 to C closed, 1 open | |
| 4 | OFF | 11 | Brown | A | 1 to C closed, 2 open | DUT 4 |
| | ON | 12 | White | B | 2 to C closed, 1 open | |
| 9 | OFF | 4 | Gray | A | 1 to C closed, 2 open | DUT 5 |
| | ON | 3 | White/Red | B | 2 to C closed, 1 open | |

Table O-2: Configuration of 11713B/C (Option 501) to N1810U/UL SPDT switch (Option 201)

| From 11713B/C (Option 501) | | | | To N1810U/UL (Option 201) | |
|----------------------------|-----|--|-----------------------|---------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number/banana jack (rear panel) | 9-Pin Dsub pin number | RF path | Device under test (DUT) |
| – | – | 1 (VCC)/VDC COM | 5 | – | VCC for all 5 DUTs |
| – | – | 2 (GND)/GND | 1 | – | GND for all 5 DUTs |
| 1 | OFF | 5 | 4 | 1 to C closed, 2 open | DUT 1 |
| | ON | 6 | 3 | 2 to C closed, 1 open | |
| 2 | OFF | 7 | 4 | 1 to C closed, 2 open | DUT 2 |
| | ON | 8 | 3 | 2 to C closed, 1 open | |
| 3 | OFF | 9 | 4 | 1 to C closed, 2 open | DUT 3 |
| | ON | 10 | 3 | 2 to C closed, 1 open | |
| 4 | OFF | 11 | 4 | 1 to C closed, 2 open | DUT 4 |
| | ON | 12 | 3 | 2 to C closed, 1 open | |
| 9 | OFF | S9-B | 4 | 1 to C closed, 2 open | DUT 5 |
| | ON | S9-A | 3 | 2 to C closed, 1 open | |

Note 1: Each table below illustrates the configuration of five switches to the 11713B/C.

Note 2: For standard/non-TTL drive only.

Note 3: Five additional switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7, 8 & 0) using the same configuration as Attenuator X.

Note 4: 2,000,000 switching cycles at 0.7 A for contact pairs 9 and 0. For more details, please refer to the "Supplemental characteristics" table on page 3.

Table O-3: Configuration of 11713B/C (Option 201) to N1810T/TL SPDT (Option 202)

| From 11713A/B/C (Option 201) | | | | To N1810T/TL (Option 202) | | |
|------------------------------|-----|-----------------------------|-----------------|---------------------------|-----------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path | Device under test (DUT) |
| – | – | 1 (VCC) | Red | +V | – | VCC for all 5 DUTs |
| – | – | 2 (GND) | White/Brown | GND | – | GND for all 5 DUTs |
| 1 | OFF | 5 | Violet | A | 1 to C closed, 2 terminated | DUT 1 |
| | ON | 6 | Yellow | B | 2 to C closed, 1 terminated | |
| 2 | OFF | 7 | Black | A | 1 to C closed, 2 terminated | DUT 2 |
| | ON | 8 | Green | B | 2 to C closed, 1 terminated | |
| 3 | OFF | 9 | Orange | A | 1 to C closed, 2 terminated | DUT 3 |
| | ON | 10 | Blue | B | 2 to C closed, 1 terminated | |
| 4 | OFF | 11 | Brown | A | 1 to C closed, 2 terminated | DUT 4 |
| | ON | 12 | White | B | 2 to C closed, 1 terminated | |
| 9 | OFF | 4 | Gray | A | 1 to C closed, 2 terminated | DUT 5 |
| | ON | 3 | White/Red | B | 2 to C closed, 2 terminated | |

Table O-4: Configuration of 11713B/C (Option 501) to N1810T/TL SPDT switch (Option 201)

| From 11713A/B/C (Option 501) | | | | To N1810T/TL (Option 201) | |
|------------------------------|-----|--|-----------------------|-----------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number/banana jack (rear panel) | 9-pin Dsub pin number | RF path | Device under test (DUT) |
| – | – | 1 (VCC)/VDC COM | 5 | – | VCC for all 5 DUTs |
| – | – | 2 (GND)/GND | 1 | – | GND for all 5 DUTs |
| 1 | OFF | 5 | 4 | 1 to C closed, 2 terminated | DUT 1 |
| | ON | 6 | 3 | 2 to C closed, 1 terminated | |
| 2 | OFF | 7 | 4 | 1 to C closed, 2 terminated | DUT 2 |
| | ON | 8 | 3 | 2 to C closed, 1 terminated | |
| 3 | OFF | 9 | 4 | 1 to C closed, 2 terminated | DUT 3 |
| | ON | 10 | 3 | 2 to C closed, 1 terminated | |
| 4 | OFF | 11 | 4 | 1 to C closed, 2 terminated | DUT 4 |
| | ON | 12 | 3 | 2 to C closed, 1 terminated | |
| 9 | OFF | S9-B | 4 | 1 to C closed, 2 terminated | DUT 5 |
| | ON | S9-A | 3 | 2 to C closed, 2 terminated | |

Note 1: Each table below illustrates the configuration of two switches to the 11713B/C.

Note 2: For Option 401 (TTL drive) only.

Note 3: Two additional switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7 & 8) using the same configuration as Attenuator X.

Table O-5: Configuration of 11713B/C (Option 201) to N1810U/UL SPDT (Option 202/401)

| From 11713B/C (Option 201) | | | | To N1810U/UL (Option 202/401) | | |
|----------------------------|-----|-----------------------------|-----------------|-------------------------------|-----------------------|-------------------------|
| Front panel pushbutton | | Interface Cable | | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path | Device under test (DUT) |
| – | – | 1 (VCC) | Red | +V | – | VCC for all 2 DUTs |
| – | – | 2 (GND) | White/Brown | GND | – | GND for all 2 DUTs |
| 1 | OFF | 5 | Violet | A | 1 to C closed, 2 open | DUT1 |
| 2 | ON | 7 | Black | B | | |
| 1 | ON | 5 | Violet | A | 2 to C closed, 1 open | |
| 2 | OFF | 7 | Black | B | | |
| 3 | OFF | 9 | Orange | A | 1 to C closed, 2 open | DUT2 |
| 4 | ON | 11 | Brown | B | | |
| 3 | ON | 9 | Orange | A | 2 to C closed, 1 open | |
| 4 | OFF | 11 | Brown | B | | |

Table O-6: Configuration of 11713B/C (Option 502) to N1810U/UL SPDT switch (Option 201/401)

| From 11713B/C (Option 502) | | | | To N1810U/UL (Option 201/401) | |
|----------------------------|-----|---|-----------------------|-------------------------------|-------------------------|
| Front panel pushbutton | | Interface Cable | | | |
| Attenuator X | LED | Viking connector pin number/ banana jack (rear panel) | 9-pin Dsub pin number | RF path | Device under test (DUT) |
| – | – | 1 (VCC)/VDC COM | 5 | – | VCC for all 2 DUTs |
| – | – | 2 (GND)/GND | 1 | – | GND for all 2 DUTs |
| 1 | OFF | 5 | 4 | 1 to C closed, 2 open | DUT1 |
| 2 | ON | 7 | 3 | | |
| 1 | ON | 5 | 4 | 2 to C closed, 1 open | |
| 2 | OFF | 7 | 3 | | |
| 3 | OFF | 9 | 4 | 1 to C closed, 2 open | DUT2 |
| 4 | ON | 11 | 3 | | |
| 3 | ON | 9 | 4 | 2 to C closed, 1 open | |
| 4 | OFF | 11 | 3 | | |

Note 1: Each table below illustrates the configuration of two switches to the 11713B/C.

Note 2: For Option 401 (TTL drive) only.

Note 3: Two additional switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7 & 8) using the same configuration as Attenuator X.

Table O-7: Configuration of 11713B/C (Option 201) to N1810T/TL SPDT switch (Option 202/401)

| From 11713A/B/C (Option 201) | | | | To N1810T/TL (Option 202/401) | | |
|------------------------------|-----|-----------------------------|-----------------|-------------------------------|-----------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path | Device under test (DUT) |
| – | – | 1 (VCC) | Red | +V | – | VCC for all 2 DUTs |
| – | – | 2 (GND) | White/Brown | GND | – | GND for all 2 DUTs |
| 1 | OFF | 5 | Violet | A | 1 to C closed, 2 terminated | DUT1 |
| 2 | ON | 7 | Black | B | | |
| 1 | ON | 5 | Violet | A | 2 to C closed, 1 terminated | |
| 2 | OFF | 7 | Black | B | | |
| 3 | OFF | 9 | Orange | A | 1 to C closed, 2 terminated | DUT2 |
| 4 | ON | 11 | Brown | B | | |
| 3 | ON | 9 | Orange | A | 2 to C closed, 1 terminated | |
| 4 | OFF | 11 | Brown | B | | |

Table O-8: Configuration of 11713B/C (Option 502) to N1810T/TL SPDT switch (Option 201/401)

| From 11713A/B/C (Option 502) | | | | To N1810T/TL (Option 201/401) | |
|------------------------------|-----|---|--------------------------|-------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number/ banana jack (rear panel) | 9-pin Dsub pin number | RF path | Device under test (DUT) |
| – | – | 1 (VCC)/VDC COM | 5 | – | VCC for all 2 DUTs |
| – | – | 2 (GND)/GND | 1 | – | GND for all 2 DUTs |
| 1 | OFF | 5 | 4 | 1 to C closed, 2 terminated | DUT1 |
| 2 | ON | 7 | 3 | | |
| 1 | ON | 5 | 4 | 2 to C closed, 1 terminated | |
| 2 | OFF | 7 | 3 | | |
| 3 | OFF | 9 | 4 | 1 to C closed, 2 terminated | DUT2 |
| 4 | ON | 11 | 3 | | |
| 3 | ON | 9 | 4 | 2 to C closed, 1 terminated | |
| 4 | OFF | 11 | 3 | | |

Note 1: Each table below illustrates configuration of five switches to 11713B/C.

Note 2: For standard/non TTL drive only.

Note 3: Five additional switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7, 8 & 0) using the same configuration as Attenuator X.

Table O-9: Configuration of 11713B/C (Option 201) to N1812U/UL bypass switch (Option 202)

| From 11713B/C (Option 201) | | | | To N1812U/UL (Option 202) | | |
|----------------------------|-----|-----------------------------|-----------------|---------------------------|---------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path | Device under test (DUT) |
| – | – | 1 (VCC) | Red | +V | – | VCC for all 5 DUTs |
| – | – | 2 (GND) | White/Brown | GND | – | GND for all 5 DUTs |
| 1 | OFF | 5 | Violet | A | 1 to open, 2 to 3, 4 to 5 | DUT 1 |
| | ON | 6 | Yellow | B | 1 to 2, 3 to 4, 5 to open | |
| 2 | OFF | 7 | Black | A | 1 to open, 2 to 3, 4 to 5 | DUT 2 |
| | ON | 8 | Green | B | 1 to 2, 3 to 4, 5 to open | |
| 3 | OFF | 9 | Orange | A | 1 to open, 2 to 3, 4 to 5 | DUT 3 |
| | ON | 10 | Blue | B | 1 to 2, 3 to 4, 5 to open | |
| 4 | OFF | 11 | Brown | A | 1 to open, 2 to 3, 4 to 5 | DUT 4 |
| | ON | 12 | White | B | 1 to 2, 3 to 4, 5 to open | |
| 9 | OFF | 4 | Gray | A | 1 to open, 2 to 3, 4 to 5 | DUT 5 |
| | ON | 3 | White/Red | B | 1 to 2, 3 to 4, 5 to open | |

Table O-10: Configuration of 11713B/C (Option 501) to N1812U/UL bypass switch (Option 201)

| From 11713B/C (Option 501) | | | | To N1812U/UL (Option 201) | |
|----------------------------|-----|--|-----------------------|---------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number/banana jack (rear panel) | 9-pin Dsub pin number | RF path | Device under test (DUT) |
| – | – | 1 (VCC)/VDC COM | 5 | – | VCC for all 5 DUTs |
| – | – | 2 (GND)/GND | 1 | – | GND for all 5 DUTs |
| 1 | OFF | 5 | 4 | 1 to open, 2 to 3, 4 to 5 | DUT 1 |
| | ON | 6 | 3 | 1 to 2, 3 to 4, 5 to open | |
| 2 | OFF | 7 | 4 | 1 to open, 2 to 3, 4 to 5 | DUT 2 |
| | ON | 8 | 3 | 1 to 2, 3 to 4, 5 to open | |
| 3 | OFF | 9 | 4 | 1 to open, 2 to 3, 4 to 5 | DUT 3 |
| | ON | 10 | 3 | 1 to 2, 3 to 4, 5 to open | |
| 4 | OFF | 11 | 4 | 1 to open, 2 to 3, 4 to 5 | DUT 4 |
| | ON | 12 | 3 | 1 to 2, 3 to 4, 5 to open | |
| 9 | OFF | S9-B | 4 | 1 to open, 2 to 3, 4 to 5 | DUT 5 |
| | ON | S9-A | 3 | 1 to 2, 3 to 4, 5 to open | |

Note 1: Each table below illustrates configuration of five switches to 11713B/C.

Note 2: For standard/non TTL drive only.

Note 3: Five additional switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7, 8 & 0) using the same configuration as Attenuator X.

Note 4: 2,000,000 switching cycles at 0.7 A for contact pairs 9 and 0. For more details, please refer to the “Supplemental characteristics” table on page 3.

Table O-11: Configuration of 11713B/C (Option 201) to N1811T/TL bypass switch (Option 202)

| From 11713B/C (Option 201) | | | | To N1811T/TL (Option 202) | | |
|----------------------------|-----|-----------------------------|-----------------|---------------------------|---------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path | Device under test (DUT) |
| – | – | 1 (VCC) | Red | +V | – | VCC for all 5 DUTs |
| – | – | 2 (GND) | White/Brown | GND | – | GND for all 5 DUTs |
| 1 | OFF | 5 | Violet | A | 1 to 2, 3 to 4 | DUT 1 |
| | ON | 6 | Yellow | B | 1 terminated, 2 to 3, 4 to open | |
| 2 | OFF | 7 | Black | A | 1 to 2, 3 to 4 | DUT 2 |
| | ON | 8 | Green | B | 1 terminated, 2 to 3, 4 to open | |
| 3 | OFF | 9 | Orange | A | 1 to 2, 3 to 4 | DUT 3 |
| | ON | 10 | Blue | B | 1 terminated, 2 to 3, 4 to open | |
| 4 | OFF | 11 | Brown | A | 1 to 2, 3 to 4 | DUT 4 |
| | ON | 12 | White | B | 1 terminated, 2 to 3, 4 to open | |
| 9 | OFF | 4 | Gray | A | 1 to 2, 3 to 4 | DUT 5 |
| | ON | 3 | White/Red | B | 1 terminated, 2 to 3, 4 to open | |

Table O-12: Configuration of 11713B/C (Option 501) to N1811T/TL bypass switch (Option 201)

| From 11713B/C (Option 501) | | | | To N1811T/TL (Option 201) | |
|----------------------------|-----|--|-----------------------|---------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number/banana jack (rear panel) | 9-pin Dsub pin number | RF path | Device under test (DUT) |
| – | – | 1 (VCC)/VDC COM | 5 | – | VCC for all 5 DUTs |
| – | – | 2 (GND)/GND | 1 | – | GND for all 5 DUTs |
| 1 | OFF | 5 | 4 | 1 to 2, 3 to 4 | DUT 1 |
| | ON | 6 | 3 | 1 terminated, 2 to 3, 4 to open | |
| 2 | OFF | 7 | 4 | 1 to 2, 3 to 4 | DUT 2 |
| | ON | 8 | 3 | 1 terminated, 2 to 3, 4 to open | |
| 3 | OFF | 9 | 4 | 1 to 2, 3 to 4 | DUT 3 |
| | ON | 10 | 3 | 1 terminated, 2 to 3, 4 to open | |
| 4 | OFF | 11 | 4 | 1 to 2, 3 to 4 | DUT 4 |
| | ON | 12 | 3 | 1 terminated, 2 to 3, 4 to open | |
| 9 | OFF | S9-B | 4 | 1 to 2, 3 to 4 | DUT 5 |
| | ON | S9-A | 3 | 1 terminated, 2 to 3, 4 to open | |

Note 1: Each table below illustrates configuration of two switches to 11713B/C.

Note 2: For Option 401 (TTL drive) only.

Note 3: Two additional switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7 & 8) using the same configuration as Attenuator X.

Table O-13: Configuration of 11713B/C (Option 201) to N1812U/UL bypass switch (Option 202/401)

| From 11713B/C (Option 201) | | | | To N1812U/UL (Option 202/401) | | |
|----------------------------|-----|-----------------------------|-----------------|-------------------------------|---------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path | Device under test (DUT) |
| – | – | 1 (VCC) | Red | +V | – | VCC for all 2 DUTs |
| – | – | 2 (GND) | White/Brown | GND | – | GND for all 2 DUTs |
| 1 | OFF | 5 | Violet | A | 1 to open, 2 to 3, 4 to 5 | DUT1 |
| 2 | ON | 7 | Black | B | | |
| 1 | ON | 5 | Violet | A | 1 to 2, 3 to 4, 5 to open | |
| 2 | OFF | 7 | Black | B | | |
| 3 | OFF | 9 | Orange | A | 1 to open, 2 to 3, 4 to 5 | DUT2 |
| 4 | ON | 11 | Brown | B | | |
| 3 | ON | 9 | Orange | A | 1 to 2, 3 to 4, 5 to open | |
| 4 | OFF | 11 | Brown | B | | |

Table O-14: Configuration of 11713B/C (Option 502) to N1812U/UL bypass switch (Option 201/401)

| From 11713B/C (Option 502) | | | | To N1812U/UL (Option 201/401) | |
|----------------------------|-----|---|--------------------------|-------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number/ banana jack (rear panel) | 9-pin Dsub pin number | RF path | Device under test (DUT) |
| – | – | 1 (VCC)/VDC COM | 5 | – | VCC for all 2 DUTs |
| – | – | 2 (GND)/GND | 1 | – | GND for all 2 DUTs |
| 1 | OFF | 5 | 4 | 1 to open, 2 to 3, 4 to 5 | DUT1 |
| 2 | ON | 7 | 3 | | |
| 1 | ON | 5 | 4 | 1 to 2, 3 to 4, 5 to open | |
| 2 | OFF | 7 | 3 | | |
| 3 | OFF | 9 | 4 | 1 to open, 2 to 3, 4 to 5 | DUT2 |
| 4 | ON | 11 | 3 | | |
| 3 | ON | 9 | 4 | 1 to 2, 3 to 4, 5 to open | |
| 4 | OFF | 11 | 3 | | |

Note 1: Each table below illustrates configuration of two switches to 11713B/C.

Note 2: For Option 401 (TTL drive) only.

Note 3: Two additional switches can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7 & 8) using the same configuration as Attenuator X.

Table O-15: Configuration of 11713B/C (Option 201) to N1811T/TL bypass switch (Option 202/401)

| From 11713B/C (Option 201) | | | | To N1811T/TL (Option 202/401) | | |
|----------------------------|-----|-----------------------------|-----------------|-------------------------------|---------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | | |
| Attenuator X | LED | Viking connector pin number | Bare wire color | Solder terminal number | RF path | Device under test (DUT) |
| – | – | 1 (VCC) | Red | +V | – | VCC for all 2 DUTs |
| – | – | 2 (GND) | White/Brown | GND | – | GND for all 2 DUTs |
| 1 | OFF | 5 | Violet | A | 1 to 2, 3 to 4 | DUT1 |
| 2 | ON | 7 | Black | B | | |
| 1 | ON | 5 | Violet | A | 1 terminated, 2 to 3, 4 to open | |
| 2 | OFF | 7 | Black | B | | |
| 3 | OFF | 9 | Orange | A | 1 to 2, 3 to 4 | DUT2 |
| 4 | ON | 11 | Brown | B | | |
| 3 | ON | 9 | Orange | A | 1 terminated, 2 to 3, 4 to open | |
| 4 | OFF | 11 | Brown | B | | |

Table O-16: Configuration of 11713B/C (Option 502) to N1811T/TL bypass switch (Option 201/401)

| From 11713B/C (Option 502) | | | | To N1811T/TL (Option 201/401) | |
|----------------------------|-----|--|-----------------------|---------------------------------|-------------------------|
| Front panel pushbutton | | Interface cable | | | |
| Attenuator X | LED | Viking connector pin number/ banana jack (rear panel) | 9-pin Dsub pin number | RF path | Device under test (DUT) |
| – | – | 1 (VCC)/VDC COM | 5 | – | VCC for all 2 DUTs |
| – | – | 2 (GND)/GND | 1 | – | GND for all 2 DUTs |
| 1 | OFF | 5 | 4 | 1 to 2, 3 to 4 | DUT1 |
| 2 | ON | 7 | 3 | | |
| 1 | ON | 5 | 4 | 1 terminated, 2 to 3, 4 to open | |
| 2 | OFF | 7 | 3 | | |
| 3 | OFF | 9 | 4 | 1 to 2, 3 to 4 | DUT2 |
| 4 | ON | 11 | 3 | | |
| 3 | ON | 9 | 4 | 1 terminated, 2 to 3, 4 to open | |
| 4 | OFF | 11 | 3 | | |

Configuration Information for Attenuators

Note 1: Each table below illustrates the configuration of one attenuator to the 11713B/C.

Note 2: One additional attenuator can be driven by Attenuator Y (front panel pushbuttons 5, 6, 7 & 8) using the same configuration as Attenuator X.

Note 3: To drive multiple sections of attenuator with Option 011 (5 V operating supply voltage) simultaneously, refer to respective attenuator data sheet for minimum voltage required (user defined terminal to be used), or add an interval delay for each section, refer to respective attenuator data sheet for switching speed.

Table P-1: Configuration of 11713B/C (Option 001)
to 8494G/H, 8495G/H, 8496G/H, 8495K & 8497K programmable attenuators (Option 016)

| From 11713B/C (Option 001) | | | | To attenuators (Option 016) | | | | |
|----------------------------|-----|-----------------------------|-----------------------|-----------------------------|---------|---------|-------|-------|
| Front panel pushbutton | | Interface cable | | 8494G/H | 8495G/H | 8496G/H | 8495K | 8497K |
| Attenuator X | LED | Viking connector pin number | 10-pin DIP pin number | Attenuation (dB) | | | | |
| – | – | 1 (VCC) | 10 | – | – | – | – | – |
| 1 | OFF | 5 | 1 | 0 | 0 | 0 | 0 | 0 |
| | ON | 6 | 2 | 1 | 10 | 10 | 10 | 10 |
| 2 | OFF | 7 | 5 | 0 | 0 | 0 | 0 | 0 |
| | ON | 8 | 8 | 2 | 20 | 20 | 20 | 20 |
| 3 | OFF | 9 | 4 | 0 | 0 | 0 | 0 | 0 |
| | ON | 10 | 9 | 4 | 40 | 40 | 20 | 30 |
| 4 | OFF | 11 | 6 | 0 | – | 0 | 0 | 0 |
| | ON | 12 | 7 | 4 | – | 40 | 20 | 30 |

Table P-2: Configuration of 11713B/C (Option 101)
to 8494G/H, 8495G/H, 8496G/H, 8495K & 8497K programmable attenuators (Option 060)

| From 11713B/C (Option 101) | | | | To attenuators (Option 060) | | | | |
|----------------------------|-----|-----------------------------|-----------------------------|-----------------------------|---------|---------|-------|-------|
| Front panel pushbutton | | Interface cable | | 8494G/H | 8495G/H | 8496G/H | 8495K | 8497K |
| Attenuator X | LED | Viking connector pin number | Viking connector pin number | Attenuation (dB) | | | | |
| – | – | 1 (VCC) | 1 | – | – | – | – | – |
| 1 | OFF | 5 | 5 | 0 | 0 | 0 | 0 | 0 |
| | ON | 6 | 6 | 1 | 10 | 10 | 10 | 10 |
| 2 | OFF | 7 | 7 | 0 | 0 | 0 | 0 | 0 |
| | ON | 8 | 8 | 2 | 20 | 20 | 20 | 20 |
| 3 | OFF | 9 | 9 | 0 | 0 | 0 | 0 | 0 |
| | ON | 10 | 10 | 4 | 40 | 40 | 20 | 30 |
| 4 | OFF | 11 | 11 | 0 | – | 0 | 0 | 0 |
| | ON | 12 | 12 | 4 | – | 40 | 20 | 30 |

Table Q: Configuration of 11713B/C (Option 001)
to 84904K/L/M, 84905M, 84906K/L, 84907K/L & 84908M programmable attenuators

| From 11713B/C (Option 001) | | | | To attenuators | | | | |
|----------------------------|-----|-----------------------------|-----------------------|------------------|--------|----------|----------|--------|
| Front panel pushbutton | | Interface cable | | 84904K/L/M | 84905M | 84906K/L | 84907K/L | 84908M |
| Attenuator X | LED | Viking connector pin number | 10-pin DIP pin number | Attenuation (dB) | | | | |
| – | – | 1 (VCC) | 10 | – | – | – | – | – |
| 1 | OFF | 5 | 1 | 0 | 0 | 0 | 0 | 0 |
| | ON | 6 | 2 | 1 | 10 | 10 | 10 | 5 |
| 2 | OFF | 7 | 5 | 0 | 0 | 0 | 0 | 0 |
| | ON | 8 | 8 | 2 | 20 | 20 | 20 | 10 |
| 3 | OFF | 9 | 4 | 0 | 0 | 0 | 0 | 0 |
| | ON | 10 | 9 | 4 | 30 | 30 | 40 | 20 |
| 4 | OFF | 11 | 6 | 0 | – | 0 | – | 0 |
| | ON | 12 | 7 | 4 | – | 30 | – | 30 |

Interface Cable Drawings

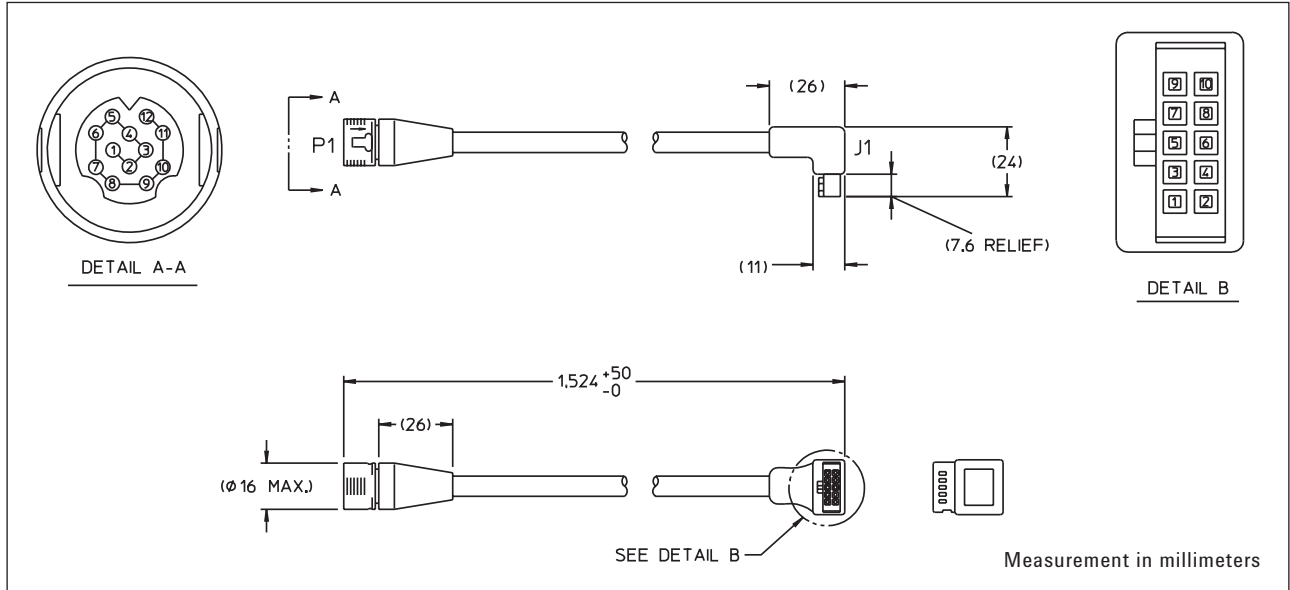


Figure 1. Option 001 viking connector to 10-pin DIP connector

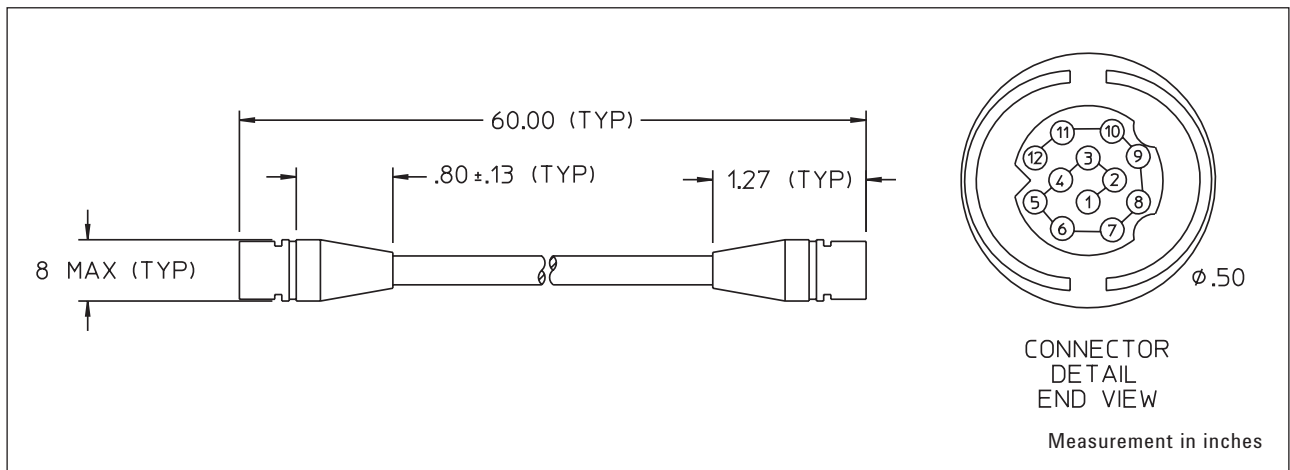


Figure 2. Option 101 viking connector to viking connector

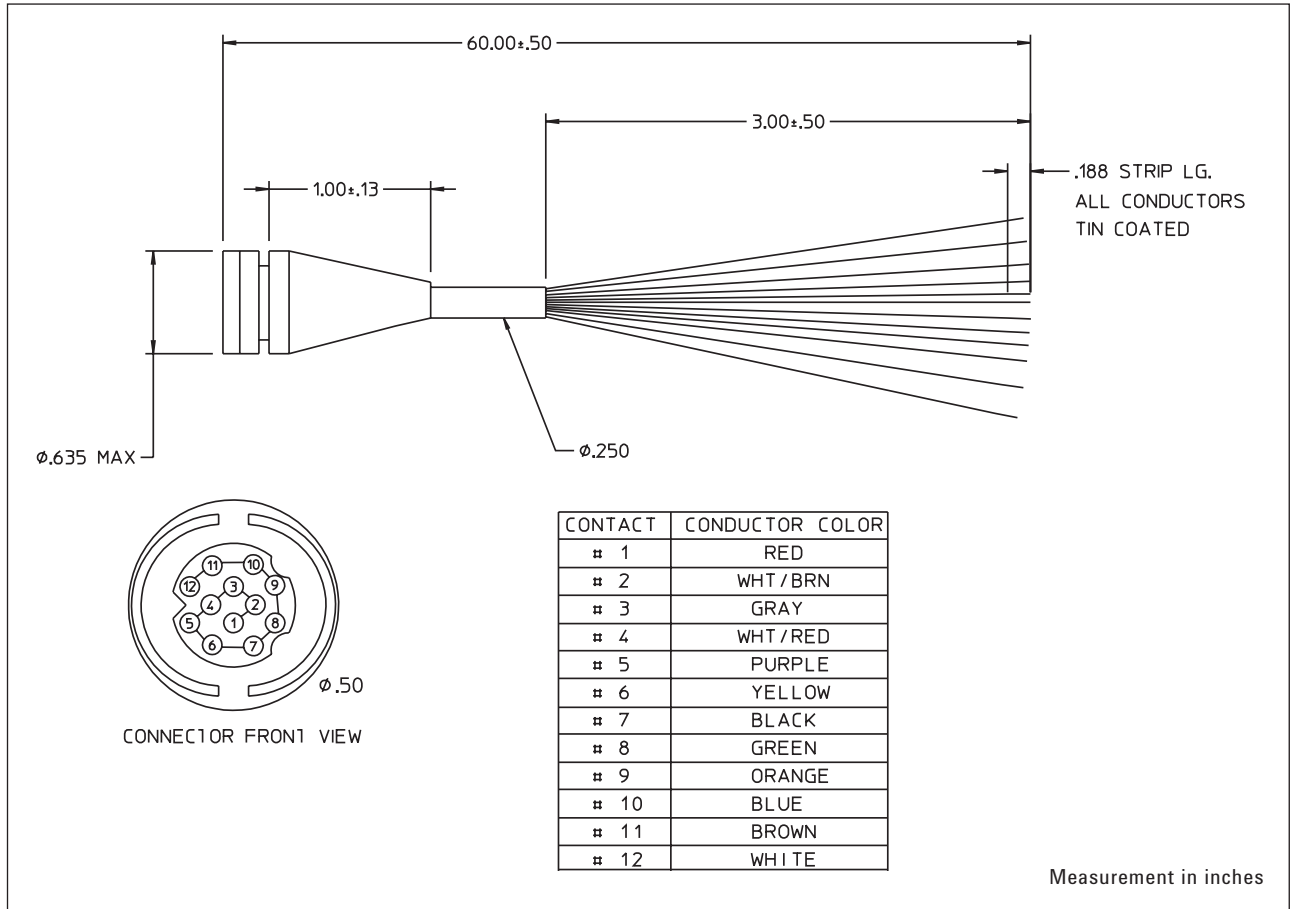


Figure 3. Option 201 viking connector to 12-pin conductor cable, bare wire

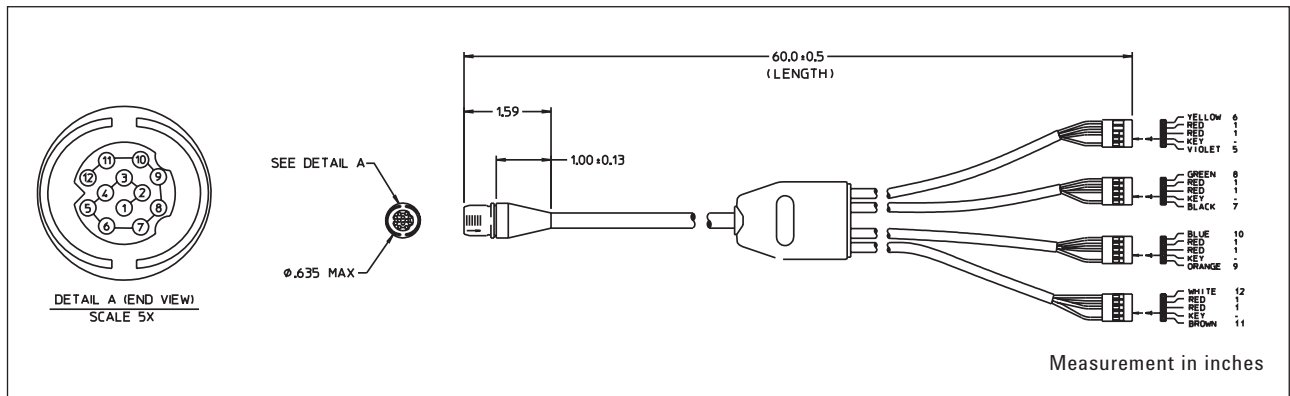


Figure 4. Option 301 viking connector to 4 ribbon cables

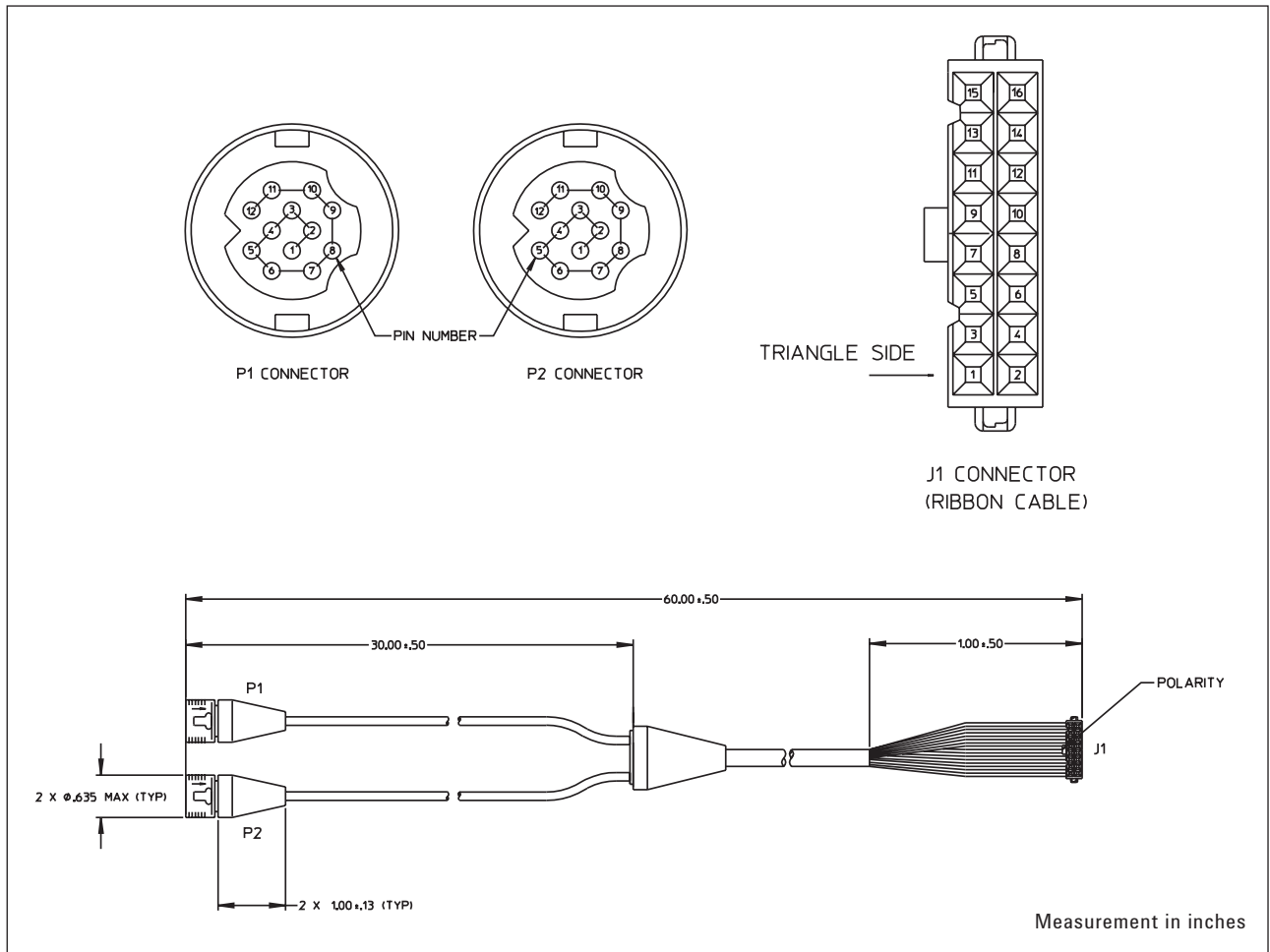


Figure 5. Option 401 dual-viking connector to 16-pin DIP connector

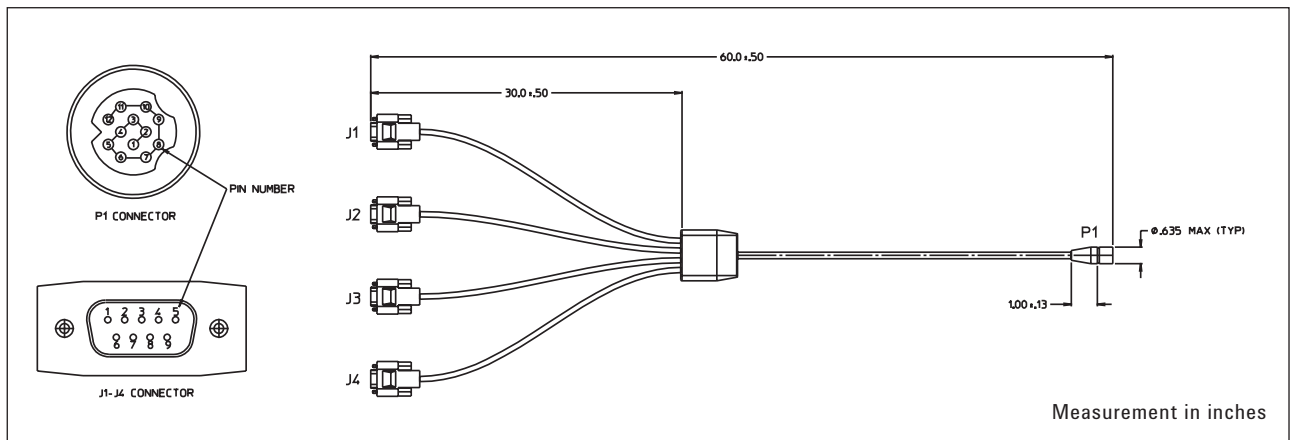


Figure 6. Option 501 viking connector to (4) 9-pin Dsub connectors

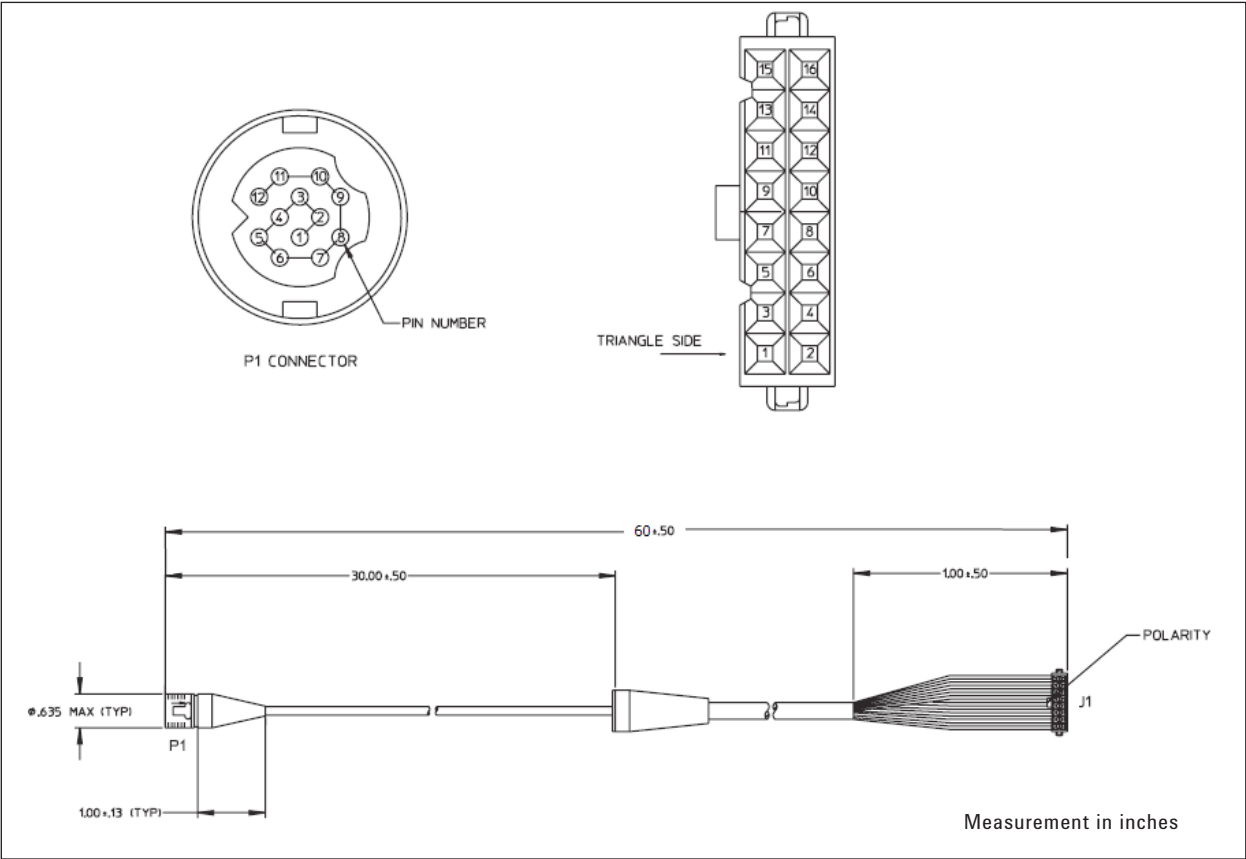


Figure 7. Option 601 viking connector to 16-pin DIP connector

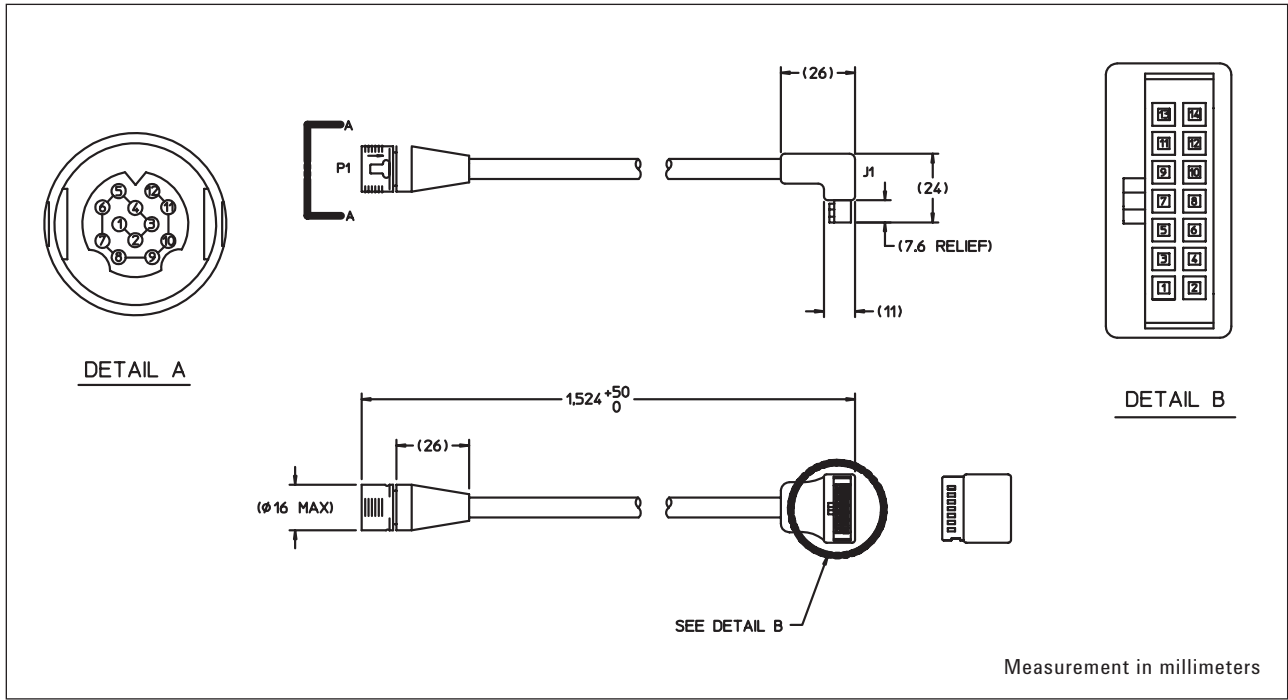


Figure 8. Option 701 viking connector to 14-pin DIP connector

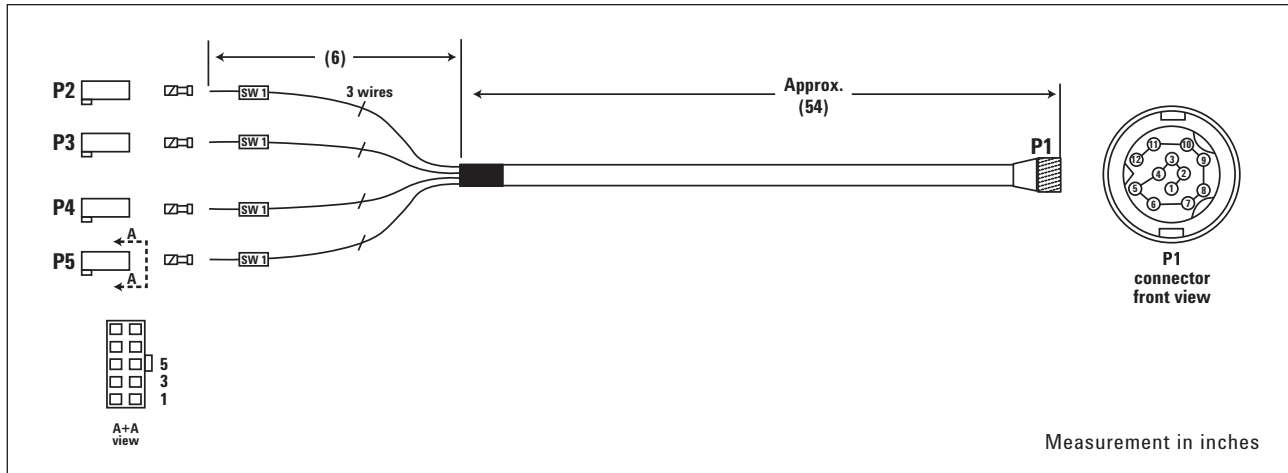


Figure 9. Option 801 viking connector to (4) 10-pin DIP connectors

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