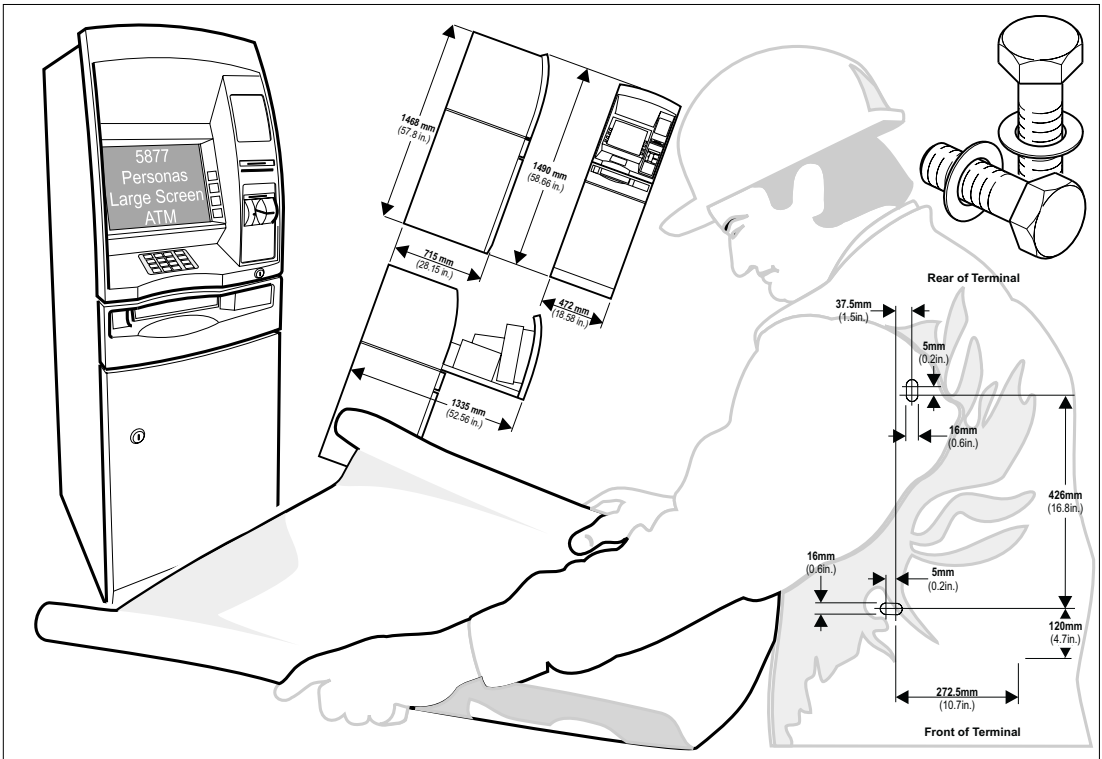




5877 Personas ATM

Site Preparation



Publication ID: B006-6208-A000

Date: 1101

NOTICE

This is a contractual document. It contains important warning and confers important legal rights and obligations. You are advised to read it carefully.

It is the responsibility of the customer to assure that all installation preparations are complete and in compliance with all specifications and requirements of NCR and all applicable national, state, or local codes, regulations and laws.

The product described in this book is a licensed product of NCR Corporation.

Trademark Information

It is the policy of NCR Corporation (NCR) to improve products as new technology, components, software, and firmware become available. NCR, therefore, reserves the right to change specifications without prior notice.

All features, functions, and operations described herein may not be marketed by NCR in all parts of the world. In some instances, photographs are of equipment prototypes. Therefore, before using this document, consult with your NCR representative or NCR office for information that is applicable and current.

To maintain the quality of our publications, we need your comments on the accuracy, clarity, organization, and value of this book.

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DD2 3XX

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Federal Communications Commission (FCC) Radio Frequency Interference Statement

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 the 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 Class A Device Declaration

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Information to User

This equipment must be installed and used in strict accordance with the manufacturer's instructions. However, there is no guarantee that interference to radio communications will not occur in a particular commercial installation. If this equipment does cause interference, which can be determined by turning the equipment off and on, the user is encouraged to consult an NCR service representative immediately.

Caution NCR Corporation is not responsible for any radio or television interference caused by unauthorised modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by NCR. Such unauthorized modifications, substitutions, or attachments may void the user's authority to operate the equipment. The correction of interference caused by such unauthorized modifications, substitutions, or attachments will be the responsibility of the user.

Revision Record

Date	Page	Description of Change
Jul 01	All	New Publication
Nov 01	2-8 & 2-9	Securing Bolt Location Holes

Preface

This book contains the information necessary for the preparation of a site conforming to NCR specifications. It is very important that the site complies with the requirements specified in this document because, once the equipment has been installed, deficiencies in site preparation or the problems caused by these deficiencies are much more difficult to detect and correct. Further, failure to comply with these requirements or to take proper steps to protect equipment against risks identified in this document may cause serious damage to the equipment and to the customer's business.

In addition to the need to comply with the requirements specified, electrical wiring and mechanical systems must also comply with all relevant codes, laws and regulations.

It is important that the site be prepared by a customer or his agent who is fully conversant with the special requirements of electronic equipment. The responsibility for ensuring that the site is prepared in compliance with this document remains with the customer.

For information and guidance only, a list is provided, in general terms, of those matters for which the customer is responsible. This list is not intended to be comprehensive, and in no way modifies, alters, or limits the responsibility of the customer for all aspects of adequate site preparation.

NCR staff will be available to answer questions relating to the contents of this document but, except where

- the customer has been notified that a full or partial consultancy service is available and/or that NCR will be willing to undertake a preliminary or final site survey and the customer shall have entered into a formal contract with NCR for provision of the same

- no comment, suggestion or advice offered or not offered about preparation of the site nor any inspection of the site whether before or after preparation is to be taken as approval of the location of the site and equipment or of its preparation and NCR will not be liable in respect of any comment, suggestion or advice given by its staff or in respect of any failure to give advice.

Finally, only the customer can know the full extent of damage which may be caused to his business by reason of failure of the equipment which is to be installed. For this reason, it is the customer's responsibility to ascertain the extent of any such possible damage to his existing or planned business, and to effect full insurance in respect of it.

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Chapter 1

Planning Check List and Installation Accessories

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Planning Check List and Installation Accessories

Planning Check List

To assist in preparing your site for the arrival of the terminal, it is recommended that the various procedures, detailed in the following check list be carried out **prior** to the arrival of the terminal. The procedures given are listed in chronological order, starting with the procedure that should be carried out first.

Activity	
Select site and make scaled floor plan	
Ensure correct environmental conditions	
Establish all contractor and vendor related schedules including surrounds/kiosk vendors	
Check communication line requirements	
Plan application development	
Check floor plan and make any alterations	
Install additional electrical outlets (if required)	
Prepare site for data communication	
Arrange for designing and printing of overlays/decals	
Order information products	
Order media supplies	
Plan operator training (optional)	
Ensure data communications equipment is installed and tested	
Ensure installation accessories listed are available	

Installation Accessories

When installing the terminal, it is recommended that the following items are available:

- Pincers/claw hammer to remove staples/nails from around the air/sea pallet
- **19mm** (3/4 in.) for UL safe, ring/open-ended combination spanner and socket to remove pallet bolts, and to fit floor bolts
- Cross-head screwdriver
- **13mm** (17/32 in.) spanner or socket - to remove the four screws that secure either of the cross struts to the pallet
- **10mm** (13/32in.) ring/open ended combination spanner - for attaching earth stud
- **17 mm** (11/16 in.) ring/open-ended combination spanner or socket
- Wooden/metal safety blocks to support the terminal during installation
- **4mm** (7/64 in.) Allen key
- Hex nut driver set (including M3 and M4 sizes)
- Selection of screwdrivers for flat blade and cross head applications
- Forklift or a lifting/moving device
- Packing to protect exterior of the terminal while on trolleys
- Lifting Trolleys (may need to be modified, refer to the NCR *5877 Personas ATM Installation Manual* (B006-6209-A000))
- Scissors.

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Physical Requirements

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Physical Requirements

Overview

The NCR 5877 Personas ATM (P77) is a self-service ATM which may be installed in any suitable interior location.

The P77 is designed to enable customers to avail themselves of a range of services such as:

- Cash Withdrawals
- Receipt Printing
- Cheque Book Requests
- Account Enquiries.


Customer Responsibilities

The customer must do or provide the following:

- When required by NCR, provide the NCR customer service representative with appropriate drawings that indicate:
 - Location of the equipment
 - Site wiring (power and signal, paths and lengths)
 - Location of other equipment capable of generating electrical noise, electromagnetic interference, heat, etc.
- Make building alterations necessary to meet wiring and other site requirements
- Provide and install all communications cables, wall jacks, special connectors and associated hardware
- Provide and install necessary power distribution boxes, conduits, grounds, lightning protection and associated hardware
- Make sure all applicable codes, regulations and laws (including but not limited to electrical, building, safety and health, disabilities) are met
- Provide and install auxiliary power or other equipment as required
- Provide storage or service areas as required
- Make sure the environmental requirements of the system/unit are met
- Provide floor coverings and environmental systems that limit or control static electricity build-up and discharge.

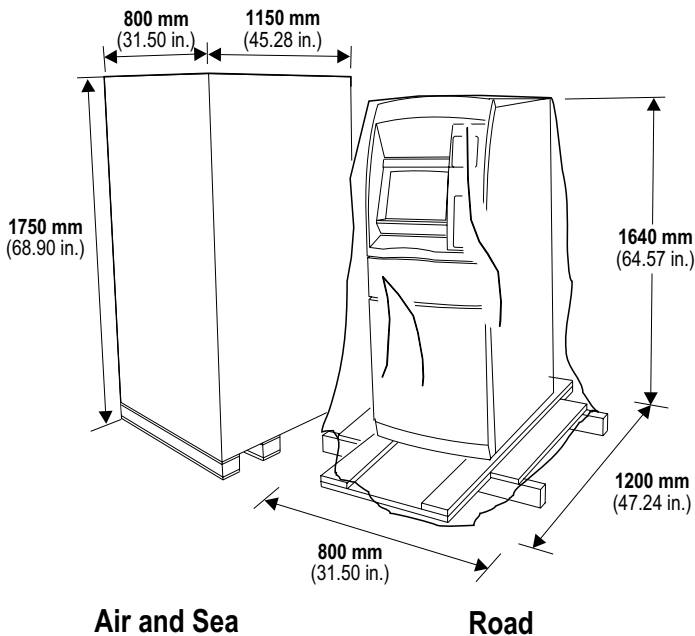
Product Identification

The product is identified by a class type number (5877), and a 4-digit model number which is printed on a label (similar to the following) attached to the inside wall of the P77 near the ON/OFF switch. The first two digits of this model number identify the major model (normally 01), the next two digits identify the minor model (normally 01). The serial number is unique to each P77, as is the Class number combined with the Tracer number.

 <p>NCR Financial Solutions Group Ltd Dundee Scotland Made in U.K.</p>	Class	5877	Model	XXXX
	Serial	08-XXXXXXXX	Tracer	08-XXXXXX
		Vac.	120/220	Hz. 50/60 A.10.0
<p>Electromagnetic Compatibility</p> <p>This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.</p> <p>This apparatus does not exceed Class A limits for radio noise emissions set out in the Radio Interference Regulations of Canada.</p> <p>Le present appareil n'emet pas bruits radioelectriques depassant les limites de la classe A prescrites dans le Reglement sur le brouillage radioelectrique du Canada.</p>				
<p>"Complies with FDA Radiation Performance Standards, 21 CFR Subchapter J".</p>				

Packaging Dimensions

The type of packaging used is dependent on the shipping method - road or air/sea freight. If access to the installation location is not wide enough to allow the package to pass through, unpack the P77 in an area with sufficient access.



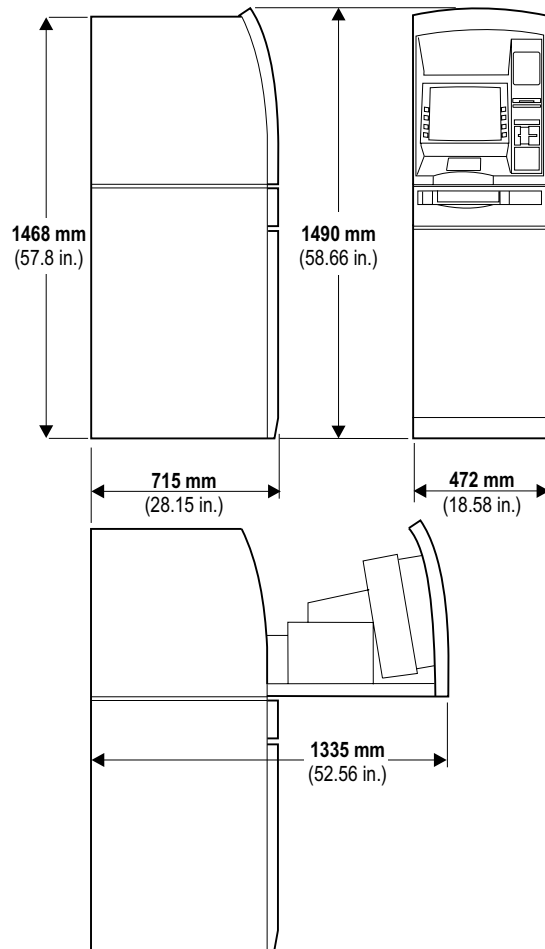
Air/Sea Package:

- Height = **1750mm** (68.90 in.)
- Depth = **1150mm** (45.28 in.)
- Width = **800mm** (31.49 in.)

Road Package:

- Height = **1640mm** (64.56 in.)
- Depth = **1200mm** (47.24 in.)
- Width = **800mm** (31.49 in.)

Terminal Dimensions

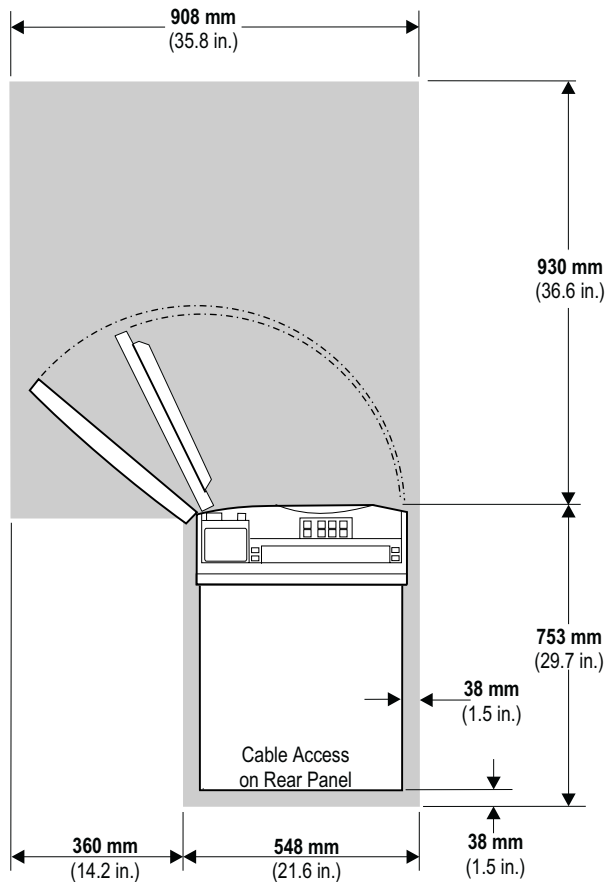


Installation And Service Clearances

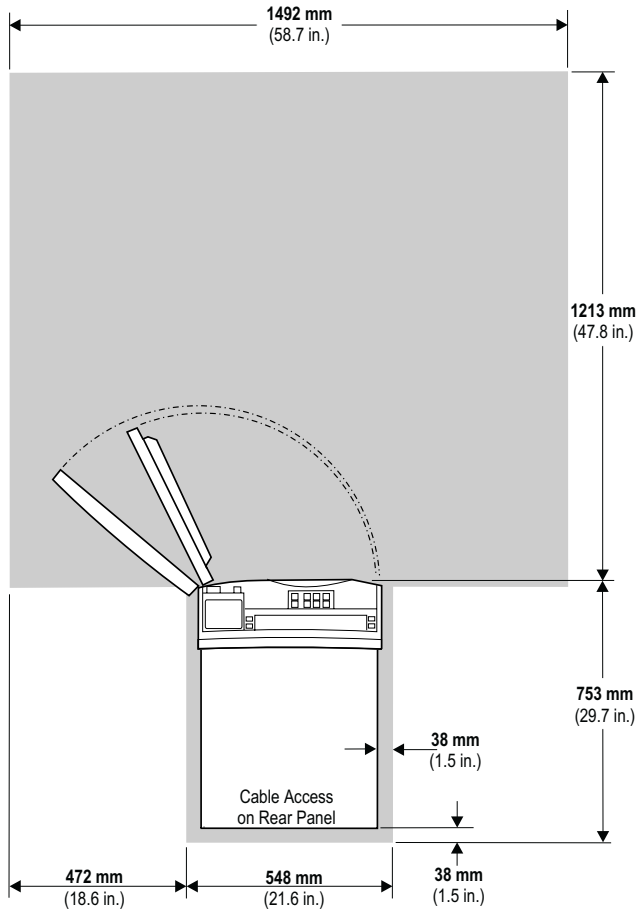
The following illustrations show both **minimum** and **recommended** floor areas required for installing, servicing and replenishing a P77.

Note: This illustrations show the safe door in the service position.

Minimum



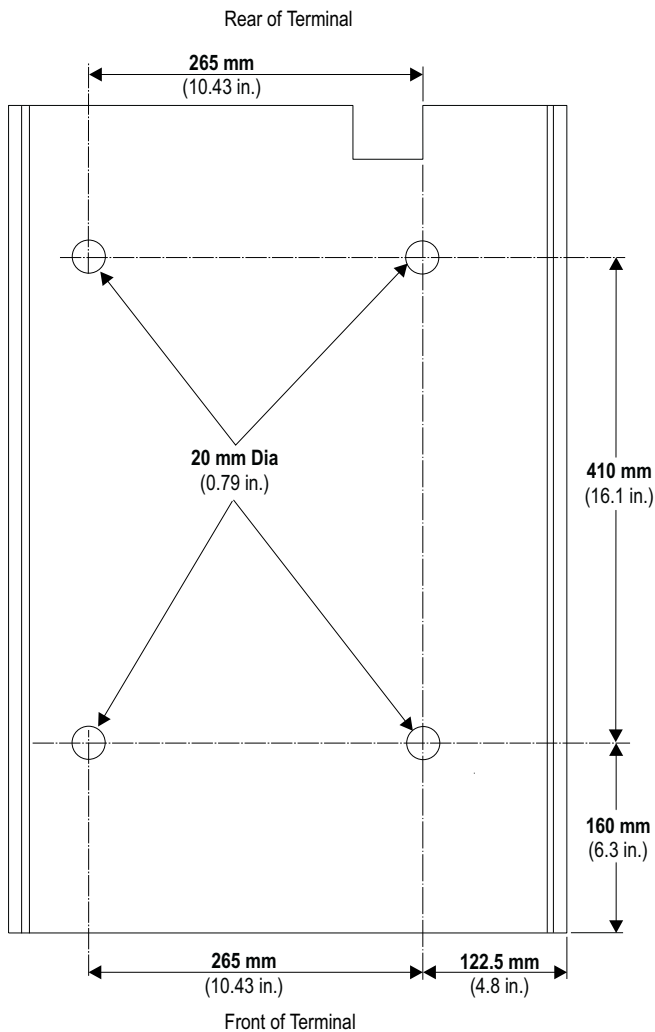
Recommended



Securing Bolt Location Points

The following illustrations show the dimensions for the securing bolt location points for UL Standard Security safe viewed from above.

UL



Securing Bolts

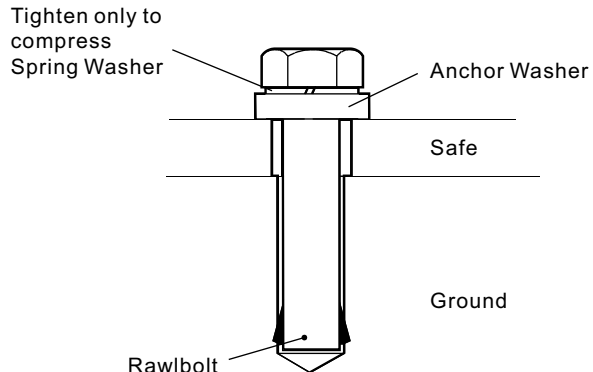
The P77 **must** be bolted to the floor using four (4) securing bolts. The floor must be capable of taking the anchor points for the bolts.

Note: The securing bolts, anchors and appropriate washers must be supplied by the owning organisation.

The minimum specification for bolts to secure the P77 to a plinth or a stone/concrete floor is:

UL Standard Security Safe

- M12 Rawlbolt - **12mm** (0.47 in.) diameter x **38mm** (1.5 in.) minimum long
- Anchor point for M12 Rawlbolt, length suitable to clamp **25.4mm** (1 in.) minimum of bolt.



Floor Covering

An antistatic floor covering should be used. This floor covering should be of a type which will not generate dust or fluff.

P77 Location

The P77 should not be located in a position where bright sunlight will fall directly on the P77 screen.

Weight and Floor Loading

The P77 must be installed on a solid, level floor capable of supporting the maximum weight. The weight of the P77 varies with configuration, however, only the maximum weight should be considered since additional options may be added after installation. The P77 can be stabilised by using the bolts that secure the transportation feet to the terminal. Refer *NCR 5877 Personas ATM Installation Manual* (B006-6209-A000).

Note: Floor loading is calculated by dividing the maximum weight of the P77 by the surface area of the P77 base (the area in contact with the floor).

Standard Security (UL 291) Safe

- Maximum weight: **535kg** (11791lb.)
- Floor loading: **1585kg/m²** (325lb/ft²).

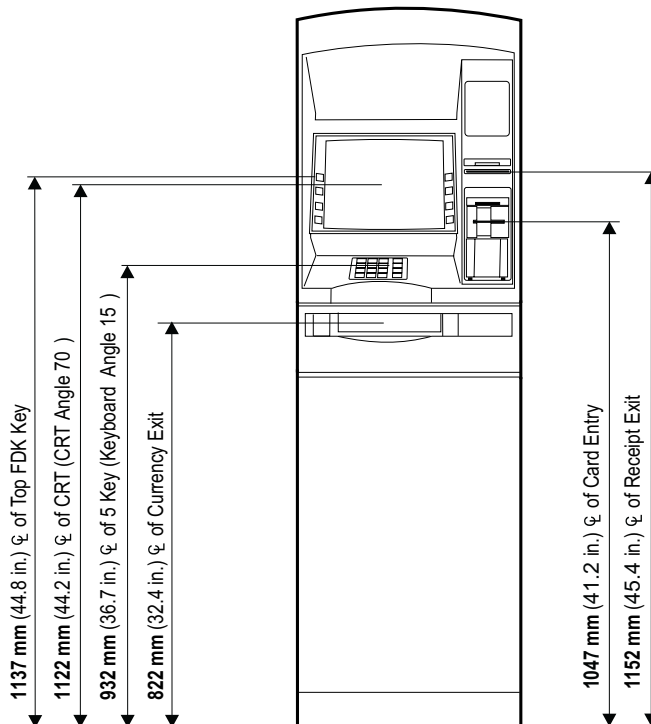
Access For All

The P77 is designed to meet optimum height and reach requirements to provide comfortable access for all users. This design takes account of wheelchair users, the visually impaired and all others. For wheelchair users, optimized parallel approach is offered, providing security and private space if installed according to recommendations.

The P77 complies with the height and reach requirements of the Canadian Standards Association (CSA) Barrier Free Access and the Americans with Disabilities Act (ADA).

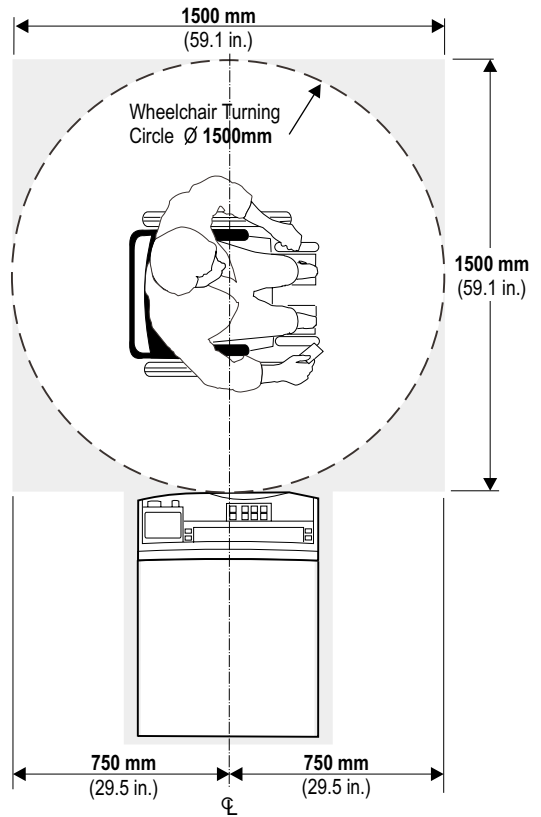
Heights To Main Facia Items

The following illustrations shows the heights from the P77 base (safe floor) to the main items, or exit slots, located on the P77 facia.



Recommended Wheelchair Clearance

The following illustration shows the recommended clearance for wheelchair approach.



Physical Requirements
Access For All



Chapter 3

Electrical Requirements

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Power Quality Distribution And Grounding Requirements

Voltage transients, line noise, surges, sags, impulses, and spikes may be experienced routinely or sporadically. When such phenomena occur, the use of protective devices, as described in Appendix A and B, may be required to ensure proper operation of the equipment.

AC Requirements

The maximum current requirements at various input voltages are:

- 8.2A at 120V
- 4.1A at 240V.

The maximum inrush current requirements at various input voltages are:

- 200A peak at 136V
- 150A peak at 257V.

Input Voltage Setting

The P77 can operate from the following input mains voltages:

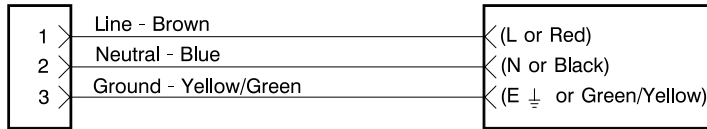
- 104V to 136V at 50/60Hz
- 198V to 257V at 50/60Hz.

Power Cable

The power cable supplied with the P77 is fitted with a NEMA type 5-15P power source connector. If this is not suitable for your use, it should be replaced with a suitable power source connector. This connector must be wired as shown below:

The power cable supplied is **3m** (9ft 9 in.) in length. If it is necessary to increase this length to meet site requirements, then the extension must satisfy local or country regulations.

Warning This equipment must be earthed.



Note: The annotations within brackets are included to comply with United Kingdom legislation and refer to the markings on United Kingdom three pin plugs.

Grounding Requirements

The P77 operates from a single phase 3 wire supply; live, neutral and ground. The power requirements of this unit will normally permit it to operate within existing wiring configurations and from existing branch mains outlets with the following provisions:

- 1 If this supply is provided from a general purpose distribution panel, the other branch circuits from this panel must not be used to support heavy inductive loads such as air conditioners, elevators, microwave ovens, and so on. Nor may such equipment be operated on the same branch circuit as the P77.
- 2 If using distribution panels, all branch circuit grounding conductors must be connected to an insulated terminal strip in the distribution panel. The grounding conductor from the distribution panel to the building ground point must be at least equal in size to the power conductor necessary to supply the NCR system.

Note: The building ground point can affect data integrity. For additional information refer to the 'Data Line Transient Protection' section of Appendix A.

Transient Power Loss

The voltage loss due to power interruptions must not be more than 50% of the nominal value for a maximum of one half cycle at a maximum rate of 1 every 10 seconds.

EMI Susceptibility

The P77 meets NCR CES-2-11-09 and CES-2-11-10 (details available on request).

EMI Emission

The P77 meets FCC Class A and FTZ VDE 0871/0875 requirements for radiated and conducted emission.

Communications Requirements

Voltage transients, line noise, surges, sags, impulses, and spikes may be experienced routinely or sporadically. When such phenomena occur, the use of protective devices, as described in Appendix A, may be required to ensure proper operation of the equipment.

It is the responsibility of the customer to assure that all installation preparations are complete and in compliance with NCR specifications and requirements and with all national, state or local telephone and telegraph regulations and laws.

High Order Communications Cables

The high order communications cable type depends upon the communications system to be used.

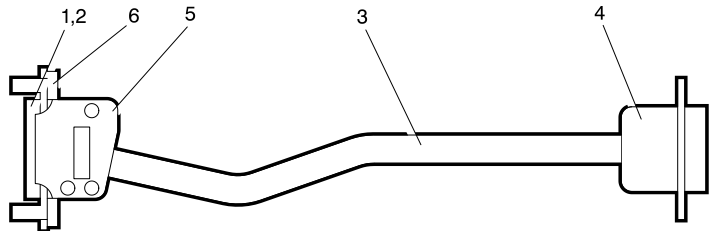
Note: Communications cables are not supplied with the P77. If these cables are required, it is the customer's responsibility to have them installed.

All communications cables are routed through the back of the P77, underneath the module tray to the PC core.

High Order Communications Standard Cable (RS-232)

The standard high order communications system supports most common bit and byte orientated disciplines (synchronous and asynchronous) with an RS-232 interface.

The interconnecting cable to the remote modem should not exceed **15.24m (50ft.)** in length, and must conform to the specification and wiring given in the following diagram.

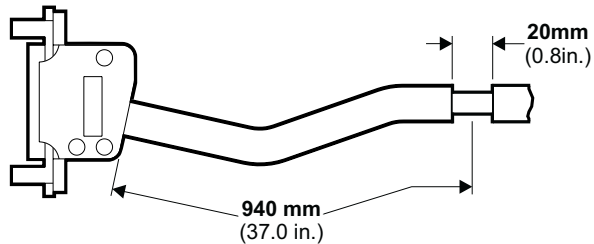


1. Connector, 25 way (NCR part no. 006-0005897).
2. Terminal wire, male (NCR part no. 009-0002642).
3. Cable, multiconductor (NCR part no. 007-8907033).
4. Connector (determined by remote device).
5. Shell hood (NCR part no. 006-1081980).
6. Screw retainer (NCR part no. 601-0101584).



Cable Preparation At a point **940mm (37 in.)** from the connector end of the cable, remove a **20mm (0.8 in.)** section of the outer sleeve as shown.

Note: Take care not to cut through the cable shielding when removing the outer sleeve.



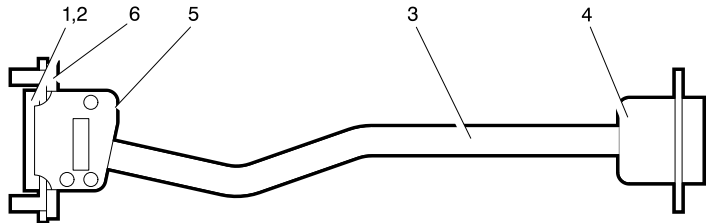
Alarm Interface Cable

The P77 may, optionally, be configured to provide an alarm interface which enables the P77 to be connected to an external local alarm system. The interface may take the form of one of two options; a basic alarm system or an enhanced alarm system.

The external alarm system must provide to the P77, through the alarm interface cable wiring, a non-interruptible, stabilized power supply with the following specifications:

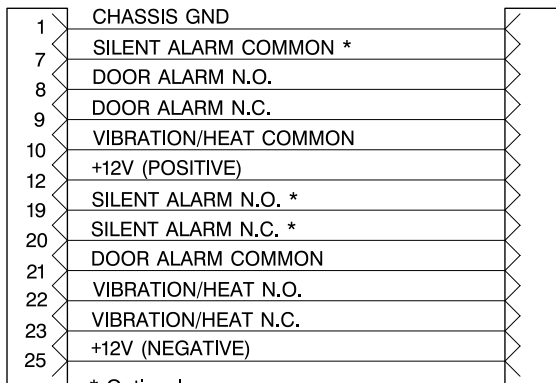
- $12V \pm 2V$ dc
- 200mA maximum
- Ripple, 5% maximum.

The interconnecting cable to the P77 is similar for both alarm interface options and must conform to the following specification and wiring:



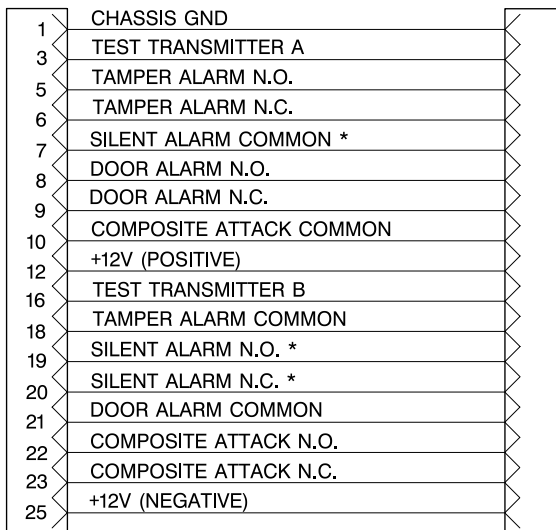
1. Connector, 25 Way (NCR part no. 006-0005896)
2. Terminal, wire, female (NCR part no. 009-0002640)
3. Cable, multiconductor (determined by the alarm installed).
4. Connector (determined by remote device).
5. Shell Hood (NCR part no. 006-1081980).
6. Screw retainer (NCR part no. 601-0101584).

Alarm Interface Cable Wiring



* Optional

Basic alarm interface cable wiring

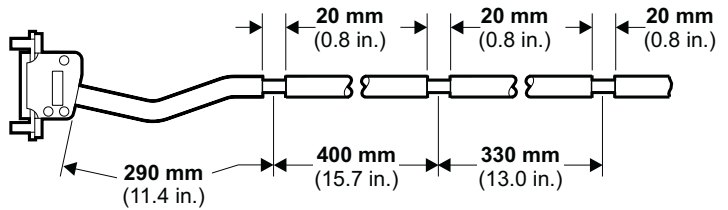


* Optional

Enhanced alarm interface cable wiring

Cable Preparation Starting from the connector end, remove **20mm (0.8 in.)** sections of the outer sleeve at the distances detailed in the following diagram.

Note: Take care not to cut through the cable shielding when removing the outer sleeve.



Electrical Requirements
Communications Requirements



Chapter 4

Installation Site Environmental Requirements

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Installation Site Environmental Requirements

Environmental Requirements

For the terminal to function correctly, the installation site should meet the following environmental requirements.

Temperature And Humidity

The terminal will operate over a range of temperature and humidity. However, continuous operation at or near the range limits or in a location where the temperature and humidity change beyond the specification, should be avoided. The temperature and humidity ranges are as follows:

Normal Operating Range (Interior ATM Environment)

- Temperature: **10°C to 40°C** (50°F to 104°F)
- Temperature change rate: **10°C** (50°F) per hour
- Relative humidity: 20% to 80%
- Relative humidity change rate: 10% per hour
- Dew point temperature restriction: **26°C** (79°F) maximum.

Environmental Requirements

All Environments

- Storage range (up to three months):
 - Temperature: **-10°C to 50°C** (14°F to 122°F)
 - Temperature change rate: **15°C per hour** (27°F per hour)
 - Relative humidity: 10% to 90%.
- Transit range (up to one week):
 - Temperature: **-40°C to 60°C** (-40°F to 140°F)
 - Temperature change rate: **20°C per hour** (36°F per hour)
 - Relative humidity: 5% to 95%.
- Extreme power on range (up to one hour):
 - Temperature: **0°C to 40°C** (32°F to 104°F)
 - Temperature change rate: **10°C per hour** (18°F per hour)
 - Relative humidity: 10% to 95%.

Barometric Pressure

Operating and transit limits: **105kPa** (15.2 lb. F per in.)

Equivalent altitude: up to a maximum of **3000 metres** (9750 feet).

Heat Dissipation

The heat dissipation of the terminal is **378kcal per h** (1500Btu per h or 1606.5 kJ) maximum.

Air Flow

The air flow through the terminal is rated at **0.1m³ per s** (212ft³ per min.).

Temperature Rise

The temperature rise for air passing through the terminal is **3°C** (5.4°F).

Acoustical Noise

Does not exceed 65dBA in idle mode or 68dBA while operating.



Chapter 5
Decals

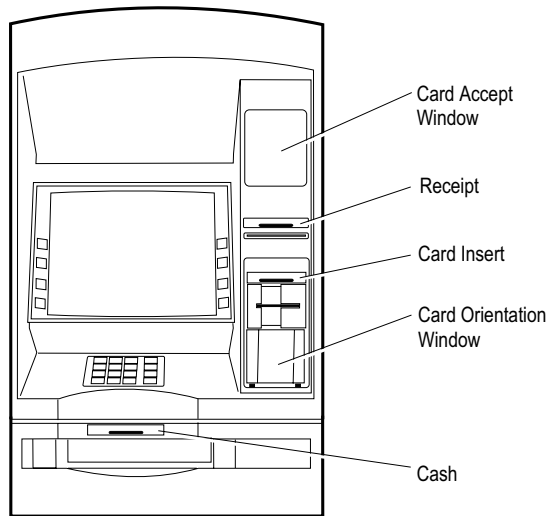
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Decal Specifications

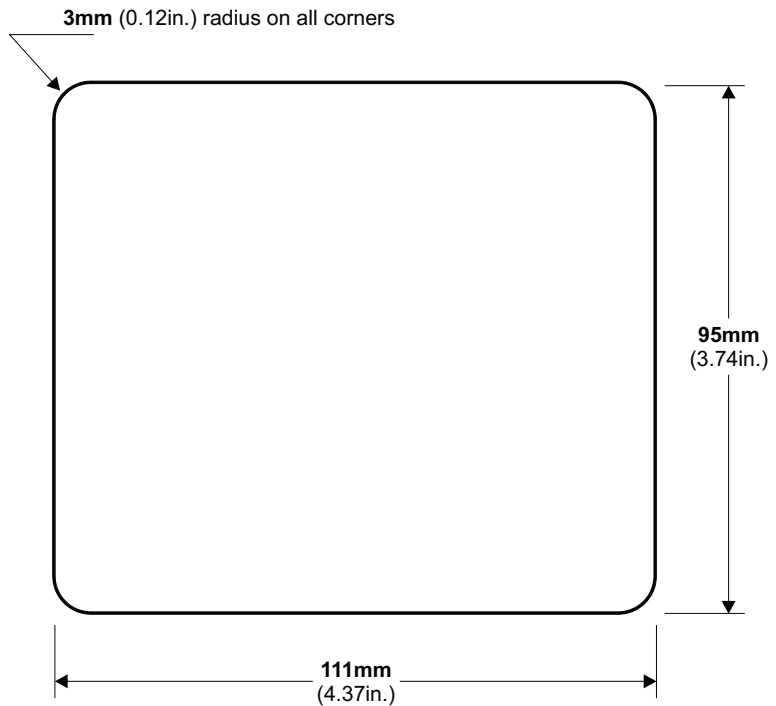
This following illustration shows the approximate locations for the decals which you may wish to fit to the front of your P77.



Specifications and guidelines for the various decals are given in the following sections.

Card Accept

The Card Accept decal, which is typically used to provide the consumer with information on card acceptance, surcharging or general advertising should conform to the following dimensions:

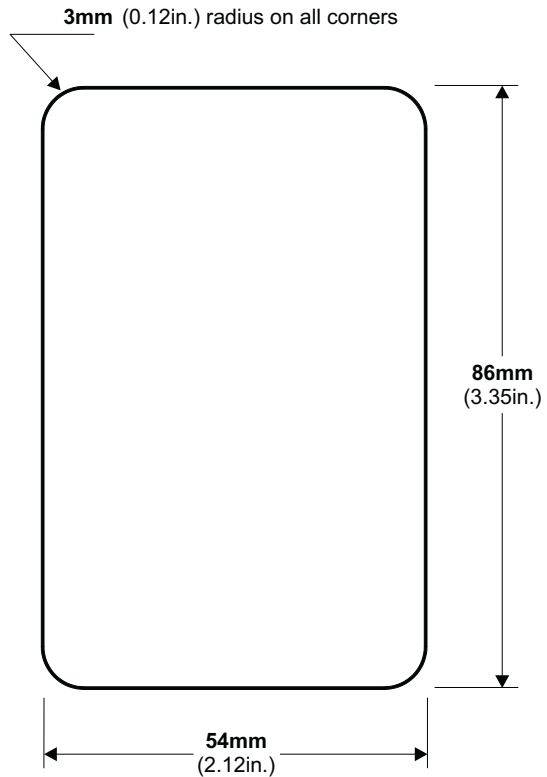


The insert should be a maximum of **0.8mm** (0.031 in.) thick. NCR recommend that the insert be made from one of the following materials:

- Polycarbonate
- Polyester
- Paper.

**Card Orientation
Decal**

If the Card Reader Module window is to be customised to indicate card orientation. The card/decals to be inserted should be a maximum of **0.75mm (0.029 in.)** thick and conform to the following dimensions:



Note: These are the dimensions of the industry-standard credit card.

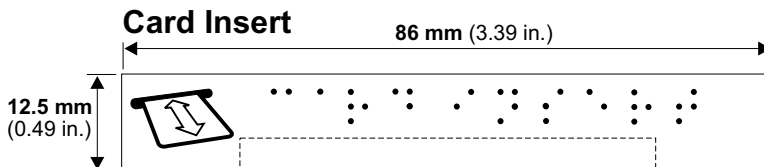
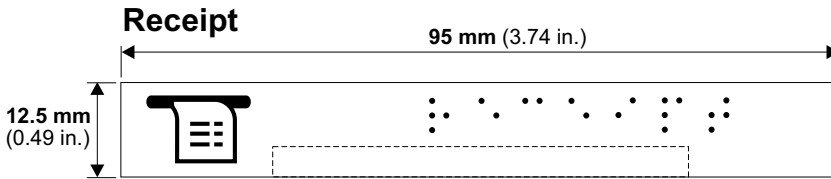
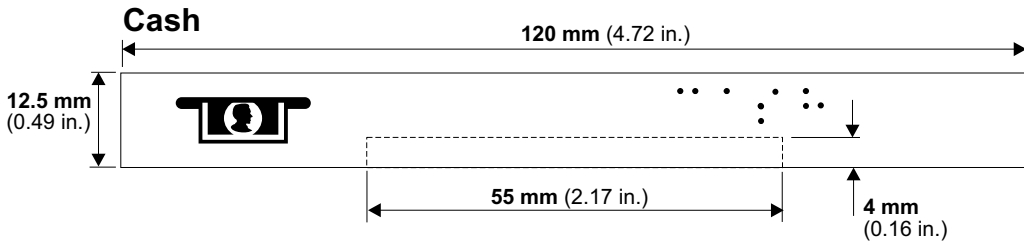
Exit/Entry Slot Decals

Decals can be used to identify the exit/entry slots for the receipt printer, cash dispenser and card entry. The decal should be a maximum of **0.5mm** (0.02 in.) thick and it is recommended that it is made from Textured Polycarbonate with 3M 467 High Performance MP adhesive.

Note: A combination of your application and screen graphics can be used as an alternative to indicate the exit/entry slots.

P77 Example Decals

The following decals are only a guide and financial institutions may wish to design their own.



Note: The overall dimensions given on these decals are the dimensions of the decal recesses on the P77.

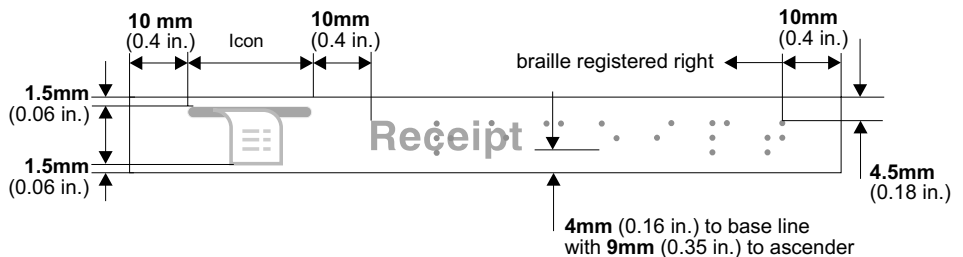
On the P77, the MEIs are within the decal location recesses, this has to be considered when designing decals. The following are recommendations only:

- if the background of the decal is transparent the decal can be the full depth **12.5mm** (0.49in.) with/without a section (**55mm** (2.17in.) x **4mm** (0.16in.) - the dotted area shown on the decals) cut out for the MEI.
- if a coloured background is required:
 - the decal can be full depth **12.5mm** (0.49in.) with a section (**55mm** (2.17in.) x **4mm** (0.16in.) - the dotted area shown on the decals) cut out for the MEI.

or

- the decal can be **8mm** (0.32in.) deep and be positioned along the top of the MEI.

Recommended Icon, Text and Braille Placement



Decals
Decal Specifications



Appendix A
Transient Protection

AC Power Line Transient Protection A-1

Data Line Transient Protection A-3

Table of Contents
Transient Protection

AC Power Line Transient Protection

In the process of power distribution, transient electrical energy (including, but not limited to, lightning strikes, intermittent short circuits, and switching transients) can be introduced on to power lines. Such transient energy can be very damaging to electronic hardware and can also cause data corruption. Under these circumstances, NCR recommends the use of a.c. power transient suppressors and data (communication) line transient suppressors. Such protective devices are intended to guard against power and data line transients that can result in hardware damage and various system or program errors.

Improvement of any deficiencies in power quality is a customer responsibility. Malfunction and/or component failure as a result of power quality problems are/is not covered by NCR Maintenance Agreement, NCR accepts no liability for any such occurrence nor for its consequences.

When power transient suppression is required, the suppressors used should meet the following minimum requirements:

- Dissipate energy to match the appropriate application categories as defined by IEEE Standard 587. These categories are described in the following table:

Location Category	Comparable to IEC No 664 Category	Transient	
		Waveform	Amplitudes
A=Outlets > 10m (30 ft) from Cat. B A= Outlets > 20m (60 ft) from Cat. C	II	0.5 μ s Risetime, then 100 kHz Ringwave, each peak=60% of previous	6 kV 200A
B=Major feeders, short branch circuits, and load centres	III	Volts= $1.3 \times 5 \mu$ s Current= $8 \times 20 \mu$ s and 0.5 μ s Rise = 100 kHz Ringwave	6kV 3kA 6kV 500A
C = Service Entrance and run to load centre	IV	Volts = $1.2 \times 5 \mu$ s Current = $8 \times 20 \mu$ s	10kV or > 10kA or >

- Be of the voltage limiting (clipping), or tracking filter type. The suppressor must not 'clamp' the voltage to zero, and must self-recover after passage of the transient. The suppressor may be of the hybrid type construction that makes use of various technologies in order to meet speed and dissipation requirements
- Exhibit a 'short circuit' mode upon its failure, thus providing a positive indication of its failure such as a blown fuse or tripped breaker
- Be listed by the accepted safety organization for the country involved (e.g. UL, CSA, VDE, ETL, etc.) and the installation must conform to local, state, and national electrical codes and regulations.

Data Line Transient Protection

The nature of the transient phenomenon may extend to the data communication lines connected to this equipment. It is the responsibility of the customer to install and connect a data line transient suppression system to correct or prevent any deficiencies. Such systems must meet the following minimum requirements:

- Be of the voltage limiting type and must self-recover after passage of the transient
- Exhibit a 'short circuit' mode upon its failure to insure a positive indication of its failure
- Insert less than 5 ohms resistance and minimal inductive and capacitive loading at the operating frequency, in each data line in order to avoid signal degradation
- Be installed in accordance with all applicable local, state, and national electrical codes and regulations.

Note: In certain countries, NCR is able to supply both power and data line transient suppressors as well as a comprehensive line of power conditioning equipment. For application data, contact your NCR Customer Services Division Representative.

Transient Protection
Data Line Transient Protection



Appendix B

Power Protection

NCR Power Protection and Cabling Products	B-1
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Line-Interactive UPS	B-4
Contact Information	B-4

NCR Power Protection and Cabling Products

Power protection equipment suitable for use with NCR ATMs can be purchased from the NCR Power Protection and Cabling group. Some of these products are outlined below.

AC Power Line Transient Protection

The following products can be purchased from the NCR Power Protection and Cabling group to help provide protection from power line spikes and surges:

NCR Product ID	Description
4060-4030-0094	110V, 3 outlet, wall plug-in, 15 Amp suppressor, United States applications
4060-4050-0094	110V, 3 outlet, strip, 15 Amp suppressor with 1.8 metres (6 feet) of power cable, United States applications
4060-4070-0094	110V, 7 outlet, strip, 15 Amp suppressor with 1.8 metres (6 feet) of power cable, United States applications
4060-4310-7594	220V, 4 outlet, strip, United Kingdom plug fitted
4060-4311-7594	220V, 4 outlet, strip, German/European plug fitted
4060-4312-7594	220V, 4 outlet, strip, French plug fitted

These products have numerous features:

- unique five-stage hybrid circuitry
- protection from spikes and surges
- protection covers all modes - line to neutral, line to earth (ground) and neutral to earth (ground)
- integral RF/EMI damping capability
- thermal overload protection
- high capacity fusing
- indicator lights display operational readiness
- highly flame retardant plastic housing, conforming to UL94-5V.

Data Line Transient Protection

The following Data Line Transient Voltage Surge Suppressors can be purchased from the NCR Power Protection and Cabling group to help protect the communications port against harmful transient surges from both external and internal sources not eliminated by Uninterruptible Power Supplies (UPS) or other AC protection:

NCR Product ID	Description
4060-K018-V000	25 pin, CMP, snaps in to United States surge suppressors
4060-K019-V000	25 pin, CFP, snaps in to United States surge suppressors
4060-K021-V000	25 pin, CMP, stand-alone, all applications
4060-K022-V000	25 pin, CFP, stand-alone, all applications

Note: The first two products are designed to snap-in to the interface port on NCR Series 4000 Transient Voltage Surge Suppressors in the United States. The second two products are designed to be stand-alone for use in Europe.

Uninterruptible Power Supplies

Uninterruptible Power Supplies (UPS) can be purchased from the NCR Power Protection and Cabling group to help protect information and equipment by providing power conditioning and battery back-up.

On-line UPS

NCR Product ID	Description
4082-1000-7194	1000 VA on-line UPS with rack/tower configuration, 120VAC 50/60 Hz
4082-1000-7494	1000 VA on-line UPS with rack/tower configuration, 230VAC 50/60 Hz

These products offer:

- on-line topology
- 10 minute battery backup at full load
- true sine wave output
- 100% clean, conditioned power to connected equipment

- extended battery cabinets available for extended run times
- on-board SNMP optional on all models
- standard LAN/serial (RS-232) network interface
- standard rack-mountable unit design
- also available in 1500 VA, 2000 VA and 3000 VA sizes.

Enhanced Line-Interactive UPS

NCR Product ID	Description
4071-1020-7194	1000 VA Enhanced line-interactive UPS, 120VAC 60Hz
4071-1021-7194	1000 VA Enhanced line-interactive UPS, 120VAC 60Hz Rack-mountable
4071-1020-7494	1000 VA Enhanced line-interactive UPS, 230 VAC, 50/60 Hz
4071-1021-7494	1000 V A Enhanced line-interactive UPS, 230 VAC, 50/60 Hz, Rack-mountable

These products offer:

- line-interactive topology
- 8 minute battery backup at full load
- true sine wave output
- input voltage selectable to 110/127 VAC or 220/240 VAC
- advanced battery management prolongs battery life and ensures quick availability after discharge
- advanced battery management for early failure detection and advanced user warning
- internal transformer provides voltage buck/boost
- standard LAN/serial (RS-232) network interface
- rack-mountable configuration
- available in 600 VA, 1500 VA, 2000 VA, 2200 VA, 2400 VA and 3000 VA sizes.

Line-Interactive UPS

NCR Product ID	Description
4070-1000-7194	1000 VA Line-interactive UPS, 120AC, 60 Hz
4070-1000-7494	1000 VA Line-interactive UPS, 230VAC, 50/60 Hz

These products offer:

- line-interactive topology
- 7 minute battery backup at full load
- modified sine wave output
- input voltage selectable at 110/127 VAC or 220/240 VAC
- advanced battery management prolongs battery life and ensures quick availability after discharge
- advanced battery management for early failure detection and advanced user warning
- internal transformer provides voltage buck/boost
- standard LAN/serial (RS-232) network interface
- hot-swappable batteries
- available in 450 VA, 700 VA, 1500 VA sizes.

Contact Information

For more information from NCR's Power Protection and Cabling Group on the power protection, data line transient suppressors and uninterruptible power supply products available, warranty or configuration assistance, call the appropriate number below:

	Telephone
Worldwide (excl. USA)	(44) 1932 57 3435 or + 1 919 460 9489
USA only	1 800 257 0458
	Facsimile
Worldwide	USA +1 919 460 9558

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