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Regulatory Compliance and Safety Information

Product Numbers: DOC-4000-IG=, DOC-4000IM3=, DOC-4000IM4=

This document, which was formerly known as the *Public Network Certification* publication, provides international regulatory and safety compliance information for the Cisco 4000 series of routers. Use this publication with the *Cisco 4000 Series Router Installation Guide*, *Cisco 4000 Series Hardware Installation and Maintenance*, and configuration note publications.

Note These publications are available on the Documentation CD-ROM, which ship with each chassis and is also available on the World Wide Web URL <http://www.cisco.com>. Printed copies can be ordered from Customer Service (contact 800 553-6387, 408 526-7208, or cs-rep@cisco.com).

This document contains the following sections:

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- Operating Conditions for Canada
- Operating Conditions for the European Community
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Agency Approvals

The following agency approvals apply to the router chassis:

Safety:

- UL 1950 2nd Edition
- CAN/CSA 950-M93
- EN60950 with Amendments 1 and 2
- AS/RNZ 3260 and TS001

EMI:

- FCC Part 15 Class A
- CSA Std., C 108.8 CLASS A
- VCCI 2
- AS/NRZ 3548
- EN 55022 B (CISPR 22 B)
- EN 50081-1
- EN 50082-1

PTT:

- CS-03
- FCC Part 68

Translated Safety Warnings

This section includes translations in multiple languages of the warnings that appear in the installation documentation that shipped with the router. Before working on equipment, be aware of the hazards involved with electrical circuitry and standard safety practices to prevent accidents.

Qualified Personnel Warning



Warning Only trained and qualified personnel should be allowed to install or replace this equipment.

Waarschuwing Installatie en reparaties mogen uitsluitend door getraind en bevoegd personeel uitgevoerd worden.

Varoitus Ainoastaan koulutettu ja pätevä henkilökunta saa asentaa tai vaihtaa tämän laitteen.

Avertissement Tout installation ou remplacement de l'appareil doit être réalisé par du personnel qualifié et compétent.

Achtung Gerät nur von geschultem, qualifiziertem Personal installieren oder auswechseln lassen.

Avvertenza Solo personale addestrato e qualificato deve essere autorizzato ad installare o sostituire questo apparecchio.

Advarsel Kun kvalifisert personell med riktig opplæring bør montere eller bytte ut dette utstyret.

Aviso Este equipamento deverá ser instalado ou substituído apenas por pessoal devidamente treinado e qualificado.

¡Atención! Estos equipos deben ser instalados y reemplazados exclusivamente por personal técnico adecuadamente preparado y capacitado.

Warning Denna utrustning ska endast installeras och bytas ut av utbildad och kvalificerad personal.

Warning Definition



Warning 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. To see translations of the warnings that appear in this publication, refer to the *Regulatory Compliance and Safety Information* document that accompanied this device.

Waarschuwing 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 standaard maatregelen om ongelukken te voorkomen. Voor vertalingen van de waarschuwingen die in deze publicatie verschijnen, kunt u het document *Regulatory Compliance and Safety Information* (Informatie over naleving van veiligheids- en andere voorschriften) raadplegen dat bij dit toestel is ingesloten.

Varoitus Tämä varoitusmerkki merkitsee vaaraa. Olet tilanteessa, joka voi johtaa ruumiinvammaan. Ennen kuin työskentelet minkään laitteiston parissa, ota selvää sähkökytkentöihin liittyvistä vaaroista ja tavanomaisista onnettomuuksien ehkäisykeinoista. Tässä julkaisussa esiintyvien varoitusten käännökset löydät laitteen mukana olevasta *Regulatory Compliance and Safety Information* -kirjasesta (määräysten noudattaminen ja tietoa turvallisuudesta).

Attention Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant causer des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers posés par les circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions d'avertissements figurant dans cette publication, consultez le document *Regulatory Compliance and Safety Information* (Conformité aux règlements et consignes de sécurité) qui accompagne cet appareil.

Warnung Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu einer Körperverletzung führen könnte. Bevor Sie mit der Arbeit an irgendeinem Gerät beginnen, seien Sie sich der mit elektrischen Stromkreisen verbundenen Gefahren und der Standardpraktiken zur Vermeidung von Unfällen bewußt. Übersetzungen der in dieser Veröffentlichung enthaltenen Warnhinweise finden Sie im Dokument *Regulatory Compliance and Safety Information* (Informationen zu behördlichen Vorschriften und Sicherheit), das zusammen mit diesem Gerät geliefert wurde.

Avvertenza Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di lavorare su qualsiasi apparecchiatura, occorre conoscere i pericoli relativi ai circuiti elettrici ed essere al corrente delle pratiche standard per la prevenzione di incidenti. La traduzione delle avvertenze riportate in questa pubblicazione si trova nel documento *Regulatory Compliance and Safety Information* (Conformità alle norme e informazioni sulla sicurezza) che accompagna questo dispositivo.

Advarsel Dette varselsymbolet betyr fare. Du befinner deg i en situasjon som kan føre til personskade. Før du utfører arbeid på utstyr, må du være oppmerksom på de faremomentene som elektriske kretser innebærer, samt gjøre deg kjent med vanlig praksis når det gjelder å unngå ulykker. Hvis du vil se oversettelser av de advarslene som finnes i denne publikasjonen, kan du se i dokumentet *Regulatory Compliance and Safety Information* (Overholdelse av forskrifter og sikkerhetsinformasjon) som ble levert med denne enheten.

Aviso Este símbolo de aviso indica perigo. Encontra-se numa situação que lhe poderá causar danos físicos. Antes de começar a trabalhar com qualquer equipamento, familiarize-se com os perigos relacionados com circuitos eléctricos, e com quaisquer práticas comuns que possam prevenir possíveis acidentes. Para ver as traduções dos avisos que constam desta publicação, consulte o documento *Regulatory Compliance and Safety Information* (Informação de Segurança e Disposições Reguladoras) que acompanha este dispositivo.

¡Advertencia! Este símbolo de aviso significa peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considerar los riesgos que entraña la corriente eléctrica y familiarizarse con los procedimientos estándar de prevención de accidentes. Para ver una traducción de las advertencias que aparecen en esta publicación, consultar el documento titulado *Regulatory Compliance and Safety Information* (Información sobre seguridad y conformidad con las disposiciones reglamentarias) que se acompaña con este dispositivo.

Warning! Denna varningssymbol 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 vanligt förfarande för att förebygga skador. Se förklaringar av de varningar som förekommer i denna publikation i dokumentet *Regulatory Compliance and Safety Information* (Efterrättelse av föreskrifter och säkerhetsinformation), vilket medföljer denna anordning.

Installation Warning



Warning Read the installation instructions before you connect the system to its power source.

Waarschuwing Raadpleeg de installatie-aanwijzingen voordat u het systeem met de voeding verbindt.

Varoitus Lue asennusohjeet ennen järjestelmän yhdistämistä virtälähteeseen.

Attention Avant de brancher le système sur la source d'alimentation, consulter les directives d'installation.

Warnung Lesen Sie die Installationsanweisungen, bevor Sie das System an die Stromquelle anschließen.

Avvertenza Consultare le istruzioni di installazione prima di collegare il sistema all'alimentatore.

Advarsel Les installasjonsinstruksjonene før systemet kobles til strømkilden.

Aviso Leia as instruções de instalação antes de ligar o sistema à sua fonte de energia.

¡Advertencia! Ver las instrucciones de instalación antes de conectar el sistema a la red de alimentación.

Warning! Läs installationsanvisningarna innan du kopplar systemet till dess strömförsörjningsenhet.

TN Power Warning



Warning The device is designed to work with TN power systems.

Waarschuwing Het apparaat is ontworpen om te functioneren met TN energiesystemen.

Varoitus Koje on suunniteltu toimimaan TN-sähkövoimajärjestelmien yhteydessä.

Attention Ce dispositif a été conçu pour fonctionner avec des systèmes d'alimentation TN.

Warnung Das Gerät ist für die Verwendung mit TN-Stromsystemen ausgelegt.

Avvertenza Il dispositivo è stato progettato per l'uso con sistemi di alimentazione TN.

Advarsel Utstyret er utfomet til bruk med TN-strømsystemer.

Aviso O dispositivo foi criado para operar com sistemas de corrente TN.

¡Advertencia! El equipo está diseñado para trabajar con sistemas de alimentación tipo TN.

Warning! Enheten är konstruerad för användning tillsammans med elkraftssystem av TN-typ.

Power Supply Disconnection Warning



Warning Before working on a chassis or working near power supplies, unplug the power cord on AC units; disconnect the power at the circuit breaker on DC units.

Waarschuwing Voordat u aan een frame of in de nabijheid van voedingen werkt, dient u bij wisselstroom toestellen de stekker van het netsnoer uit het stopcontact te halen; voor gelijkstroom toestellen dient u de stroom uit te schakelen bij de stroomverbreker.

Varoitus Kytke irti vaihtovirtalaitteiden virtajohto ja katkaise tasavirtalaitteiden virta suojakytkimellä, ennen kuin teet mitään asennuspohjalle tai työskentelet virtalähteiden läheisyydessä.

Attention Avant de travailler sur un châssis ou à proximité d'une alimentation électrique, débrancher le cordon d'alimentation des unités en courant alternatif ; couper l'alimentation des unités en courant continu au niveau du disjoncteur.

Warnung Bevor Sie an einem Chassis oder in der Nähe von Netzgeräten arbeiten, ziehen Sie bei Wechselstromeinheiten das Netzkabel ab bzw. schalten Sie bei Gleichstromeinheiten den Strom am Unterbrecher ab.

Avvertenza Prima di lavorare su un telaio o intorno ad alimentatori, scollegare il cavo di alimentazione sulle unità CA; scollegare l'alimentazione all'interruttore automatico sulle unità CC.

Advarsel Før det utføres arbeid på kabinettet eller det arbeides i nærheten av strømforsyningsenheter, skal strømfledningen trekkes ut på vekselstrømsenheter og strømmen kobles fra ved strømbryteren på likestrømsenheter.

Aviso Antes de trabalhar num chassis, ou antes de trabalhar perto de unidades de fornecimento de energia, desligue o cabo de alimentação nas unidades de corrente alternada; desligue a corrente no disjuntor nas unidades de corrente contínua.

¡Advertencia! Antes de manipular el chasis de un equipo o trabajar cerca de una fuente de alimentación, desenchufar el cable de alimentación en los equipos de corriente alterna (CA); cortar la alimentación desde el interruptor automático en los equipos de corriente continua (CC).

Warning! Innan du arbetar med ett chassi eller nära strömförsörjningsenheter skall du för växelströmsenheter dra ur nätsladden och för likströmsenheter bryta strömmen vid överspänningsskyddet.

Circuit Breaker (15A) Warning



Warning This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC, 15A U.S. (240 VAC, 10A international) is used on the phase conductors (all current-carrying conductors).

Waarschuwing Dit produkt is afhankelijk van de installatie van het gebouw voor kortsluit-(overstroom)beveiliging. Controleer of er een zekering of stroomverbreker van niet meer dan 120 Volt wisselstroom, 15 A voor de V.S. (240 Volt wisselstroom, 10 A internationaal) gebruikt wordt op de fasegeleiders (alle geleiders die stroom voeren).

Varoitus Tämä tuote on riippuvainen rakennukseen asennetusta oikosulkusuojuuksesta (ylivirtasuojauksesta). Varmista, että vaihevirtajohtimissa (kaikissa virroitetuissa johtimissa) käytetään Yhdysvalloissa alle 120 voltin, 15 ampeerin ja monissa muissa maissa 240 voltin, 10 ampeerin sulaketta tai suojakytkintä.

Attention Pour ce qui est de la protection contre les courts-circuits (surtension), ce produit dépend de l'installation électrique du local. Vérifier qu'un fusible ou qu'un disjoncteur de 120 V alt., 15 A U.S. maximum (240 V alt., 10 A international) est utilisé sur les conducteurs de phase (conducteurs de charge).

Warnung Dieses Produkt ist darauf angewiesen, daß im Gebäude ein Kurzschluß- bzw. Überstromschutz installiert ist. Stellen Sie sicher, daß eine Sicherung oder ein Unterbrecher von nicht mehr als 240 V Wechselstrom, 10 A (bzw. in den USA 120 V Wechselstrom, 15 A) an den Phasenleitern (allen stromführenden Leitern) verwendet wird.

Avvertenza Questo prodotto dipende dall'installazione dell'edificio per quanto riguarda la protezione contro cortocircuiti (sovracorrente). Verificare che un fusibile o interruttore automatico, non superiore a 120 VCA, 15 A U.S. (240 VCA, 10 A internazionale) sia stato usato nei fili di fase (tutti i conduttori portatori di corrente).

Advarsel Dette produktet er avhengig av bygningens installasjoner av kortslutningsbeskyttelse (overstrøm). Kontroller at det brukes en sikring eller strømbryter som ikke er større enn 120 VAC, 15 A (USA) (240 VAC, 10 A internasjonalt) på faselederne (alle strømførende ledere).

Aviso Este produto depende das instalações existentes para protecção contra curto-circuito (sobrecarga). Assegure-se de que um fusível ou disjuntor não superior a 240 VAC, 10A é utilizado nos condutores de fase (todos os condutores de transporte de corrente).

¡Advertencia! Este equipo utiliza el sistema de protección contra cortocircuitos (o sobrecorrientes) del propio edificio. Asegurarse de que se utiliza un fusible o interruptor automático de no más de 240 voltios en corriente alterna (VAC), 10 amperios del estándar internacional (120 VAC, 15 amperios del estándar USA) en los hilos de fase (todos aquellos portadores de corriente).

Warning! Denna produkt är beroende av i byggnaden installerat kortslutningsskydd (överströmsskydd). Kontrollera att säkring eller överspänningsskydd används på fasledarna (samtliga strömförande ledare) för internationellt bruk max. 240 V växelström, 10 A (i USA max. 120 V växelström, 15 A).

Chassis Warning—Disconnecting Telephone-Network Cables



Warning Before opening the chassis, disconnect the telephone-network cables to avoid contact with telephone-network voltages.

Waarschuwing Voordat u het frame opent, dient u de verbinding met het telefoonnetwerk te verbreken door de kabels te ontkoppelen om zo contact met telefoonnetwerk-spanningen te vermijden.

Varoitus Vältä joutumista kosketuksiin puhelinverkostojännitteiden kanssa irrottamalla puhelinverkoston kaapelit ennen asennuspohjan aukaisemista.

Attention Avant d'ouvrir le châssis, débrancher les câbles du réseau téléphonique afin d'éviter tout contact avec les tensions d'alimentation du réseau téléphonique.

Warnung Bevor Sie das Chassis öffnen, ziehen Sie die Telefonnetzkabel aus der Verbindung, um Kontakt mit Telefonnetzspannungen zu vermeiden.

Avvertenza Prima di aprire il telaio, scollegare i cavi della rete telefonica per evitare di entrare in contatto con la tensione di rete.

Advarsel Før kabinettet åpnes, skal kablene for telenettet kobles fra for å unngå å komme i kontakt med spenningen i telenettet.

Aviso Antes de abrir o chasis, desligue os cabos da rede telefónica para evitar contacto com a tensão da respectiva rede.

¡Advertencia! Antes de abrir el chasis, desconectar el cableado dirigido a la red telefónica para evitar contacto con voltajes de la propia red.

Warning! Koppla loss ledningarna till telefonnätet innan du öppnar chassit så att kontakten med telefonnätsspänningen bryts.

Lightning Activity Warning



Warning Do not work on the system or connect or disconnect cables during periods of lightning activity.

Waarschuwing Tijdens onweer dat gepaard gaat met bliksem, dient u niet aan het systeem te werken of kabels aan te sluiten of te ontkoppelen.

Varoitus Älä työskentele järjestelmän parissa äläkä yhdistä tai irrota kaapeleita ukkosilmalla.

Attention Ne pas travailler sur le système ni brancher ou débrancher les câbles pendant un orage.

Warnung Arbeiten Sie nicht am System und schließen Sie keine Kabel an bzw. trennen Sie keine ab, wenn es gewittert.

Avvertenza Non lavorare sul sistema o collegare oppure scollegare i cavi durante un temporale con fulmini.

Advarsel Utfør aldri arbeid på systemet, eller koble kabler til eller fra systemet når det tordner eller lyner.

Aviso Não trabalhe no sistema ou ligue e desligue cabos durante períodos de mau tempo (trovoada).

¡Advertencia! No operar el sistema ni conectar o desconectar cables durante el transcurso de descargas eléctricas en la atmósfera.

Warning! Vid åska skall du aldrig utföra arbete på systemet eller ansluta eller koppla loss kablar.

Restricted Area Warning



Warning This unit is intended for installation in restricted access areas. A restricted access area is where access can only be gained by service personnel 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.

Waarschuwing Dit toestel is bedoeld voor installatie op plaatsen met beperkte toegang. Een plaats met beperkte toegang is een plaats waar toegang slechts door servicepersoneel verkregen kan worden door middel van een speciaal instrument, een slot en sleutel, of een ander veiligheidsmiddel, en welke beheerd wordt door de overheidsinstantie die verantwoordelijk is voor de locatie.

Varoitus Tämä laite on tarkoitettu asennettavaksi paikkaan, johon pääsy on rajoitettua. Paikka, johon pääsy on rajoitettua, tarkoittaa paikkaa, johon vain huoltohenkilöstö pääsee jonkin erikoistyökalun, lukkoon sopivan avaimen tai jonkin muun turvalaitteen avulla ja joka on paikasta vastuussa olevien toimivaltaisten henkilöiden valvoma.

Attention Cet appareil est à installer dans des zones d'accès réservé. Ces dernières sont des zones auxquelles seul le personnel de service peut accéder en utilisant un outil spécial, un mécanisme de verrouillage et une clé, ou tout autre moyen de sécurité. L'accès aux zones de sécurité est sous le contrôle de l'autorité responsable de l'emplacement.

Warnung Diese Einheit ist zur Installation in Bereichen mit beschränktem Zutritt vorgesehen. Ein Bereich mit beschränktem Zutritt ist ein Bereich, zu dem nur Wartungspersonal mit einem Spezialwerkzeugs, Schloß und Schlüssel oder anderer Sicherheitsvorkehrungen Zugang hat, und der von dem für die Anlage zuständigen Gremium kontrolliert wird.

Avvertenza Questa unità deve essere installata in un'area ad accesso limitato. Un'area ad accesso limitato è un'area accessibile solo a personale di assistenza tramite un'attrezzo speciale, lucchetto, o altri dispositivi di sicurezza, ed è controllata dall'autorità responsabile della zona.

Advarsel Denne enheten er laget for installasjon i områder med begrenset adgang. Et område med begrenset adgang gir kun adgang til servicepersonale som bruker et spesielt verktøy, lås og nøkkel, eller en annen sikkerhetsanordning, og det kontrolleres av den autoriteten som er ansvarlig for området.

Aviso Esta unidade foi concebida para instalação em áreas de acesso restrito. Uma área de acesso restrito é uma área à qual apenas tem acesso o pessoal de serviço autorizado, que possua uma ferramenta, chave e fechadura especial, ou qualquer outra forma de segurança. Esta área é controlada pela autoridade responsável pelo local.

¡Advertencia! Esta unidad ha sido diseñada para instalarse en áreas de acceso restringido. Área de acceso restringido significa un área a la que solamente tiene acceso el personal de servicio mediante la utilización de una herramienta especial, cerradura con llave, o algún otro medio de seguridad, y que está bajo el control de la autoridad responsable del local.

Warning! Denna enhet är avsedd för installation i områden med begränsat tillträde. Ett område med begränsat tillträde får endast tillträdas av servicepersonal med ett speciellt verktyg, lås och nyckel, eller annan säkerhetsanordning, och kontrolleras av den auktoritet som ansvarar för området.

Grounded Equipment Warning



Warning This equipment is intended to be grounded. Ensure that the host is connected to earth ground during normal use.

Waarschuwing Deze apparatuur hoort geaard te worden. Zorg dat de host-computer tijdens normaal gebruik met aarde is verbonden.

Varoitus Tämä laitteisto on tarkoitettu maadoitettavaksi. Varmista, että isäntälaitte on yhdistetty maahan normaalikäytön aikana.

Attention Cet équipement doit être relié à la terre. S'assurer que l'appareil hôte est relié à la terre lors de l'utilisation normale.

Warnung Dieses Gerät muß geerdet werden. Stellen Sie sicher, daß das Host-Gerät während des normalen Betriebs an Erde gelegt ist.

Avvertenza Questa apparecchiatura deve essere collegata a massa. Accertarsi che il dispositivo host sia collegato alla massa di terra durante il normale utilizzo.

Advarsel Dette utstyret skal jordes. Forviss deg om vertsterminalen er jordet ved normalt bruk.

Aviso Este equipamento deverá estar ligado à terra. Certifique-se que o host se encontra ligado à terra durante a sua utilização normal.

¡Advertencia! Este equipo debe conectarse a tierra. Asegurarse de que el equipo principal esté conectado a tierra durante el uso normal.

Warning! Denna utrustning är avsedd att jordas. Se till att värdenheten är jordad vid normal användning.

Ground Connection Warning



Warning When installing the unit, the ground connection must always be made first and disconnected last.

Waarschuwing Bij de installatie van het toestel moet de aardverbinding altijd het eerste worden gemaakt en het laatste worden losgemaakt.

Varoitus Laitetta asennettaessa on maahan yhdistäminen aina tehtävä ensiksi ja maadoituksen irti kytkeminen viimeiseksi.

Attention Lors de l'installation de l'appareil, la mise à la terre doit toujours être connectée en premier et déconnectée en dernier.

Warnung Der Erdanschluß muß bei der Installation der Einheit immer zuerst hergestellt und zuletzt abgetrennt werden.

Avvertenza In fase di installazione dell'unità, eseguire sempre per primo il collegamento a massa e disconnetterlo per ultimo.

Advarsel Når enheten installeres, må jordledningene alltid tilkobles først og frakobles sist.

Aviso Ao instalar a unidade, a ligação à terra deverá ser sempre a primeira a ser ligada, e a última a ser desligada.

¡Advertencia! Al instalar el equipo, conectar la tierra la primera y desconectarla la última.

Varning! Vid installation av enheten måste jordledningen alltid anslutas först och kopplas bort sist.

Jewelry Removal Warning



Warning Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.

Waarschuwing Alvorens aan apparatuur te werken die met elektrische leidingen is verbonden, sieraden (inclusief ringen, kettingen en horloges) verwijderen. Metalen voorwerpen worden warm wanneer ze met stroom en aarde zijn verbonden, en kunnen ernstige brandwonden veroorzaken of het metalen voorwerp aan de aansluitklemmen lassen.

Varoitus Ennen kuin työskentelet voimavirtajohtoihin kytkettyjen laitteiden parissa, ota pois kaikki korut (sormukset, kaulakorut ja kellot mukaan lukien). Metalliesineet kuumenevat, kun ne ovat yhteydessä sähkövirran ja maan kanssa, ja ne voivat aiheuttaa vakavia palovammoja tai hitsata metalliesineet kiinni liitäntänapoihin.

Attention Avant d'accéder à cet équipement connecté aux lignes électriques, ôter tout bijou (anneaux, colliers et montres compris). Lorsqu'ils sont branchés à l'alimentation et reliés à la terre, les objets métalliques chauffent, ce qui peut provoquer des blessures graves ou souder l'objet métallique aux bornes.

Warnung Vor der Arbeit an Geräten, die an das Netz angeschlossen sind, jeglichen Schmuck (einschließlich Ringe, Ketten und Uhren) abnehmen. Metallgegenstände erhitzen sich, wenn sie an das Netz und die Erde angeschlossen werden, und können schwere Verbrennungen verursachen oder an die Anschlußklemmen angeschweißt werden.

Avvertenza Prima di intervenire su apparecchiature collegate alle linee di alimentazione, togliersi qualsiasi monile (inclusi anelli, collane, braccialetti ed orologi). Gli oggetti metallici si riscaldano quando sono collegati tra punti di alimentazione e massa: possono causare ustioni gravi oppure il metallo può saldarsi ai terminali.

Advarsel Fjern alle smykker (inkludert ringer, halskjeder og klokker) før du skal arbeide på utstyr som er koblet til kraftledninger. Metallgjenstander som er koblet til kraftledninger og jord blir svært varme og kan forårsake alvorlige brannskader eller smelte fast til polene.

Aviso Antes de trabalhar em equipamento que esteja ligado a linhas de corrente, retire todas as jóias que estiver a usar (incluindo anéis, fios e relógios). Os objectos metálicos aquecerão em contacto com a corrente e em contacto com a ligação à terra, podendo causar queimaduras graves ou ficarem soldados aos terminais.

¡Advertencia! Antes de operar sobre equipos conectados a líneas de alimentación, quitarse las joyas (incluidos anillos, collares y relojes). Los objetos de metal se calientan cuando se conectan a la alimentación y a tierra, lo que puede ocasionar quemaduras graves o que los objetos metálicos queden soldados a los bornes.

Warning! Tag av alla smycken (inklusive ringar, halsband och armbandsur) innan du arbetar på utrustning som är kopplad till kraftledningar. Metallobjekt hettas upp när de kopplas ihop med ström och jord och kan förorsaka allvarliga brännskador; metallobjekt kan också sammansvetsas med kontaktarna.

Power Supply Warning



Warning Do not touch the power supply when the power cord is connected. For systems with a power switch, line voltages are present within the power supply even when the power switch is off and the power cord is connected. For systems without a power switch, line voltages are present within the power supply when the power cord is connected.

Waarschuwing U dient de voeding niet aan te raken zolang het netsnoer aangesloten is. Bij systemen met een stroomschakelaar zijn er lijnspanningen aanwezig in de voeding, zelfs wanneer de stroomschakelaar uitgeschakeld is en het netsnoer aangesloten is. Bij systemen zonder een stroomschakelaar zijn er lijnspanningen aanwezig in de voeding wanneer het netsnoer aangesloten is.

Varoitus Älä kosketa virtälähdettä virtajohdon ollessa kytkettynä. Virrankatkaisimella varustetuissa järjestelmissä on virtälähteen sisällä jäljellä verkkojännite, vaikka virrankatkaisin on katkaistu-asennossa virtajohdon ollessa kytkettynä. Järjestelmissä, joissa ei ole virrankatkaisinta, on virtälähteen sisällä verkkojännite, kun virtajohto on kytkettynä.

Attention Ne pas toucher le bloc d'alimentation quand le cordon d'alimentation est branché. Avec les systèmes munis d'un commutateur marche-arrêt, des tensions de ligne sont présentes dans l'alimentation quand le cordon est branché, même si le commutateur est à l'arrêt. Avec les systèmes sans commutateur marche-arrêt, l'alimentation est sous tension quand le cordon d'alimentation est branché.

Warnung Berühren Sie das Netzgerät nicht, wenn das Netzkabel angeschlossen ist. Bei Systemen mit Netzschalter liegen Leitungsspannungen im Netzgerät vor, wenn das Netzkabel angeschlossen ist, auch wenn das System ausgeschaltet ist. Bei Systemen ohne Netzschalter liegen Leitungsspannungen im Netzgerät vor, wenn das Netzkabel angeschlossen ist.

Avvertenza Non toccare l'alimentatore se il cavo dell'alimentazione è collegato. Per i sistemi con un interruttore di alimentazione, tensioni di linea sono presenti all'interno dell'alimentatore anche quando l'interruttore di alimentazione è in posizione di disattivazione (off), se il cavo dell'alimentazione è collegato. Per i sistemi senza un interruttore, tensioni di linea sono presenti all'interno dell'alimentatore quando il cavo di alimentazione è collegato.

Advarsel Berør ikke strømforsyningsenheden når strømledningen er tilkoblet. I systemer som har en strømbryter, er det spenning i strømforsyningsenheden selv om strømbryteren er slått av og strømledningen er tilkoblet. Når det gjelder systemer uten en strømbryter, er det spenning i strømforsyningsenheden når strømledningen er tilkoblet.

Aviso Não toque na unidade abastecedora de energia quando o cabo de alimentação estiver ligado. Em sistemas com interruptor, a corrente eléctrica estará presente na unidade abastecedora, sempre que o cabo de alimentação de energia estiver ligado, mesmo quando o interruptor se encontrar desligado. Para sistemas sem interruptor, a tensão eléctrica dentro da unidade abastecedora só estará presente quando o cabo de alimentação estiver ligado.

¡Advertencia! No tocar la fuente de alimentación mientras el cable esté enchufado. En sistemas con interruptor de alimentación, hay voltajes de línea dentro de la fuente, incluso cuando el interruptor esté en Apagado (OFF) y el cable de alimentación enchufado. En sistemas sin interruptor de alimentación, hay voltajes de línea en la fuente cuando el cable está enchufado.

Warning! Vidrör inte strömförsörjningsenheten när nätsladden är ansluten. För system med strömbrytare finns det nätspänning i strömförsörjningsenheten även när strömmen har slagits av men nätsladden är ansluten. För system utan strömbrytare finns det nätspänning i strömförsörjningsenheten när nätsladden är ansluten.

DC Power Supply Warning



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.

Waarschuwing Wanneer geslagen bedrading vereist is, dient u bedrading te gebruiken die voorzien is van goedgekeurde aansluitpunten, zoals het gesloten-lus type of het grijperschop type waarbij de aansluitpunten omhoog wijzen. Deze aansluitpunten dienen de juiste maat voor de draden te hebben en dienen zowel de isolatie als de geleider vast te klemmen.

Varoitus Jos säikeellinen johdin on tarpeen, käytä hyväksytyä johdinliitääntä, esimerkiksi suljettua silmukkaa tai kourumaista liitääntä, jossa on ylöspäin käännetyt kiinnityskorvat. Tällaisten liitääntöjen tulee olla kooltaan johtimiin sopivia ja niiden tulee puristaa yhteen sekä eristeen että johdinosan.

Attention Quand des fils torsadés sont nécessaires, utiliser des douilles terminales homologuées telles que celles à circuit fermé ou du type à plage ouverte avec cosses rebroussées. Ces douilles terminales doivent être de la taille qui convient aux fils et doivent être refermées sur la gaine isolante et sur le conducteur.

Warnung Wenn Litzenverdrahtung erforderlich ist, sind zugelassene Verdrahtungsabschlüsse, z.B. für einen geschlossenen Regelkreis oder gabelförmig, mit nach oben gerichteten Kabelschuhen zu verwenden. Diese Abschlüsse sollten die angemessene Größe für die Drähte haben und sowohl die Isolierung als auch den Leiter festklemmen.

Avvertenza Quando occorre usare trecce, usare connettori omologati, come quelli a occhio o a forcilla con linguette rivolte verso l'alto. I connettori devono avere la misura adatta per il cablaggio e devono serrare sia l'isolante che il conduttore.

Advarsel Hvis det er nødvendig med flertrådede ledninger, brukes godkjente ledningsavslutninger, som for eksempel lukket sløyfe eller spadetype med oppoverbøyde kabelsko. Disse avslutningene skal ha riktig størrelse i forhold til ledningene, og skal klemme sammen både isolasjonen og ledere.

Aviso Quando forem requeridas montagens de instalação eléctrica de cabo torcido, use terminações de cabo aprovadas, tais como, terminações de cabo em circuito fechado e planas com terminais de orelha voltados para cima. Estas terminações de cabo deverão ser do tamanho apropriado para os respectivos cabos, e deverão prender simultaneamente o isolamento e o fio condutor.

¡Advertencia! Cuando se necesite hilo trenzado, utilizar terminales para cables homologados, tales como las de tipo "bucle cerrado" o "espada", con las lengüetas de conexión vueltas hacia arriba. Estos terminales deberán ser del tamaño apropiado para los cables que se utilicen, y tendrán que sujetar tanto el aislante como el conductor.

Warning! När flertrådiga ledningar krävs måste godkända ledningskontakter användas, t.ex. kabelsko av sluten eller öppen typ med uppåtvänd tapp. Storleken på dessa kontakter måste vara avpassad till ledningarna och måste kunna hålla både isoleringen och ledaren fastklämda.

DC Power Disconnection Warning



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.

Waarschuwing Voordat u een van de onderstaande procedures uitvoert, dient u te controleren of de stroom naar het gelijkstroom circuit uitgeschakeld is. Om u ervan te verzekeren dat alle stroom UIT is geschakeld, kiest u op het schakelbord de stroomverbreker die het gelijkstroom circuit bedient, draait de stroomverbreker naar de UIT positie en plakt de schakelaarhendel van de stroomverbreker met plakband in de UIT positie vast.

Varoitus Varmista, että tasavirtapiirissä ei ole virtaa ennen seuraavien toimenpiteiden suorittamista. Varmistaaksesi, että virta on KATKAISTU täysin, paikanna tasavirrasta huolehtivassa kojetaulussa sijaitseva suojakytkin, käännä suojakytkin KATKAISTU-asentoon ja teippaa suojakytkimen varsi niin, että se pysyy KATKAISTU-asennossa.

Attention Avant de pratiquer l'une quelconque des procédures ci-dessous, vérifiez que le circuit en courant continu n'est plus sous tension. Pour en être sûr, localiser le disjoncteur situé sur le panneau de service du circuit en courant continu, placer le disjoncteur en position fermée (OFF) et, à l'aide d'un ruban adhésif, bloquer la poignée du disjoncteur en position OFF.

Warnung Vor Ausführung der folgenden Vorgänge ist sicherzustellen, daß die Gleichstromschaltung keinen Strom erhält. Um sicherzustellen, daß sämtlicher Strom abgestellt ist, machen Sie auf der Schalttafel den Unterbrecher für die Gleichstromschaltung ausfindig, stellen Sie den Unterbrecher auf AUS, und kleben Sie den Schaltergriff des Unterbrechers mit Klebeband in der AUS-Stellung fest.

Avvertenza Prima di svolgere una qualsiasi delle procedure seguenti, verificare che il circuito CC non sia alimentato. Per verificare che tutta l'alimentazione sia scollegata (OFF), individuare l'interruttore automatico sul quadro strumenti che alimenta il circuito CC, mettere l'interruttore in posizione OFF e fissarlo con nastro adesivo in tale posizione.

Advarsel Før noen av disse prosedyrene utføres, kontroller at strømmen er frakoblet likestrømkretsen. Sørg for at all strøm er slått AV. Dette gjøres ved å lokalisere strømbryteren på brytertavlen som betjener likestrømkretsen, slå strømbryteren AV og teipe bryterhåndtaket på strømbryteren i AV-stilling.

Aviso Antes de executar um dos seguintes procedimentos, certifique-se que desligou a fonte de alimentação de energia do circuito de corrente contínua. Para se assegurar que toda a corrente foi DESLIGADA, localize o disjuntor no painel que serve o circuito de corrente contínua e coloque-o na posição OFF (Desligado), segurando nessa posição a manivela do interruptor do disjuntor com fita isoladora.

¡Advertencia! Antes de proceder con los siguientes pasos, comprobar que la alimentación del circuito de corriente continua (CC) esté cortada (OFF). Para asegurarse de que toda la alimentación esté cortada (OFF), localizar el interruptor automático en el panel que alimenta al circuito de corriente continua, cambiar el interruptor automático a la posición de Apagado (OFF), y sujetar con cinta la palanca del interruptor automático en posición de Apagado (OFF).

Warning! Innan du utför någon av följande procedurer måste du kontrollera att strömförsörjningen till likströmskretsen är bruten. Kontrollera att all strömförsörjning är BRUTEN genom att slå AV det överspänningsskydd som skyddar likströmskretsen och tejpa fast överspänningsskyddets omkopplare i FRÅN-läget.

DC Power Connection Warning



Warning After wiring the DC power supply, remove the tape from the circuit breaker switch handle and reinstate power by moving the handle of the circuit breaker to the ON position.

Waarschuwing Nadat de bedrading van de gelijkstroom voeding aangebracht is, verwijdert u het plakband van de schakelaarhendel van de stroomverbreker en schakelt de stroom weer in door de hendel van de stroomverbreker naar de AAN positie te draaien.

Varoitus Yhdistettyäsi tasavirtalähteen johdon avulla poista teippi suojakytken varresta ja kytke virta uudestaan kääntämällä suojakytken varsi KYTKETTY-asentoon.

Attention Une fois l'alimentation connectée, retirer le ruban adhésif servant à bloquer la poignée du disjoncteur et rétablir l'alimentation en plaçant cette poignée en position de marche (ON).

Warnung Nach Verdrahtung des Gleichstrom-Netzgeräts entfernen Sie das Klebeband vom Schaltergriff des Unterbrechers und schalten den Strom erneut ein, indem Sie den Griff des Unterbrechers auf EIN stellen.

Avvertenza Dopo aver eseguito il cablaggio dell'alimentatore CC, togliere il nastro adesivo dall'interruttore automatico e ristabilire l'alimentazione spostando all'interruttore automatico in posizione ON.

Advarsel Etter at likestrømsenheten er tilkoblet, fjernes teipen fra håndtaket på strømbryteren, og deretter aktiveres strømmen ved å dreie håndtaket på strømbryteren til PÅ-stilling.

Aviso Depois de ligar o sistema de fornecimento de corrente contínua, retire a fita isoladora da manivela do disjuntor, e volte a ligar a corrente ao deslocar a manivela para a posição ON (Ligado).

¡Advertencia! Después de cablear la fuente de alimentación de corriente continua, retirar la cinta de la palanca del interruptor automático, y restablecer la alimentación cambiando la palanca a la posición de Encendido (ON).

Warning! När du har kopplat ledningarna till strömförsörjningsenheten för inmatad likström tar du bort teipen från överspänningsskyddets omkopplare och slår på strømmen igen genom att ställa överspänningsskyddets omkopplare i TILL-läget.

DC Power Supply Wiring Warning



Warning The illustration shows the DC power supply terminal block. Wire the DC power supply using the appropriate lugs at the wiring end, as illustrated. The proper wiring sequence is ground to ground, positive to positive (line to L), and negative to negative (neutral to N). Note that the ground wire should always be connected first and disconnected last.

Waarschuwing De figuur toont de aansluitstrip van de gelijkstroomvoeding. Breng de bedrading aan voor de gelijkstroomvoeding met behulp van de juiste aansluitpunten aan het draadeinde zoals aangegeven. De juiste bedradingsvolgorde is aarde naar aarde, positief naar positief (lijn naar L) en negatief naar negatief (neutraal naar N). Let op dat de aarddraad altijd het eerst verbonden en het laatst losgemaakt wordt.

Varoitus Kuva esittää tasavirran pääterasiasa. Liitä tasavirtalähde johdon avulla käyttäen sopivia kiinnityskorvia johdon päässä kuvan esittämällä tavalla. Oikea kytkejärjestys on maajohto maajohtoon, positiivinen positiiviseen (johto L:ään) ja negatiivinen negatiiviseen (nollajohto N:ään). Ota huomioon, että maajohto on aina yhdistettävä ensin ja irrotettava viimeisenä.

Attention La figure illustre le bloc de connexion de l'alimentation en courant continu. Câbler l'alimentation en courant continu en fixant les cosses qui conviennent aux extrémités câblées conformément au schéma. La séquence de câblage à suivre est terre-terre, positif-positif (ligne sur L), et négatif-négatif (neutre sur N). Noter que le fil de masse doit toujours être connecté en premier et déconnecté en dernier.

Warnung Die Abbildung zeigt den Terminalblock des Gleichstrom-Netzgeräts. Verdrahten Sie das Gleichstrom-Netzgerät unter Verwendung von geeigneten Kabelschuhen am Verdrahtungsende (siehe Abbildung). Die richtige Verdrahtungsfolge ist Erde an Erde, positiv an positiv (Leitung an L) und negativ an negativ (neutral an N). Beachten Sie bitte, daß der Erdungsdraht immer als erster verbunden und als letzter abgetrennt werden sollte.

Avvertenza L'illustrazione mostra la morsettiere dell'alimentatore CC. Cablare l'alimentatore CC usando i connettori adatti all'estremità del cablaggio, come illustrato. La corretta sequenza di cablaggio è da massa a massa, da positivo a positivo (da linea ad L) e da negativo a negativo (da neutro a N). Tenere presente che il filo di massa deve sempre venire collegato per primo e scollegato per ultimo.

Advarsel Figuren viser likestrømforsyningsenhetens tilkoplingsterminal. Likestrømforsyningsenheten tilkoples ved hjelp av passende kabelsko som festes i enden av ledningene, slik som vist i figuren. Riktig tilkoplingssekvens er jord til jord, positiv til positiv (linje til L), og negativ til negativ (nøytral til N). Husk at jordingsledningen alltid bør tilkoples først og frakoples sist.

Aviso A figura mostra o bloco do terminal de fornecimento de corrente contínua. Ligue o fornecimento de corrente contínua utilizando as extremidades apropriadas no final do cabo, conforme ilustrado. A sequência correcta de instalação é terra-a-terra, positivo-positivo (linha para L), e negativo-negativo (neutro para N). Note que o fio de terra deverá ser sempre o primeiro a ser ligado, e o último a ser desligado.

¡Advertencia! La figura muestra la caja de bornes de la fuente de alimentación. Cablear la fuente de alimentación de corriente continua, usando las lengüetas de conexión apropiadas, en el extremo del cable tal como se muestra. Las conexiones deben realizarse en el siguiente orden: tierra con tierra, positivo con positivo (la línea con la L) y negativo con negativo (el neutro con la N). Tenga en cuenta que el conductor de tierra siempre tiene que conectarse el primero y desconectarse el último.

Warning! Illustrationen visar anslutningsplinten för likströmförsörjningsenheten. Koppla ledningarna till strömförsörjningsenheten med lämpliga kabelskor i ledningsändarna som bilden visar. Korrekt kopplingssekvens är jord till jord, positiv till positiv (linje till L) och negativ till negativ (neutral till N). Observera att jordledningen alltid skall anslutas först och kopplas bort sist.

Hazardous Voltages in WAN Ports



Warning Hazardous network voltages are present in WAN ports regardless of whether power to the router is OFF or ON. To avoid electric shock, use caution when working near WAN ports. When detaching cables, detach the end away from the router first.

Waarschuwing Er is gevaarlijke netwerkspanning aanwezig in WAN poorten ongeacht of de stroom naar de router INGESCHAKELD of UITGESCHAKELD is. Om elektrische schokken te vermijden, dient u voorzichtig te werk te gaan wanneer u in de nabijheid van WAN poorten werkt. Wanneer u kabels losmaakt, dient u eerst het uiteinde dat zich het verst van de router vandaan bevindt, te verwijderen.

Varoitus WAN-porteissa on vaarallisia verkkojännitteitä riippumatta siitä, onko reitittimen virta kytketty vai ei. Välttyäksesi sähköiskulta ole varovainen työskennellessäsi WAN-porttien lähettyvillä. Kun irrotat kaapeleita, irrota reitittimestä kauempana sijaitseva pää ensiksi.

Attention Les ports de réseau longue distance (WAN) gèrent des tensions de réseau dangereuses, que le routeur soit sous tension ou pas. Pour éviter tout risque d'électrocution, prenez toutes les précautions nécessaires avant de travailler à proximité des ports WAN. Pour déconnecter les câbles, commencez par débrancher l'extrémité la plus éloignée du routeur.

Warnung In WAN-Ports sind gefährliche Netzspannungen vorhanden, auch wenn der Strom zum Router abgeschaltet wurde. Zur Vermeidung von Elektroschock Vorsicht bei der Arbeit in der Nähe von WAN-Ports. Beim Abtrennen von Kabeln zuerst das vom Router entfernte Ende lösen.

Avvertenza Nelle porte WAN sono presenti tensioni di rete pericolose, sia che il router sia acceso o meno (ON od OFF). Per evitare scosse elettriche, fare attenzione quando si lavora in prossimità di porte WAN. Quando si scollegano cavi, staccare per primo il connettore collegato al router.

Advarsel Det er livsfarlig nettverksspenning i WAN-utganger, uavhengig av om strømmen til fordelingsenheten er slått av (OFF) eller på (ON). Vær forsiktig når du jobber nær WAN-utganger slik at du unngår elektrisk støt. Hvis du skal løsne kabler, må du først løsne den enden som er lengst borte fra fordelingsenheten.

Aviso Existem sempre tensões de rede perigosas nas portas WAN, independentemente da corrente para o dispositivo repartidor de mensagens estar ligada (ON) ou desligada (OFF). Para evitar choques eléctricos, tenha o devido cuidado ao trabalhar perto das portas WAN. Ao desconectar os cabos, separe primeiro a extremidade que se encontra ligada ao dispositivo repartidor de mensagens.

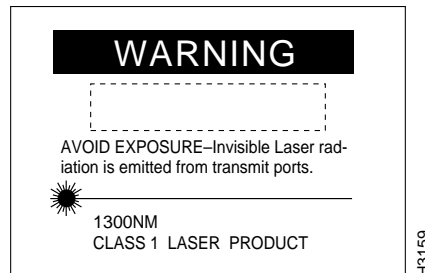
¡Advertencia! Hay tensiones de red peligrosas en los puertos de redes de área extendida (WAN), tanto con la alimentación al router conectada como desconectada. Para evitar la sacudida eléctrica, proceda con precaución cuando trabaje en las proximidades de puertos WAN. Para desconectar los cables, desconecte primero el extremo que va al router.

Warning! Farlig nätverksspanning föreligger i WAN-portarna oavsett om strömförsörjningen till distributören är bruten eller ej. För att undvika elektriska stötar ska du vara försiktig vid arbete i närheten av dessa portar. När du kopplar bort en kabel ska du först koppla bort den ände som inte är ansluten till distributören.

Invisible Laser Radiation Warning



Warning Invisible laser radiation may be emitted from the aperture ports of the single-mode FDDI card when no cable is connected. *Avoid exposure and do not stare into open apertures.* Following is an example of the warning label that appears on the product:



Waarschuwing Wanneer geen kabel aangesloten is, kan er onzichtbare laserstraling geëmitteerd worden uit de apertuurpoorten van de enkelvoudige-modus FDDI-kaart ("Fiber Distributed Data Interface" = "Interface van door glasvezels gedistribueerde gegevens"). *Vermijd blootstelling en staar niet in de open aperturen.*

Varoitus Yksitoimintoisen FDDI-kortin avoimista porteista saattaa vapautua näkymättömiä lasersäteitä kaapelin ollessa irrotettuna. *Vältä säteilyä ja avoimiin aukkoihin katsomista.*

Attention Des rayons laser invisibles peuvent s'échapper des ouvertures prévues pour la carte d'interface des données distribuées par fibres optiques monomode (Fiber Distributed Data Interface ou FDDI) quand un câble n'est pas connecté. *Éviter toute exposition et ne pas approcher les yeux des ouvertures.*

Warnung Wenn kein Kabel angeschlossen ist, wird möglicherweise unsichtbare Laserstrahlung von den Steckanschlüssen der Monomode-FDDI-Karte (Glasfaserdatenübertragungs-Schnittstelle; Fiber Distributed Data Interface) ausgestrahlt. *Schützen Sie sich vor Strahlung, und blicken Sie nicht direkt in offene Steckanschlüsse.*

Avvertenza Radiazioni laser invisibili potrebbero essere emesse dalle porte di apertura della scheda FDDI (Fiber Distributed Data Interface - Interfaccia di dati distribuiti a fibre) a modo singolo quando il cavo non è stato collegato. *Evitare l'esposizione a tali radiazioni e non fissare alcuna porta aperta.*

Advarsel Usynlig laserstråling kan emitteres fra åpningsutgangene på FDDI-kort med kabel av monomodusfiber når de ikke er tilkoblet en ledning. *Unngå utsettelse for stråling, og stirr ikke inn i åpne åpninger.*

Aviso Radiação laser invisível poderá ser emitida através das portas de abertura da placa FDDI (Interface de Dados Distribuídos por Fibra Óptica) de modo simples, mesmo quando não houver nenhum cabo ligado. *Evite exposição e não espreite por estas aberturas.*

¡Advertencia! La tarjeta FDDI modo sencillo puede emitir radiaciones láser invisibles por los orificios de los puertos cuando no se haya conectado ningún cable. *Evitar la exposición y no mirar fijamente los orificios abiertos.*

Varning! Osynlig laserstrålning kan avges från portöppningarna för FDDI-kortet för enkelmodsfiber när ingen kabel är ansluten (FDDI: Fiber Distributed Data Interface = gränssnitt för dataöverföring med fiberoptik). *Utsätt dig inte för denna strålning och titta inte in i öppningarna.*

ISDN Connection Warning



Warning The ISDN connection is regarded as a source of voltage that should be inaccessible to user contact. Do not attempt to tamper with or open any public telephone operator (PTO)-provided equipment or connection hardware. Any hardwired connection (other than by a nonremovable, connect-one-time-only plug) must be made only by PTO staff or suitably trained engineers.

Waarschuwing De verbinding met ISDN (Integrated Services Digital Network = Digitaal netwerk met geïntegreerde faciliteiten) wordt beschouwd als een spanningsbron die ontoegankelijk dient te zijn voor gebruikers. Gebruikers dienen geen poging te doen om door de openbare telefoondienst (PTT) verstrekte apparatuur of aansluitingshardware te openen of ermee te knoeien. Alle vastbedrade verbindingen (behalve die verbindingen die gemaakt zijn door een niet-verwijderbare, slechts eenmaal te verbinden stekker) dienen slechts door PTT-personeel of door daartoe opgeleide ingenieurs gemaakt te worden.

Varoitus ISDN-liitäntää pidetään jännitelähteenä, jonka kanssa käyttäjän ei tulisi päästä kosketuksiin. Käyttäjien ei tulisi yrittää peukaloida tai avata laitteita tai liittimiä, jotka kuuluvat yleiselle puhelinlaitokselle (PTO). Ainoastaan yleisen puhelinlaitoksen henkilökunnan tai ammattitaitoisten teknikoiden tulee tehdä kaapeliliitännät (lukuun ottamatta kiinteitä pistokkeita, jotka yhdistetään ainoastaan yhden kerran).

Attention La connexion du réseau numérique intégré (Integrated Services Digital Network ou ISDN) constitue une source de tension qui ne doit pas être accessible à l'utilisateur. Les utilisateurs ne doivent jamais tenter de modifier ni même d'ouvrir un matériel fourni par une compagnie de téléphone public, ou le matériel de connexion. Toute connexion câblée (autre que celles établies par une prise non démontable à connexion unique) ne doit être effectuée que par le personnel de la compagnie de téléphone ou par des techniciens proprement formés.

Warnung Die ISDN-Verbindung gilt als eine Spannungsquelle, die dem Anwender unzugänglich sein sollte. Anwender sollten nicht versuchen, sich an der von den Anbietern öffentlicher TK-Dienste gelieferten Ausstattung oder Verbindungs-Hardware zu schaffen zu machen oder sie zu öffnen. Alle festverdrahteten Verbindungen (mit Ausnahme der Verbindungen mit einem nicht abnehmbaren, nur einmal anzuschließenden Stecker) sind von Mitarbeitern des TK-Anbieters oder von entsprechend geschulten Technikern herzustellen.

Avvertenza Il collegamento ISDN (Integrated Services Digital Network -Rete digitale a servizi integrati) viene considerato come una fonte di tensione che dovrebbe essere inaccessibile al contatto dell'utente. Gli utenti non devono né manomettere né provare ad aprire le apparecchiature o i dispositivi di collegamento forniti dalla società telefonica. Qualsiasi collegamento cablato (ad eccezione di una spina non rimovibile, da installare una sola volta) deve essere eseguito esclusivamente da un dipendente della società telefonica o da tecnici specializzati.

Advarsel ISDN-koblingen betraktes som en spenningskilde som bør være utilgjengelig for brukeren. Brukere bør ikke klusse med eller åpne utstyr eller tilkoblingsmateriale som er utstyrt av Telenor. Eventuelle faste installasjoner (bortsett fra koblinger som er foretatt med et støpsel for engangsbruk og som ikke kan fjernes) må kun utføres av Telenor-montører.

Aviso A conexão RDIS (Rede Digital com Integração de Serviços) é interpretada como uma fonte de tensão que deverá ser inacessível ao utilizador. Os utilizadores não deverão tentar violar qualquer equipamento ou conexão de serviço telefónico público. Qualquer conexão de rede de fios (para além daquela estabelecida por uma ficha não-removível de ligação única), deverá apenas ser efectuada por pessoal dos serviços telefónicos ou engenheiros devidamente treinados.

¡Advertencia! La conexión al circuito RDSI (Red Digital de Servicios Integrados) se considera como una fuente de voltaje con la cual el usuario no debe entrar en contacto. Los usuarios deberán evitar manipular indebidamente, o abrir, los equipos o hardware de conexión proporcionados por cualquier compañía operadora de la red pública de telefonía. Las conexiones de cable rígido que

sean necesarias (excepto las de clavija no desmontable de un solo uso) deberán ser realizadas exclusivamente por personal de la entidad operadora de la red pública de telefonía, o por personal técnico adecuadamente capacitado.

Warning! ISDN-anslutningen betraktas som en spänningskälla och bör inte vara åtkomlig för användaren (ISDN: Integrated Services Digital Network = digitalt flertjänstnät). Användare får inte manipulera eller söka öppna utrustning eller anslutningsdon som tillhandahållits av telefonbolag (PTO-produkter). Anslutning av ledningar (med undantag av en icke löstagbar propp för engångsanslutning) får endast utföras av PTO-anställda eller lämpligt utbildade tekniker.

SELV Circuits



Warning To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.

Waarschuwing Om elektrische schokken te vermijden, mogen veiligheidscircuits met extra lage spanning (genaamd SELV = Safety Extra-Low Voltage) niet met telefoonnetwerkspanning (TNV) circuits verbonden worden. LAN (Lokaal netwerk) poorten bevatten SELV circuits en WAN (Regionaal netwerk) poorten bevatten TNV circuits. Sommige LAN en WAN poorten gebruiken allebei RJ-45 connectors. Ga voorzichtig te werk wanneer u kabels verbindt.

Varoitus Jotta vältyt sähköiskulta, älä kytke pienjännitteisiä SELV-suojapiirejä puhelinverkkojännitettä (TNV) käyttöviin virtapiireihin. LAN-portit sisältävät SELV-piirejä ja WAN-portit puhelinverkkojännitettä käyttöviä piirejä. Osa sekä LAN- että WAN-porteista käyttää RJ-45-liittimiä. Ole varovainen kytkiessäsi kaapeleita.

Attention Pour éviter une électrocution, ne raccordez pas les circuits de sécurité basse tension (Safety Extra-Low Voltage ou SELV) à des circuits de tension de réseau téléphonique (Telephone Network Voltage ou TNV). Les ports du réseau local (LAN) contiennent des circuits SELV et les ports du réseau longue distance (WAN) sont munis de circuits TNV. Certains ports LAN et WAN utilisent des connecteurs RJ-45. Raccordez les câbles en prenant toutes les précautions nécessaires.

Warnung Zur Vermeidung von Elektroschock die Sicherheits-Kleinspannungs-Stromkreise (SELV-Kreise) nicht an Fernsprechnetzspannungs-Stromkreise (TNV-Kreise) anschließen. LAN-Ports enthalten SELV-Kreise, und WAN-Ports enthalten TNV-Kreise. Einige LAN- und WAN-Ports verwenden auch RJ-45-Steckverbinder. Vorsicht beim Anschließen von Kabeln.

Avvertenza Per evitare scosse elettriche, non collegare circuiti di sicurezza a tensione molto bassa (SELV) ai circuiti a tensione di rete telefonica (TNV). Le porte LAN contengono circuiti SELV e le porte WAN contengono circuiti TNV. Alcune porte LAN e WAN fanno uso di connettori RJ-45. Fare attenzione quando si collegano cavi.

Advarsel Unngå å koble lavspenningskretser (SELV) til kretser for telenettspenning (TNV), slik at du unngår elektrisk støt. LAN-utganger inneholder SELV-kretser og WAN-utganger inneholder TNV-kretser. Det finnes både LAN-utganger og WAN-utganger som bruker RJ-45-kontakter. Vær forsiktig når du kobler kabler.

Aviso Para evitar choques eléctricos, não conecte os circuitos de segurança de baixa tensão (SELV) aos circuitos de tensão de rede telefónica (TNV). As portas LAN contêm circuitos SELV e as portas WAN contêm circuitos TNV. Algumas portas LAN e WAN usam conectores RJ-45. Tenha o devido cuidado ao conectar os cabos.

¡Advertencia! Para evitar la sacudida eléctrica, no conectar circuitos de seguridad de voltaje muy bajo (safety extra-low voltage = SELV) con circuitos de voltaje de red telefónica (telephone network voltage = TNV). Los puertos de redes de área local (local area network = LAN) contienen circuitos

SELV, y los puertos de redes de área extendida (wide area network = WAN) contienen circuitos TNV. En algunos casos, tanto los puertos LAN como los WAN usan conectores RJ-45. Proceda con precaución al conectar los cables.

Warning! För att undvika elektriska stötar, koppla inte säkerhetskretsar med extra låg spänning (SELV-kretsar) till kretsar med telefonnätspänning (TNV-kretsar). LAN-portar innehåller SELV-kretsar och WAN-portar innehåller TNV-kretsar. Vissa LAN- och WAN-portar är försedda med RJ-45-kontakter. Iaktta försiktighet vid anslutning av kablar.

Battery Handling Warning



Warning There is the danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Waarschuwing Er is ontploffingsgevaar als de batterij verkeerd vervangen wordt. Vervang de batterij slechts met hetzelfde of een equivalent type dat door de fabrikant aanbevolen is. Gebruikte batterijen dienen overeenkomstig fabrieksvoorschriften weggegooid te worden.

Varoitus Räjähdyksen vaara, jos akku on vaihdettu väärään akkuun. Käytä vaihtamiseen ainoastaan saman- tai vastaavantyyppistä akkua, joka on valmistajan suosittelema. Hävitä käytetyt akut valmistajan ohjeiden mukaan.

Attention Danger d'explosion si la pile n'est pas remplacée correctement. Ne la remplacer que par une pile de type semblable ou équivalent, recommandée par le fabricant. Jeter les piles usagées conformément aux instructions du fabricant.

Warnung Bei Einsetzen einer falschen Batterie besteht Explosionsgefahr. Ersetzen Sie die Batterie nur durch den gleichen oder vom Hersteller empfohlenen Batterietyp. Entsorgen Sie die benutzten Batterien nach den Anweisungen des Herstellers.

Avvertenza Pericolo di esplosione se la batteria non è installata correttamente. Sostituire solo con una di tipo uguale o equivalente, consigliata dal produttore. Eliminare le batterie usate secondo le istruzioni del produttore.

Advarsel Det kan være fare for eksplosjon hvis batteriet skiftes på feil måte. Skift kun med samme eller tilsvarende type som er anbefalt av produsenten. Kasser brukte batterier i henhold til produsentens instruksjoner.

Aviso Existe perigo de explosão se a bateria for substituída incorrectamente. Substitua a bateria por uma bateria igual ou de um tipo equivalente recomendado pelo fabricante. Destrua as baterias usadas conforme as instruções do fabricante.

¡Advertencia! Existe peligro de explosión si la batería se reemplaza de manera incorrecta. Reemplazar la batería exclusivamente con el mismo tipo o el equivalente recomendado por el fabricante. Desechar las baterías gastadas según las instrucciones del fabricante.

Warning! Explosionsfara vid felaktigt batteribyte. Ersätt endast batteriet med samma batterityp som rekommenderas av tillverkaren eller motsvarande. Följ tillverkarens anvisningar vid kassering av använda batterier.

Product Disposal Warning



Warning Ultimate disposal of this product should be handled according to all national laws and regulations.

Waarschuwing Dit produkt dient volgens alle landelijke wetten en voorschriften te worden afgedankt.

Varoitus Tämän tuotteen lopullisesta hävittämisestä tulee huolehtia kaikkia valtakunnallisia lakeja ja säännöksiä noudattaen.

Attention La mise au rebut définitive de ce produit doit être effectuée conformément à toutes les lois et réglementations en vigueur.

Warnung Dieses Produkt muß den geltenden Gesetzen und Vorschriften entsprechend entsorgt werden.

Avvertenza L'eliminazione finale di questo prodotto deve essere eseguita osservando le normative italiane vigenti in materia.

Advarsel Endelig disponering av dette produktet må skje i henhold til nasjonale lover og forskrifter.

Aviso A descartagem final deste produto deverá ser efectuada de acordo com os regulamentos e a legislação nacional.

¡Advertencia! El desecho final de este producto debe realizarse según todas las leyes y regulaciones nacionales.

Varning! Slutlig kassering av denna produkt bör skötas i enlighet med landets alla lagar och föreskrifter.

Channelized T1/ISDN PRI Regulatory Compliance

The following text is required to comply with regulatory agencies.

FCC Part 68

This equipment complies with Part 68 of the FCC rules. On the side of this network module interface card is a label that contains, among other information, the FCC registration number. If requested, this information must be provided to the telephone company.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facility, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make the necessary modifications that maintain uninterrupted service.

If trouble is experienced with this equipment, please contact the following address:

Cisco System, Inc.
RMA Receiving
1135 Walsh Avenue
Santa Clara, California 95050
USA

For warranty information contact Cisco's Technical Assistance Center (see the section "Cisco Connection Online").

If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved.

It is recommended that the customer install an AC surge arrester in the AC outlet to which this device is connected to avoid damage to equipment caused by local lightning strikes and other electrical surges.

The CT1/PRI network processor module for Cisco 4000 series routers has the 6.0F service order cable.

The CT1/PRI module has the following facility interface codes: 04DU9-BN, 04DU9-DN, 04DU9-KN, 04DU9-1SN.

ISDN Safety and Compliance Conditions

This section contains safety and agency compliance information.

BRI Network Processor Module Independent of Host

The Basic Rate Interface (BRI) network processor module for the Cisco 4000 series is a processor/interface card assembly for use within a range of data communication (gateway and router) chassis supplied by Cisco Systems throughout Europe. The BRI module is a self-contained product that provides all of the hardware necessary to allow connection of the Cisco 4000 series chassis to four or eight Basic Access Integrated Services Digital Networks (ISDNs) each at the S-reference point. The ISDN usage is restricted to point-to-point mode only.

The BRI network processor module must have a dedicated S-bus connection for each of its ISDN ports. The BRI module cannot share any of its S-bus connections with other terminal equipment; therefore, no other terminals should be connected to the same S-bus as a BRI module connection.

The four or eight ISDN connections must be made to network connection points that are provided by one network vendor or public telephone operator (PTO) to ensure that common network timing exists between the ISDN ports used. Failure to observe this point may result in lost (nonrecoverable) data packets because of timing slips.

The BRI network processor module is fully transportable between compatible host chassis. The choice of each compatible chassis has no impact on the capabilities, functionality, or performance of the BRI network processor module.

The BRI network processor module consists of the following subassemblies:

- BRI network processor module mother card (part number 73-1219)
- 1 BRI adapter interface card (part number 73-1220)
- BRI-ISDN (point-to-point use) Software Version 1.0

The BRI network processor module provides users of compatible host router or bridge chassis with a high-speed throughput, point-to-point connection that can be set up over the digital telecommunication network ISDN.

BRI Module Installation Requirements—Special Considerations

Observe the following considerations during the installation of a Cisco 4000 series router with ISDN interfaces.

ISDN, Type of Connection

Where your PTO has provided you with ISDN modular sockets, the BRI module can be plugged in to make the connection. Connections should only be made to a BRI module properly installed within the host chassis.

In certain countries, the BRI network processor module must be hardwired permanently to the S-reference connection point. This is accommodated for by the use of a connect one-time-only, nonremovable plug (an RJ-45 with the latch tab removed).

ISDN Connection, Safety Warning



Warning The ISDN connection is regarded as a source of voltage that should be inaccessible to user contact. Do not attempt to tamper with or open any public telephone operator (PTO)–provided equipment or connection hardware. Any hardwired connection (other than by nonremovable, connect-one-time-only lug) must be made only by PTO staff or suitably trained engineers.

The BRI network processor module is approved only for installation in a host chassis and with host attachments, which are either type approved for such apparatus, or covered by a general approval.

Maintaining Safe Installation Distances

Except at the edge connector that plugs into the host chassis expansion slot, clearance and creepage distances of X millimeters (mm) and Y mm as listed in Table 1 must be maintained between the cards and other parts of the host including any other expansion cards fitted.

Table 1 Creepage and Clearance Distances Based on Voltage

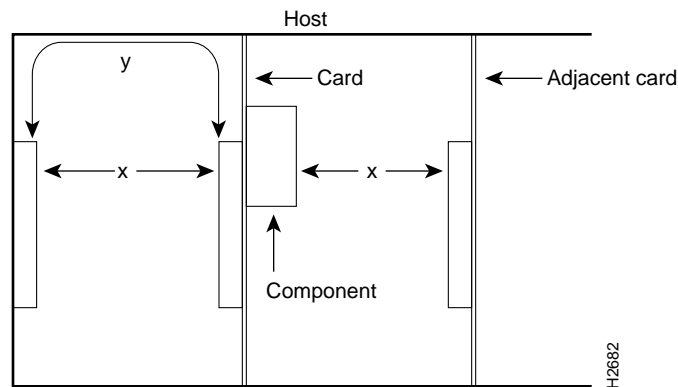
Voltage ¹ (Vrms or VDC) ²	Creepage (Y mm) ³	Clearance (X mm)
Up to 50	2.4 (3.8)	2.0
Up to 125	3.0 (4.8)	2.6
Up to 250	5.0 (8.0)	4.0
Up to 300	6.4 (10.0)	4.0

1. Refers to the voltage used or generated by other parts of the host or expansion card.
2. Vrms = root mean square voltage; VDC = volts direct current.
3. The creepage distances not in parentheses apply when the equipment is installed in a normal office environment. The larger dimensions, in parentheses, must be applied when the equipment is installed in an environment in which dust and other types of pollution could conduct electricity because of the effects of dampness and condensation. This applies to locations subject to high humidity.

Note the following points in Table 1:

- Clearance distances are defined as the minimum distance measured in air between two points (i.e., line of sight)
- Creepage distances are defined as the minimum distance measured across the surface of an insulator between two points (i.e., following the contour of the insulator)

Creepage and clearance distances are measured between adjacent parts as shown in Figure 1.

Figure 1 Creepage and Clearance Distances between BRI Module and Components

Note that in Figure 1 x indicates the clearance distances between cards and adjacent cards and components, and y shows the creepage path across the surface of an insulator and between the two points indicated by x .

Host Power Supply Requirements

The power requirements of the BRI network processor module are as follows:

- +5 VDC/2.5 mA
- +12 VDC/100 mA
- -12 VDC/100 mA

Ensure that the power drawn by the apparatus together with the power drawn by any auxiliary apparatus lies within the rating of the host chassis power supply.

Additional Safety Information

The BRI network processor modules contain safety extra-low voltage (SELV) circuitry. Ensure that attachments at the interconnection ports of the apparatus are also SELV circuits. (SELV circuits are so designed and protected that, under both normal conditions and a likely fault condition, the current that can be drawn is not hazardous.)

Always disconnect the host chassis from the power supply before removing any covers.

Always disconnect the host chassis from any analog telephone circuits or Basic Access ISDN (where applicable) before removing any covers.

Failure to install the BRI modules in accordance with these instructions will invalidate any telecommunication terminal equipment type approval(s).

If you have any doubt as to how to safely install a Cisco 4000 series BRI module correctly within a host chassis, seek advice from a qualified telecommunications engineer.

Cisco Dual Port Serial Network Processor Module (2T-NIM) Independent of Host

The Cisco dual port serial network processor module is a processor/interface card assembly for use within a range of data communication (gateway and router) chassis supplied by Cisco Systems Europe. The dual port serial network processor module is a self-contained product which provides

all of the hardware necessary to allow connection of Cisco Systems chassis to either Digital leased line circuits (point to point) or to Packet Switched Public Data Networks (PSPDN). The software is downloaded from a separate memory card installed in any Cisco compatible host.

The dual port serial network processor module is fully transportable between compatible "host" chassis. The choice of each compatible chassis has no effect on the capabilities, functionality, or performance of the dual port serial network processor module.

The dual port serial network processor module consists of the following subassemblies:

- Dual port serial network processor module motherboard (part number 73-0900)
- X.25 Software Version 2.0

The dual port serial network processor module is a self-contained data communication device which provides any two out of four possible serial port connections. The four options for leased line connection are X.21, V.24, V.35, and V.36. Each port can provide connection to leased line or packet switched services. The dual port serial network processor module provides all of the hardware necessary for supporting Packet Switched Public Data Network communications. The wide-area networking (WAN) operating software (designated as the X.25 Version 2.0) is downloaded from the storage medium by the Cisco compatible host.

The following port configurations are supported:

- X.21 port for connection to leased lines at up to 2048 kbps or X.25 Packet Switched service at up to 64 kbps.
- V.24 port for connection to X.21bis leased lines or X.25 Packet Switched service at up to 19.2 kbps.
- V.35 port for connection to X.21bis leased lines or X.25 Packet Switched service at up to 64 kbps.
- V.36 port for connection to X.25 Packet Switched service at up to 64 kbps.

The final configuration of each serial interface is dependent on the serial port adapter cable used. The dual port serial network processor module incorporates cable sensing circuitry to detect the presence of a specific adapter cable for each service. Adapter cables are supplied with the dual port serial network processor module and are as follows:

- X.21 Adapter Cable: part number 72-0683
- V.24 Adapter Cable: part number 72-0670
- V.35 Adapter Cable: part number 72-0671
- V.36 Adapter Cable: part number 72-0672

X.25 Support

X.25 packet switched support is provided by the operating software resident in the compatible Cisco chassis. This software is designated as the X.25 Version 2.0. This software provides both the link and packet level facilities of the dual port serial network processor module.

The operating software is accessed through a VT100 terminal connected to the console port of the host. The settings of the terminal should be as follows:

- Baud: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1

Dual Port Serial Network Processor Module Installation Requirements

The dual port serial network processor module is approved only for installation in a host and with host attachments, which are either **type approved** for such apparatus, or covered by a **General Approval**.

Maintaining Safe Installation Distances

Except at the edge connector that plugs into the host chassis expansion slot, clearance and creepage distances of X millimeters (mm) and Y mm as listed in Table 2 must be maintained between the cards and other parts of the host including any other expansion cards fitted.

Note that in Table 2:

- Clearance distances are defined as the minimum distance measured in air between two points (i.e., line of sight).
- Creepage distances are defined as the minimum distance measured across the surface of an insulator between two points (i.e., following the contour of the insulator).

Creepage and clearance distances are measured between adjacent parts as shown in Figure 1. Note that X indicates the clearance distances between cards and adjacent cards and components, and Y shows the creepage path across the surface of an insulator and between the two points indicated by X.

Table 2 Creepage and Clearance Distances Based on Voltage

Voltage ¹ (Vrms ² or VDC ³)	Creepage (Y mm) ⁴	Clearance (X mm)
Up to 50	2.4 (3.8)	2.0
Up to 125	3.0 (4.8)	2.6
Up to 250	5.0 (8.0)	4.0
Up to 300	6.4 (10.0)	4.0

1. Refers to the voltage used or generated by other parts of the host or expansion card.

2. Vrms = voltage root mean square .

3. VDC= volts direct current.

4. The creepage distances not in parentheses apply when the equipment is installed in a normal office environment. The larger dimensions, in parentheses, must be applied when the equipment is installed in an environment in which dust and other types of pollution could conduct electricity because of the effects of dampness and condensation. This applies to locations subject to high humidity.

Note the following points in Table 2:

- Clearance distances are defined as the minimum distance measured in air between two points (i.e., line of sight)
- Creepage distances are defined as the minimum distance measured across the surface of an insulator between two points (i.e., following the contour of the insulator)

Creepage and clearance distances are measured between adjacent parts as shown in Figure 1.

Note that in Figure 1 x indicates the clearance distances between cards and adjacent cards and components, and y shows the creepage path across the surface of an insulator and between the two points indicated by x.

Host Power Supply Requirements

The power requirements of the dual port serial network processor module are as follows:

- +5 VDC/2.600A
- +12 VDC/200 mA
- -12 VDC/200 mA

Ensure that the power drawn by the apparatus, together with the power drawn by any auxiliary apparatus, lies within the rating of the host chassis power supply.

Additional Safety Information

The dual port serial network processor module contains Safety Extra-Low Voltage (SELV), circuitry. Ensure that attachments at the interconnection ports of the apparatus are also SELV circuits. (SELV circuits are so designed and protected that, under both normal conditions and a likely fault condition, the current which can be drawn is not hazardous.)

Always disconnect the chassis from the power supply before removing any covers.

Always disconnect the host product chassis from any analogue telephone circuits or Basic Access ISDN (where applicable) before removing any covers.

Failure to install the dual port serial network processor module in accordance with these instructions will invalidate the approval.

If you have any doubt as to how to safely install the Cisco dual port serial network processor module correctly within a host chassis, seek advice from a qualified data communications engineer.

Cisco Four Port Serial Network Processor Module (4T-NIM) Independent of Host

The Cisco four port serial network processor module is a processor/interface card assembly for use within a range of data communication (gateway and router) chassis supplied by Cisco Systems Europe. The four port serial network processor module is a self contained product which provides all of the hardware necessary to allow connection of Cisco Systems' chassis to either Digital leased line circuits (point to point) or to Packet Switched Public Data Networks (PSPDN). The software is down loaded from a separate memory card installed in any Cisco compatible host.

The four port serial network processor module is fully transportable between compatible "host" chassis. The choice of each compatible chassis has no effect on the capabilities, functionality or performance of the four port serial network processor module.

The four port serial network processor module consists of the following subassemblies:

- Four port serial network processor module mother card (part number 73-1186)
- 5 in 1 Serial Port Adapter (part number 73-1194)
- X.25 software Version 2.0

The four port serial network processor module is a self contained data communication device which provides four serial port connections. Each port can provide connection to leased line or packet switched services of the type X.21, V.24, V.35, and V.36. The four port serial network processor module provides all of the hardware necessary for supporting Packet Switched Public Data Network communications. The wide area networking (WAN) operating software (designated as the X.25 Version 2.0), is down loaded from the storage medium by the Cisco compatible host.

Each serial port on the 5 in 1 Serial Port Adapter is presented as a custom 50 way connector. The following port configurations are supported:

- X.21 port for connection to leased lines at up to 2048 kbps or X.25 Packet Switched service at up to 64 kbps.
- V.24 port for connection to X.21bis leased lines or X.25 Packet Switched service at up to 19.2 kbps.
- V.35 port for connection to X.21bis leased lines or X.25 Packet Switched service at up to 64 kbps.
- V.36 port for connection to X.25 Packet Switched service at up to 64 kbps.

The final configuration of each serial interface is dependent on the Serial Port Adapter Cable used. The four port serial network processor module incorporates cable sensing circuitry to detect the presence of a specific adapter cable for each service. Further configuration is not necessary. Custom adapter cables are supplied with the apparatus and are as follows.

- X.21 Adapter Cable: part number 72-0790
- V.24 Adapter Cable: part number 72-0793
- V.35 Adapter Cable: part number 72-0791
- V.36 Adapter Cable: part number 72-0795

Each cable provides adaption from a 50 way custom connector to the applicable ISO standard connector.

X.25 Support

X.25 Packet switched support is provided by the operating software resident in the compatible Cisco chassis. This software is designated as the X.25 Version 2.0. This software provides both the link and packet level facilities of the four port serial network processor module.

The operating software is accessed through a VT100 terminal connected to the console port of the host. The settings of the terminal should be as follows:

- Baud: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1

Four Port Serial Network Processor Module Installation Requirements

The four port serial network processor module is approved only for installation in a host and with host attachments, which are either **type approved** for such apparatus, or, covered by a **General Approval**.

Maintaining Safe Installation Distances

Except at the edge connector that plugs into the host chassis expansion slot, clearance and creepage distances of X millimeters (mm) and Y mm as listed in Table 3 must be maintained between the cards and other parts of the host including any other expansion cards fitted.

Note that in Table 3:

- Clearance distances are defined as the minimum distance measured in air between two points (i.e., line of sight).
- Creepage distances are defined as the minimum distance measured across the surface of an insulator, between two points (i.e., following the contour of the insulator).

Table 3 Creepage and Clearance Distances Based on Voltage

Voltage ¹ (Vrms ² or VDC ³)	Creepage (Y mm) ⁴	Clearance (X mm)
Up to 50	2.4 (3.8)	2.0
Up to 125	3.0 (4.8)	2.6
Up to 250	5.0 (8.0)	4.0
Up to 300	6.4 (10.0)	4.0

1. Refers to the voltage used or generated by other parts of the host or expansion card.
2. Vrms = root mean square voltage.
3. VDC=volts direct current
4. The creepage distances not in parentheses apply when the equipment is installed in a normal office environment. The larger dimensions, in parentheses, must be applied when the equipment is installed in an environment in which dust and other types of pollution could conduct electricity due to the effects of dampness and condensation. This applies to locations subject to high humidity.

Creepage and clearance distances are measured between adjacent parts as shown in Figure 1. Note that X indicates the clearance distances between cards and adjacent cards and components, and Y shows the creepage path across the surface of an insulator and between the two points indicated by X.

Host Power Supply Requirements

The power requirements of the four port serial network processor module are as follows:

- +5 VDC/2.100 A
- +12 VDC/200 mA
- -12 VDC/30 mA

Ensure that the power drawn by the apparatus, together with the power drawn by any auxiliary apparatus, lies within the rating of the host chassis power supply.

Additional Safety Information

The four port serial network processor module contains Safety Extra-Low Voltage (SELV), circuitry. Ensure that attachments at the interconnection ports of the apparatus are also SELV circuits. (SELV circuits are so designed and protected that, under both normal conditions and a likely fault condition, the current which can be drawn is not hazardous).

Always disconnect the chassis from the power supply before removing any covers.

Always disconnect the host product chassis from any analogue telephone circuits or Basic Access ISDN (where applicable) before removing any covers.

Failure to install the four port serial network processor module in accordance with these instructions will invalidate the approval.

If you have any doubt as to how to safely install the Cisco four port serial network processor module correctly within a host chassis, seek advice from a qualified data communications engineer.

Operating Conditions for Canada

In addition to the warnings and safety guidelines listed in the section “Translated Safety Warnings,” the following warnings apply to models used in Canada:

- The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective operational and safety requirements. The Department does not guarantee the equipment will operate to the user’s satisfaction.
- Before installing the equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company’s inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.
- Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.
- Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.



Caution Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Operating Conditions for the European Community

The following operating conditions are required within the European Community.

- The ports marked “Ethernet,” “10BaseT,” “Token Ring,” and “FDDI,” “Console,” and “AUX” are SELV circuits.
- SELV circuits should only be connected to other SELV circuits.

FCC Part 15 Compliance

The following table provides FCC Part 15 compliance information.

FCC Compliance	Network Processor Modules	
FCC Class A	NP-1E=	NP-1A-E3=
	NP-2E	NP-2T=
	NP-6E=	NP-4T=
	NP-1RV2=	NP-4B=
	NP-2R=	NP-4GB=
	NP-1F-D-MM=	NP-4GU=
	NP-1F-S-M=	NP-8B=
	NP-1F-D-SS=	NP-CT1=
	NP-1A-SM=	NP-CE1B=
	NP-1A-MM=	NP-CE1U=
	NP-1A-DS3=	NP-2T16S=
	NP-1FE=	
	FCC Class B	NP-1HSSI=

Cisco Connection Online

Cisco Connection Online (CCO) is Cisco Systems' primary, real-time support channel. Maintenance customers and partners can self-register on CCO to obtain additional information and services.

Available 24 hours a day, 7 days a week, CCO provides a wealth of standard and value-added services to Cisco's customers and business partners. CCO services include product information, product documentation, software updates, release notes, technical tips, the Bug Navigator, configuration notes, brochures, descriptions of service offerings, and download access to public and authorized files.

CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously: a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and it is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can access CCO in the following ways:

- WWW: <http://www.cisco.com>
- WWW: <http://www-europe.cisco.com>
- WWW: <http://www-china.cisco.com>
- Telnet: [cco.cisco.com](telnet://cco.cisco.com)
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO's Frequently Asked Questions (FAQ), contact cco-help@cisco.com. For additional information, contact cco-team@cisco.com.

Note If you are a network administrator and need personal technical assistance with a Cisco product that is under warranty or covered by a maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800 553-2447, 408 526-7209, or tac@cisco.com. To obtain general information about Cisco Systems, Cisco products, or upgrades, contact 800 553-6387, 408 526-7208, or cs-rep@cisco.com.

This document is to be used in conjunction with the *Cisco 4000 Series Installation Guide*, the *Cisco 4000 Series Hardware Installation and Maintenance*, or the *Cisco 4000 Hardware Installation and Maintenance* publication. This document replaces the *Cisco 4000 Series Public Network Certification* document.

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