

PanelView Plus 6 Compact Terminals

Catalog Numbers 2711PC-K4M20D8, 2711PC-B4C20D8, 2711PC-B4C20D8-LR, 2711PC-T6M20D8, 2711PC-T6C20D8, 2711PC-T10C4D8



Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.



WARNING: Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.



ATTENTION: Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence.

IMPORTANT

Identifies information that is critical for successful application and understanding of the product.

Labels may also be on or inside the equipment to provide specific precautions.



SHOCK HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.



BURN HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.



ARC FLASH HAZARD: Labels may be on or inside the equipment, for example, a motor control center, to alert people to potential Arc Flash. Arc Flash will cause severe injury or death. Wear proper Personal Protective Equipment (PPE). Follow ALL Regulatory requirements for safe work practices and for Personal Protective Equipment (PPE).

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Notes:

This manual describes how to install, configure, operate, and troubleshoot the PanelView™ Plus 6 Compact terminals. It does not provide procedures on how to create applications that run on the terminal.

You also need to do the following:

- Use FactoryTalk® View Studio for Machine Edition to create a human-machine interface (HMI) application to run in the terminal.
- Create ladder logic to interact with the HMI application.

Summary of Changes

This manual contains new and updated information as indicated in the following table.

| Topic | Pages |
|--|--------|
| Updated the power supply catalog number. | 14, 26 |

Firmware Upgrades

For the latest firmware upgrades and other downloads for PanelView Plus 6 Compact terminals, go to <http://www.rockwellautomation.com/support> and click Firmware Updates.

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

| Resource | Description |
|--|---|
| PanelView Plus Specifications Technical Data, publication 2711P-TD005 | Provides technical specifications, environmental specifications, and certifications for the PanelView Plus Compact terminals. |
| Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1 | Provides general guidelines for installing a Rockwell Automation® industrial system. |
| Product Certifications website, rok.auto/certifications | Provides declarations of conformity, certificates, and other certification details. |

You can view or download publications at <http://www.rockwellautomation.com/literature/>. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.

This product ships with these items:

- Terminal with FactoryTalk View Machine Edition runtime software installed and activated
- Product information
- Mounting levers for panel installation
- Panel cutout template

Notes:

Overview

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PanelView™ Plus 6 Compact terminals (400/600/1000) are similar to the PanelView Plus 6 (400/600) terminals but with limited hardware and software functions. Major differences of the PanelView Plus 6 Compact terminals include the following items:

- Serial and Ethernet communication only
- Connection to a single logic controller by using either RSLinx® Enterprise or KEPServer Enterprise software, not both
- Limited number of displays and alarms in FactoryTalk® View Machine Edition (ME) application and runtime software
- Primary HMI for CompactLogix™ controllers

TIP Applications created for PanelView Plus 6 Compact terminals are referred to as Compact Machine Edition applications. They run on PanelView Plus 6 and PanelView Plus 6 Compact terminals. You cannot run a Machine Edition application created for a PanelView Plus 6 terminal on a PanelView Plus 6 Compact terminal.

Software Support

[Table 1](#) lists software supported by the terminals.

Table 1 - PanelView Plus 6 Compact Software Support

| Software | Description | Version |
|---|---|---------------|
| FactoryTalk View Machine Edition Station | Runtime environment for FactoryTalk View Machine Edition .mer applications. Machine Edition Station is preloaded on each terminal and does not require FactoryTalk View activation. | 6.10 or later |
| FactoryTalk View Studio for Machine Edition | Configuration software for developing HMI applications that run on PanelView Plus 6 Compact terminals. RSLinx Enterprise software is included with FactoryTalk View Studio software and loaded during installation. | 6.10 or later |
| Windows CE 6.0 operating system | All terminals run the Windows CE 6.0 operating system with an open or closed desktop environment. Other supported features include these items: <ul style="list-style-type: none"> • FTP server • VNC client/server • ActiveX controls⁽¹⁾ • Third-party device support • Adobe PDF reader | 6.0 |

(1) Refer to [Display FactoryTalk View ME Station Information on page 64](#) for a list of ActiveX controls loaded on a terminal.

PanelView Plus 6 Compact Applications

PanelView Plus 6 Compact Machine Edition applications are restricted to a subset of the functions on the PanelView Plus 6 terminals:

- Maximum of 25 screens.
- Maximum of 200 alarm messages.
- One connection or shortcut to a single controller by using either RSLinx Enterprise or KEPServer Enterprise software.
- Only Serial and Ethernet communication are supported.

If using RSLinx Enterprise software, only serial DF1, serial DH-485, and Ethernet drivers are supported.

Product Selections

[Table 2](#) lists the catalog numbers of the PanelView Plus 6 Compact terminals.

Table 2 - PanelView Plus 6 Compact Terminals

| Cat. Nos. | Display | | Input Type | Communication Ports | | USB Ports | | Power |
|-------------------|----------|-----------|------------------|---------------------|--------|-----------|--------|-------|
| | Size | Type | | Ethernet | RS-232 | Host | Device | |
| 2711PC-K4M20D8 | 3.5-in. | Grayscale | Keypad | • | • | • | • | DC |
| 2711PC-B4C20D8 | | Color | Keypad and Touch | • | • | • | • | |
| 2711PC-B4C20D8-LR | | | | • | • | • | • | |
| 2711PC-T6M20D8 | 5.7-in. | Grayscale | Touch | • | • | • | • | |
| 2711PC-T6C20D8 | | Color | | • | • | • | • | |
| 2711PC-T10C4D8 | 10.4 in. | Color | Touch | • | • | • | | |

Terminal Features

The PanelView Plus 6 Compact 400, 600, and 1000 terminals are fixed configurations that do not support modular components.

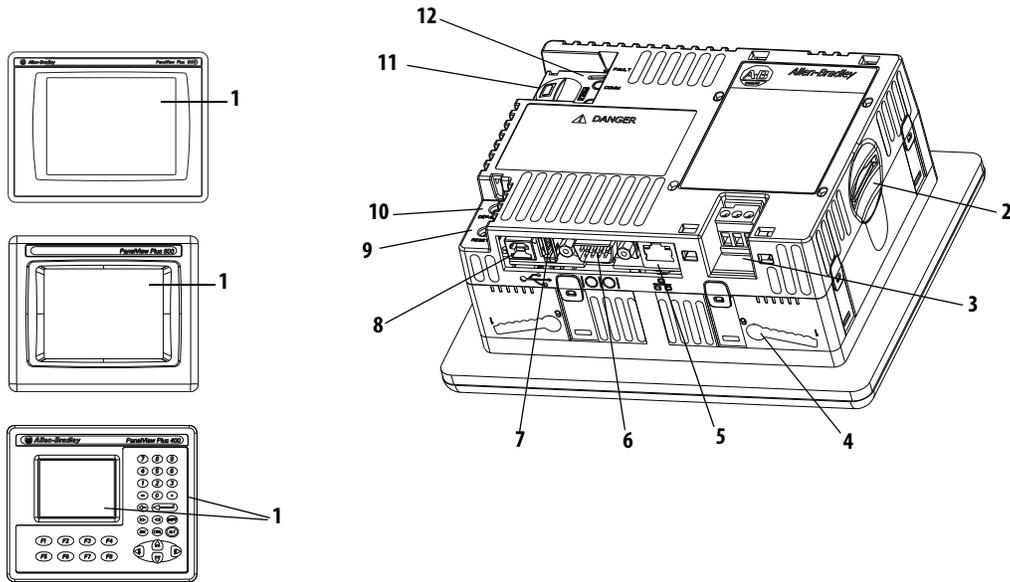


Table 3 - PanelView Plus 6 Compact Terminal Components

| Item | Component |
|------|--|
| 1 | 3.5, 5.7, or 10.4-in. grayscale or color display with one of these operator input options: <ul style="list-style-type: none"> Keypad Touch screen Combination keypad and touch screen |
| 2 | Secure Digital (SD) card slot for external storage |
| 3 | DC power input, non-isolated 24V DC nom (18...30V DC) |
| 4 | Mounting slots (four) |
| 5 | Ethernet port for controller communication, 10/100Base-T, Auto MDI/MDI-X |
| 6 | RS-232 serial port for controller communication, printing, or file transfers |
| 7 | One USB 2.0 high-speed (type A) host port for attaching USB peripherals including mouse, keyboard, printer, and USB drives that are hot-swappable in nonhazardous locations |
| 8 | One USB 2.0 high-speed (type B) device port for connecting a host computer (only 400 and 600 terminals) |
| 9 | Reset switch to reset the terminal without having to power off and on |
| 10 | Default switch to access maintenance operations such as restoring factory defaults |
| 11 | Battery compartment |
| 12 | Indicators provide communication and fault status |

Operator Input

The terminals feature grayscale or color LCD displays with keypad, touch screen, or keypad and touch-screen input.

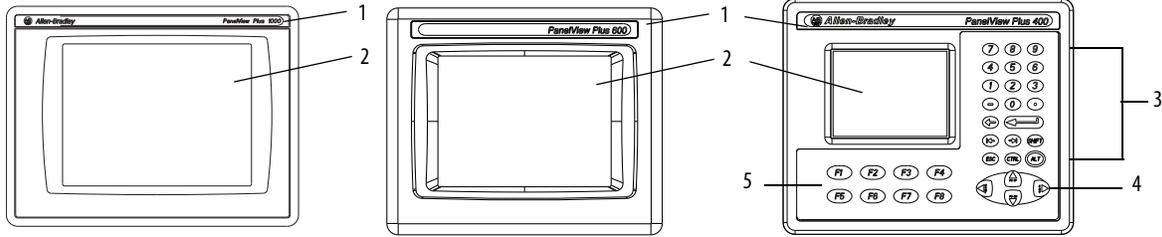


Table 4 - Display and Operator Input Features

| Item | Feature | Description |
|------|------------------------------|--|
| 1 | Product label | Product identification label can be replaced with custom label. |
| 2 | Display/touch screen | Color or grayscale display with or without a resistive, 4-wire, touch screen (catalog number dependent) |
| 3 | Numeric keypad | 0 . . 9, Backspace, Enter, Left and Right Tab, Esc, Shift, Ctrl, Alt keys |
| 4 | Navigation keys | Use arrow keys for navigation. Use Alt+arrow to initiate these functions: <ul style="list-style-type: none"> • Alt+left arrow (Home), Alt+right arrow (End) • Alt+up arrow (Page Up), Alt+down arrow (Page Down) |
| 5 | Function keys F1 . . . F8 | Keys that can be configured in the application to perform operations. For example, F1 can be configured to navigate to another screen. |



ATTENTION: Use a finger or gloved-finger to operate the keypad. To operate the touch screen, use a finger, gloved-finger, or plastic stylus with a minimum tip radius of 1.3 mm (0.051 in.). If you use any other object or tool you can damage the keypad or touch screen.



ATTENTION: Do not carry out multiple operations simultaneously. Doing so can result in unintended operation:

- Touch only one operating element on the screen with one finger at one time.
- Press only one key on the terminal at one time.

Open versus Closed System

The terminals can be configured to run an open or closed desktop environment:

- An open system launches the Windows Explorer desktop on startup. The system is configurable via the control panel and supports Windows operations.
- A closed system launches a FactoryTalk View Machine Edition application on startup and restricts access to the Windows Explorer desktop.

All terminals are shipped as closed systems restricting access to the desktop. The first time you start the system, the terminal launches FactoryTalk View ME Station Configuration mode. At this point, you can change the start-up option to allow desktop access.

Start-up Options

You can configure the terminal to perform one of three actions at startup:

- Launch a FactoryTalk View Machine Edition HMI application.
- Launch the FactoryTalk View Machine Edition Configuration mode of the terminal where you load and run applications, configure start-up options and terminal settings, and enable or disable desktop access.
- Launch the Windows Explorer desktop.

The factory default state and start-up option following a firmware upgrade is to launch the terminal in Configuration mode. Refer to [Start-up Options on page 37](#) for details on how to change the start-up option.

Desktop Access

Any of the terminals can be configured to allow or restrict desktop access. From the desktop, you can perform system and control panel operations, or run third-party applications. You can also enable temporary access to perform specific tasks, then disable access to prevent unauthorized changes.

TIP All terminals are shipped with desktop access disabled.

Refer to [Desktop Access on page 40](#) for details on how to modify desktop access.

Product Accessories

Table 5 through Table 10 lists accessories for the terminals.

Table 5 - Secure Digital (SD) Cards

| Cat. No. | Terminal Model | Description |
|------------|----------------|-------------------------------|
| 1784-SD1 | All terminals | 1 GB SD card |
| 1784-SD2 | | 2 GB SD card |
| 2711C-RCSD | | USB to SD adapter for SD card |

Table 6 - Cables

| Cat. No. | Terminal Model | Description | Length |
|-------------------------------|----------------|--|--------------|
| 6189V-USBCBL2 | 400 or 600 | Programming cable that connects the USB device port of the terminal to a USB host port of a computer | 1.8 m (6 ft) |
| 2711C-CBL-UU02 ⁽¹⁾ | 1000 | Programming cable that connects the USB device port of the terminal to a USB host port of a computer | 2 m (6.5 ft) |

(1) Only for Series A terminals with a mini-USB port, type B.

Table 7 - Power Supply and Power Terminal Blocks

| Cat. No. | Terminal Model | Description | Quantity |
|--------------|--------------------|--|----------|
| 1606-XLE120E | 400, 600, and 1000 | DIN-rail power supply, AC-to-DC, 100...240V AC, 50...60 Hz | 1 |
| 2711P-6RSA | 400 and 600 | AC module converts a DC terminal to AC power | 1 |
| 2711-TBDC | | DC power terminal block | 10 |
| 2711P-RTBAC3 | 1000 | AC power terminal block | 10 |
| 2711P-RTBDC2 | | DC power terminal block | 10 |

Table 8 - Replacement Battery

| Cat. No. | Terminal Model | Description |
|--------------|----------------|---|
| 2711P-RY2032 | All terminals | Replacement CR2032 coin-cell equivalent battery |

Table 9 - Antiglare Overlays

| Cat. No. ⁽¹⁾ | Terminal Model | Operator Input | | |
|-------------------------|------------------------|----------------|-------|-----------|
| | | Keypad | Touch | Key/Touch |
| 2711P-RGB4 | 400 grayscale or color | • | | • |
| 2711P-RGT6 | 600 grayscale or color | | • | |
| 2711P-RGT10 | 1000 color | | • | |

(1) Three overlays are shipped with each catalog number.

Table 10 - Mounting Hardware

| Cat. No. | Terminal Model | Description | Quantity |
|------------|----------------|-----------------------------|----------|
| 2711P-RTFC | 400 and 600 | Replacement mounting levers | 8 |
| 2711P-RTMC | 1000 | Replacement mounting clips | 8 |

Install the Terminal

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ATTENTION: Environment and Enclosure

This equipment is intended for use in a Pollution Degree 2 industrial environment, in overvoltage Category II applications (as defined in IEC 60664-1), at altitudes up to 2000 m (6561 ft) without derating.

The terminals are intended for use with programmable logic controllers. Terminals that are AC powered must be connected to the secondary of an isolating transformer.

This equipment is considered Group 1, Class A industrial equipment according to IEC CISPR 11. Without appropriate precautions, there may be difficulties with electromagnetic compatibility in residential and other environments due to conducted or radiated disturbances.

Korean Radio Wave Suitability Registration - When so marked this equipment is registered for Electromagnetic Conformity Registration as business equipment (A), not home equipment. Sellers or users are required to take caution in this regard.

This equipment is supplied as open-type equipment. It must be mounted within an enclosure that is suitably designed for those specific environmental conditions that will be present and appropriately designed to prevent personal injury resulting from accessibility to live parts. The interior of the enclosure must be accessible only by the use of a tool. The terminals meet specified NEMA, UL type, and IEC ratings only when mounted in a panel or enclosure with the equivalent rating. Subsequent sections of this publication may contain additional information regarding specific enclosure type ratings that are required to comply with certain product safety certifications.

In addition to this publication, see the following:

- Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#), for additional installation requirements
- NEMA 250 and IEC 60529, as applicable, for explanations of the degrees of protection provided by different types of enclosure



ATTENTION: Wiring and Safety Guidelines

Use publication NFPA 70E, Electrical Safety Requirements for Employee Workplaces, IEC 60364 Electrical Installations in Buildings, or other applicable wiring safety requirements for the country of installation when wiring the devices. In addition to the NFPA guidelines, here are some other guidelines to follow:

- Connect the device and other similar electronic equipment to its own branch circuit.
- Protect the input power by a fuse or circuit breaker rated at no more than 15 A.
- Route incoming power to the device by a separate path from the communication lines.
- Cross power and communication lines at right angles if they must cross.
- Communication lines can be installed in the same conduit as low-level DC I/O lines (less than 10V).
- Shield and ground cables appropriately to avoid electromagnetic interference (EMI). Grounding minimizes noise from EMI and is a safety measure in electrical installations.

For more information on grounding recommendations, refer to the National Electrical Code published by the National Fire Protection Association.

Hazardous Locations

North American Hazardous Location Approval

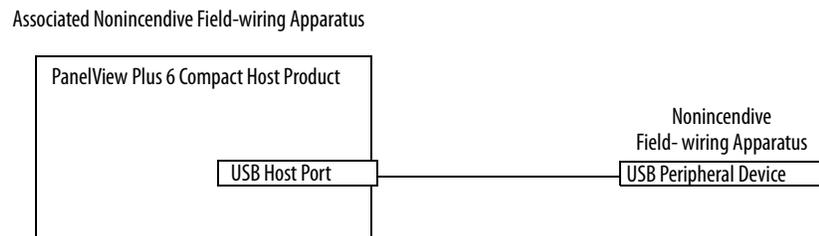
| The following information applies when operating this equipment in hazardous locations. | Les informations suivantes s'appliquent pour les équipements utilisés dans des environnements dangereux. |
|--|--|
| <p>When marked, these products are suitable for use in Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F and G; Class III hazardous locations and nonhazardous locations only. Each product is supplied with markings on the rating nameplate indicating the hazardous location temperature code. When combining products within a system, the most adverse temperature code (lowest "T" number) may be used to help determine the overall temperature code of the system. Combinations of equipment in your system are subject to investigation by the local Authority Having Jurisdiction at the time of installation.</p> | <p>Les produits marqués "CL I, DIV 2, GP A, B, C, D" ne conviennent qu'à une utilisation en environnements de Classe I, Division 2, Groupes A, B, C et D ; Classe II, Division 2, Groupes F et G ; Classe III dangereux et non dangereux. Chaque produit est livré avec des marquages sur sa plaque d'identification qui indiquent le code de température pour les environnements dangereux. Lorsque plusieurs produits sont combinés dans un système, le code de température le plus défavorable (code de température le plus faible) peut être utilisé pour déterminer le code de température global du système. Les combinaisons d'équipements dans le système sont sujettes à inspection par les autorités locales qualifiées au moment de l'installation.</p> |
|  <p>WARNING: EXPLOSION HAZARD</p> <ul style="list-style-type: none"> • Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous. • Do not disconnect connections to this equipment unless power has been removed or the area is known to be nonhazardous. • Substitution of components may impair suitability for Class I, Division 2. • Peripheral equipment must be suitable for the location in which it is used. • The battery or real-time clock module in this product must only be changed in an area known to be nonhazardous. • All wiring must be in accordance with Class I, Division 2, Class II, Division 2, or Class III wiring methods of Articles 501, 502 or 503, as appropriate, of the National Electrical Code and/or in accordance with Section 18-1J2 of the Canadian Electrical Code, and in accordance with the authority having jurisdiction. • When used in Class II and Class III hazardous locations these products must be installed in a dust tight enclosure in accordance with Articles 502 and 503 of the National Electrical Code. |  <p>AVERTISSEMENT : RISQUE D'EXPLOSION</p> <ul style="list-style-type: none"> • Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher l'équipement. • Couper le courant ou s'assurer que l'environnement est classé non dangereux avant de débrancher les connecteurs. • La substitution de composants peut rendre cet équipement inadapté à une utilisation en environnement de Classe I, Division 2 • Les équipements périphériques doivent s'adapter à l'environnement dans lequel ils sont utilisés. • La batterie ou le module de l'horloge en temps réel de ce produit doit être changé(e) uniquement dans un environnement classé sans risque. • Tous les systèmes de câblage doivent être de Classe I, Division 2, Classe II, Division 2, ou Classe III conformément aux méthodes de câblage indiquées dans les Articles 501, 502 ou 503 du National Electrical Code (Code Electrique National) et/ou conformément à la Section 18-1J2 du Canadian Electrical Code (Code Electrique Canadien), et en fonction de l'autorité de juridiction. • Quand ces produits sont utilisés dans des environnements dangereux de Classe II et Classe III, ils doivent être installés dans une enceinte étanche aux poussières conformément aux Articles 502 et 503 du Code Electrique National (National Electrical Code). |

The terminals have a temperature code of T4 when operating in a 55 °C (131 °F) maximum ambient temperature. Do not install product in environments where atmospheric gases have ignition temperatures less than 135 °C (275 °F).

Required Circuit Parameters for USB Peripheral Devices

This product contains a USB host port that complies with hazardous location environments. Field-wiring compliance requirements are provided in compliance with the National Electrical Code, Article 500.

Figure 1 - PanelView Plus 6 Compact Terminals Control Drawing



PanelView™ Plus 6 Compact terminals provide one separately powered USB host port. [Table 11](#) defines the circuit parameters of the USB host port.

Table 11 - Circuit Parameters for USB Host Ports

| Parameter | Value | Parameter Definition | |
|---------------|------------|--|---|
| $V_{oc(USB)}$ | 5.25V DC | Open circuit voltage of the host USB port. The maximum applied voltage rating, $V_{max(Peripheral)}$, of each USB peripheral device must be greater than or equal to $V_{oc(USB)}$. | $V_{max(Peripheral)} \geq V_{oc(USB)}$, as appropriate |
| $I_{sc(USB)}$ | 1.68 A | Maximum output current of the host USB port. The maximum current, $I_{max(Peripheral)}$, that each USB peripheral device can be subjected must be greater than or equal to $I_{sc(USB)}$. | $I_{max(Peripheral)} \geq I_{sc(USB)}$ |
| $C_a(USB)$ | 10 μ F | This value is the maximum total capacitance that can be connected to the USB host port. The total capacitance of the USB peripheral device and its associated cable must not exceed the indicated value. The maximum total capacitance, $C_i(Peripheral)$, and cable capacitance of each separate USB peripheral device must be less than or equal to $C_a(USB)$. | $C_i(Peripheral) + C_{cable(USB)} \leq C_a(USB)$ |
| $L_a(USB)$ | 15 μ H | This value is the maximum total inductance that can be connected to the USB host port. The total inductance of the USB peripheral device and its associated cable must not exceed the indicated value. The maximum total inductance, $L_i(Peripheral)$, and cable inductance of the separate USB peripheral device must be less than or equal to $L_a(USB)$. | $L_i(Peripheral) + L_{cable} \leq L_a(USB)$ |

Application Information

Per the National Electrical Code, the circuit parameters of associated field-wiring apparatus for use in hazardous locations must be coordinated with the host product such that their combination remains nonincendive. PanelView Plus 6 Compact terminals and the USB peripheral devices must be treated in this manner.

The USB peripheral devices and their associated cabling must have circuit parameters with the limits given in [Table 11](#) for them to remain nonincendive when used with the PanelView Plus 6 Compact USB host port.

If cable capacitance and inductance are not known, use the following values from ANSI/ISA-RP 12.06.01-2003:

$$C_{cable} = 197 \text{ pF/m (60 pF/ft)}$$

$$L_{cable} = 0.7 \text{ } \mu\text{H/m (0.20 } \mu\text{H/ft)}$$

Nonincendive field-wiring must be wired and separated in accordance with 501.10(B)(3) of the National Electrical Code (NEC) ANSI/NFPA 70 or other local codes as applicable. This associated nonincendive field-wiring apparatus has not been evaluated for use in combination with another associated nonincendive field-wiring apparatus.

Mounting Clearances

Plan for adequate space around the terminal, inside the enclosure, for ventilation and cabling. Consider heat produced by other devices in the enclosure. The ambient temperature around the terminal must be 0...55 °C (32...131 °F).

Table 12 - Minimum Required Clearances

| Product Area | Minimum Clearance |
|--------------|-------------------------------|
| Top | 51 mm (2 in.) |
| Bottom | 102 mm (4 in.) ⁽¹⁾ |
| Side | 25 mm (1 in.) ⁽¹⁾ |
| Back | 0 mm (0 in.) |

(1) A clearance of 102 mm (4 in.) is sufficient on the side of the terminal to insert and remove an SD card, and on the bottom of the terminal for connections.

Panel Guidelines

The terminals are panel-mounted devices intended to mount in the door or wall of a NEMA rated, UL Type rated, or IP rated enclosure:

- Supporting panels must have a mounting thickness of 1.5...4.8 mm (0.060...0.188 in.).
- The material strength and stiffness of the panel must be sufficient to hold the terminal and maintain an appropriate seal against water and dust.
- The panel surface must be flat and free of imperfections to maintain an adequate seal and NEMA and UL Type ratings.

Panel Cutout Dimensions

Use the full-size template shipped with your product to mark the cutout dimensions.

Table 13 - Panel Cutout Dimensions

| Terminal Type | Input Type | Height, mm (in.) | Width, mm (in.) |
|---------------|------------------------|------------------|-----------------|
| 400 | Keypad or keypad/touch | 123 (4.86) | 156 (6.15) |
| 600 | Touch | 123 (4.86) | 156 (6.15) |
| 1000 | Touch | 224 (8.8) | 305 (12.00) |

Product Dimensions

Figure 2 through Figure 4 provide product dimensions.

Figure 2 - PanelView Plus 6 Compact - 400 Keypad or Keypad/Touch

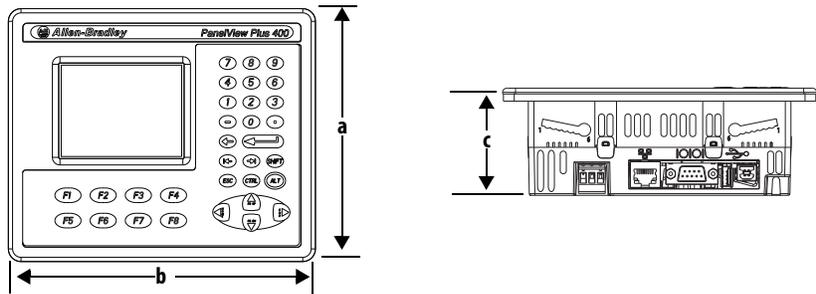


Figure 3 - PanelView Plus 6 Compact - 600 Touch

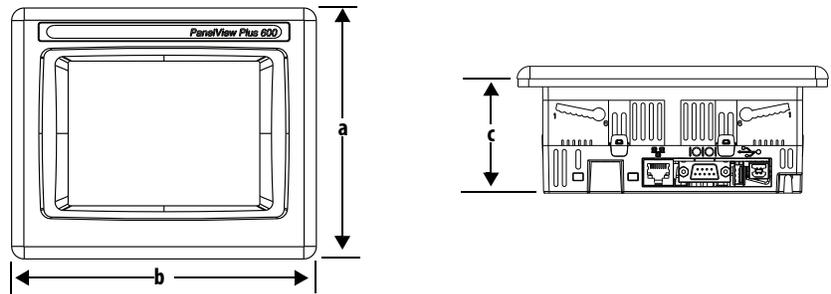


Figure 4 - PanelView Plus 6 Compact - 1000 Touch

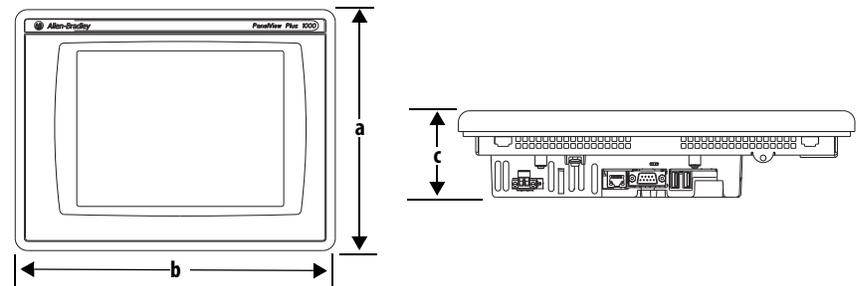


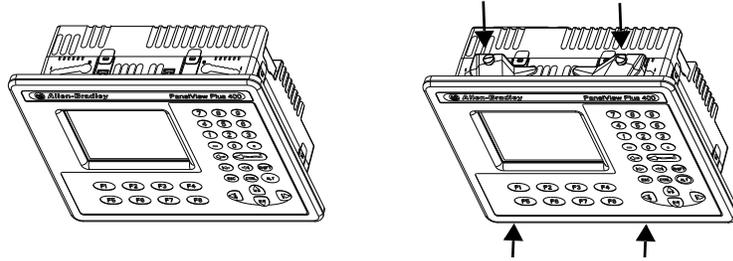
Table 14 - PanelView Plus 6 Compact - 400/600/1000 Product Dimensions

| Terminal Size | Input Type | Height (a) mm (in.) | Width (b) mm (in.) | Depth (c) mm (in.) |
|---------------|------------------------|------------------------|-----------------------|-----------------------|
| 400 | Keypad or keypad/touch | 152 (6.0) | 185 (7.28) | 60 (2.35) |
| 600 | Touch | 152 (6.0) | 185 (7.28) | 68 (2.68) |
| 1000 | Touch | 248 (9.77) | 329 (12.97) | 83 (3.27) |

Mount the 400/600 Terminal in a Panel

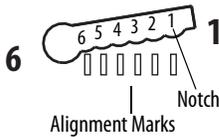
The terminals are designed for single-person installation. No tools are required except for those needed to make the panel cutout.

Four mounting levers secure the terminal to the panel. The levers insert into the mounting slots on the top and bottom of the terminal.



Each mounting slot has six notches with alignment marks that are locking positions for a lever. The thickness of the panel where you mount the terminal determines the locking position required to maintain the NEMA/UL Type seal.

Table 15 - Lever Locking Positions

| Mounting Slot | Lever Lock Position | Panel Thickness Range | Typical Gauge |
|--|---------------------|------------------------------------|---------------|
| Orientation of Slot Varies  | 1 | 1.50...2.01 mm (0.060...0.079 in.) | 16 |
| | 2 | 2.03...2.64 mm (0.080...0.104 in.) | 14 |
| | 3 | 2.67...3.15 mm (0.105...0.124 in.) | 12 |
| | 4 | 3.17...3.66 mm (0.125...0.144 in.) | 10 |
| | 5 | 3.68...4.16 mm (0.145...0.164 in.) | 8/9 |
| | 6 | 4.19...4.80 mm (0.165...0.188 in.) | 7 |

Follows these steps to mount the terminal in a panel.



ATTENTION: Disconnect all electrical power from the panel before making the panel cutout.

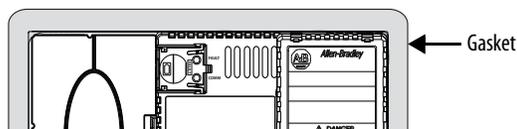
Make sure the area around the panel cutout is clear and that the panel is clean of any debris, oil, or other chemicals.

Make sure metal cuttings do not enter any components already installed in the panel and that the edges of the cutout have no burrs or sharp edges.

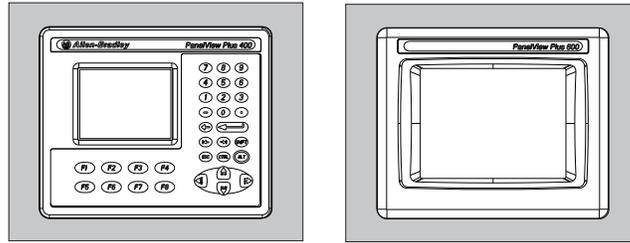
Failure to follow these warnings can result in personal injury or damage to panel components.

1. Cut an opening in the panel by using the cutout template shipped with the terminal or the cutout dimensions on [page 18](#).
2. Verify the sealing gasket is present on the terminal.

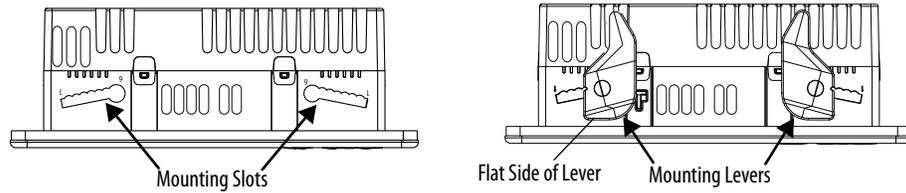
This gasket forms a compression-type seal. Do not use sealing compounds.



- Place the terminal in the panel cutout.



- Insert all mounting levers into the mounting slots on the terminal.
Slide each lever until the flat side of the lever touches the panel surface.

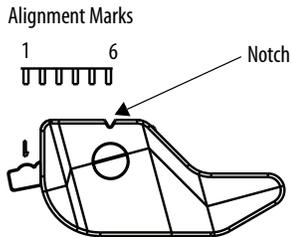


- When all levers are in place, slide each lever an additional notch or two until you hear a click.
Refer to [Table 15 on page 20](#) as a guide to determine the locking positions for your panel thickness.

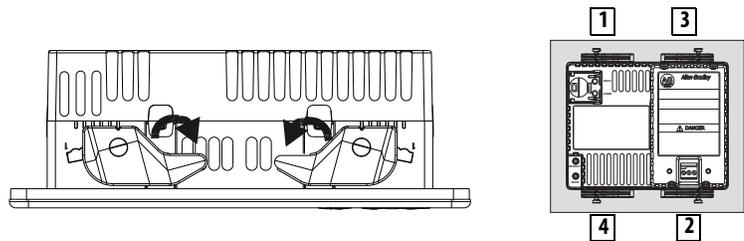
- Rotate each lever in the direction indicated until it is in the final position.

TIP Levers rotate in same direction on top and bottom of terminal.

Follow the appropriate locking sequence for the optimal terminal fit.



Rotate lever until notch in lever aligns with proper alignment mark on terminal.



- Inspect all levers to verify that they are in the correct and same locked position.



ATTENTION: All levers must be locked to provide an adequate gasket seal between the terminal and the panel. Rockwell Automation assumes no responsibility for water or chemical damage to the terminal or other equipment within the enclosure because of improper installation.

Mount the 1000 Terminal in a Panel

Four mounting clips secure the 1000 terminal in a panel. Tools required for installation include panel cutout tools, a small, slotted screwdriver, and a torque wrench for tightening the mounting clips.



ATTENTION: Disconnect all electrical power from the panel before making the panel cutout.

Make sure the area around the panel cutout is clear and that the panel is clean of any debris, oil, or other chemicals.

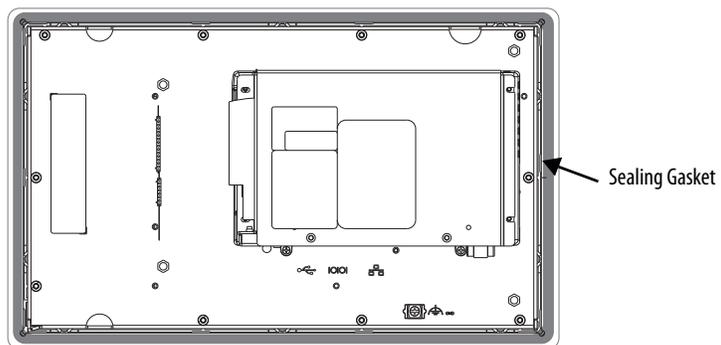
Make sure metal cuttings do not enter any components already installed in the panel and that the edges of the cutout have no burrs or sharp edges.

Failure to follow these warnings can result in personal injury or damage to panel components.

Follow these steps to mount the terminal in a panel.

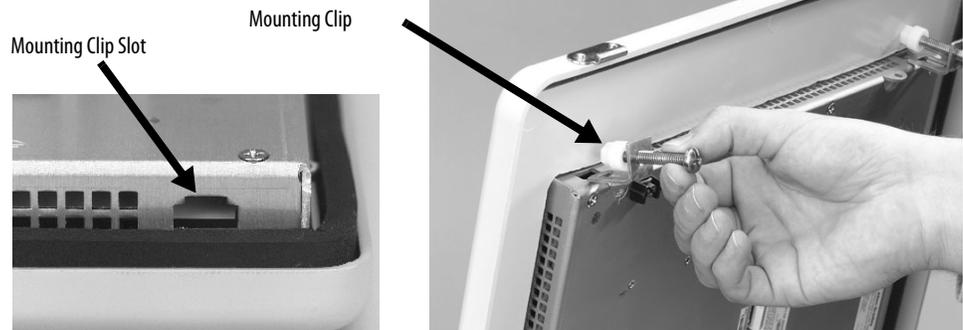
1. Cut an opening in the panel by using the panel cutout template shipped with the terminal or the cutout dimensions on [page 18](#).
2. Verify the terminal sealing gasket is properly positioned on the terminal.

This gasket forms a compression type seal. Do not use sealing compounds.



Be careful not to pinch the legend strip during installation.

- Place the terminal in the panel cutout.



- Slide the ends of the mounting clips into the slots on the terminal.
- Tighten the mounting clip screws by hand until the gasket seal contacts the mounting surface uniformly.



- Tighten the mounting clips screws to a torque of 0.90...1.1 N•m (8...10 lb•in) by using the specified sequence, making sure not to overtighten.

| | |
|----------------------------|---|
| 1 | 4 |
| Torque Sequence 4 Clips | |
| 3 | 2 |



ATTENTION: Tighten the mounting clips to the specified torque to provide a proper seal and to prevent damage to the product. Rockwell Automation assumes no responsibility for water or chemical damage to the product or other equipment within the enclosure because of improper installation.

Remove and Install the Power Terminal Block

The terminals are shipped with a power terminal block installed. You can remove the terminal block for ease of installation, wiring, and maintenance.



WARNING: Explosion Hazard

If you connect or disconnect wiring while the power is on, an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed and the area is nonhazardous before proceeding.

Failure to remove power can result in electrical shock or damage to the terminal.

The power terminal block is not intended for daisy chaining power.

Use a 0.6 x 3.5 mm flat-blade screwdriver for terminal block wiring.

Table 16 - Wire Specifications for Power Input Terminal Block

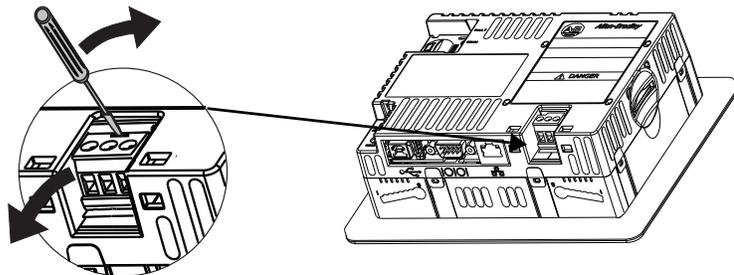
| Terminal | Wire Type | Dual-wire Size ⁽¹⁾ | Single-wire Size | Strip Length | Screw Torque |
|----------|--|--|--|-----------------|----------------------------------|
| 400, 600 | Stranded or solid Cu 90 °C (194 °F) | 0.3...1.3 mm ² 22...16 AWG | 0.3...2.1 mm ² (22...14 AWG) | 7 mm (0.28 in.) | 0.45...0.56 N·m (4...5 lb·in) |
| 1000 | | | | | 0.56...0.90 N·m (5...8 lb·in) |

(1) Two-wire max per terminal.

400 and 600 Terminals

Follow these steps to remove the terminal block.

1. Insert the tip of a small, flat-blade screwdriver into the terminal block access slot.
2. Gently pry the terminal block to rotate it away from the terminal; this releases the locking mechanism.



Follow these steps to install the terminal block.

1. Press the terminal block base in first with the block leaning outward.

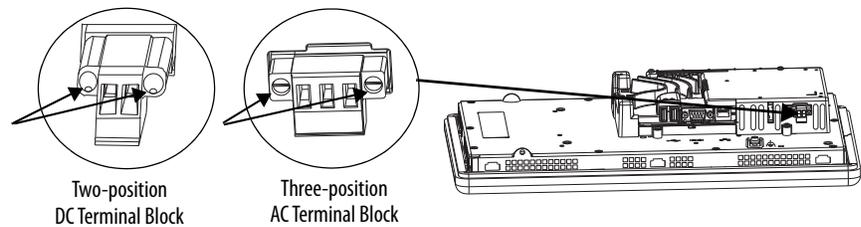


2. Gently push the top of the terminal block to rotate it into place.
The terminal block snaps into place when seated.

1000 Terminals

Follow these steps to remove the terminal block from a 1000 terminal.

1. Loosen the two screws that secure the terminal block.
2. Gently pull the terminal block away from the connector.



Follow these steps to install the terminal block.

1. Reattach the terminal block to the connector until seated.
2. Tighten the two screws that secure the terminal block to a torque of 0.40...0.51 N•m (3.5...4.5 lb•in).

DC Power Connections

Terminals with an integrated 24V DC power supply have these power ratings.

Table 17 - DC Power Ratings

| Terminal | Power Supply | Input Voltage, nom | Power Consumption, max |
|----------|--------------|----------------------|------------------------|
| 400, 600 | Nonisolated | 24V DC (18...30V DC) | 15 W (0.6 A at 24V DC) |
| 1000 | Isolated | 24V DC (18...32V DC) | 70 W (2.9 A at 24V DC) |

The power supply is internally protected against reverse polarity. Connecting DC+ or DC- to the earth/ground terminal can damage the device.



ATTENTION: Do not connect an AC power source to the terminal. Applying an AC power source to the terminal can damage the device.

External Power Supply

The 400 and 600 terminals require a dedicated 24V DC Class 2 power supply or a safety extra-low voltage (SELV) or protective extra-low voltage (PELV) power supply to power each PanelView Plus 6 Compact 400 or 600 device.

For the 1000 terminals, it is recommended that a dedicated 24V DC safety extra-low voltage (SELV) or protective extra-low voltage (PELV) power supply is used to power each PanelView Plus Compact 6 1000 device.



ATTENTION: Use an SELV or PELV power supply as required by local wiring codes for your installation. These power supplies provide protection so that under normal and single fault conditions, the voltage between conductors and earth ground does not exceed a safe value.

PanelView Plus 6 Compact terminals were tested to operate with the catalog number 1606-XLE120E power supply. To use another power supply, review the criteria in [Table 18](#).

Table 18 - Power Supply Criteria

| If the PanelView Plus 6 Device | Use a | Description |
|--|--|--|
| Connects to equipment with isolated communication ports | SELV or PELV power supply | Other equipment can share this power supply with the PanelView Plus 6 device provided that no ground loops are created. A PELV source internally connects the negative power terminal to chassis ground. |
| Does not connect to other equipment | | |
| Connects to equipment with nonisolated communication ports | Dedicated, isolated, and ungrounded SELV source to power each terminal | This prevents ground loops from damaging the device. |

IMPORTANT All ports on the terminals are electrically isolated, except for the USB ports.

Earth/Ground Connection

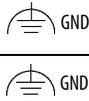
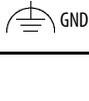
PanelView Plus 6 compact terminals use a DC power input and have an earth/ground terminal that you must connect to a low-impedance earth/ground:

- On 400 and 600 terminals, the earth/ground connection is on the power terminal block.
- On 1000 terminals, the earth/ground connection is on the rear of the display module.

IMPORTANT The earth/ground connection to ground is mandatory. This connection is required for the following:

- Noise immunity, reliability, and Electromagnetic Compliance (EMC) with the European Union (EU) EMC directive for CE-mark conformance
- Safety by Underwriters Laboratory

Table 19 - Earth Wire Specifications for DC Power

| Terminal | Symbol | Wire Type | Wire Gauge | Terminal Screw Torque |
|----------|---|--|--|------------------------------------|
| 400, 600 |  GND | Stranded or solid Cu 90 °C (194 °F) | 2.1...3.3 mm ² (14...12 AWG) | 0.45...0.56 N·m (4...5 lb·in) |
| 1000 |  GND | Stranded or solid Cu 90 °C (194 °F) | 2.1...5.3 mm ² (14...10 AWG) | 1.13...1.36 N·m (10...12 lb·in) |



ATTENTION: Damage or malfunction can occur when a voltage potential exists between two separate ground points. Make sure the terminal does not serve as a conductive path between ground points at different potentials.

Connect DC Power



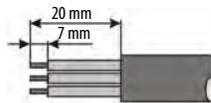
WARNING: Explosion Hazard

Do not disconnect equipment unless power has been switched off and area is known to be nonhazardous.

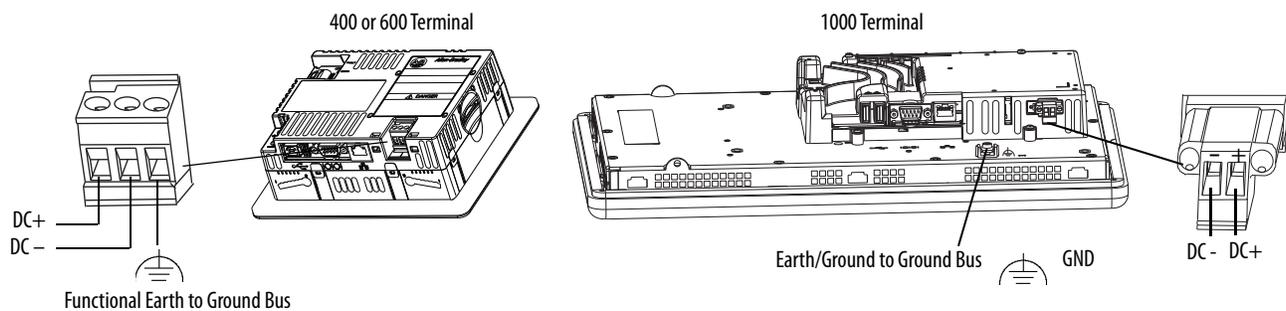
Disconnect all power before installing or replacing components. Failure to disconnect power can result in electrical shock or damage to the terminal.

Follow these steps to connect the terminal to DC power.

1. Verify that the terminal is not connected to a power source.
2. Strip 7 mm (0.28 in.) of insulation from the ends of the wires.



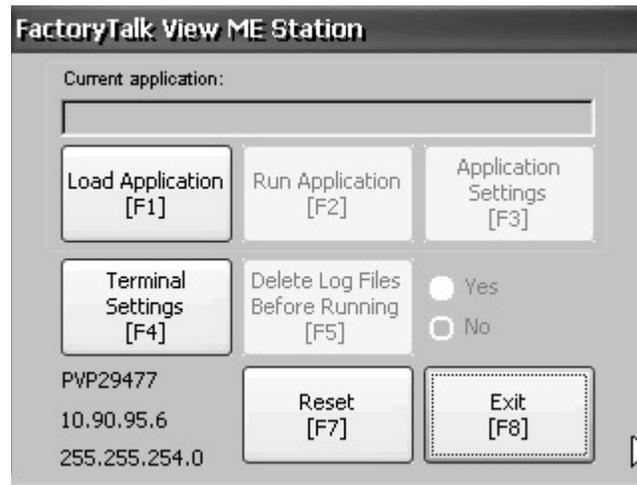
3. Secure the DC power wires to the marked terminals (+ and -) on the power terminal block.
4. Secure the earth/ground wire:
 - On 400 and 600 terminals, secure the earth/ground wire to the functional earth/ground terminal on the power terminal block.
 - On 1000 terminals, secure the earth/ground wire to the functional earth screw on the back of the display.



5. Apply power to the terminal.

Initial Startup

The first time you start the system, the terminal goes through its power-up sequence and launches FactoryTalk® View ME Station Configuration mode.



You can change the action the terminal takes on startup by pressing Terminal Settings then choosing Startup Options. You can configure one of these options:

- Launch a FactoryTalk Machine Edition HMI application that is configured to run at startup.
- Launch FactoryTalk View ME Station Configuration mode and run the configuration options for the terminal (default).
- Launch the Windows Explorer desktop.

You can also configure a terminal to allow desktop access. Terminals are initially shipped with desktop access disabled. To allow or restrict desktop access, press Terminal Setting, then choose Desktop Access.

For more information on changing the start-up option and restricting or allowing desktop access, refer to [Chapter 3 - Configuration Mode](#).

Reset Terminal

You have several options to restart the terminal without having to disconnect and reapply power:

- Use the Reset switch on the back of the terminal.
- From the terminal desktop Start menu, choose Programs>Restart System.
- On the FactoryTalk View ME Station configuration dialog box, press Reset.

After a restart, the terminal performs a series of start-up tests then takes one of these actions:

- Launches an HMI application that is configured to run at startup.
- Launches FactoryTalk ME Station Configuration mode.
- Launches the Windows Explorer desktop.

The action that occurs depends on the start-up options configured for the terminal. Refer to [Start-up Options on page 37](#) for details.

Refer to [Start-up Messages and Codes on page 143](#) for a list of start-up information and error messages.

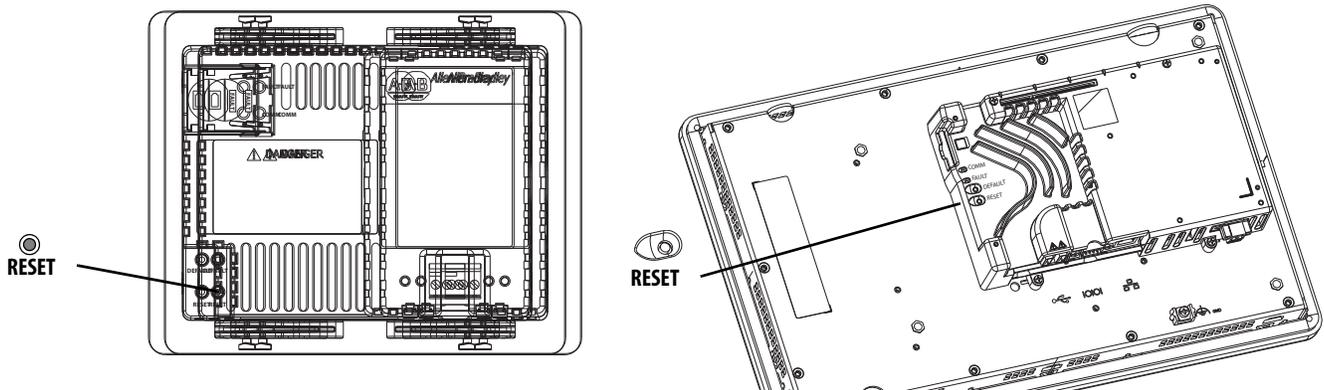
Follow these steps to restart the system by using the RESET switch.

1. Insert a thin, nonconductive object into the RESET area.



ATTENTION: Use a nonconductive object to press the RESET switch. Do not use a conducting object such as a paper clip or the tip of a pencil. Either can damage the terminal.

2. Press and release the RESET switch.



Follow these steps to restart the system from the Windows desktop.

1. From the Start menu, choose Programs>Restart System.
You are asked to confirm the restart.
2. Click Yes to restart or No to cancel.

Follow these steps to restart the system from FactoryTalk View ME Station software.

1. Access Configuration Mode.

Refer to [Access Configuration Mode on page 31](#) for ways to launch FactoryTalk View ME Station Configuration mode.

2. Press Reset [F7].