

# Switch Accessories and Cables



Figure 1. NI PXI-4021 Switch Controller

## Switch Controller (see Figure 1)

NI 4021 switch controllers provides complete control of an SCXI-based switching system. These accessories are the ideal low-cost control solution when the switching modules are used with third-party instruments or to route signals to measurement devices other than the NI 4060 or PXI-4070 DMMs. NI 4021 requires no additional software.

<b>PXI-4021</b> .....	778277-01
<b>PCI-4021</b> .....	778278-01



Figure 2. SCXI-1357 High-Voltage Backplane Assembly Kit

## High-Voltage Backplane Assemblies

For the SCXI-1127, SCXI-1128, and SCXI-1129 multiplexer/matrix modules. The SCXI-1357 consists of a 4-slot high-voltage backplane, two cables for routing analog and digital signals to an external scanning DMM, and two analog bus plugs for connecting the backplane components. The SCXI-1358 is identical to the SCXI-1357, except it is for a 12-slot SCXI chassis. To add more chassis to your high-voltage backplane configuration, purchase one add-on kit for each chassis added. You can intermix 4 and 12-slot chassis.

### SCXI-1357 (4-Slot) (see Figure 2)

1 m cables .....	776575-571
2 m cables .....	776575-572
Backplane only .....	776575-57
Add-On Chassis Kit (4-slot) .....	776575-57M

### SCXI-1358 (12-slot) (see Figure 3)

1 m cables .....	776575-581
2 m cables .....	776575-582
Backplane only .....	776575-58
Add-On Chassis Kit (8-slot) .....	776575-58M



Figure 3. Add-on Chassis Kit (4-slot)

## SCXI Communication Adapter Kits

These kits include a backplane adapter that connects the digital control lines of the NI 4060 and PXI-4070 DMMs and NI 4021 switch controller to the switch modules. The SCXI-1359 includes an SCXI-1359 backplane and an SH9MD-AUX cable. The SCXI-1362 Kit includes an SCXI-1362 backplane and an SH9MD-AUX cable. During multichassis expansion the SH9MD-AUX cable is used to connect two SCXI-1362 backplanes.

### SCXI-1359 (see figure 4)

1 m cable .....	776575-591
2 m cable .....	776575-592
Backplane only .....	776575-59

### SCXI-1362 (see figure 5)

1 m cable .....	776575-621
2 m cable .....	776575-622
Backplane only .....	776575-62



Figure 4. SCXI-1359 Adapter Kit



Figure 5. SCXI-1362 Adapter Kit

# Switch Accessories and Cables

## PXI-2501 and PXI-2503 Terminal Blocks

### TB-2605 (see Figure 6)

Multiplexing terminal block for PXI-250x. The kit contains an analog bus plug for easy expansion of multiplexing architectures with two or more devices. For example, two PXI-2503 switches can become a 96 x 1 (1-wire) multiplexer .....777878-01

### TB-2606

Matrix terminal block used to configure the PXI-250x as a 4x6 (2-wire) matrix .....777879-01

### TBX-68S

DIN-rail mountable, 68-pin screw terminal block with cold-junction sensor for use in systems with PXI-250x. Use it with the SH68-68S cable (not included) .....777716-01

### CB-68LP

DIN-rail mountable, 68-pin low-cost screw terminal for use in systems with PXI-250X. Use it with SH68-68S cable (not included).....777145-01

## PXI-2565 Terminal Block

### 16-pin Screw Terminal Plug Kit (see Figure 7)

Additional screw terminal plug kit for PXI-2565-based switching systems. The kit includes one green 16-pin screw terminal plug, cable housing for plug and label .....761289-16

## SCXI-1160 Terminal Block

### SCXI-1324 (see Figure 8)

The SCXI-1324 is a high-voltage terminal block with 48 screw terminals for signal connections to the SCXI-1160 relay module .....777687-24

## SCXI-1127 and SCXI-1128 Terminal Blocks

### SCXI-1331 (see Figure 9)

The SCXI-1331 is a general-purpose screw terminal block for use with the SCXI-1127 and SCXI-1128 multiplexer/matrix modules. This terminal block provides screw terminals for connection to the SCXI-1127 and SCXI-1128 lines and a cold-junction compensation sensor. Select the SCXI-1331 when using the SCXI-1127 or SCXI-1128 to scan thermocouple or voltage signal, or when you need a matrix configuration other than 4x8 .....777687-31

### SCXI-1332 (see Figure 10)

The SCXI-1332 is a matrix screw terminal block for use with the SCXI-1127 and SCXI-1128. This terminal block configures the SCXI-1127 and SCXI-1128 as a 4x8 switching matrix module. You can connect signals to both the columns and rows via screw terminals .....777687-32



Figure 6. TB-2605 Multiplexing Terminal Block



Figure 7. 16-pin Screw Terminal Plug Kit



Figure 8. SCXI-1324 High-Voltage Terminal Block



Figure 9. SCXI-1331 Terminal Block



Figure 10. SCXI-1332 Terminal Block

# Switch Accessories and Cables



Figure 11. SCXI-1333 Terminal Block



Figure 12. Matrix Expansion Plugs



Figure 13. Matrix Expansion Cable



Figure 14. HV8 to BAN4 Cable



Figure 15. SH9MD-AUX Cable

## SCXI-1129 Terminal Blocks (see Figure 11)

Each terminal block automatically configures the SCXI-1129 module into a different 2-wire matrix. The matrices are easily expandable using the appropriate matrix expansion plugs and cables. For further information on matrix expansion please refer to National Instruments Application Note 174, Guide to Matrix Expansion.

SCXI-1333, quad 4x16 (2-wire) matrix .....	777687-33
SCXI-1334, 4x64 (2-wire) matrix .....	777687-34
SCXI-1335, 8x32 (2-wire) matrix .....	777687-35
SCXI-1336, 16x16 (2-wire) matrix .....	777687-36
SCXI-1337, dual, 8x16 (2-wire) matrix .....	777687-37
SCXI-1339, 4x32 (2-wire) matrix .....	777687-39

## Matrix Expansion Plugs (see Figure 12)

The matrix expansion plugs expand the row count of the following SCXI-1129 terminal blocks: SCXI-1333, SCXI-1334, SCXI-1335, and SCXI-1336. The plugs connect the columns of adjacent SCXI-1129 switch modules, which doubles your row count. You can easily and quickly expand your switch system with these plugs.....778364-01

## Cables

### SH68-68S

Shielded cable for use with TBX-68S, CB-68LP, and NI 2501/NI 2503.

1 m .....	185262-01
2 m .....	185262-02
5 m .....	185262-05

### Matrix Expansion Cable (see Figure 13)

This cable is used with the SCXI-1332 terminal block and SCXI-1127 and SCXI-1128 switch modules to expand four lines of 2-wire signals. For example, if you need to expand a matrix from a 4x8 to an 8x8, you need two matrix expansion cables, in addition to the extra switch module. This cable is also used with the SCXI-1335 terminal block to expand matrix rows with the SCXI-1129.

0.4 m .....	185440-0R4
0.75 m .....	185440-0R75

### HV8 to BAN4 Cable (see Figure 14)

Use this cable to connect the HVAB to an NI DMM. This is the recommended connection wire from the HVAB to the NI 4060 DMM and NI PXI-4070 FlexDMM. This cable is included in several kits such as the SCXI-1357 and SCXI-1358. The 0.18 m version is intended for use with the PXI-1011 combination chassis.

0.18 m .....	185444-0R18
0.5 m .....	185444-0R5
1 m .....	185444-01
2 m .....	185444-02

# Switch Accessories and Cables

## SH9MD-AUX Cable (see Figure 15)

Used to send digital control signals from the NI 4021 switch controller and NI 4060 DMM to SCXI switching systems and to cascade digital control signals between two SCXI chassis. The cable, with round connectors, plugs into the SCXI-1357 and SCXI-1358 backplanes, as well as the SCXI-1362 backplane adapter. It is included with several kits, such as the SCXI-1357, SCXI-1358, and SCXI-1362.

1 m .....	185258-01
2 m .....	185258-02

## HV8 to HV8 Cable (see Figure 16)

Used to cascade high-voltage analog buses between two chassis. This cable is included in the SCXI-1357 and SCXI-1358 multichassis expansion kit.

1 m .....	185437-01
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## BAN4 to LV6 Cable

Used exclusively to connect the TB-2605 terminal block to a DMM. Three lengths are available. The 18 cm version is intended for use with the DMM and switch in adjacent slots.

0.18 m .....	185434-0R18
1 m .....	185434-01
2 m .....	185434-02

## SMA 100 Cable (see Figure 17)

SMA male to SMA male, 50  $\Omega$  coaxial cable

0.15 m .....	763443-01
0.45 m .....	763444-01

## SMB 110 Cable (see Figure 18)

SMB female to BNC male, 50  $\Omega$  coaxial cable

1 m .....	763405-01
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## SMB 200 Cable (see Figure 19)

SMB female to SMB female, 50  $\Omega$  coaxial cable

0.3 m .....	763390-01
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## SMB 300 Cable (see Figure 20)

SMB female to alligator clip, 50  $\Omega$  coaxial cable

1 m .....	763388-01
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## SMA Torque Wrench

This 1 Nm torque wrench is used to tighten the SMA 100 cables to the switches correctly. ....187106-01

## Termination Plugs

50  $\Omega$  termination plug for use with the SCXI-1190, SCXI-1191, SCXI-1192, NI 2590, and NI 2591.

SMA .....	778353-01
SMB .....	778354-01



Figure 16. HV8 to HV8 Cable



Figure 17. SMA 100 Cable



Figure 18. SMB 110



Figure 19. SMB 200



Figure 20. SMB 300