

# P400/P400 Plus Terminal

## Full Guide

### Features

The P400 is a consumer-facing handheld device. It can also be fix-mounted in some integrated retail scenarios. The product's design is equally appealing as a handheld PINpad and robust enough to look and function appropriately in a fixed mount setting.

#### Front Functions

The P400 includes the following features:

- Capacitive touch LCD display
- Secure keypad supporting 3x5 matrix containing 0-9, \*, #, Cancel, Backspace/Clear, and Enter keys.
- Supports telco-style format
- Dual-function Backspace/Clear key.
- Customer-entry for Cancel and Enter keys.

#### Back Functions

The rear of the P400 device shows the following:

- Cable connector compartment.
- Threaded grommets for attaching the mounting plate.
- A uSD and a dual-stack MSAM connectors built into the back of the unit to support stored-value card programs or other merchant card requirements.

#### Features & Benefits

- 320 (RGB) x 480 TFT (HVGA) display with a capacitive touch panel.
- Connects with most POS payment terminals.
- Supports payment transactions in a variety of payment environments.

#### Security Protection

- Offers a choice of Master/Session or DUKPT key-management methods to protect PIN-based transactions.
- Offers secure, reliable PIN input for expanding range of PIN-based transactions.
- PCI-compliant for secure solutions, meeting the PED standard.
- Meets ISO and ANSI standards for PIN encryption, key management, and MAC.
- Key injection simplified and secured with Verifone's SecureKit key loading software.

- Removable privacy shield offers option of supplemental physical security.
- Connects with most POS payment terminals, PCs, and ECRs.
- USB Connectivity that gives another option to connect with payment terminals, personal computers, and electronic cash registers (ECRs).

## Setup

This chapter describes the setup procedure for the V400m Terminal & Base, in the following sections:

- Selecting Location
- Unpacking Shipping Carton
- Installing MSAM/uSD Cards
- Power Supply
- Cable Connections
- Smart Card Reader
- Magnetic Stripe Card Reader
- Contactless Transactions

### Selecting Location

To Select a Location, please use the following guidelines:

- Far from heavy metal objects
- A flat support surface such as a countertop or a table
- Near a power outlet and the terminal or computer that connects to the P400
- For safety, do not string cables or cords across a walkway
- Do not use the unit where there is high heat, dust, humidity, moisture, or caustic chemicals or oils.
- Keep the unit away from direct sunlight and anything that radiates heat, such as a stove or a motor.
- Do not use the P400 outdoors.
- Disconnect the device from its POS terminal before cleaning.

### Unpacking Shipping Carton

Carefully inspect the shipping carton and its contents for possible tampering or damage.

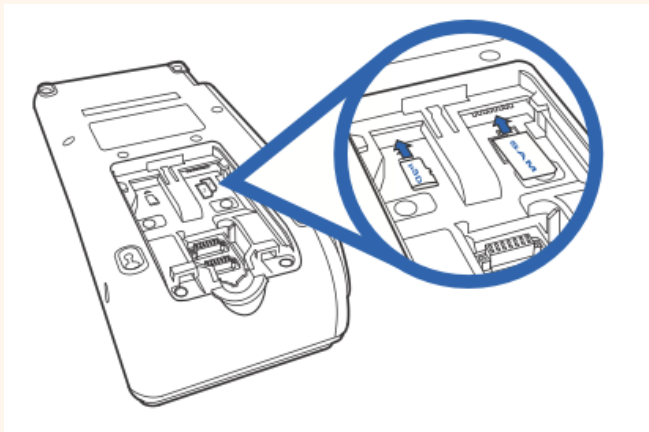
1. Remove the P400 unit from the shipping carton. The standard package contains the PIN pad only and does not include any other cables or accessories.

2. Remove any protective plastic wrap and place the unit on a table or countertop.
3. Remove the clear protective film from the display.
4. Replace all the packing materials, close the lid, and save the carton for repacking or moving the P400 unit in the future.

Do not use a unit that has been tampered with or otherwise damaged. This unit comes equipped with a tamper-evident label. If a label or component appears damaged, immediately notify the shipping company and contact [JustiFi support](#) for assistance.

## Installing or Changing MSAM/uSD Cards

You may need to install one or more multiple security access module (MSAM) cards or replace the old cards.



### To install or change uSD or MSAM cards:

1. Place the terminal face down on a soft and clean surface to protect the lens from scratches.
2. Slide out and lift the compartment cover with a captive screw. The uSD and MSAM cardholders are now accessible. The P400 supports two MSAM cards in a stacked configuration.
3. Install the uSD or MSAM card by carefully sliding it into the slot until fully inserted. Insert the card with the card's gold contacts facing away from you, toward the unit.

## Power Supply

Not all configurations and device contexts require the use of a power supply – Verifone ships power supply with the terminal as required. Contact [JustiFi support](#) for assistance if you have changed the context in which the terminal is used or have questions about which power supply should be used.

Disconnect the power pack cord from the power outlet before connecting a power supply. Connect and route all cables between the terminal, ECR, and PC before plugging the power pack cord into a wall outlet or surge protector.

When the terminal has power and an application is loaded, the application starts after the initial Verifone copyright screen and displays a unique copyright screen. If no application is loaded, DOWNLOAD NEEDED appears on the display after the initial Verifone copyright screen.

## USB Power Supply

P400 can be powered with 5 V supply from USB port (5 V at 500 mA) with the following power-saving conditions controlled by the OS:

- Maximum audio output volume is reduced.
- LCD backlight intensity is reduced to 30% (not suitable for high-glare, outdoor usage).
- Keypad backlight is disabled.
- Ethernet functionality is unavailable.
- BT/Wi-Fi functions are unavailable.
- The maximum USB cable length supported is 4.1 m (CBL280-025-02-A)
- In CTLS payment mode, the microprocessor operating frequency is reduced to 300 MHz until the PINpad exits CTLS mode.
- Multimedia function (video playback or audio function) has to be switched off by user or customer app when CTLS payment mode is activated. Other modes of payment like smart card and MSR payment can be supported.

## Cable Connections

The P400 has several cabling scenarios, depending on what it connects to:

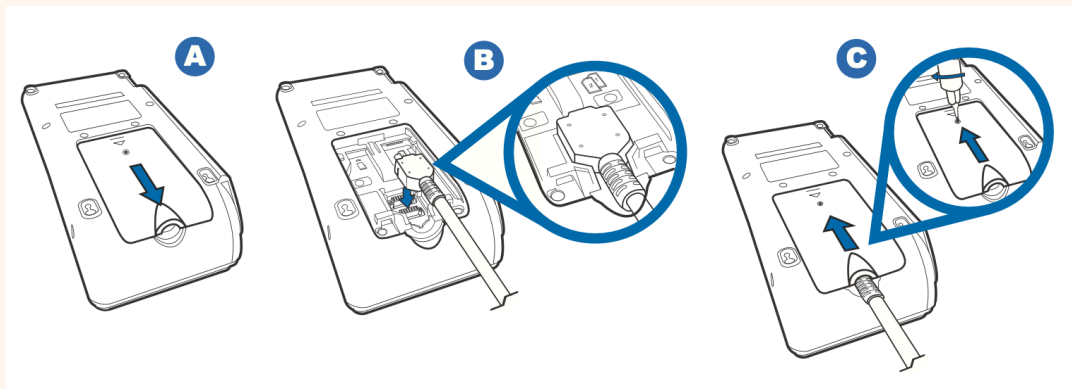
1. Connection to Another Verifone Terminal.
2. RS-232 Connection Using an External Power Brick.

3. Direct USB Connection.
4. Powered USB Connection.
5. Ethernet Connection with External Power Brick.

Turning off or unplugging the terminal when connecting or disconnecting the device to avoid device memory corruption and data loss.

### Attaching a Cable Connector to the P400

Before going into each cabling scenario, the cables first have to be attached to the P400. To attach a cable to the terminal, follow steps 1-2 in the Installing or Changing MSAM/uSD Card section to open the compartment door, then attach the 28-pin connector of the cable to the terminal. Slide back compartment cover and tighten the captive screw as shown.

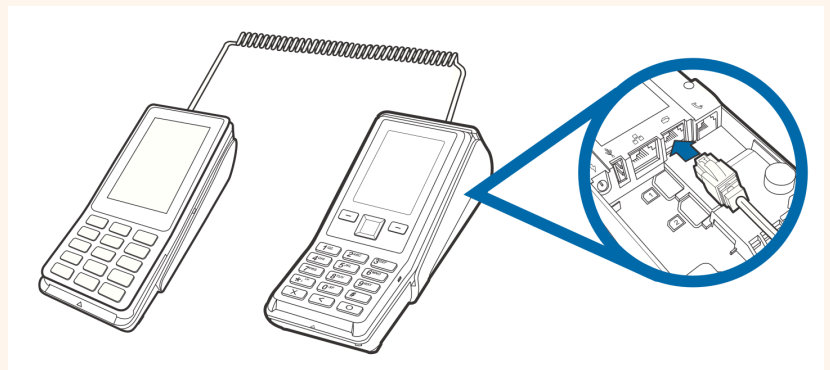


### Connection to Another Verifone Terminal

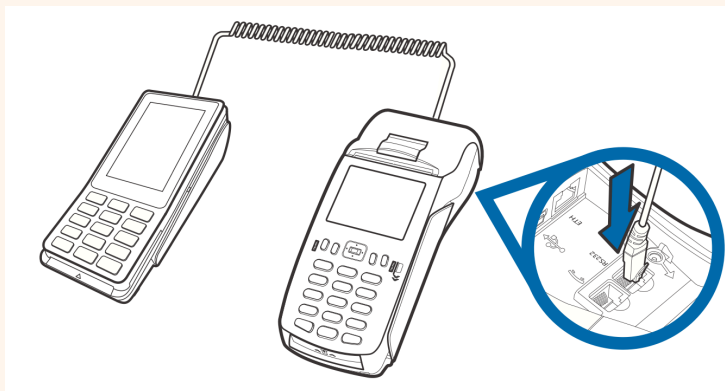
The P400 can be powered by another Verifone terminal in two ways:

#### Option 1: Serial Connection

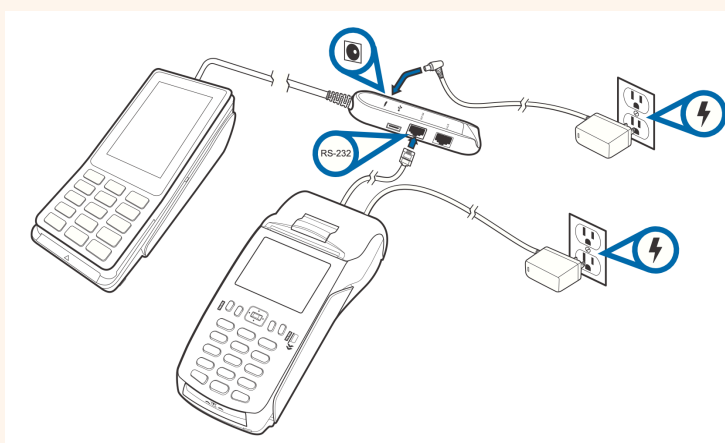
**Configuration 1** - P400 to V200c: Connect the 28-pin connector of the coiled serial cable (VPN - CBL282-036-01-A) to P400, then insert the other end of the cable to the multi-communication port of V200c. There is a minimum power requirement for the terminal, currently specified at 5.2 W.



**Configuration 2 - P400 to VX 520:** Connect the 28-pin connector of the coiled serial cable (VPN - CBL282-036-01-A) to P400, then insert the other end of the cable to the RS-232 port of VX520.

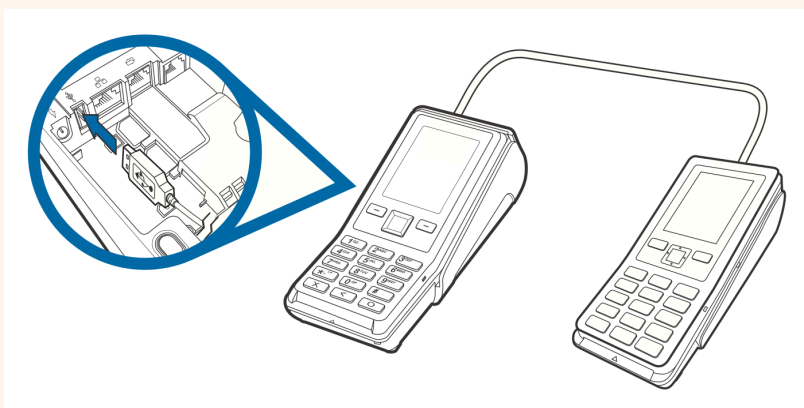


**Configuration 3 - P400 Plus to VX 520:** In order for the P400 Plus (also applicable to P400) to support full-feature without any limitation, it is required to power the PINpad with an external power supply

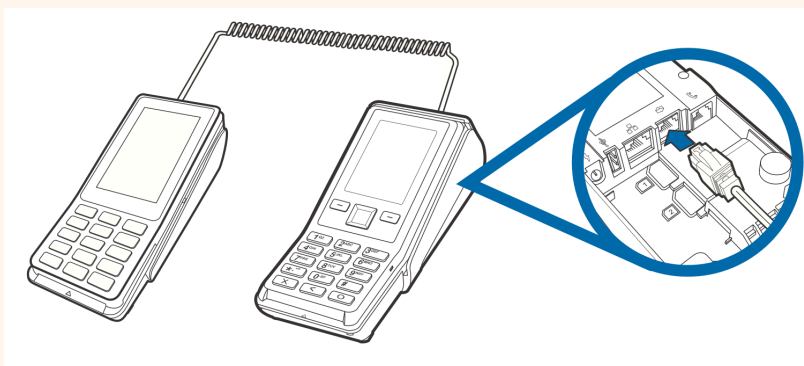


## Option 2: USB Connection

**Configuration 1 - P400 to V200c:** P400 can be powered by V200c via the USB port. Connect the USB cable CBL282-038-xx-A directly to the USB1 (USB Vertical Type A) port of V200c

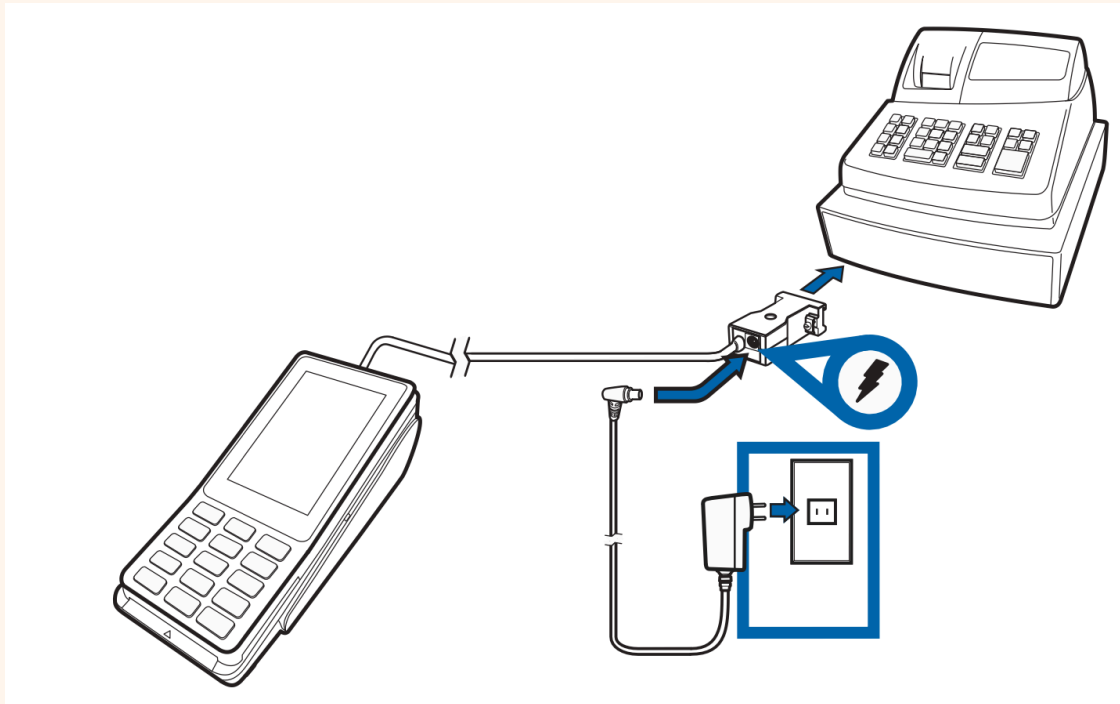


**Configuration 2 - P400 to V200c:** P400 can be powered via the V200c multi-communication port of V200c, which also supports USB connectivity. Insert the USB cable CBL435-002-01-A directly to the multi-communication port of V200c.



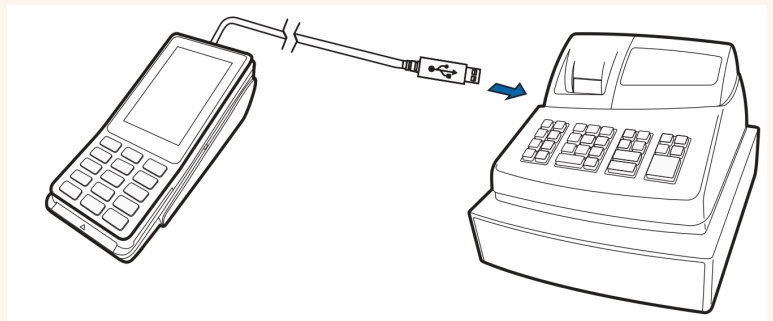
## RS-232 Connection Using an External Power Brick

A special dongle cable is used, where one end of the cable plugs into the P400 while the other end terminates in a DB-9 connector housing. On the housing, a DC jack is provided to connect to an external power brick. This is a generic cable for all RS232-based hosts (VPN - CBL282-031-XX-A).



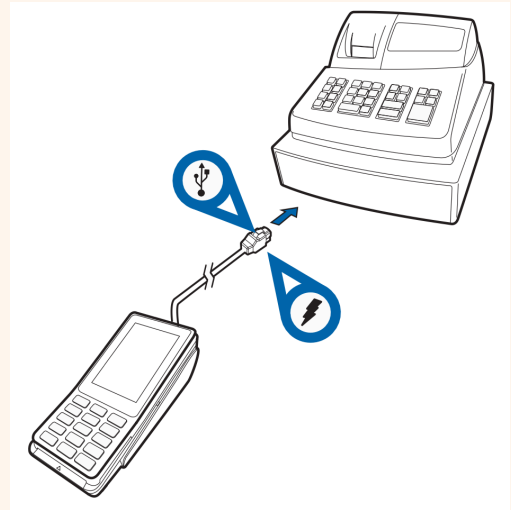
## Direct USB Connection

Similarly, a USB cable (VPN - CBL282-038-XX-A) is required in standard USB environments. For this cable option, the host end has a molded housing which exposes the standard USB plug.



## Powered USB Connection

A PoweredUSB cable allows for devices to obtain power through their USB host instead of requiring an independent power supply or external AC adapter. Connect the cable (VPN - CBL282-033-01-A) to the P400 and plug the male USB connector into the corresponding USB port of the connecting device.

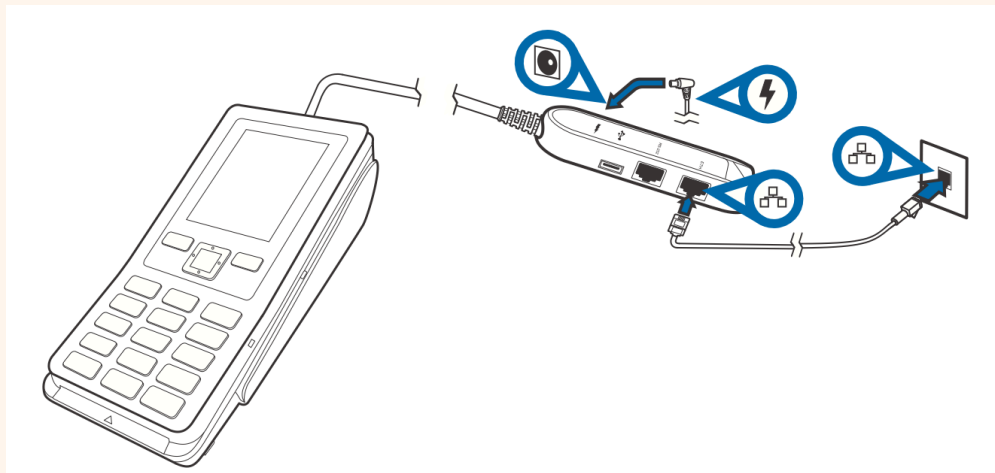


## Ethernet Connection with External Power Brick

To connect the terminal to other devices via Ethernet, use the cable with a junction box that provides a standard RJ-45 LAN socket, a mini-USB port, and a standard DC jack for an external power connection. The junction box comes in these configurations:

Cable	Configuration	Part Number
Ethernet with RS232	Junction box with RJ-45 socket (for connecting PINPad to LAN infrastructure), MOD-8 socket & DC-in jack	CBL282-006-01-B
Ethernet and Mini-USB option	Junction box with RJ-45 socket (for connecting PINPad to LAN infrastructure), MOD-8 socket, Mini USB & DC-in jack	CBL435-005-02-A
Ethernet with RS232 and USB option	Junction box with RJ-45 socket (for connecting PINPad to LAN infrastructure), MOD-8 socket, Mini USB, type A USB & DC-in jack	CBL435-044-01-A

The figure below shows the connections available on the external power brick.

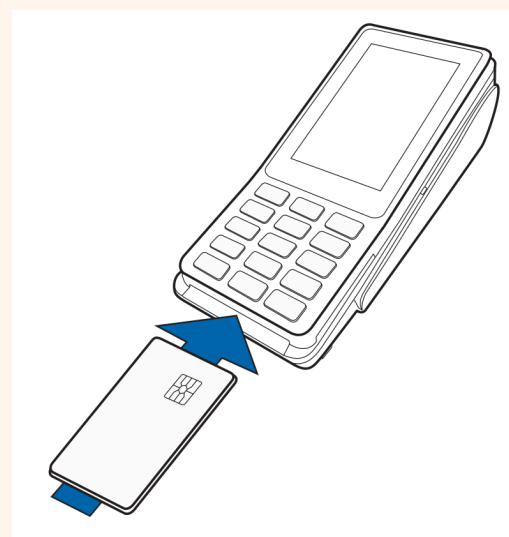


## Smart Card Reader

The smart card transaction procedure can vary depending on the application. Verify the proper procedure with your application provider before performing a smart card transaction.

### To conduct a smart card transaction:

1. Position the smart card with the gold contacts facing upward.
2. Insert the card into the smart card reader slot in a smooth, continuous motion until it seats firmly.
3. Remove the card when the display indicates the transaction is completed.

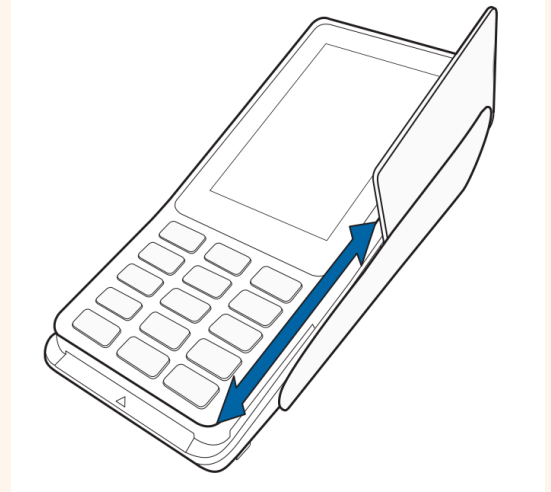


## Magnetic Stripe Card Reader Use

The P400 has a magnetic card reader that uses a triple track stripe reader. This gives the unit greater reliability over a wide range of swipe speeds and operating environments.

### To conduct a credit or debit card transaction:

1. Position a magnetic card with the stripe facing the keypad.
2. Swipe it through the magnetic card reader.



## Contactless Transactions

The P400 supports contactless transactions through an integrated contactless module. The terminal only becomes active for contactless smart card transactions when initialized by an application.

### To perform a contactless smart card transaction:

1. Gently tap the card onto or hold the card (within 4 cm) against the surface of the display where the contactless logo appears.
2. An activated LED visual on the display accompanied by a short beeping sound indicates a successful transaction.



## Troubleshooting Guidelines

This chapter lists typical malfunctions that may occur while operating a P400 device and the appropriate corrective action. If the problem persists – even after performing the outlined guidelines, or if the problem is not described, please contact [Justifi support](#) for assistance.

The P400 device uses a tamper-evident case and contains no user-serviceable parts. Do not, under any circumstance, attempt to disassemble the unit. Perform only those adjustments or repairs specified in this guide.

### Display Panel Does Not Work

Use the following steps to check the display panel:

1. Check all the cable connections.
2. Check the controlling device's AC outlet to be sure the outlet is supplying sufficient power. Substitute the controlling device's power pack with another power pack.
3. The controlling device's application program might not be loaded correctly. Download the application program and try again.

### Keypad Does Not Respond

Use the following steps to check the keypad:

1. Check the display panel. If there are no characters, or the wrong characters are displayed, refer to Display Panel Does Not Work.

### Transactions Fail to Process

There are several possible reasons why the unit may not be processing transactions. Use the following steps to troubleshoot failures.

1. **Check Magnetic Card Reader**
  - a. Perform a test transaction using one or more different magnetic stripe cards to ensure the problem is not a defective card.
  - b. Ensure that you are swiping cards properly (see Magnetic Stripe Card Reader Use).
  - c. Process a transaction manually using the keypad instead of the card reader. If the manual transaction works, the problem may be a defective card reader.

## 2. Check Smart Card Reader

- a. Perform a test transaction using several different smart cards to ensure the problem is not a defective card.
- b. Ensure that the card is inserted correctly (see Magnetic Stripe Card Reader Use).
- c. Ensure the MSAM cards are properly inserted in the slots and are properly secured (see MSAM/uSD Cards).

## Service and Support

The P400 device has no user-serviceable parts. Unless otherwise instructed, do not, under any circumstances, attempt any service, adjustments, or repairs on the unit.

Disconnect the device before cleaning. To clean the unit, periodically use a clean cloth, slightly dampened with water and a drop or two of mild soap. For stubborn stains, use alcohol or an alcohol-based cleaner.