Extron

PI 130 Power Injector • Installation Guide

Important Safety Instructions

This symbol, when used on the product, is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.

This symbol, when used on the product, is intended to alert the user of the presence of uninsulated dangerous voltage within the product enclosure that may present a risk of electric shock.

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with a dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Use only attachments and accessories specified by the manufacturer.
- Unplug this device apparatus during lightning storms or when unused for long periods of time.

CAUTION: **Risk of electric shock.** To reduce the risk of fire or electric shock, do not expose this apparatus to rain, moisture, dripping, splashing, or objects filled with liquids.

ATTENTION : **Risque de choc électrique:** Afin de réduire les risques d'incendie ou de choc électrique, protégez cet appareil de la pluie ou de l'humidité. Cet appareil doit être conservé à l'abri des éclaboussures et des projections, et aucun objet contenant un liquide, tel qu'un vase, ne doit être posé sur l'appareil.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

ATTENTION:

- This apparatus is a Class I product. This product must be connected to a mains socket outlet with a protective earthing connection.
- Cet appareil est un produit de Classe 1. Ce produit doit être connecté à une prise femelle secteur équipée d'une connexion de mise à la terre.

The mains plug is used as the disconnect device and shall remain readily operable.

To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards.

ATTENTION:

Power sources • This equipment should be operated only from the power source indicated on the product. This equipment is intended to be used with a main power system with a grounded (neutral) conductor. The third (grounding) pin is a safety feature. Do not attempt to bypass or disable it.

Source d'alimentation • Ce matériel ne devrait être alimenté qu'à partir de la source d'alimentation stipulée sur le produit. Ce matériel est prévu pour être relié à un circuit d'alimentation général doté d'un conducteur (neutre) mis à la terre. La troisième broche (de terre) est un composant de sécurité. N'essayez pas de l'éviter ou de la désactiver.

Power disconnection • To remove power from the equipment safely, remove all power cords from the rear of the equipment, or the desktop power module (if detachable), or from the power source receptacle (wall plug).

Déconnection de l'alimentation • Pour déconnecter le matériel de sa source d'alimentation en toute sécurité, débranchez tous les cordons d'alimentation de l'arrière du matériel ou débranchez l'adaptateur secteur (si débranchable) ou de la prise secteur (prise murale).

The Extron PI 130 Power Injector is a high output midspan power injector for Extron products that have power requirements PoE+ class 4 or below. It provides power over LAN cabling. This guide provides instructions for an experienced installer to install and connect the PI 130.



Rear Panel



Front Panel

Installation

Step 1 — Mounting

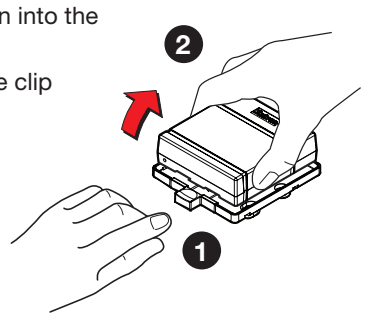
ATTENTION:

- These power supplies are not suitable for use in air handling spaces or in wall cavities. The power supply must be located within the vicinity of the Extron AV equipment in an ordinary location with pollution degree 2, and secured to an equipment rack within a dedicated closet, podium, or desk.
- Ces sources d'alimentation ne sont pas appropriées pour une utilisation dans les espaces d'aération ou dans les cavités murales. Cette source d'alimentation doit être située à proximité de l'équipement audiovisuel d'Extron, dans un endroit ordinaire avec une pollution IEC 1010 degré 2, et fixé à un équipement de rack au sein d'un placard, d'une estrade ou d'un bureau qui lui est dédié.
- The installation must be in accordance with the applicable provisions of National Electrical Code ANSI/NFPA 70, article 725 and Canadian Electrical Code part 1, section 16. The power supply must not be permanently fixed to building or similar structure.
- Cette installation doit toujours être en accord avec les mesures qui s'applique au National Electrical Code ANSI/NFPA 70, article 725, et au Canadian Electrical Code, partie 1, section 16. La source d'alimentation ne devra pas être fixée de façon permanente à une structure de bâtiment ou à une structure similaire.
- The PI 130 is intended for indoor use only. It is to be connected only to networks or circuits that are not routed to the outside plant or building.
- Le PI 130 est destinée à une utilisation en intérieur uniquement. Elle doit être connectée seulement à des réseaux ou des circuits qui ne sont pas routés au réseau ou au bâtiment extérieur.

Using the ZipClip 200

To attach the power injector to the ZipClip 200 mounting clip:

1. Insert the bottom of the power injector down into the clip, starting with one end.
2. Pivot the other end down and press until the clip snaps into place.

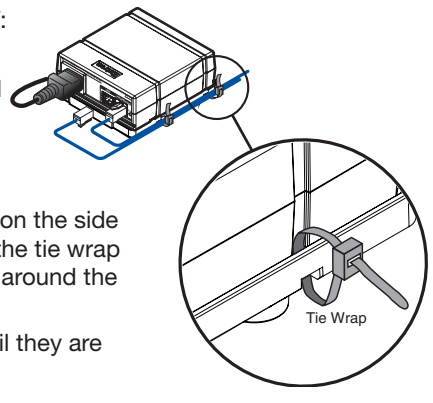


To remove the power injector from the ZipClip:

1. Press the tab (❶) on the ZipClip.
2. Pivot the power injector and lift it out of the ZipClip (❷).

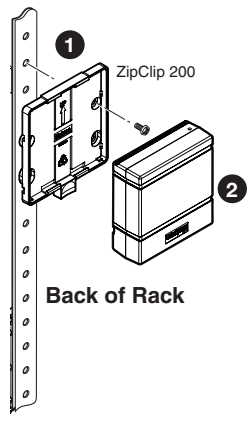
To fasten the tie wraps for cable strain relief:

1. Attach the power injector to the ZipClip 200 mounting clip as described previously.
2. Fasten the power output cords to the ZipClip base.
   a. Insert tie wraps along the notches on the side of the power injector and through the tie wrap anchor points on the ZipClip, then around the cord.
   b. Connect and pull the tie wraps until they are secure. Do not over tighten.



Mounting to Rack Rails Using a ZipClip

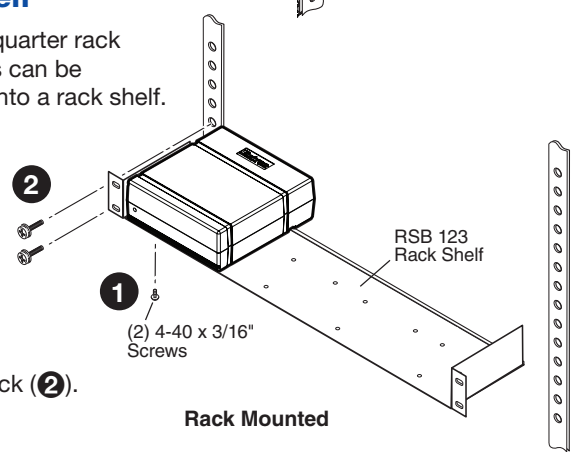
1. Fasten the ZipClip 200 mounting clip to a rack rail using two rack screws as shown in the diagram on the right (❶).
2. Insert the power injector into the ZipClip as described previously and press to snap it into place (❷).



Mounting to a Rack Shelf

These power supplies are one-quarter rack wide. Up to four power supplies can be mounted side by side directly onto a rack shelf.

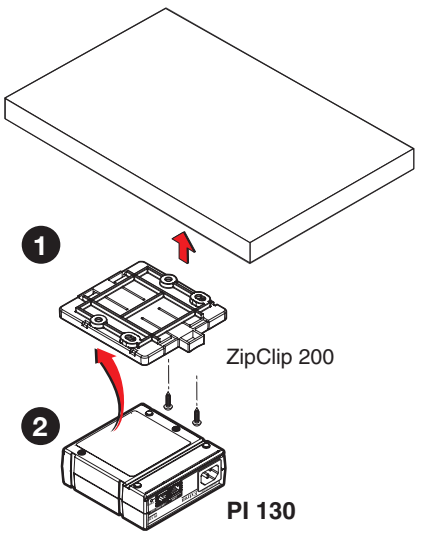
1. Align the threaded holes in the bottom of the power injector with the holes in an Extron rack shelf. Fasten the supply to the shelf with two 4-40 x 3/16 inch screws (❶) as shown at right.
2. Bolt the rack shelf to the rack (❷).



Rack Mounted

Furniture Mounting

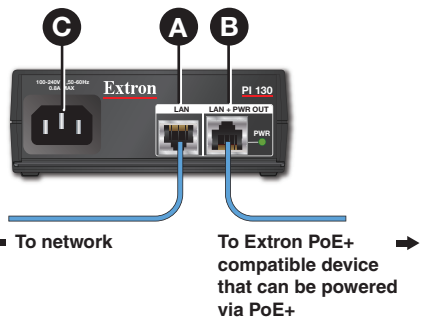
1. Attach the ZipClip to the furniture using two or more wood screws (included) as shown at right (❶). Make sure the clip is oriented with the appropriate side facing the mounting surface and with the tab accessible from the front of the furniture.
2. Insert the power injector into the ZipClip as described previously and press to snap it into place (❷).



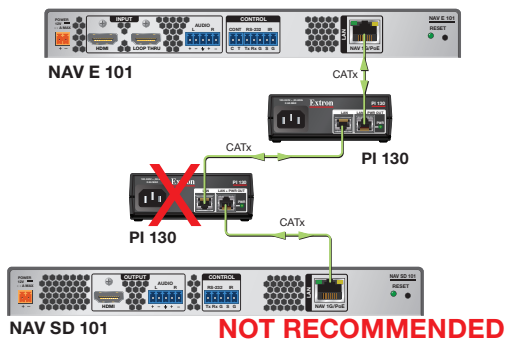
Step 2 — Cabling

For the best performance, see **Twisted Pair Recommendations** on page 2.

1. Connect a network switch or an Extron twisted pair transmitter product to the LAN port (Ⓐ) of the power injector using a straight-through cable. The device plugged into this connector needs to be powered by a local power source.
2. Connect an Extron PoE+ compatible product that requires remote power to the LAN+PWR OUT port (Ⓑ) using a straight-through cable.
3. Connect AC power to the PI 130 (Ⓒ).



NOTE: Do not use two power injectors on the same cable run to remotely power the transmitter and receiver. The diagram at right shows this type of application, which is not recommended by Extron.



LED Indicators



Ⓐ **Front panel power LED indicator** — Lights to indicate the PI 130 is receiving power.

Ⓑ **Rear panel PWR LED indicator** — Indicates various power states of the connected endpoints (see the table below).

LED State	Port Status
Unlit	The endpoint is not connected or cannot be powered.
Lit	The endpoint is receiving power from the PI 130.
Blinking	There is a power overload fault, or power allocation is exceeded.

Twisted Pair Recommendations

Supported Cables

The PI 130 is compatible with CAT 5e, 6, 6a, and 7 shielded twisted pair (F/UTP, SF/UTP, and S/FTP) and unshielded twisted pair (U/UTP) cable.

ATTENTION:

- To ensure FCC Class B and CE compliance, STP cables and STP connectors are required.
- Afin de s'assurer de la compatibilité entre FCC Classe B et CE, les câbles STP et les connecteurs STP sont nécessaires.

Cable Recommendations

Extron recommends using the following practices to achieve full transmission distances up to 330 feet (100 meters) and reduce transmission errors.

- Use Extron XTP DTP 24 SF/UTP cable for the best performance.
  - **XTP DTP 24/1000** Non-Plenum 1000 feet (305 m) spool 22-236-03
  - **XTP DTP 24P/1000** Plenum 1000 feet (305 m) spool 22-235-03
  - **XTP DTP 24 Plug** Package of 10 101-005-02
- If you are not using XTP DTP 24 cable, at a minimum, Extron recommends 24 AWG, solid conductor, STP cable with a minimum bandwidth of 400 MHz.
- Terminate cables with shielded connectors to the TIA/EIA T568B standard.
- Limit the use of more than two pass-through points, which may include patch points, punch down connectors, couplers, and power injectors. If these pass-through points are required, use CAT 6 or 6a shielded couplers and punch down connectors.

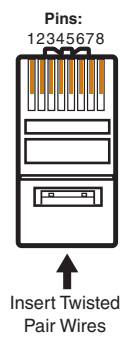
Number of Patches	Maximum Transmission Distance
1 or 2	330 feet (100 meters)
3	280 feet (85 meters)

NOTE: Using more than three patches with the PI 130 yields varying maximum cable lengths. Limit the use of RJ-45 patches in the system.

NOTE: When using CAT 5e or CAT 6 cable in bundles or conduits:

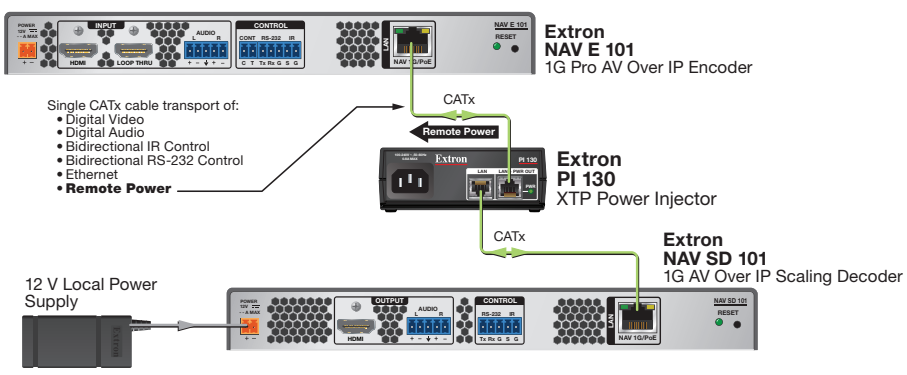
- Do not exceed 40% fill capacity in conduits.
- Do not comb the cable for the first 20 meters where cables are straightened, aligned, and secured in tight bundles.
- Loosely place cables and limit the use of tie wraps or Velcro®.
- Separate twisted pair cables from AC power cables.

TIA/EIA T568B	
Pin	**Wire Color**
1	White-orange
2	Orange
3	White-green
4	Blue
5	White-blue
6	Green
7	White-brown
8	Brown

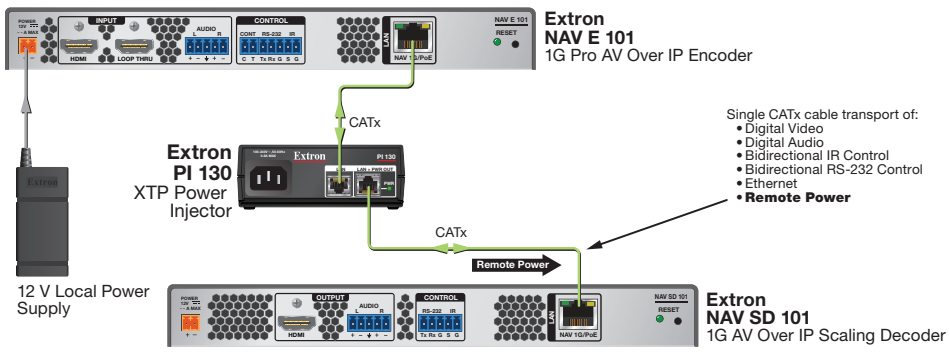


Application Diagrams

PI 130 Remote Power to the Encoder



PI 130 Remote Power to the Decoder



PI 130 Remote Power to TLP Pro or ShareLink Pro



NOTE: Before using the PI 130, check the user guide for your Extron product to see if the device can be powered through a midspan power injector.

Safety Instructions • English

This symbol, when used on the product, is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.

This symbol , when used on the product, is intended to alert the user of the presence of uninsulated dangerous voltage within the product enclosure that may present a risk of electric shock.

Cautions and General Guidelines

Read instructions • Read and understand all safety and operating instructions before using the equipment.

Retain instructions • The safety instructions should be kept for future reference.

Follow warnings • Follow all warnings and instructions marked on the equipment or in the user information.

Avoid attachments • Do not use tools or attachments that are not recommended by the equipment manufacturer because they may be hazardous.

Avoid water • Do not use this or other electrical equipment near water. Clean the device with a dry cloth only.

Warnings

Power and electrical safety

CAUTION: Electrical shock that may result in injury. To reduce the risk of fire or electric shock, do not expose this apparatus to rain, moisture, dripping, splashing, or objects filled with liquids.

Power sources • This equipment should be operated only from the power source indicated on the product. This equipment is intended to be used with a main power system with a grounded (neutral) conductor. The third (grounding) pin is a safety feature, do not attempt to bypass or disable it.

ATTENTION: This apparatus is a Class I product. This product must be connected to a mains socket outlet with a protective earthing connection.

Power disconnection • To remove power from the equipment safely, remove all power cords from the rear of the equipment, or the desktop power module (if detachable), or from the power source receptacle (wall plug).

Power plug as a disconnection device • The mains plug is used as the disconnect device and shall remain readily operable. In other words, it the power plug must be accessible and easy to unplug from the power source.

When to unplug the unit • Unplug this device during lightning storms or when it will be unused for long periods. Unplug the device before servicing.

Power cord protection • Power cords should be routed so that they are not likely to be stepped on or pinched by items placed upon or against them. Protect the cord particularly at plugs, convenience receptacles, and the points where they exit the devices.

Polarized and grounding plugs • Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician to replace the obsolete outlet with a safer one.

Servicing • Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled into or objects have fallen into the device, or when the device has been exposed to rain or moisture, does not operate normally, or has been dropped. To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards.

Ventilation, mounting, and temperature

Ventilation slots and openings • If the equipment has slots or holes in the enclosure, these are provided to prevent overheating of sensitive components inside. Do not block any ventilation opening, as this may cause the product to malfunction. Install the device in accordance with the manufacturer's instructions.

Temperature • Do not install electronic devices near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Consignes de Sécurité • Français

Ce symbole sert à avertir l'utilisateur que la documentation fournie avec le matériel contient des instructions importantes concernant l'exploitation et la maintenance (réparation).

Ce symbole sert à avertir l'utilisateur de la présence dans le boîtier de l'appareil de tensions dangereuses non isolées posant des risques d'électrocution.

Attention

Lire les instructions • Prendre connaissance de toutes les consignes de sécurité et d'exploitation avant d'utiliser le matériel.

Conserver les instructions • Ranger les consignes de sécurité afin de pouvoir les consulter à l'avenir.

Respecter les avertissements • Observer tous les avertissements et consignes marqués sur le matériel ou présentés dans la documentation utilisateur.

Eviter les pièces de fixation • Ne pas utiliser de pièces de fixation ni d'outils non recommandés par le fabricant du matériel car cela risquerait de poser certains dangers.

Avertissement

Alimentations • Ne faire fonctionner ce matériel qu'avec la source d'alimentation indiquée sur l'appareil. Ce matériel doit être utilisé avec une alimentation principale comportant un fil de terre (neutre). Le troisième contact (de mise à la terre) constitue un dispositif de sécurité : n'essayez pas de la contourner ni de la désactiver.

Déconnexion de l'alimentation • Pour mettre le matériel hors tension sans danger, déconnectez tous les cordons d'alimentation de l'arrière de l'appareil ou du module d'alimentation de bureau (s'il est amovible) ou encore de la prise secteur.

Protection du cordon d'alimentation • Acheminer les cordons d'alimentation de manière à ce que personne ne risque de marcher dessus et à ce qu'ils ne soient pas écrasés ou pincés par des objets.

Réparation-maintenance • Faire exécuter toutes les interventions de réparation-maintenance par un technicien qualifié. Aucun des éléments internes ne peut être réparé par l'utilisateur. Afin d'éviter tout danger d'électrocution, l'utilisateur ne doit pas essayer de procéder lui-même à ces opérations car l'ouverture ou le retrait des couvercles risquent de l'exposer à de hautes tensions et autres dangers.

Fentes et orifices • Si le boîtier de l'appareil comporte des fentes ou des orifices, ceux-ci servent à empêcher les composants internes sensibles de surchauffer. Ces ouvertures ne doivent jamais être bloquées par des objets.

安全须知 • 中文

这个符号提示用户该设备用户手册中有重要的操作和维护说明。

这个符号警告用户该设备机壳内有暴露的危险电压，有触电危险。

注意

阅读说明书 • 用户使用该设备前必须阅读并理解所有安全和使用说明。

保存说明书 • 用 户应保存安全说明书以备将来使用。

遵守警告 • 用户应遵守产品和用户指南上的所有安全和操作说明。

避免追加 • 不要使用该产品厂商没有推荐的工具或追加设备，以避免危险。

警告

电源 • 该设备只能使用产品上标明的电源。 设备必须使用有地线的供电系统供电。 第三条线（地线）是安全设施，不能不用或跳过 。

拔掉电源 • 为安全地从设备拔掉电源，请拔掉所有设备后或桌面电源的电源线，或任何接到市电系统的电源线。

电源线保护 • 妥善布线， 避免被踩踏，或重物挤压。

维护 • 所有维修必须由认证的维修人员进行。 设备内部没有用户可以更换的零件。为避免出现触电危险不要自己试图打开设备盖子维修该设备。

通风孔 • 有些设备机壳上有通风槽或孔，它们是用来防止机内敏感元件过热。 不要用任何东西挡住通风孔。

Sicherheitsanleitungen • Deutsch

Dieses Symbol soll dem Benutzer in der im Lieferumfang enthaltenen Dokumentation besonders wichtige Hinweise zur Bedienung und Wartung (Instandhaltung) geben.

Dieses Symbol soll den Benutzer darauf aufmerksam machen, daß im Inneren des Gehäuses dieses Produktes gefährliche Spannungen, die nicht isoliert sind und die einen elektrischen Schock verursachen können, herrschen.

Achtung

Lesen der Anleitungen • Bevor Sie das Gerät zum ersten Mal verwenden, sollten Sie alle Sicherheits-und Bedienungsanleitungen genau durchlesen und verstehen.

Aufbewahren der Anleitungen • Die Hinweise zur elektrischen Sicherheit des Produktes sollten Sie aufbewahren, damit Sie im Bedarfsfall darauf zurückgreifen können.

Befolgen der Warnhinweise • Befolgen Sie alle Warnhinweise und Anleitungen auf dem Gerät oder in der Benutzerdokumentation.

Keine Zusatzgeräte • Verwenden Sie keine Werkzeuge oder Zusatzgeräte, die nicht ausdrücklich vom Hersteller empfohlen wurden, da diese eine Gefahrenquelle darstellen können.

Vorsicht

Stromquellen • Dieses Gerät sollte nur über die auf dem Produkt angegebene Stromquelle betrieben werden. Dieses Gerät wurde für eine Verwendung mit einer Hauptstromleitung mit einem geerdeten (neutralen) Leiter konzipiert. Der dritte Kontakt ist für einen Erdanschluß, und stellt eine Sicherheitsfunktion dar. Diese sollte nicht umgangen oder außer Betrieb gesetzt werden.

Stromunterbrechung • Um das Gerät auf sichere Weise vom Netz zu trennen, sollten Sie alle Netzkabel aus der Rückseite des Gerätes, aus der externen Stomversorgung (falls dies möglich ist) oder aus der Wandsteckdose ziehen.

Schutz des Netzkabels • Netzkabel sollten stets so verlegt werden, daß sie nicht im Weg liegen und niemand darauf treten kann oder Objekte darauf- oder unmittelbar dagegengestellt werden können.

Wartung • Alle Wartungsmaßnahmen sollten nur von qualifiziertem Servicepersonal durchgeführt werden. Die internen Komponenten des Gerätes sind wartungsfrei. Zur Vermeidung eines elektrischen Schocks versuchen Sie in keinem Fall, dieses Gerät selbst öffnen, da beim Entfernen der Abdeckungen die Gefahr eines elektrischen Schlags und/oder andere Gefahren bestehen.

Schlitze und Öffnungen • Wenn das Gerät Schlitze oder Löcher im Gehäuse aufweist, dienen diese zur Vermeidung einer Überhitzung der empfindlichen Teile im Inneren. Diese Öffnungen dürfen niemals von anderen Objekten blockiert werden.

Instrucciones de seguridad • Español

Este símbolo se utiliza para advertir al usuario sobre instrucciones importantes de operación y mantenimiento (o cambio de partes) que se desean destacar en el contenido de la documentación suministrada con los equipos.

Este símbolo se utiliza para advertir al usuario sobre la presencia de elementos con voltaje peligroso sin protección aislante, que puedan encontrarse dentro de la caja o alojamiento del producto, y que puedan representar riesgo de electrocución.

Precaucion

Leer las instrucciones • Leer y analizar todas las instrucciones de operación y seguridad, antes de usar el equipo.

Conservar las instrucciones • Conservar las instrucciones de seguridad para futura consulta.

Obedecer las advertencias • Todas las advertencias e instrucciones marcadas en el equipo o en la documentación del usuario, deben ser obedecidas.

Evitar el uso de accesorios • No usar herramientas o accesorios que no sean especificamente recomendados por el fabricante, ya que podrian implicar riesgos.

Advertencia

Alimentación eléctrica • Este equipo debe conectarse únicamente a la fuente/tipo de alimentación eléctrica indicada en el mismo. La alimentación eléctrica de este equipo debe provenir de un sistema de distribución general con conductor neutro a tierra. La tercera pata (puesta a tierra) es una medida de seguridad, no puentearia ni eliminaria.

Desconexión de alimentación eléctrica • Para desconectar con seguridad la acometida de alimentación eléctrica al equipo, desenchufar todos los cables de alimentación en el panel trasero del equipo, o desenchufar el módulo de alimentación (si fuera independiente), o desenchufar el cable del receptáculo de la pared.

Protección del cables de alimentación • Los cables de alimentación eléctrica se deben instalar en lugares donde no sean pisados ni apretados por objetos que se puedan apoyar sobre ellos.

Reparaciones/mantenimiento • Solicitar siempre los servicios técnicos de personal calificado. En el interior no hay partes a las que el usuario deba acceder. Para evitar riesgo de electrocución, no intentar personalmente la reparación/mantenimiento de este equipo, ya que al abrir o extraer las tapas puede quedar expuesto a voltajes peligrosos u otros riesgos.

Ranuras y aberturas • Si el equipo posee ranuras o orificios en su caja/alojamiento, es para evitar el sobrecalientamiento de componentes internos sensibles. Estas aberturas nunca se deben obstruir con otros objetos.

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