

AT-8600 Series Switch Installation and Safety Guide



AT-8624T/2M
AT-8624PoE
AT-8648T/2SP

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AT-8624PoE
AT-8648T/2SP**

AT-8600 Installation & Safety Guide
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Electrical Safety and Emission Compliance Statement

STANDARDS: This product meets the following standards:

Category	Approval Agency and Requirement
	UL60950-1 CAN/CSA-C22.2 No. 60950-1-03 EN60950-1 EN60825-1
Electromagnetic Compliance	FCC CFR47 Part 15 Class A EN55022 Class A EN61000-3-2 EN61000-3-3 VCCI Class A AS/NZS CISPR22 Class A
Immunity	EN55024

U.S. Federal Communications Commission

RADIATED ENERGY

Note: This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canadian Department of Communications

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Electrical Safety

IMPORTANT: This equipment must be installed in accordance with safety precautions (page 20).

Elektrische Sicherheit

WICHTIG: Für die Installation dieses Gerätes ist die Einhaltung von Sicherheitsvorkehrungen erforderlich (Seite 21).

Elektrisk sikkerhed

VIGTIGT: Dette udstyr skal installeres i overensstemmelse med sikkerhedsadvarslerne (side 23).

Elektrische veiligheid

BELANGRIJK: Dit apparaat moet in overeenstemming met de veiligheidsvoorschriften worden geïnstalleerd (pagina 24).

Sécurité électrique

IMPORTANT: Cet équipement doit être utilisé conformément aux instructions de sécurité (page 25).

Sähköturvallisuus

TÄRKEÄÄ: Tämä laite on asennettava turvaohjeiden mukaisesti (sivu 26).

Sicurezza elettrica

IMPORTANTE: questa apparecchiatura deve essere installata rispettando le norme di sicurezza (pagina 28).

Elektrisk sikkerhet

VIKTIG: Dette utstyret skal installeres i samsvar med sikkerhetsregler (side 29).

Segurança eléctrica

IMPORTANTE: Este equipamento tem que ser instalado segundo as medidas de precaução de segurança (página 30).

Seguridad eléctrica

IMPORTANTE: La instalación de este equipo deberá llevarse a cabo cumpliendo con las precauciones de seguridad (página 31).

Elsäkerhet

OBS! Alla nödvändiga försiktighetsåtgärder måste vidtas när denna utrustning används (sida 33).

EC Declaration of Conformity

EC Declaration of Conformity (page 35).

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Models Covered By This Guide

This *Installation & Safety Guide* includes information on these models:

- AT-8624T/2M 24-port 10BASE-T/100BASE-TX Layer 3 Fast Ethernet Switch
- AT-8624PoE 24-port 10BASE-T/100BASE-TX Layer 3 Fast Ethernet Switch
- AT-8648T/2SP 48-port 10BASE-T/100BASE-TX Layer 3 Fast Ethernet Switch

You can download *Installation & Safety Guide* updates from [http:// www.alliedtelesis.com/support](http://www.alliedtelesis.com/support).

Package Contents

These items are included with each AT-8600 Series switch:

- One AC power cord
- One power cord retaining clip
- One serial cable for connecting the switch to a terminal or PC
- One 19 inch rack-mount kit
- One *AT-8600 Series Installation & Safety Guide* (which includes statutory and safety information)
- One AT-8600 Series Documentation and Tools CD-ROM (which includes the complete AT-8600 Series document set and utilities)
- One warranty card

Contact your authorised distributor or reseller if any items are damaged or missing.

Selecting a Site

You can install the switch in a standard 19-inch rack, on a level surface such as a desktop or bench, or against a wall using the optional wall-mount kit. How to install the switch using the 19-inch rack-mount kit is described below. .

When you install the switch, choose a site that:

- allows adequate airflow around the switch and its vents.
- is free of dust and moisture.
- will maintain an ambient temperature range of 0 ° C to 40° C (32° F to 104° F) and a humidity range of 5% to 80% non-condensing.
- has a reliable and earthed (grounded) power supply, preferably dedicated and filtered.
- does not expose cabling to sources of electrical noise such as radio transmitters, broadband amplifiers, power lines, electric motors, and fluorescent fixtures.
- allows easy access to the switch's power and cable connections.
- allows all related network devices to be connected to the switch without exceeding maximum cable length limitations as specified in the *AT-8600 Series Hardware Reference*.
- ensures that when the switch is mounted in a rack, the switch is mounted evenly to prevent uneven mechanical loading of the rack.

How to Install the Switch



Warning All versions of this equipment must be earthed.

Prepare to install the switch

1. Read the safety information

Read the safety information included in this *Installation & Safety Guide*. This *Installation & Safety Guide* is also on the Documentation and Tools CD-ROM and you can download a copy from <http://www.alliedtelesis.com>.

2. Gather the tools and equipment you will need

You will need a Phillips #2 flat-head screwdriver and cage nuts to attach the brackets to your rack. These are not supplied.

3. Choose a suitable operating location

Follow the guidelines described in “[Selecting a Site](#)” on [page 7](#) to choose a suitable location.

You can install the switch either in a 19-inch rack, on a flat bench, or against a wall.

4. Unpack the switch

Verify the package contents. If any items are damaged or missing, contact your authorised distributor or reseller.

5. Install expansion modules (optional)

The only expansion module supported by the AT-8624T/2M is the AT-A46.

If you purchased expansion modules, install them now by following the instructions in the *AT-A45/xx Series, AT-A46, and AT-A47 Expansion Modules Installation Guide* that comes with the modules. The AT-A46 expansion module is supported by AT-8000 Series switches as well as AT-8600 Series switches.

Hot swap of expansion modules is not supported on AT-8624T/2M switches. If you insert or remove a module when the switch is already powered on, you must restart the switch before the module can be used.

6. Place the switch in its operating location

If installing the switch in a rack:

- Remove the rubber feet on the bottom of the switch with a flat-head screwdriver.
- Attach the two rack-mounting brackets to the switch with the screws provided in the rack-mount kit.

- Mount the switch in the rack using standard screws (these are not provided).

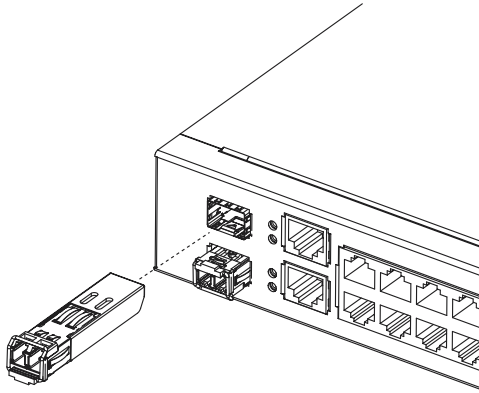
7. Install SFPs

For the AT-8648T/2SP, you may also need an optional SFP (Small Form-factor Pluggable module).



Do not look into the optical ports of SFP cables or transceivers. Invisible laser radiation may be emitted from disconnected fibres or connectors.

The SFP transceivers must be inserted the right way into the SFP 49 or SFP 50 slots. See the figure below.



Slide the transceiver into the SFP socket, and firmly press it until it engages. To remove it, first release it by gently pulling the release lever, and then pull it out of the socket. **Never** force a transceiver into or out of a socket.

When an SFP is installed into one of the two SFP ports, that SFP port takes precedence over its corresponding 10/100/1000T port. When the SFP is removed, the 10/100/1000T port is once again active.

8. Check the supply voltage and the switch's rated voltage

AT-8600 Series switches are fitted with a universal main power supply that will function over the range 100–240 VAC and 50–60 Hz.

The specific power supply requirements for a particular model are clearly displayed on the rear or underside of the switch. If the supply is outside the accepted range for the switch, the switch may not operate or damage to the switch may result.

9. Apply AC power to the switch

Plug the power cord into the AC power connector. This is on the switch's rear panel, as shown in the below figures.

Figure 1: AT-8624T/2M front and rear panel with AC power inlet.

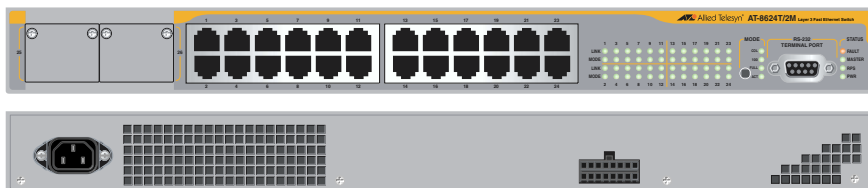


Figure 2: AT-8624PoE front and rear panel with AC power inlet

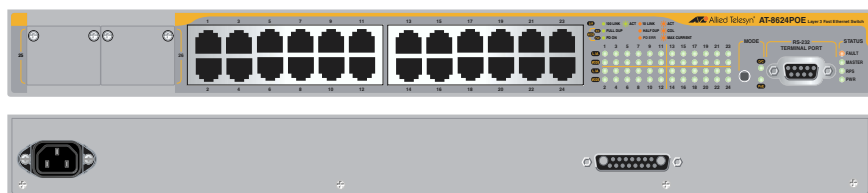
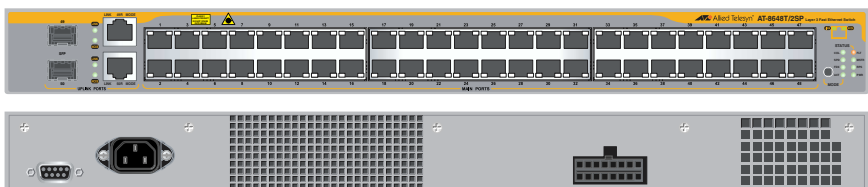


Figure 3: AT-8648T/2SP front and rear panel with AC power inlet



10. Check that the PWR LED on the switch's front panel lights green

If the PWR (power) LED fails to light, refer to the *AT-8600 Series Hardware Reference* for troubleshooting information.

11. Connect the data cables

Make sure each cable connection is secure. The switch will now perform basic Layer 2 switching functions.

How to Configure the Switch

Some configuration is necessary to enable the switch's advanced switching capabilities. This is achieved via the Command Line Interface (CLI). On the AT-8624T/2M, you can also use the Graphical User Interface (GUI).

Using the CLI to configure a switch

1. Connect a terminal or PC to the Terminal Port (ASYNO).

Using the supplied RS-232 DB9 serial straight-through cable, connect your terminal or PC to the RS-232 Terminal Port:

- For the AT-8624T/2M and AT-8624PoE, the RS-232 Terminal Port is on the front panel.
- For the AT-8648T/2SP, the RS-232 Terminal Port is on the back panel.

2. Set the communication parameters.

Set the communication parameters on your terminal or terminal emulation program to:

- Bit rate: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: None

3. Log in.

After the switch has booted, the login prompt appears. If the login prompt does not appear, press [Enter] two or three times.

When the switch boots for the first time it automatically creates an account with manager privileges. The account has the login name **manager** and the password is **friend**.

At the login prompt, enter the login name and password:

```
Login: manager
Password: friend
```

The switch's command prompt appears. Now use the CLI to configure the switch.

4. Change password and display help.

Change the password as soon as possible because a manager account left with the default password is a serious security risk. Remember the new password as there is no way to retrieve it if it is lost.

To change the account password, use the command:

```
set password
```

To display a list of help topics, use the command:

```
help
```

To display help on a specific topic, use the command:

```
help topic
```

Alternatively, type a question mark (?) at the end of a partially completed command to see a list of valid options.

How to configure the switch is explained in detail in the *AT-8600 Series Software Reference*.

Using the GUI to configure the AT-8624T/2M switch

This section describes how to establish a connection to the AT-8624T/2M switch through the GUI so you can configure it before installing it in your LAN.

1. Select a PC to use and identify its subnet.

You can browse to the switch from any PC that is running a supported operating system with a supported browser installed. JavaScript must be enabled. If you are using a toolbar or plug-in on your browser to block pop-ups, disable it while using the GUI. The GUI displays detailed configuration options and information in pop-up windows.

2. Connect the PC to the switch.

Use an Ethernet cable to connect an Ethernet card on the PC to any one of the switch ports.

You can browse to the router through any VLAN, as long as you give that VLAN an IP address. These instructions assume you are using vlan 1. All switch ports belong to vlan 1 by default.

3. Access the switch's command line interface.

Access the CLI from the PC, as described in the previous section, "Using the CLI to configure a switch".

4. Enable IP.

```
enable ip
```

5. Assign the vlan 1 interface an IP address in the same subnet as the PC.

```
add ip interface=vlan1 ip=ipaddress mask=mask
```

6. Save the configuration and set the switch to use it on bootup.

```
create config=your-name.cfg
```

```
set config=your-name.cfg
```

7. On the PC's web browser, bypass the HTTP proxy server, if necessary.**8. Point your web browser at IP address for vlan 1.****9. At the login prompt, enter the user name and password.**

```
User Name: manager <the default>
```

```
Password: friend
```

The System Status page is displayed. Select options from the sidebar menu to configure and manage the switch.

For context-sensitive online help, click the Help button at the top of the sidebar menu or on any pop-up page.

LEDs on AT-8600 Series Switches

The following tables outline how the switch and expansion modules report faults and operational activities. Expansion modules are optional and can be purchased separately. Contact an authorised Allied Telesis distributor or reseller, or visit www.alliedtelesis.com for more information on purchasing expansion modules.

System LEDs

LED	State	Description
FAULT	Off	Switch operation is normal.
	Red	The switch or management software is malfunctioning.
	1 flash	A switch fan has failed.
	3 flashes	The main PSU has failed and the RPS is now providing power.
	4 flashes	The RPS Monitor is set to ON, and the RPS is not functioning, either because it has failed or has been switched off.
	5 flashes	The RPS Monitor is set to ON, but the RPS is not connected.
	7 flashes	For the AT-8624T/2M and AT-8624PoE switches: An expansion module has been inserted or removed while the switch is powered on.
MASTER	This LED is not supported and will never be lit.	
RPS	Green	An optional redundant power supply is connected to the switch.
	OFF	There is no optional redundant power supply connected to the switch.
PWR	Green	The switch is receiving power and the voltage is within the acceptable range.
	Off	The switch is not receiving power.

Note Use the Mode Select button to toggle the Mode LEDs to the desired state. Toggling the Mode Selection button does not affect the normal operations of the switch.

Link and Mode LEDs for the AT-8624T/2M switch

LED	State	Description
LINK	OFF	There is no link between the port and the end-node.
	Green	A valid link has been established between the port and the end-node.
Mode - COL	OFF	No data collisions are occurring on the port.
	Flashing Green	Data collisions are occurring on the port.
Mode - 100	OFF	The port is operating at 10 Mbps.
	Green	The port is operating at 100 Mbps.
Mode - FULL	OFF	The port is operating in half-duplex mode.
	Green	The port is operating in full-duplex mode.
Mode - ACT	OFF	There is no activity on the port.
	Flashing Green	There is activity on the port. It is transmitting and/or receiving data.

Link and Mode LEDs for the AT-8624PoE switch

LED	State	Description
L/A Status (Top LED)	OFF	There is no link between the port and the end-node.
	Green	The port is operating at 100 Mbps.
	Flashing Green	There is activity on the port. It is transmitting and/or receiving data at 100 Mbps.
	Red	The port is operating at 10 Mbps.
	Flashing Red	There is activity on the port. It is transmitting and/or receiving data at 10 Mbps.
Mode LEDs (Bottom LED)	OFF	Either DC Mode or PoE Mode.
D/C Mode	OFF	There is no link between the port and the end-node.
	Green	The port is operating in full duplex mode.
	Red	The port is operating in half-duplex mode.
	Flashing Red	The port is operating in half-duplex mode and data collisions are occurring on the port.
PoE Mode	OFF	There is no powered device detected.
	Green	The end-node is a powered device and the port is providing power to it.
	Red	The port is experiencing a problem providing PoE to the end-node.
	Flashing Red	The port is connected to a powered device but providing power to it would exceed the maximum PoE power budget of the switch.

Link and Mode LEDs for the AT-8648T/2SP switch

LED	State	Description
LINK	OFF	There is no link between the port and the end-node.
	Green	A valid link has been established between the port and the end-node.
Mode - COL	OFF	No data collisions are occurring on the port.
	Flashing Green	Data collisions are occurring on the port.
Mode - SPD	OFF	The port is operating at 10 Mbps.
	Green	The port is operating at 100 Mbps.
Mode - FDX	OFF	The port is operating in half-duplex mode.
	Green	The port is operating in full-duplex mode.
Mode - ACT	OFF	There is no activity on the port
	Flashing Green	There is activity on the port.

SFP and 10/100/1000Base-T LEDs for the AT-8648T/2SP switch

LED	State	Description
LINK	OFF	There is no link between the port and the end-node.
	Green	A valid link has been established between the port and the end-node.
Mode - COL	OFF	No data collisions are occurring on the port.
	Flashing Green	Data collisions are occurring on the port.
Mode - SPD	OFF	The port is operating at 10/100 Mbps.
	Green	The port is operating at 1000 Mbps.
Mode - FDX	OFF	The port is operating in half-duplex mode.
	Green	The port is operating in full-duplex mode.
Mode - ACT	OFF	There is no activity on the port
	Flashing Green	There is activity on the port.

Documentation and Tools CD-ROM

The Documentation and Tools CD-ROM bundled with each switch contains the complete documentation set for AT-8600 Series switches and their expansion options, as well as tools to manage the switch.

The documentation and tools CD-ROM includes:

- This *Installation & Safety Guide*, which also provides safety and statutory information for the AT-8600 Series switch and its expansion options.
- The *AT-8600 Series Hardware Reference*, which provides detailed information on the switch unit and its hardware features.
- The *AT-8600 Series Software Reference*, which provides detailed information on configuring the switch unit and its software.
- The *AT-A45/xx Series, AT-A46, and AT-A47 Expansion Modules Installation Guide*, which outlines the procedure for installing expansion modules, and provides technical specifications for the modules.
- AT-TFTP Server for Windows for downloading software releases.
- How To notes, white papers, Visio Stencils, and information about related Allied Telesis products.
- MIBs supported by the switch
- Adobe Acrobat Reader for viewing online documentation.

Safety



WARNING: In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.



WARNING: Class I Laser product.



WARNING: Do not stare into the laser beam.



CAUTION: Use of controls or adjustments of performance or procedures other than those specified herein may result in hazardous radiation exposure.



ELECTRICAL NOTICES

WARNING: ELECTRIC SHOCK HAZARD

To prevent ELECTRIC shock, do not remove the cover. No user-serviceable parts inside. This unit contains HAZARDOUS VOLTAGES and should only be opened by a trained and qualified technician.



LIGHTNING DANGER

DANGER: DO NOT WORK on equipment or CABLES during periods of LIGHTNING ACTIVITY.



CAUTION: POWER CORD IS USED AS A DISCONNECTION DEVICE. TO DE-ENERGIZE EQUIPMENT, disconnect the power cord.



ELECTRICAL - TYPE CLASS I EQUIPMENT

THIS EQUIPMENT MUST BE EARTHED. Power plug must be connected to a properly wired earth ground socket outlet. An improperly wired socket outlet could place hazardous voltages on accessible metal parts.



PLUGGABLE EQUIPMENT, the socket outlet shall be installed near the equipment and shall be easily accessible.



CAUTION: Air vents must not be blocked and must have free access to the room ambient air for cooling.



OPERATING TEMPERATURE: This product is designed for a maximum ambient temperature of 40 degrees C.



ELECTRICAL - AC MAINS CIRCUIT OVERLOADING

When installing product, consideration must be given to the accumulative nameplate ratings when connecting the equipment to the AC supply wiring.



CAUTION: MECHANICAL LOADING - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven loading.



Lithium Battery - Should only be changed by authorised service personnel.
CAUTION: Danger of explosion if battery incorrectly replaced. Replace only with Lithium Battery, type CR2032, and dispose of in accordance with the manufacturer's recommendations and all local codes.



ALL COUNTRIES: Install product in accordance with local and National Electrical Codes.



WARNING: Only trained and qualified personnel are allowed to install or replace this equipment.



CAUTION: This unit does not contain serviceable components. Please return damaged units for servicing.



CAUTION: The AT-8624PoE Ethernet ports are only intended for installation in Environment A as defined in IEEE 802.3af. All interconnected equipment must be contained in the same building including the interconnected equipment's associated LAN connections.



CAUTION: The surface-mount fuses F1 to F24 on the Power over Ethernet daughterboard in the AT-8624PoE switch are 60V, max 2A fuses. These fuses are not field-replaceable, and should only be serviced by a trained Allied Telesis service technician.

Sicherheit



WARNUNG: Bei Verwendung zu Hause kann dieses Produkt Funkstörungen hervorrufen. In diesem Fall müßte der Anwender angemessene Gegenmaßnahmen ergreifen.



WARNUNG Laserprodukt der Klasse I.



WARNUNG Nicht direkt in den Strahl blicken.



ACHTUNG: GEFÄHRLICHE SPANNUNG
Das Gehäuse nicht öffnen. Das Gerät enthält keine vom Benutzer wartbaren Teile. Das Gerät steht unter Hochspannung und darf nur von qualifiziertem technischem Personal geöffnet werden.



GEFAHR DURCH BLITZSCHLAG
GEFAHR: Keine Arbeiten am Gerät oder an den Kabeln während eines Gewitters ausführen.



VORSICHT: DAS NETZKABEL DIENST ZUM TRENNEN DER STROMVERSORGUNG. ZUR TRENnung VOM NETZ, KABEL AUS DER STECKDOSE ZIEHEN.



GERÄTE DER KLASSE I
DIESE GERÄTE MÜSSEN GEERDET SEIN. Der Netzstecker darf nur mit einer vorschriftsmäßig geerdeten Steckdose verbunden werden. Ein unvorschriftsmäßiger Anschluß kann die Metallteile des Gehäuses unter gefährliche elektrische Spannungen setzen.



STECKBARES GERÄT: Die Anschlußbuchse sollte in der Nähe der Einrichtung angebracht werden und leicht zugänglich sein.”



VORSICHT
Die Entlüftungsöffnungen dürfen nicht versperrt sein und müssen zum Kühlen freien Zugang zur Raumluft haben.



BETRIEBSTEMPERATUR: Dieses Produkt wurde für den Betrieb in einer Umgebungstemperatur von nicht mehr als 40° C entworfen.



NETZSICHERUNG
Bei der Installation muß der auf dem Typenschild angezeigte Nennwert des Gerätes für den Anschluß an das Netz beachtet werden.



VORSICHT: RAHMENEINBAU
Die Geräte müssen so in den Rahmen montiert werden, daß keine Gefahren durch unebenen inbau des Rahmens verursacht werden.



Lithium-Batterie - Sollte nur von einem geschulten qualifizierten Techniker ausgetauscht werden.
VORSICHT: Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Nur mit einer gleichen Batterie oder einem gleichwertigen Batterietyp nach Empfehlung des Herstellers ersetzen. Gebrauchte Batterien nach Anweisungen des Herstellers beseitigen.



ALLE LÄNDER: Installation muß örtlichen und nationalen elektrischen Vorschriften entsprechen.



Maschinenlärminformations-Verordnung - 3. GPSGV, der höchste Schalldruckpegel beträgt 70dB(A) oder weniger gemäss EN ISO 7779

Sikkerhed



ADVARSEL: I et hjemligt miljø kunne dette produkt forårsage radio forstyrrelse. Bliver det tilfældet, påkræves brugeren muligvis at tage tilstrækkelige foranstaltninger.



ADVARSEL Laserprodukt av klasse I.



ADVARSEL Stirr ikke på strålen.



ELEKTRISKE FORHOLDSREGLER

ADVARSEL: RISIKO FOR ELEKTRISK STØD

For at forebygge ELEKTRISK stød, undlad at åbne apparatet. Der er ingen indre dele, der kan reparerer af brugeren. Denne enhed indeholder LIVSFARLIGE STRØMSPÆNDINGER og bør kun åbnes af en uddannet og kvalificeret tekniker.



FARE UNDER UVEJR

FARE: UNDLAD at arbejde på udstyr eller KABLER i perioder med LYNAKTIVITET.



ADVARSEL: DEN STRØMFØRENDE LEDNING BRUGES TIL AT AFBRYDE STRØMMEN. SKAL STRØMMEN TIL APPARATET AFBRYDES, tages ledningen ud af stikket.



ELEKTRISK - KLASSE I-UDSTYR

DETTE UDSKYR KRÆVER JORDFORBINDELSE. Stikket skal være forbundet med en korrekt installeret jordforbunden stikkontakt. En ukorrekt installeret stikkontakt kan sætte livsfarlig spænding til tilgængelige metaldele.



UDSTYR TIL STIKKONTAKT, stikkontakten bør installeres nær ved udstyret og skal være lettilgængelig.



ADVARSEL: Ventilationsåbninger må ikke blokeres og skal have fri adgang til den omgivende luft i rummet for afkøling.



BETJENINGSTEMPERATUR: Dette apparat er konstrueret til en omgivende temperatur på maksimum 40 grader C.



ELEKTRISK-OVERBELASTNING AF SPÆNDINGSKREDSLØBET

Ved installation af produktet, bør der tages hensyn til den kumulative kapacitet der angives på navneskiltet, når udstyret forbindes med vekselstrømsledningen.



ADVARSEL: MEKANISK OPSTILLING-Udstyret skal opstilles i stativet, på en sådan måde, at der ikke opstår fare p.g.a. ujævn opstilling.



Lithium batteri - Bør kun udskiftes af uddannet og kvalificeret tekniker.
 ADVARSEL : Eksplosionsfare, hvis batteriet udskiftes ukorrekt. Udskift kun med samme eller en tilsvarende type der anbefales af producenten. Kassér brugte batterier i overensstemmelse med producentens instruktioner.



ALLE LANDE: Installation af produktet skal ske i overensstemmelse med lokal og national lovgivning for elektriske installationer.

Veiligheid



WAARSCHUWING: Binnenshuis kan dit product radiostoring veroorzaken, in welk geval de gebruiker verplicht kan worden om gepaste maatregelen te nemen.



WAARSHUWING Klasse-I laser produkt.



WAARSHUWING Neit in de straal staren.



WAARSCHUWINGEN MET BETREKKING TOT ELEKTRICITEIT
 WAARSCHUWING: GEVAAR VOOR ELEKTRISCHE SCHOKKEN
 Verwijder het deksel niet, teneinde ELEKTRISCHE schokken te voorkomen.
 Binnenin bevinden zich geen onderdelen die door de gebruiker onderhouden kunnen worden. Dit toestel staat onder GEVAARLIJKE SPANNING en mag alleen worden geopend door een daartoe opgeleide en bevoegde technicus.



GEVAAR VOOR BLIKSEMINSLAG
 GEVAAR: NIET aan toestellen of KABELS WERKEN bij BLIKSEM.



WAARSCHUWING: HET TOESTEL WORDT UITGESCHAKELD DOOR DE STROOMKABEL TE ONTROPPELEN. OM HET TOESTEL STROOMLOOS TE MAKEN: de stroomkabel ontkoppelen.



ELEKTRISCHE TOESTELLEN VAN KLASSE I
 DIT TOESTEL MOET GEAARD WORDEN. De stekker moet aangesloten zijn op een juist geaarde contactdoos. Een onjuist geaarde contactdoos kan de metalen onderdelen waarmee de gebruiker eventueel in aanraking komt onder gevaarlijke spanning stellen.



AAN TE SLUITEN APPARATUUR, de contactdoos wordt in de nabijheid van de apparatuur geïnstalleerd en is gemakkelijk te bereiken.”



OPGELET: De ventilatiegaten mogen niet worden gesperd en moeten de omgevingslucht ongehinderd toelaten voor afkoeling.



BEDRIJFSTEMPERATUUR: De omgevingstemperatuur voor dit produkt mag niet meer bedragen dan 40 graden Celsius.



ELEKTRISCH: OVERBELASTING VAN WISSELSTROOM HOOFDCIRCUIT
Tijdens de installatie van het produkt dient men rekening te houden met de gecombineerde waarden op de naamplaatjes bij het aansluiten van het toestel op de wisselstroom-voedingsdraden.



LOPGELET: MECHANISCH LADEN - De montage van het toestel in het rek dient zo uitgevoerd te worden dat geen gevaar ontstaat door een ongelijke lading.



Lithium batterij. Mag alleen worden vervangen door een daartoe opgeleide en bevoegde technicus.

OPGELET: Gevaar voor ontploffing indien de batterij verkeerd wordt vergangen. Alleen vervangen door hetzelfde of een gelijkwaardig, door de fabrikant aanbevolen type.



ALLE LANDEN: het toestel installeren overeenkomstig de lokale en nationale elektrische voorschriften.

Sécurité



MISE EN GARDE : dans un environnement domestique, ce produit peut provoquer des interférences radioélectriques. Auquel cas, l'utilisateur devra prendre les mesures adéquates.



ATTENTION Produit laser di classe I.



ATTENTION Ne pas fixer le faisceau des yeux.



INFORMATION SUR LES RISQUES ÉLECTRIQUES
AVERTISSEMENT: DANGER D'ÉLECTROCUTION

Pour éviter toute ÉLECTROCUTION, ne pas ôter le revêtement protecteur du matériel. Ce matériel ne contient aucun élément réparable par l'utilisateur. Il comprend des TENSIONS DANGEREUSES et ne doit être ouvert que par un technicien dûment qualifié.



DANGER DE Foudre

DANGER: NE PAS MANIER le matériel ou les CÂBLES lors d'activité orageuse.



ATTENTION: LE CORDON D'ALIMENTATION SERT DE MISE HORS CIRCUIT. POUR COUPER L'ALIMENTATION DU MATÉRIEL, débrancher le cordon.

**ÉQUIPEMENT DE CLASSE I ÉLECTRIQUE**

CE MATÉRIEL DOIT ÊTRE MIS A LA TERRE. La prise de courant doit être branchée dans une prise femelle correctement mise à la terre car des tensions dangereuses risqueraient d'atteindre les pièces métalliques accessibles à l'utilisateur.



EQUIPEMENT POUR BRANCHEMENT ELECTRIQUE, la prise de sortie doit être placée près de l'équipement et facilement accessible".



ATTENTION: Ne pas bloquer les fentes d'aération, ceci empêcherait l'air ambiant de circuler librement pour le refroidissement.



TEMPÉRATURE DE FONCTIONNEMENT: Ce matériel est capable de tolérer une température ambiante maximum de ou 40 degrés Celsius.

**SURCHARGE DES CIRCUITS PRINCIPAUX DE COURANT ALTERNATIF ÉLECTRIQUE**

Lors de l'installation du matériel, il faut prendre en compte la somme des puissances indiquées sur les étiquettes au moment de connecter le matériel à une source de courant alternatif.



ATTENTION : RÉPARTITION DE LA CHARGE MÉCANIQUE - Le montage du matériel dans le bâti doit être effectué de telle manière que la répartition de la charge mécanique ne pose aucun danger.



Pile en Lithium-Doit uniquement être remplacée par un technicien dûment qualifié

ATTENTION : Un danger d'explosion existe en cas de remplacement incorrect de la pile. Remplacer uniquement avec une pile du même type ou d'un type recommandé par le fabricant. Mettre au rebut les piles usagées conformément aux instructions du fabricant).



POUR TOUS PAYS: Installer le matériel conformément aux normes électriques nationales et locales.

Turvallisuus



VAROITUS: Kotiolosuhteissa tämä laite voi aiheuttaa radioaaltojen häiriötä, missä tapauksessa laitteen käyttäjän on mahdollisesti ryhdyttävä tarpeellisiin toimenpiteisiin.



VAROITUS Luokan I Lasertuote.



VAROITUS Älä katso säteeseen.

**SÄHKÖÖN LIITTYVIÄ HUOMAUTUKSIA****VAROITUS: SÄHKÖISKUVAARA**

Estääksesi SÄHKÖISKUN älä poista kantta. Sisällä ei ole käyttäjän huollettavissa olevia osia. Tämä laite sisältää VAARALLISIA JÄNNITTEITÄ ja sen voi avata vain koulutettu ja pätevä teknikko.

**SALAMANISKUVAARA**

HENGENVAARA: ÄLÄ TYÖSKENTELE laitteiden tai KAAPELEIDEN KANSSA SALAMOINNIN AIKANA.

**HUOMAUTUS: VIRTAJOHTOA KÄYTETÄÄN**

VIRRANKATKAISULAITTEENA. VIRTA KATKAISTAAN irrottamalla virtajohto.

**SÄHKÖ - TYYPPILUOKAN I LAITTEET**

TÄMÄ LAITE TÄYTY MAADOITTAA. Pistoke täytyy liittää kunnollisesti maadoitettuun pistorasiaan. Virheellisesti johdotettu pistorasia voi altistaa metalliosat vaarallisille jännitteille.



PISTORASIAAN KYTKETTÄVÄ LAITE; pistorasia on asennettava laitteen lähelle ja siihen on oltava esteetön pääsy.”



HUOMAUTUS: Ilmavaihtoreikiä ei pidä tukkia ja niillä täytyy olla vapaa yhteys ympäröivään huoneilmaan, jotta ilmanvaihto tapahtuisi.



KÄYTTÖLÄMPÖTILA: Tämä tuote on suunniteltu ympäröivän ilman maksimilämpötilalle 40°C.

**SÄHKÖ-VAIHTORVIRTASÄHKÖPIIRIN YLIKUORMITUS**

Tuotetta asennettaessa on otettava huomioon osien nimikilvissä osoitettu teho silloin kun osat liitetetään vaihtovirtaverkkoon.



HUOMAUTUS: MEKAANINEN KUORMITUS--Osien asennuksen alustaan tulee tapahtua siten, että epätasainen kuormitus ei aiheuta vaaraa.



Litiumparisto - Vaihdon voi suorittaa vain koulutettu ja pätevä teknikko.

Varoitus: Räjähdyksivaara, jos paristo on vaihdettu väärin. Vaihda vain samaan tai vastaavaan tyyppiin, jota valmistaja suosittelee. Hävitä käytetyt paristot valmistajan ohjeiden mukaan.



KAIKKI MAAT: Asenna tuote paikallisten ja kansallisten sähköturvallisuusmääräysten mukaisesti.

Norme di Sicurezza



AVVERTENZA: in ambiente domestico questo prodotto potrebbe causare radio interferenza. In questo caso potrebbe richiedersi all'utente di prendere gli adeguati provvedimenti.



AVVERTENZA Prodotto laser di Classe I.



AVERTENZA Non fissare il raggio con gli occhi.



AVVERTENZE ELETTRICHE

ATTENZIONE: PERICOLO DI SCOSSE ELETTRICHE

Per evitare **SCOSSE ELETTRICHE** non asportare il coperchio. Le componenti interne non sono riparabili dall'utente. Questa unità ha **TENSIONI PERICOLOSE** e va aperta solamente da un tecnico specializzato e qualificato.



PERICOLO DI FULMINI

PERICOLO: NON LAVORARE sul dispositivo o sui CAVI durante **PRECIPITAZIONI TEMPORALESCHES**.



ATTENZIONE: IL CAVO DI ALIMENTAZIONE È USATO COME DISPOSITIVO DI DISATTIVAZIONE. PER TOGLIERE LA CORRENTE AL DISPOSITIVO staccare il cavo di alimentazione.



ELETTRICITÀ - DISPOSITIVI DI CLASSE I

QUESTO DISPOSITIVO DEVE AVERE LA MESSA A TERRA. La spina deve essere inserita in una presa di corrente specificamente dotata di messa a terra. Una presa non cablata in maniera corretta rischia di scaricare una tensione pericolosa su parti metalliche accessibili.



APPARECCHIATURA COLLEGABILE, la presa va installata vicino all'apparecchio per risultare facilmente accessibile”.



ATTENZIONE: le prese d'aria non vanno ostruite e devono consentire il libero ricircolo dell'aria ambiente per il raffreddamento.



TEMPERATURA DI FUNZIONAMENTO: Questo prodotto è concepito per una temperatura ambientale massima di 40 gradi centigradi.



ELETTRICITÀ - SOVRACCARICO DEL CIRCUITO DI RETE A C.A.

Durante l'installazione ed il collegamento del dispositivo alla rete di alimentazione a corrente alternata, è necessario tenere in considerazione le capacità cumulative riportate sulla targhetta.



ATTENZIONE: CARICAMENTO MECCANICO - Il montaggio del dispositivo sul supporto va effettuato in maniera tale da evitare qualsiasi potenziale condizione di pericolo eventualmente dovuta al montaggio irregolare.



Batteria al litio - Va sostituita solo da un tecnico specializzato e qualificato. **ATTENZIONE:** l'errata sostituzione della batteria può causare pericolo di esplosioni. Sostituire solamente con lo stesso tipo o con uno equivalente raccomandato dal produttore. Eliminare le batterie usate secondo le istruzioni del produttore.



TUTTI I PAESI: installare il prodotto in conformità delle vigenti normative elettriche nazionali.

Sikkerhet



ADVARSEL: Hvis dette produktet benyttes til privat bruk, kan produktet forårsake radioforstyrrelse. Hvis dette skjer, må brukeren ta de nødvendige forholdsregler.



ADVARSEL Laserprodukt av klasse I.



ADVARSEL Stirr ikke på strålen.



ELEKTRISITET

ADVARSEL: FARE FOR ELEKTRISK SJOKK

For å unngå **ELEKTRISK** sjokk, må dekslet ikke tas av. Det finnes ingen deler som brukeren kan reparere på innsiden. Denne enheten inneholder **FARLIGE SPENNINGER**, og må kun åpnes av en faglig kvalifisert tekniker.



FARE FOR LYNNEDSLAG

FARE: ARBEID IKKE på utstyr eller **KABLER** i **TORDENVÆR**.



FORSIKTIG: STRØMLEDNINGEN BRUKES TIL Å FRAKOBLE UTSTYRET. FOR Å DEAKTIVISERE UTSTYRET, må strømforsyningen kobles fra.



ELEKTRISK - TYPE I- KLASSE UTSTYR

DETTE UTSTYRET MÅ JORDES. Strømkontakten må være tilkopleet en korrekt jordet kontakt. En kontakt som ikke er korrekt jordet kan føre til farlig spenninger i lett t ilgjengelige metalleder.



UTSTYR FOR STIKKONTAKT. Stikkontakten skal monteres i nærheten av utstyret og skal være lett tilgjengelig.”



FORSIKTIG: Lufteventilene må ikke blokkeres, og må ha fri tilgang til luft med romtemperatur for avkjøling.



DRIFTSTEMPERATUR: Dette produktet er konstruert for bruk i maksimum romtemperatur på 40 grader celsius.



ELEKTRISK OVERBELASTNING PÅ AC HOVEDKRETSLØP

Når produktet installeres, må de samlede navneplateverdier kontrolleres nøye når strøm påsettes.



FORSIKTIG: MEKANISK LASTNING Installering av utstyret på hyllen må utføres på en slik måte at ingen farlige situasjoner oppstår som en følge av ujevn lastning.



Litiumbatteri — Må kun byttes ut av en faglig kvalifisert tekniker.

FORSIKTIG: Eksplosjonsfare hvis batteriet feilinnsettes. Batteriet må bare erstattes med samme type eller en tilsvarende type som er anbefalt av fabrikanten. Batteriene må kasseres i samsvar med fabrikantens instruksjoner.



ALLE LAND: Produktet må installeres i samsvar med de lokale og nasjonale elektriske koder.

Segurança



AVISO: Num ambiente doméstico este produto pode causar interferência na radiorrecepção e, neste caso, pode ser necessário que o utente tome as medidas adequadas.



AVISO Produto laser de classe I



AVISO Não olhe fixamente para o raio.



AVISOS SOBRE CARACTERÍSTICAS ELÉTRICAS

ATENÇÃO: PERIGO DE CHOQUE ELÉTRICO

Para evitar **CHOQUE ELÉTRICO**, não retire a tampa. Não contém peças que possam ser consertadas pelo usuário. Este aparelho contém **VOLTAGENS PERIGOSAS** e só deve ser aberto por um técnico qualificado e treinado.



PERIGO DE CHOQUE CAUSADO POR RAIOS

PERIGO: NÃO TRABALHE no equipamento ou nos **CABOS** durante períodos suscetíveis a **QUEDAS DE RAIOS**.



CUIDADO: O **CABO DE ALIMENTAÇÃO** É UTILIZADO COMO UM **DISPOSITIVO DE DESCONEXÃO**. PARA **DESELETRIFICAR O EQUIPAMENTO**, desconecte o cabo de **ALIMENTAÇÃO**.



ELÉTRICO - EQUIPAMENTOS DO TIPO CLASSE I
 DEVE SER FEITA LIGAÇÃO DE FIO TERRA PARA ESTE EQUIPAMENTO. O plugue de alimentação deve ser conectado a uma tomada com adequada ligação de fio terra. Tomadas sem adequada ligação de fio terra podem transmitir voltagens perigosas a peças metálicas expostas.



EQUIPAMENTO DE LIGAÇÃO, a tomada eléctrica deve estar instalada perto do equipamento e ser de fácil acesso.”



CUIDADO: As aberturas de ventilação não devem ser bloqueadas e devem ter acesso livre ao ar ambiente para arrefecimento adequado do aparelho.



TEMPERATURA DE FUNCIONAMENTO: Este produto foi projetado para uma temperatura ambiente máxima de 40 graus centígrados.



ELÉTRICO - SOBRECARGA DA REDE DE CORRENTE ALTERNADA (AC)
 Antes de instalar o produto, verifique o efeito cumulativo da conexão de diversos aparelhos à rede de corrente alternada através das etiquetas que indicam potência ou amperagem.



CUIDADO: CARREGAMENTO - O equipamento deverá ser montado no suporte de montagem de forma tal que não cause perigo devido a carregamento não uniforme.



Bateria de lítio - Só deve ser trocada por técnico qualificado e treinado.
CUIDADO: Se a bateria não for devidamente instalada há perigo de explosão. Substitua somente pelo mesmo tipo ou equivalente, conforme recomendado pelo fabricante. Descarte baterias usadas, de acordo com as instruções fornecidas pelo fabricante.



TODOS OS PAÍSES: Instale o produto de acordo com as normas nacionais e locais para instalações eléctricas.

Seguridad



ADVERTENCIA: en un entorno doméstico, este producto puede causar radiointerferencias, en cuyo caso, puede requerirse del usuario que tome las medidas que sean convenientes al respecto.



¡ADVERTENCIA! Producto láser Clase I.



¡ADVERTENCIA! No mirat fijamente el haz.

**AVISOS ELECTRICOS****ADVERTENCIA: PELIGRO DE ELECTROCHOQUE**

Para evitar un ELECTROCHOQUE, no quite la tapa. No hay ningún componente en el interior al cual puede prestar servicio el usuario. Esta unidad contiene VOLTAJES PELIGROSOS y sólo deberá abrirla un técnico entrenado y calificado.

**PELIGRO DE RAYOS**

PELIGRO: NO REALICE NINGUN TIPO DE TRABAJO O CONEXION en los equipos o en LOS CABLES durante TORMENTAS ELECTRICAS.



ATENCION: EL CABLE DE ALIMENTACION SE USA COMO UN DISPOSITIVO DE DESCONEXION. PARA DESACTIVAR EL EQUIPO, desconecte el cable de alimentación.

**ELECTRICO - EQUIPO DEL TIPO CLASE I**

ESTE EQUIPO TIENE QUE TENER CONEXION A TIERRA. El cable tiene que conectarse a un enchufe a tierra debidamente instalado. Un enchufe que no está correctamente instalado podría ocasionar tensiones peligrosas en las partes metálicas que están expuestas.



EQUIPO CONECTABLE, el tomacorriente se debe instalar cerca del equipo, en un lugar con acceso fácil”.



ATENCION: Las aberturas para ventilación no deberán bloquearse y deberán tener acceso libre al aire ambiental de la sala para su enfriamiento.



TEMPERATURA REQUERIDA PARA LA OPERACIÓN: Este producto está diseñado para una temperatura ambiental máxima de 40 grados C.

**ELECTRICO - SOBRECARGA DEL CIRCUITO PRIMARIO DE CORRIENTE ALTERNA**

Al instalarse el producto deberán considerarse las potencias nominales acumulativas, cuando se conecta el equipo al cable de alimentación de corriente alterna.



ATENCION: CARGA MECANICA - El montaje del equipo en el bastidor debe realizarse de manera tal que no cause una condición peligrosa debido a la distribución desigual del peso.



Batería de litio - Sólo deberá ser cambiada por un técnico entrenado y calificado. **ATENCION:** Peligro de explosión si la batería no se reemplaza en forma correcta. Reemplace sólo con el mismo tipo o equivalente que recomienda el fabricante. Deseche las baterías usadas según las instrucciones del fabricante.



PARA TODOS LOS PAÍSES: Monte el producto de acuerdo con los Códigos Eléctricos locales y nacionales.

Säkerhet



WARNING: Denna produkt kan ge upphov till radiostörningar i hemmet, vilket kan tvinga användaren till att vidtaga erforderliga åtgärder.



WARNING! Laserprodukt av klass I.



WARNING! Laserstrålning när enheten är öppen.



TILLKÄNNAGIVANDEN BETRÄFFANDE ELEKTRICITETSRIK:
RISK FÖR ELEKTRISK STÖTFör att undvika ELEKTRISK stöt, ta ej av locket. Det finns inga delar inuti som behöver underhållas. Denna apparat är under HÖGSPÄNNING och får endast öppnas av en utbildad kvalificerad tekniker.



FARA FÖR BLIXTNEDSLAG

FARA: ARBETA EJ på utrustningen eller kablarna vid ÅSKVÄDER.



WARNING: NÄTKABELN ANVÄNDS SOM STRÖMBRYTARE FÖR ATT KOPPLA FRÅN STRÖMMEN, dra ur nätkabeln.



ELEKTRISKT - TYP KLAS I UTRUSTNING
DENNA UTRUSTNING MÅSTE VARA JORDAD. Nätkabeln måste vara ansluten till ett ordentligt jordat uttag. Ett felaktigt uttag kan göra att närliggande metalldelar utsätts för högspänning. Apparaten skall anslutas till jordat uttag, när den ansluts till ett nätverk.



UTRUSTNING MED PLUGG. Uttaget skall installeras i utrustningens närhet och vara lättåtkomligt”.



WARNING: Luftventilerna får ej blockeras och måste ha fri tillgång till omgivande rumsluft för avsvälvning.



DRIFTSTEMPERATUR: Denna produkt är konstruerad för rumstemperatur ej överstigande 40 grader Celsius.



ELEKTRISKT - ÖVERBELASTNING AV VÄXELSTRÖMSNÄTET: När produkten installeras bör den sammanlagda effekten på namnplåten beaktas när apparaten ansluts till växelströmsnätet.



WARNING: MEKANISK BELASTNING: Utrustningen ska installeras i chassit på så sätt att fara inte uppstår p g a ojämn belastning.



Litium batteri - Får endast bytas av utbildade och kvalificerade tekniker.
VARNING: Risk för explosion om felaktigt batteri används. Byt endast mot samma eller likvärdig typ batteri, rekommenderat av tillverkaren. Kassera använda batterier i enlighet med tillverkarens instruktioner.



ALLA LÄNDER: Installera produkten i enlighet med lokala och statliga bestämmelser för elektrisk utrustning.

EC Declaration of Conformity

We: **ALLIED TELESIS LABS LIMITED**
27 NAZARETH AVENUE
CHRISTCHURCH 8024
NEW ZEALAND

Declare under our sole legal responsibility that the following product meets the safety, protection and conformity requirements of council directives 73/23/EEC as amended by 93/68/EEC, and 89/336/EEC as amended by 93/68/EEC, 92/31/EEC and 91/263/EEC, on the approximation of the laws of member states relating to electromagnetic compatibility and electrical safety.

AT-8600 SERIES SWITCHES

to which this declaration relates are in conformity with the following relevant harmonized standards, the reference numbers of which have been published in the Official journal of the European community.

EN55022: 1998 Incl A1:2000 and A2:2003	Information Technology Equipment—Radio disturbance
EN55024: 1998 Incl A1:2001 and A2:2003	Information Technology Equipment—Immunity characteristics—Limits and methods of measurement.
EN60950-1: 2001	Information Technology Equipment including electrical business equipment—General Requirements.
EN60825-1: 1994 Incl A1:2002 and A2:2001	Safety of Laser Products - part 1: Equipment classification, requirements and user's guide.
EN61000-3-2: 2000	Electromagnetic compatibility (EMC) - part 3-2: Limits for harmonic current emissions (equipment input current up to and including 16A per phase).
EN61000-3-3: 1995 Incl A1:2001	Electromagnetic compatibility (EMC) - part 3-3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current up to 16A.

Name: John Shields
 On behalf of the Manufacturer

Position: Hardware and Services Manager

Signature:



Date: 2nd November 2005

