Alarm Interface Controller Patch Panel Installation Guide

AIC-SGL-PNL(=), AIC-DBL-PNL(=)

This guide describes how to install the alarm interface controller (AIC) patch panel and how to connect it to the AIC network module for Cisco 2600 series, Cisco 3640, and Cisco 3660 modular access routers and the Cisco MWR 1941-DC Mobile Wireless Edge Router. It contains the following sections:

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- Mounting the Patch Panel, page 10
- Electrical Connections, page 11
- Connecting Network Cables, page 15
- Patch Panel LEDs, page 17
- Patch Panel Pinouts, page 18
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- Obtaining Technical Assistance, page 23

Use this document with the documents listed in "Related Documents" section on page 22

Overview

The patch panel supplies power to the alarm circuits connected to an AIC network module, by means of a -48V DC circuit bridged to the alarm circuit. Current flows when the loop is closed by an alarm. The network module detects this current and sends a message to the network operating center.

CISCO SYSTEMS

Corporate Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

There are two models of AIC patch panel:

- Product number AIC-SGL-PNL (see Figure 1, Figure 2, and Figure 3) connects to a single AIC network module. It provides an interface between a bank of four Telco 50-pin connectors (for the Telco side) and a bank of four 50-pin SCSI II connectors (for the network module side).
- Product number AIC-DBL-PNL (see Figure 4, Figure 5, and Figure 6) connects to two AIC network modules. It provides an interface between two banks of four Telco 50-pin) connectors and two banks of four SCSI II connectors.

The AIC network module is shown in Figure 7.

Figure 1 AIC-SGL-PNL Patch Panel

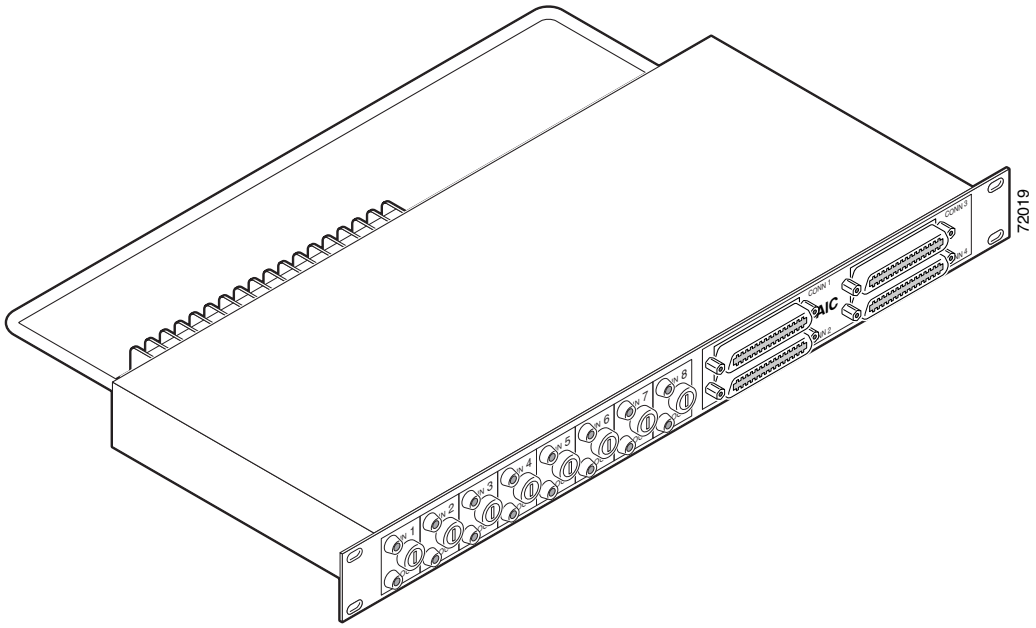

Figure 2 AIC-SGL-PNL Patch Panel Dimensions and Front View

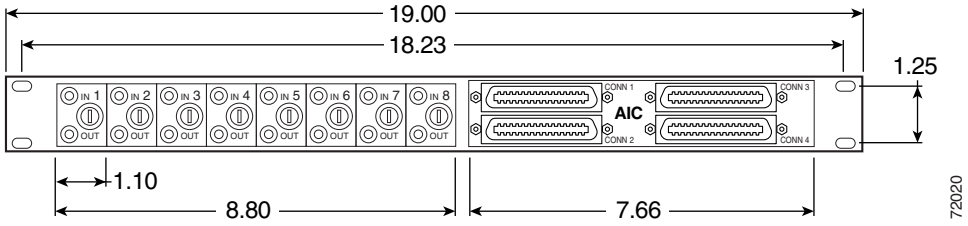

Figure 3 AIC-SGL-PNL Patch Panel, Rear View

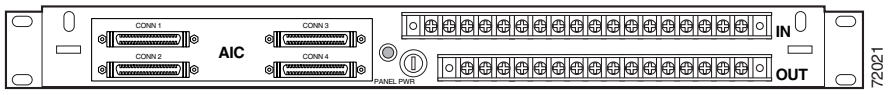

Figure 4 AIC-DBL-PNL Patch Panel

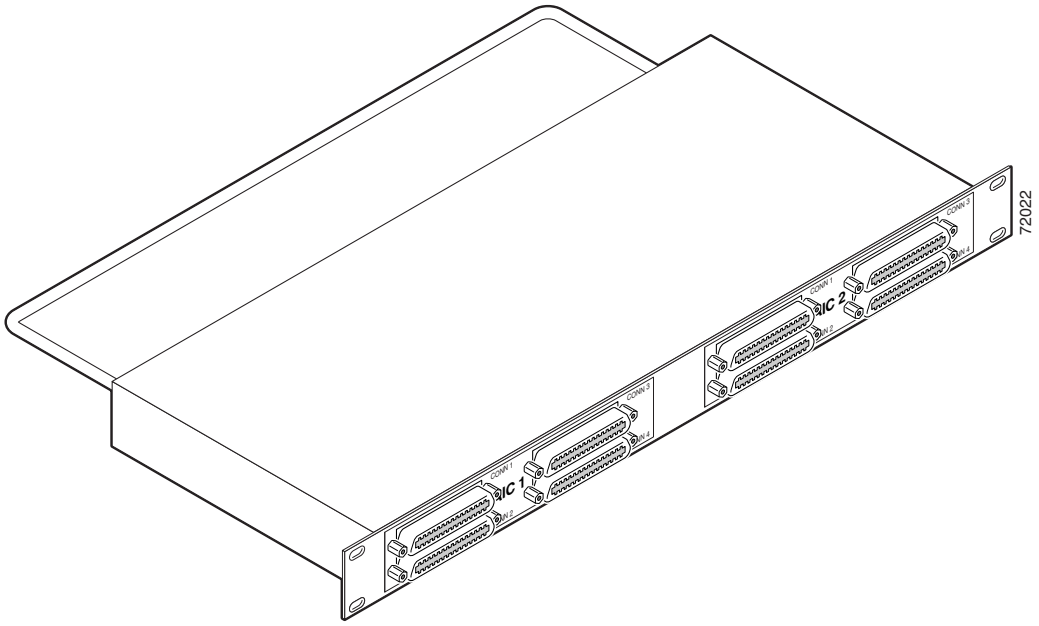

Figure 5 AIC-DBL-PNL Patch Panel, Front View

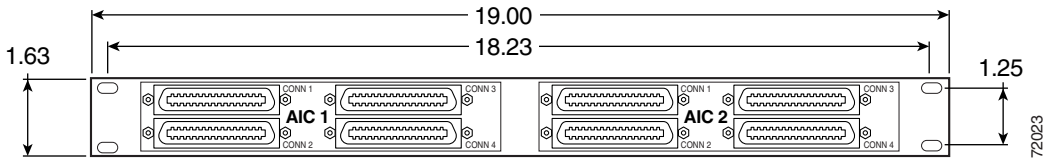

Figure 6 AIC-DBL-PNL Patch Panel, Rear View

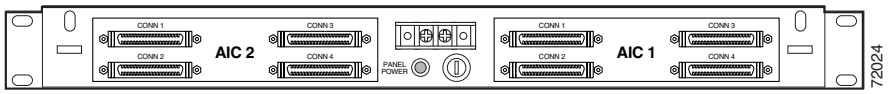

Figure 7 Alarm Interface Controller Network Module

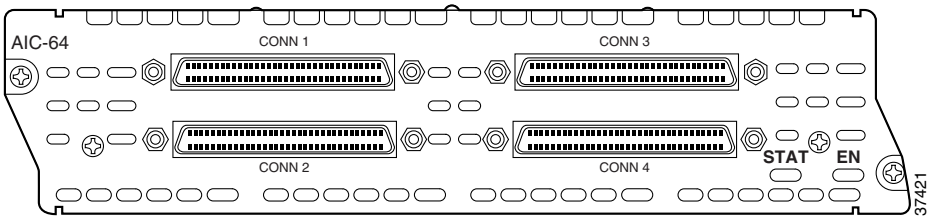

Table 1 gives temperature specifications for the patch panel.

Table 1 Patch Panel Temperature Specifications

Description	Specification
Operating temperature	32 to 104 degrees F (0 to 40 degrees C)
Nonoperating temperature	–40 to 185 degrees F (–40 to 85 degrees C)

Safety Information

Read the following safety information before performing any installation or connection procedure.

Warning **IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

SAVE THESE INSTRUCTIONS

Waarschuwing **BELANGRIJKE VEILIGHEIDSINSTRUCTIES**

Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van de standaard praktijken om ongelukken te voorkomen. Gebruik het nummer van de verklaring onderaan de waarschuwing als u een vertaling van de waarschuwing die bij het apparaat wordt geleverd, wilt raadplegen.

BEWAAR DEZE INSTRUCTIES

Varoitus **TÄRKEITÄ TURVALLISUUSOHJEITA**

Tämä varoitusmerkki merkitsee vaaraa. Tilanne voi aiheuttaa ruumiillisia vammoja. Ennen kuin käsittelet laitteistoa, huomioi sähköpiirien käsittelemiseen liittyvät riskit ja tutustu onnettomuuksien yleisiin ehkäisytapoihin. Turvallisuusvaroitusten käännökset löytyvät laitteen mukana toimitettujen käännettyjen turvallisuusvaroitusten joukosta varoitusten lopussa näkyvien lausuntonumeroiden avulla.

SÄILYTÄ NÄMÄ OHJEET

Attention **IMPORTANTES INFORMATIONS DE SÉCURITÉ**

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

CONSERVEZ CES INFORMATIONS

Warnung **WICHTIGE SICHERHEITSHINWEISE**

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

BEWAHREN SIE DIESE HINWEISE GUT AUF.

Avvertenza **IMPORTANTI ISTRUZIONI SULLA SICUREZZA**

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

CONSERVARE QUESTE ISTRUZIONI

Advarsel **VIKTIGE SIKKERHETSINSTRUKSJONER**

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslene som fulgte med denne enheten.

TA VARE PÅ DISSE INSTRUKSJONENE

Aviso **INSTRUÇÕES IMPORTANTES DE SEGURANÇA**

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

GUARDE ESTAS INSTRUÇÕES

¡Advertencia! **INSTRUCCIONES IMPORTANTES DE SEGURIDAD**

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES

Varning! **VIKTIGA SÄKERHETSANVISNINGAR**

Denna varningssignal signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanliga förfaranden för att förebygga olyckor. Använd det nummer som finns i slutet av varje varning för att hitta dess översättning i de översatta säkerhetsvarningar som medföljer denna anordning.

SPARA DESSA ANVISNINGAR

Figyelem **FONTOS BIZTONSÁGI ELOÍRÁSOK**

Ez a figyelmezeto jel veszélyre utal. Sérülésveszélyt rejto helyzetben van. Mielott bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplo figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján keresheto meg.

ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!

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これらの注意事項を保管しておいてください。

Warning **This unit is intended for installation in restricted access areas. A restricted access area is one where access can be gained by service personnel only through the use of a special tool, lock and key, or other means of security, and is controlled by the authority responsible for the location. To see translations of the warnings that appear in this publication, refer to the *Regulatory Compliance and Safety Information* document that accompanied this device.**

Warning **To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:**

- **This unit should be mounted at the bottom of the rack if it is the only unit in the rack.**
- **When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.**
- **If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.**

Warning **This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a UL Listed and Certified fuse or circuit breaker no larger than 60 VDC, 15 A is used on all current-carrying conductors. To see translations of the warnings that appear in this publication, refer to the *Regulatory Compliance and Safety Information* document that accompanied this device.**

Caution To prevent the patch panel from overheating, do not operate it in an area that exceeds the maximum recommended ambient temperature of 104°F (40°C). If installed in a closed or multiunit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. To prevent airflow restriction, allow at least 6 in. (15 cm) of clearance around the ventilation openings.

Warning **Damage to the AIC network module can occur if an alarm set for monitoring current is connected to a sensor for monitoring voltage. Make sure that your alarms are connected to the proper sensors. To see translations of the warnings that appear in this publication, refer to the *Regulatory Compliance and Safety Information* document that accompanied this device.**

Caution Connect the cable to the AIC before connecting it to the patch panel or other connection. Otherwise voltage could be present on the male pins which connect to the AIC.

Caution The signal I/O connections on this unit are intended only for connection to NEC/CEC Class 2 or equivalent circuit. This means that the voltages applied to I/O connections should not exceed 42.4 Vpk or 60 Vdc and it should be limited/fused power source. For more details on Class 2 circuits, refer to the National Electrical Code/Canadian Electrical Code. This does not apply to analog input/output terminal strip numbers 1-8 on the AIC-SGL-PNL patch panel.

Caution This unit is not intended for connection to exposed plant leads. Therefore, it should not be connected to circuit conductors, which extend beyond one building and are run so as to be subject to accidental contact with AC main conductors, or are exposed to lightning on interbuilding circuits on the same premises.

Caution The BAT terminal receives negative voltage, and the RET terminal receives positive voltage.

Caution All circuits in the patch panel are safety extra-low voltage (SELV) circuits. SELV circuits should be connected only to other SELV circuits.

Required Tools and Equipment

Installation might require some tools and equipment that are not provided as standard equipment with the router. Following are the tools and parts required for a typical installation:

- Number 2 Phillips screwdriver
- ESD-preventive wrist strap

Mounting the Patch Panel

You can mount the patch panel in a 19-inch rack using the built-in brackets.

Mounting the Strain Relief Bar

Mount the strain relief bar as shown in Figure 8 and Figure 9.

Figure 8 Inserting the Strain Relief Bar

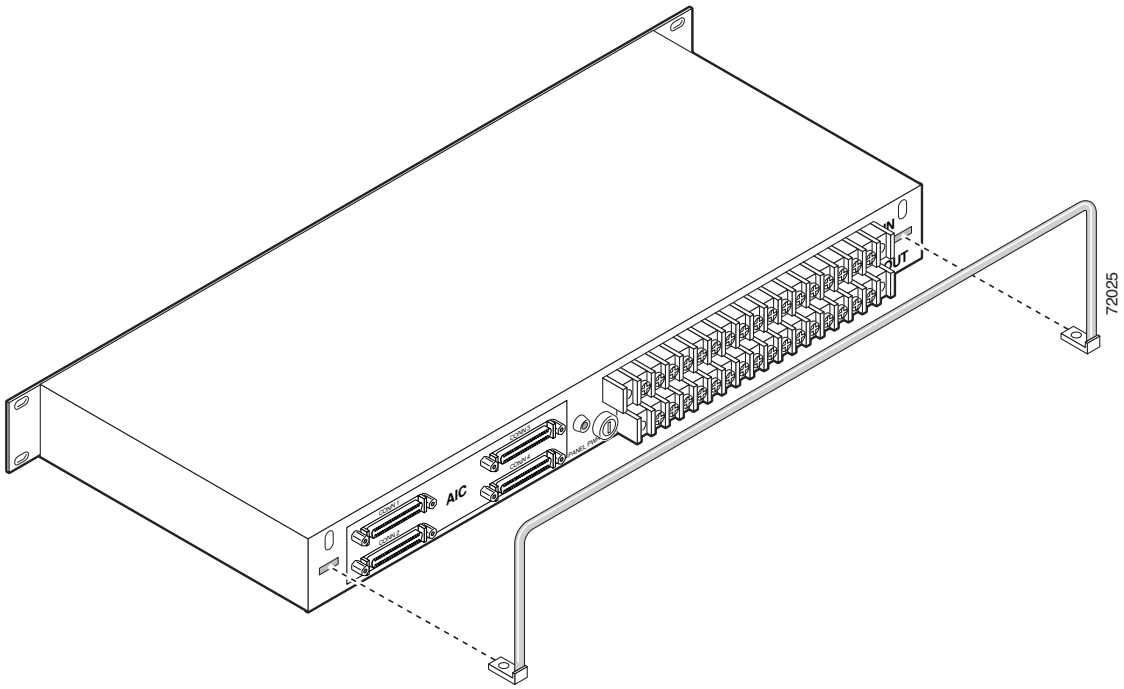
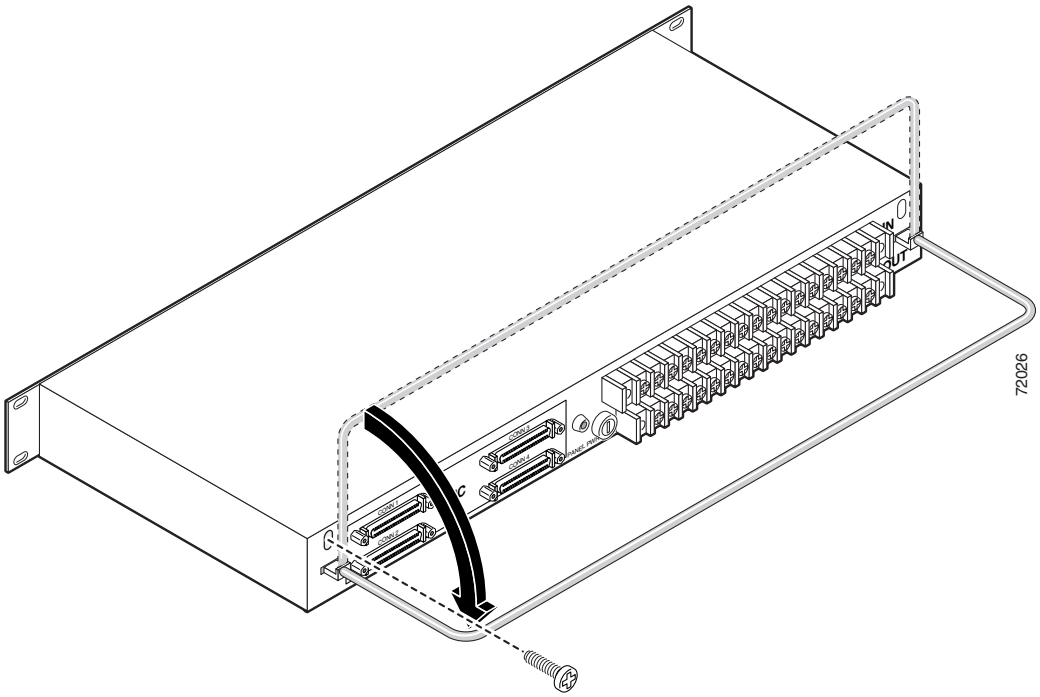


Figure 9 Positioning the Strain Relief Bar



Electrical Connections

This section explains how to ground the patch panel and how to connect electrical power.

Grounding

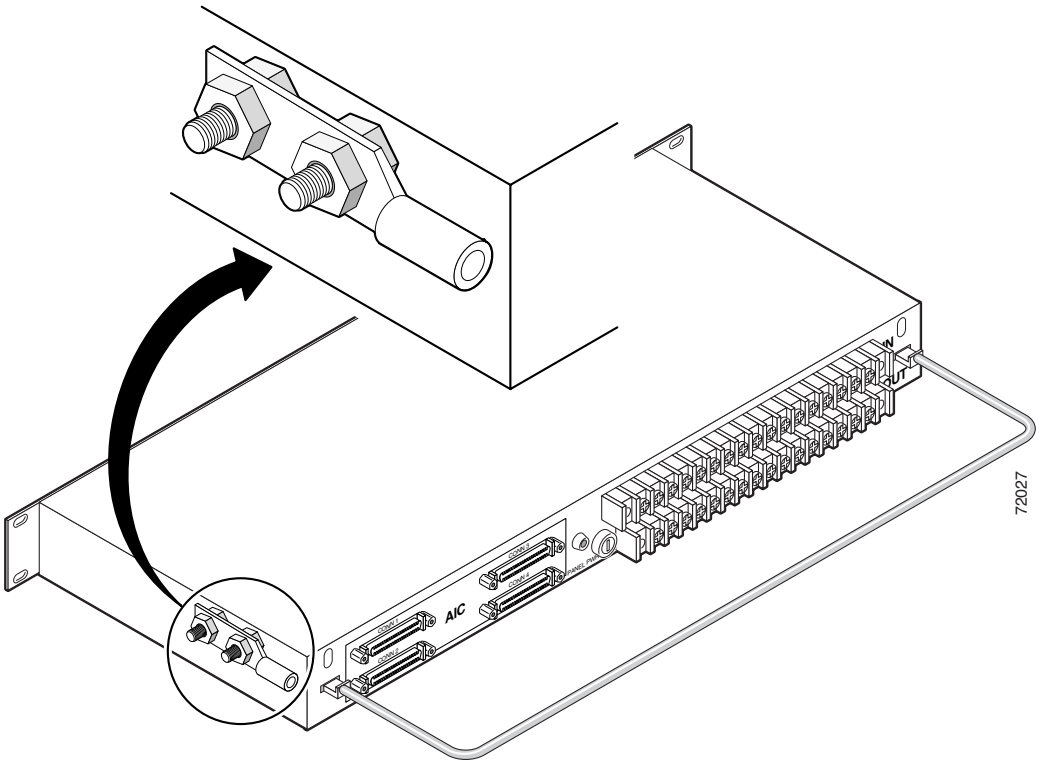
The patch panel comes with a grounding lug preinstalled. To ground the lug, follow these steps:

Step 1 Make sure that power to the patch panel is off, and that no cables are connected.

Warning **Before performing any of the following procedures, ensure that power is removed from the DC circuit. To ensure that all power is OFF, locate the circuit breaker on the panel board that services the DC circuit, switch the circuit breaker to the OFF position, and tape the switch handle of the circuit breaker in the OFF position. To see translations of the warnings that appear in this publication, refer to the *Regulatory Compliance and Safety Information* document that accompanied this device.**

Step 2 Remove the two outside 8-32 nuts attached to the patch panel chassis and and the grounding lug and put them aside (see Figure 10).

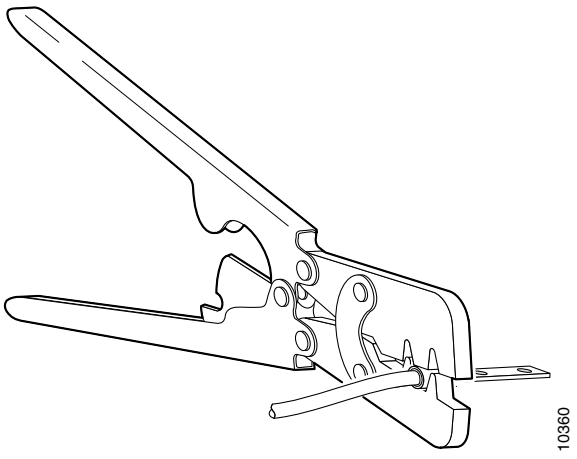
Figure 10 Grounding Lug



Step 3 Strip one end of an AWG 6 copper wire to expose approximately 0.75 in. (20 mm).

Step 4 Place the wire in the lug. Using a Panduit CT-720 crimp tool with die set CD-720-2, or the equivalent, crimp the lug until the wire is firmly in place, as shown in Figure 11.

Figure 11 Crimping the Lug Around the Wire



Step 5 Fit the grounding lug over the bolt posts on top of the two inside 8-32 nuts.

Step 6 Hand tighten the outside 8-32 nuts on the bolt posts on top of the grounding lug (see Figure 10).

Caution Do not overtorque the outside 8-32 nuts. The recommended torque is 15 ± 18 inch-lb.

Step 7 Connect the other end of the wire to a suitable grounding point.

Connecting Electrical Power

This section explains how to connect electrical power to the patch panel.

The AIC-SGL-PNL patch panel provides terminals for eight analog circuits. Power is provided to each monitored circuit by the IN terminal block on the back of the patch panel. Power is taken from each monitored circuit by the OUT terminal block located below the IN terminal block.

The AIC-SGL-PNL patch panel must also have -48 VDC connected to the first pair of terminals (port 0) on the IN terminal block. This voltage is independent of other feeds being monitored and is used to operate the detection circuits. The 500 mA fuse for port 0 is shown in Figure 12.

The AIC-DBL-PNL patch panel does not provide monitoring of analog circuits. This patch panel must have -48 VDC connected to the terminal block on the back of the patch panel.

Follow this procedure to wire the terminal block:

Warning **Before connecting or disconnecting ground or power wires to the chassis, ensure that power is removed from the DC circuit. To ensure that all power is OFF, locate the circuit breaker on the panel board that services the DC circuit, switch the circuit breaker to the OFF position, and tape the switch handle of the circuit breaker in the OFF position. To see translations of the warnings that appear in this publication, refer to the *Regulatory Compliance and Safety Information* document that accompanied this device.**

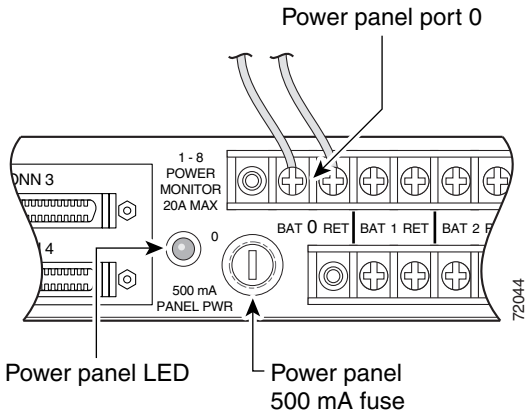
Step 1 Make sure that you have grounded the patch panel, as described in the"Grounding" section on page 11.

Step 2 Attach lugs to 14-AWG (1.5 mm^2 cross section) copper wire or equivalent.

Step 3 If you are connecting an AIC-SGL-PNL patch panel, connect wires from the monitored analog circuits to terminal blocks 1 through 8 on the back panel. The BAT (negative) terminal is on the left and the RET (positive) terminal is on the right of each pair, as you look at the back of the patch panel. BAT and RET are also marked on the patch panel chassis. Labels identify the port numbers.

Step 4 Connect -48 VDC to port 0 on the back of the AIC-SGL-PNL patch panel, or to the terminal block on the back of the AIC-DBL-PNL patch panel. The BAT (negative) terminal is on the left and the RET (positive) terminal is on the right of each pair, as you look at the back of the patch panel. BAT and RET are also marked on the patch panel chassis. See Figure 12.

Figure 12 -48 VDC Connection



Warning **When stranded wiring is required, use approved wiring terminations, such as closed-loop or spade-type with upturned lugs. These terminations should be the appropriate size for the wires and should clamp both the insulation and conductor. To see translations of the warnings that appear in this publication, refer to the *Regulatory Compliance and Safety Information* document that accompanied this device.**

Caution Do not overtorque the terminal block terminal block contact screws. The recommended torque is 8.2 ± 0.4 inch-lb.

Warning **An exposed wire lead from a DC-input power source can conduct harmful levels of electricity. Be sure that no exposed portion of the DC-input power source wire extends from the terminal block plug. To see translations of the warnings that appear in this publication, refer to the *Regulatory Compliance and Safety Information* document that accompanied this device.**

Warning **Secure all power cabling when installing this unit to avoid disturbing field-wiring connections. To see translations of the warnings that appear in this publication, refer to the *Regulatory Compliance and Safety Information* document that accompanied this device.**

Warning **After reinstating the DC power, remove the tape from the circuit breaker switch handle and reinstate power by moving the handle of the circuit breaker to the ON position. To see translations of the warnings that appear in this publication, refer to the *Regulatory Compliance and Safety Information* document that accompanied this device.**

Connecting Network Cables

Patch panel connections to the AIC network module are shown schematically in Figure 13. The four connectors of each AIC network module connect to four input connectors on the patch panel. The output connectors of the patch panel are cabled to the customer's main distribution frame (MDF). The patch panel looks transparent to the AIC network module.

An AIC network module provides four interfaces using 50-pin SCSI II receptacles. To connect the SCSI II connectors on the front of the patch panel to the network module, use cables that have male Micro DB-50 connectors at both ends, with all conductors straight-wired. A set of four eight-foot male-to-male SCSI II interface cables is orderable separately, product number CAB-AIC-008. Ports are numbered from right to left and from bottom to top, as labeled on the module's rear panel (see Figure 7).

To connect the Telco connectors on the back of the patch panel to the main distribution frame, use RJ-21 Telco connector serial cables (50-pin male).

Figure 14 shows connections from the AIC network module faceplate to a patch panel. Figure 15 shows connections to the AIC-SGL-PNL patch panel. Figure 16 shows connections to the AIC-DBL-PNL patch panel.

Figure 17 shows patch panel connections to the main distribution frame. These connections should be made with AWG 24 copper wire or equivalent.

Figure 13 AIC Network Module Connection Diagram

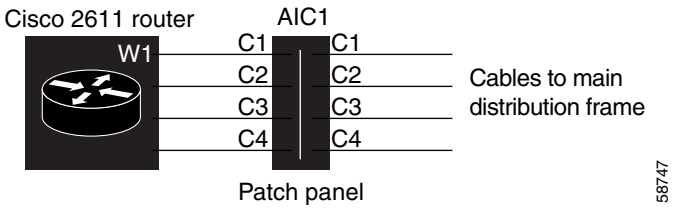


Figure 14 AIC Network Module Faceplate Connections

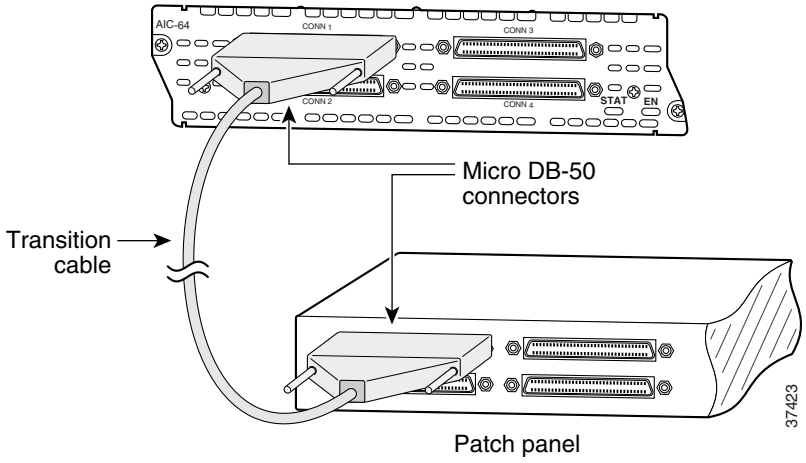


Figure 15 AIC Network Module Connected to the AIC-SGL-PNL Patch Panel

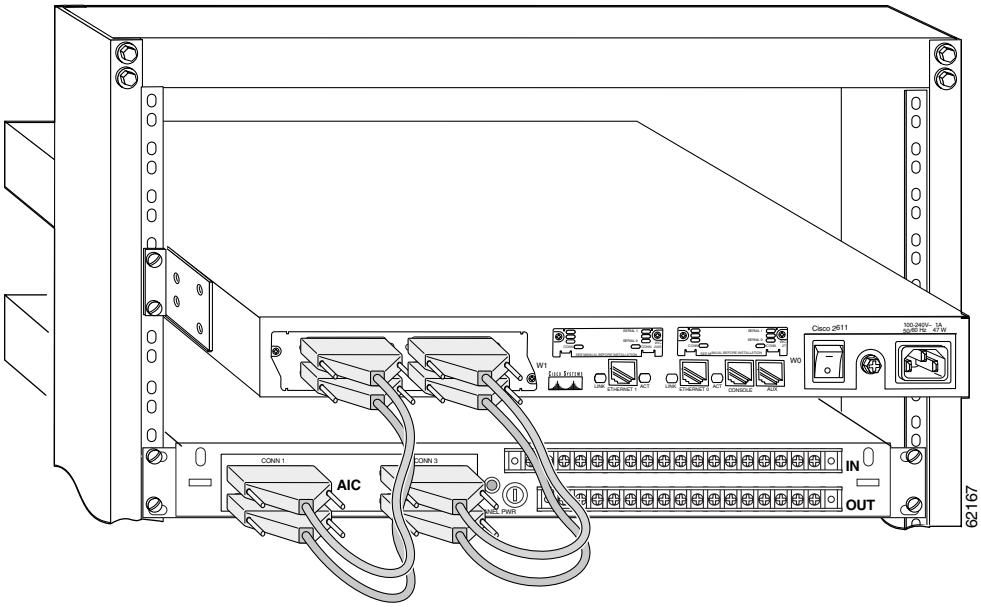


Figure 16 AIC Network Module Connected to the AIC-DBL-PNL Patch Panel

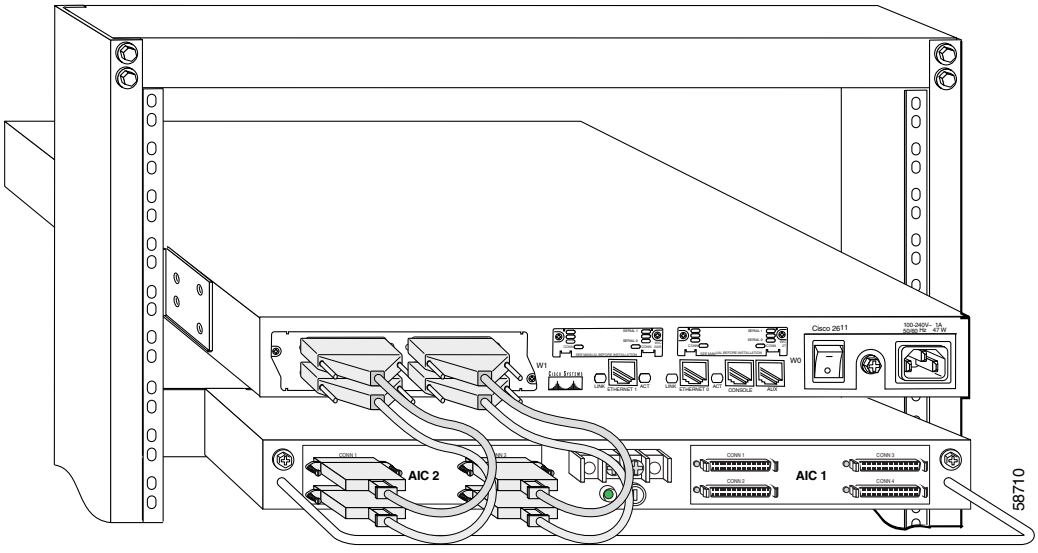
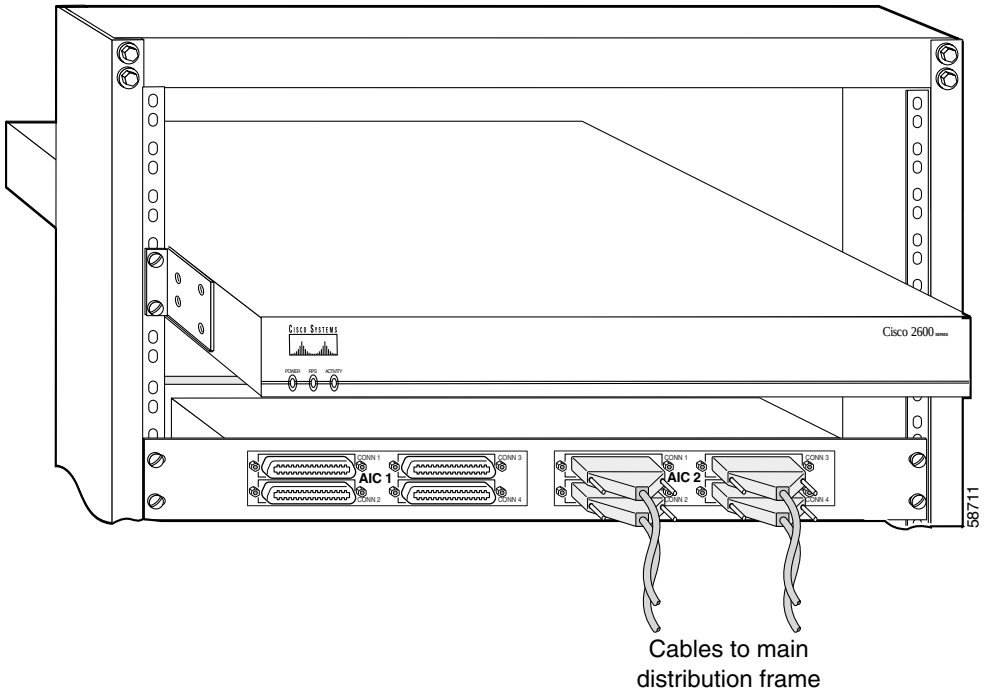


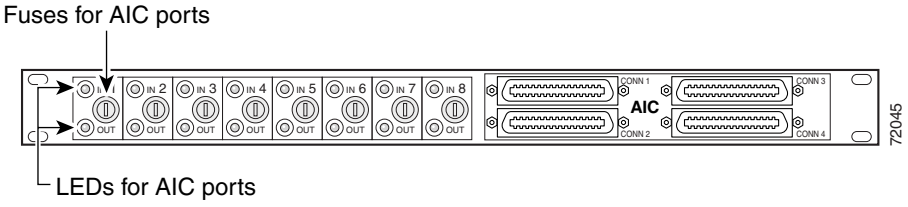
Figure 17 AIC-DBL-PNL Patch Panel Connected to MDF



Patch Panel LEDs

Each monitored analog circuit on the AIC-SGL-PNL patch panel has a green POWER IN LED and a green POWER OUT LED on the front of the patch panel. The POWER OUT LED is on when voltage is present before the fuse. The POWER OUT LED is on when voltage is present after the fuse. See Figure 18.

Figure 18 Patch Panel LEDs and Fuses



Both models of patch panel have a green PANEL POWER LED on the back. This LED shows the status of the -48 VDC input used to operate the detection circuits.

Patch Panel Pinouts

Table 2 shows pinouts for the AIC-SGL-PNL patch panel. Table 3 shows connector 3 voltage monitor pinouts for the AIC-SGL-PNL patch panel. Table 4 shows pinouts for the AIC-DBL-PNL patch panel.

Table 2 AIC-SGL-PNL Patch Panel Connector Pinouts

Telco Connector/Pinouts	Connector 1	Connector 2	Connector 3	Connector 4
1	Alarm neg1	Alarm neg 26	Alarm neg 51	Control common 1
26	Alarm pos 1	Alarm pos 26	Alarm pos 51	Control N.O. 1
2	Alarm neg 2	Alarm neg 27	Alarm neg 52	Control common 2
27	Alarm pos 2	Alarm pos 27	Alarm pos 52	Control N.O. 2
3	Alarm neg 3	Alarm neg 28	Alarm neg 53	Control common 3
28	Alarm pos 3	Alarm pos 28	Alarm pos 53	Control N.O. 3
4	Alarm neg 4	Alarm neg 29	Alarm neg 54	Control common 4
29	Alarm pos 4	Alarm pos 29	Alarm pos 54	Control N.O. 4
5	Alarm neg 5	Alarm neg 30	Alarm neg 55	Control common 5
30	Alarm pos 5	Alarm pos 30	Alarm pos 55	Control N.O. 5
6	Alarm neg 6	Alarm neg 31	Alarm neg 56	Control common 6
31	Alarm pos 6	Alarm pos 31	Alarm pos 56	Control N.O. 6
7	Alarm neg 7	Alarm neg 32	See Table 3	Control common 7
32	Alarm pos 7	Alarm pos 32	See Table 3	Control N.O. 7
8	Alarm neg 8	Alarm neg 33	See Table 3	Control common 8
33	Alarm pos 8	Alarm pos 33	See Table 3	Control N.O. 8
9	Alarm neg 9	Alarm neg 34	See Table 3	Control common 9
34	Alarm pos 9	Alarm pos 34	See Table 3	Control N.O. 9
10	Alarm neg 10	Alarm neg 35	See Table 3	Control common 10
35	Alarm pos 10	Alarm pos 35	See Table 3	Control N.O. 10
11	Alarm neg 11	Alarm neg 36	See Table 3	Control common 11
36	Alarm pos 11	Alarm pos 36	See Table 3	Control N.O. 11
12	Alarm neg 12	Alarm neg 37	See Table 3	Control common 12
37	Alarm pos 12	Alarm pos 37	See Table 3	Control N.O. 12
13	Alarm neg 13	Alarm neg 38	See Table 3	Control common 13
38	Alarm pos 13	Alarm pos 38	See Table 3	Control N.O. 13
14	Alarm neg 14	Alarm neg 39	See Table 3	Control common 14
39	Alarm pos 14	Alarm pos 39	See Table 3	Control N.O. 14
15	Alarm neg 15	Alarm neg 40	—	Control common 15
40	Alarm pos 15	Alarm pos 40	—	Control N.O. 15
16	Alarm neg 16	Alarm neg 41	—	Control common 16
41	Alarm pos 16	Alarm pos 41	—	Control N.O. 16

Table 2 AIC-SGL-PNL Patch Panel Connector Pinouts (Continued)

Telco Connector/Pinouts	Connector 1	Connector 2	Connector 3	Connector 4
17	Alarm neg 17	Alarm neg 42	—	—
42	Alarm pos 17	Alarm pos 42	—	—
18	Alarm neg 18	Alarm neg 43	—	—
43	Alarm pos 18	Alarm pos 43	—	—
19	Alarm neg 19	Alarm neg 44	—	—
44	Alarm pos 19	Alarm pos 44	—	—
20	Alarm neg 20	Alarm neg 45	—	—
45	Alarm pos 20	Alarm pos 45	—	—
21	Alarm neg 21	Alarm neg 46	—	—
46	Alarm pos 21	Alarm pos 46	—	—
22	Alarm neg 22	Alarm neg 47	—	—
47	Alarm pos 22	Alarm pos 47	—	—
23	Alarm neg 23	Alarm neg 48	—	—
48	Alarm pos 23	Alarm pos 48	—	—
24	Alarm neg 24	Alarm neg 49	—	—
49	Alarm pos 24	Alarm pos 49	—	—
25	Alarm neg 25	Alarm neg 50	—	—
50	Alarm pos 25	Alarm pos 50	—	—

Table 3 Voltage Monitor Connections on Connector 3 for AIC-SGL-PNL Patch Panel

Terminal Strip		Signal
1	RET	Alarm pos 57
	BAT	Alarm neg 57
2	RET	Alarm pos 58
	BAT	Alarm neg 58
3	RET	Alarm pos 59
	BAT	Alarm neg 59
4	RET	Alarm pos 60
	BAT	Alarm neg 60
5	RET	Alarm pos 61
	BAT	Alarm neg 61
6	RET	Alarm pos 62
	BAT	Alarm neg 62

Table 3 Voltage Monitor Connections on Connector 3 for AIC-SGL-PNL Patch Panel (Continued)

Terminal Strip		Signal
7	RET	Alarm pos 63
	BAT	Alarm neg 63
8	RET	Alarm pos 64
	BAT	Alarm neg 64

Table 4 AIC-DBL-PNL Patch Panel Connector Pinouts

Telco Connector/Pinouts	Connector 1	Connector 2	Connector 3	Connector 4
1	Alarm neg1	Alarm neg 26	Alarm neg 51	Control common 1
26	Alarm pos 1	Alarm pos 26	Alarm pos 51	Control N.O. 1
2	Alarm neg 2	Alarm neg 27	Alarm neg 52	Control common 2
27	Alarm pos 2	Alarm pos 27	Alarm pos 52	Control N.O. 2
3	Alarm neg 3	Alarm neg 28	Alarm neg 53	Control common 3
28	Alarm pos 3	Alarm pos 28	Alarm pos 53	Control N.O. 3
4	Alarm neg 4	Alarm neg 29	Alarm neg 54	Control common 4
29	Alarm pos 4	Alarm pos 29	Alarm pos 54	Control N.O. 4
5	Alarm neg 5	Alarm neg 30	Alarm neg 55	Control common 5
30	Alarm pos 5	Alarm pos 30	Alarm pos 55	Control N.O. 5
6	Alarm neg 6	Alarm neg 31	Alarm neg 56	Control common 6
31	Alarm pos 6	Alarm pos 31	Alarm pos 56	Control N.O. 6
7	Alarm neg 7	Alarm neg 32	Alarm pos 57	Control common 7
32	Alarm pos 7	Alarm pos 32	Alarm neg 57	Control N.O. 7
8	Alarm neg 8	Alarm neg 33	Alarm pos 58	Control common 8
33	Alarm pos 8	Alarm pos 33	Alarm neg 58	Control N.O. 8
9	Alarm neg 9	Alarm neg 34	Alarm pos 59	Control common 9
34	Alarm pos 9	Alarm pos 34	Alarm neg 59	Control N.O. 9
10	Alarm neg 10	Alarm neg 35	Alarm pos 60	Control common 10
35	Alarm pos 10	Alarm pos 35	Alarm neg 60	Control N.O. 10
11	Alarm neg 11	Alarm neg 36	Alarm pos 61	Control common 11
36	Alarm pos 11	Alarm pos 36	Alarm neg 61	Control N.O. 11
12	Alarm neg 12	Alarm neg 37	Alarm pos 62	Control common 12
37	Alarm pos 12	Alarm pos 37	Alarm neg 62	Control N.O. 12
13	Alarm neg 13	Alarm neg 38	Alarm pos 63	Control common 13
38	Alarm pos 13	Alarm pos 38	Alarm neg 63	Control N.O. 13
14	Alarm neg 14	Alarm neg 39	Alarm pos 64	Control common 14
39	Alarm pos 14	Alarm pos 39	Alarm neg 64	Control N.O. 14

Table 4 AIC-DBL-PNL Patch Panel Connector Pinouts (Continued)

Telco Connector/Pinouts	Connector 1	Connector 2	Connector 3	Connector 4
15	Alarm neg 15	Alarm neg 40	—	Control common 15
40	Alarm pos 15	Alarm pos 40	—	Control N.O. 15
16	Alarm neg 16	Alarm neg 41	—	Control common 16
41	Alarm pos 16	Alarm pos 41	—	Control N.O. 16
17	Alarm neg 17	Alarm neg 42	—	—
42	Alarm pos 17	Alarm pos 42	—	—
18	Alarm neg 18	Alarm neg 43	—	—
43	Alarm pos 18	Alarm pos 43	—	—
19	Alarm neg 19	Alarm neg 44	—	—
44	Alarm pos 19	Alarm pos 44	—	—
20	Alarm neg 20	Alarm neg 45	—	—
45	Alarm pos 20	Alarm pos 45	—	—
21	Alarm neg 21	Alarm neg 46	—	—
46	Alarm pos 21	Alarm pos 46	—	—
22	Alarm neg 22	Alarm neg 47	—	—
47	Alarm pos 22	Alarm pos 47	—	—
23	Alarm neg 23	Alarm neg 48	—	—
48	Alarm pos 23	Alarm pos 48	—	—
24	Alarm neg 24	Alarm neg 49	—	—
49	Alarm pos 24	Alarm pos 49	—	—
25	Alarm neg 25	Alarm neg 50	—	—
50	Alarm pos 25	Alarm pos 50	—	—

Related Documents

For additional information, see the following documents:

- *Cisco 2600 Series Hardware Installation Guide*
- *Cisco 3600 Series Hardware Installation Guide*
- *Cisco MWR 1941-DC Mobile Wireless Edge Router Hardware Installation Guide*
- *Cisco Network Module Hardware Installation Guide*
- *Software Configuration Guide for Cisco 3600 Series and Cisco 2600 Series Routers*
- *Cisco MWR 1941-DC Mobile Wireless Edge Router Software Configuration Guide*
- *Regulatory Compliance and Safety Information for the Cisco 2600 and Cisco 3600 Series*
- *Regulatory Compliance and Safety Information for the Cisco MWR 1941-DC Mobile Wireless Edge Router*
- *Quick Start Guide* for your router

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