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PanelView Plus Terminals

Allen-Bradley

Catalog Number 2711P
400, 600, 700, 1000, 1250, 1500 Terminals

User Manual









Allen-Bradley • Rockwell Software

Rockwell Automation

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Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (publication SGI-1.1 available from your local Rockwell Automation sales office or online at http://www.rockwellautomation.com/literature/) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

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.

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

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The information below summarizes the changes to this manual since the last revision.

Revision bars, as shown in the margin, identify updated information. This document includes the following changes.

Topic	Page
Added information on new web-enabled ViewPoint software	11
Corrected touchscreen stylus tip radius	15, 16, 21, 22, 88
Removed referenced to Remote I/O and DeviceNet communication modules for the 400 and 600 terminals	14
Removed referenced to Remote I/O and DeviceNet communication modules for the 700 to 1500 terminals	19
Updated catalog number configuration	23
Updated catalog number table for logic modules	24
Updated catalog number table for communication modules	25
Updated component compatibility tables	142
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Updated controller cable charts	166, 167, 168

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Objectives

This preface provides information on these topics.

- Intended audience
- Parts list
- Additional resources
- Software and firmware upgrades

Intended Audience

Use this manual if you are responsible for installing, operating, or troubleshooting the PanelView Plus or PanelView Plus CE terminals.

No special knowledge is required to understand this manual or operate the terminal. However, you must understand the functions and operations of FactoryTalk View Machine Edition (ME) applications that will run on the terminal. Consult the application designer for this information.

Equipment installers must be familiar with standard panel installation techniques.

Parts List

The PanelView Plus terminals are shipped with these items.

- Power terminal block
- FactoryTalk View ME runtime software, preloaded
- Mounting levers for 400 and 600 terminals, quantity eight
- Mounting clips for 700 to 1500 terminals, quantity four to eight
- Installation instructions
- Panel cutout template

Additional items are shipped with the PanelView Plus CE terminals.

- Windows CE .NET operating system preloaded with Terminal Services and Internet Explorer
- PanelView Plus CE Accessory CD with utilities and software development kit for C++
- Microsoft Windows CE license agreement

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Additional Resources

For additional information, refer to these publications, that you can download from http://literature.rockwellautomation.com.

Resource	Description
DeviceNet Communications for PanelView Plus Terminals User Manual, publication 2711P-UM004	Provides procedures for creating a DeviceNet application to run on a PanelView Plus terminal.
ControlNet Communications for PanelView Plus Terminals User Manual, publication 2711P-UM003	Provides procedures for creating a ControlNet application to run on a PanelView Plus terminal.
Modbus Applications for PanelView Plus Terminals User Manual, publication 2711P-UM002	Provides procedures for creating a Modbus application to run on a PanelView Plus terminal.
Wiring and Grounding Guidelines for PanelView Plus Devices Technical Data, publication 2711P-TD001	Provides grounding and wiring guidelines for PanelView Plus terminals.
Software Development Kit for PanelView Plus CE Terminals User Manual, publication 2711P-UM005	Provides information for programmers to develop CE applications for PanelView Plus CE terminals.

You may also want to refer to:

- online help for FactoryTalk View Studio or RSLinx software.
- documentation for your controller.

Software and Firmware Upgrades

To receive software updates (software serial number required) and firmware upgrades for your terminal:

- call your local Rockwell Automation sales office or distributor.
- access http://support.rockwellautomation.com

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Overview

Chapter Objectives

This chapter gives an overview of the PanelView Plus terminals.

- Software support
- PanelView Plus 400 and 600 features
- PanelView Plus 700 to 1500 features
- Catalog number configuration
- Product components

Software Support

Each PanelView Plus and PanelView Plus CE terminal is preloaded with FactoryTalk View Machine Edition runtime and terminal configuration software that does not require activation. Machine Edition applications for the terminals are created using FactoryTalk View Studio software.

Users, other than equipment operators, can view a running Machine Edition application in read-only mode within a Web browser using ViewPoint software. This software is an add-on capability provided with FactoryTalk View Studio.

IMPORTANT ViewPoint software requires terminals with a Series E or later logic module and a minimum of 128 MB RAM. You can also order an internal CompactFlash card with FactoryTalk View software, catalog number 2711P-RW*x* , to support any series logic module, catalog number 2711P-RP*xx*.

The open Windows CE.NET environment of the PanelView Plus CE terminals provides:

- familiar Windows desktop and user interface.
- terminal server-client support to configured servers
- Internet Explorer web browser.
- software development kit to support custom C++ applications for Windows CE.NET operating system.
- third-party device support for Windows CE.NET operating system.
- Windows CE.NET operating system provides these programs:
  - File viewers for MS Office: Excel, Word, PowerPoint
  - PDF file viewer
  - WordPad text editor
  - WebServer application
  - FTP server

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– Support for the .NET compact framework

Some of the above software applications are included on the PanelView Plus CE Accessory CD.

PanelView Plus 400 and 600 Terminals

The PanelView Plus 400 and 600 terminals offer:

- base-configured units.
- communication modules.
- power supply, AC or DC.
- grayscale and color displays.



The PanelView Plus 400 and 600 terminals are HMI devices that provide these features:

- PanelView Plus 400 terminals
  - Color or grayscale graphic displays
  - Keypad or keypad and touch screen input support
- PanelView Plus 600 terminals
  - Color or grayscale graphic displays
  - Keypad, touch screen, or keypad and touch screen input
- Base-configured unit
  - RS-232 only
  - RS-232, Ethernet, and modular communications interface
- Communication modules provide add-on capability to base-configured units with a modular communications interface
- Power input, AC (85…264V) or DC (18…30V)
- CompactFlash card slot supports Type 1 CompactFlash cards
- USB port for attaching mouse, keyboard, printer, bar code scanner, and other devices
- Same panel cutouts as the PanelView Standard 550 terminals

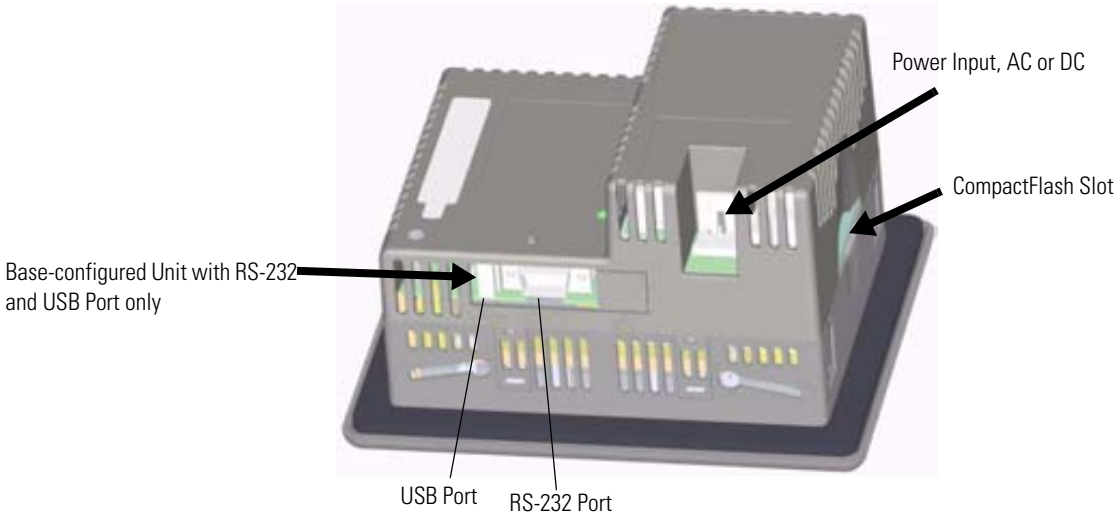
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Base-configured Units

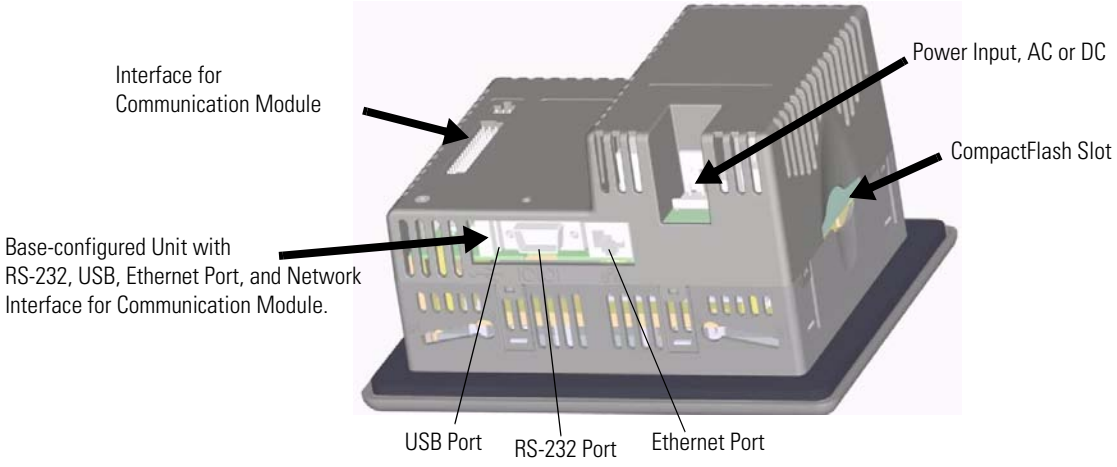
The base-configured unit of the 400 and 600 terminals is available in two versions.

- Base unit with RS-232 port and one USB port
- Base unit with RS-232 port, 10/100BaseT Ethernet port, one USB port, and a network interface for a communication module

Base Unit with RS-232 Only



Base Unit with RS-232, Ethernet Port, and Modular Communications Interface



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Communication Modules

You can attach a communication module with a network interface to the base-configured unit of the PanelView Plus 400 and 600 terminals to increase your communication capability with these networks:

- DH-485
- DH+
- Isolated RS-232
- ControlNet

The communication module installs easily on the back of the unit.



Power Options

The base-configured unit of the PanelView Plus 400 and 600 terminals is available with either AC (85…264V) or DC (18…30V) power input providing application flexibility.

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Display and Input Options

PanelView Plus 400 and 600 terminals are available with these display and operator input options:

- 400 terminals: 3.8 in. grayscale (320 x 240) graphics display with keypad or 3.5 in. (320 x 240) color with keypad or keypad and touch support
- 600 terminals: 5.5 in. color or grayscale (320 x 240) graphics display with keypad, touch screen, or keypad and touch support

Touch Screen

The PanelView Plus 600 terminals offer an analog resistive touch screen for touch input.

600 Touch Grayscale or Color Terminal



IMPORTANT The touch screen may be operated with a finger, gloved finger, or plastic stylus device with a minimum tip radius of 1.3 mm (0.051 in.) to prevent damage to the touch screen. Using any other object or tool may damage the touch screen.

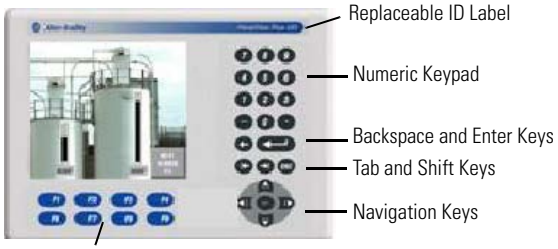
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Keypad or Keypad and Touch

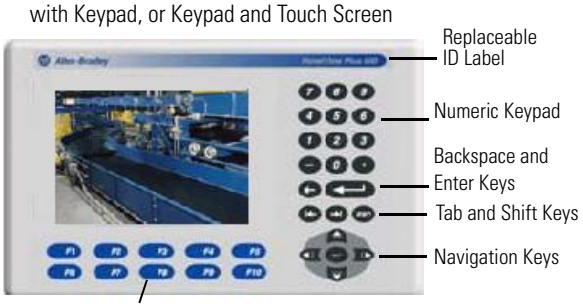
The keypad versions of the PanelView Plus 400 and 600 terminals are available with these options:

- 400 terminals: grayscale display with keypad or color display with keypad or keypad and touch input
- 400 and 600 terminals offer an analog resistive touch screen for touch input.
- 600 terminals: color or grayscale displays with either keypad, or keypad and touch input

400 Grayscale with Keypad, or 400 Color with Keypad or Keypad and Touch



600 Grayscale or Color Terminal with Keypad, or Keypad and Touch Screen



Keys		Description
400 600	F1 through F8 F1 through F10	Programmable keys that initiate functions on terminal display. Replaceable legends are available for the 600 terminals allowing for custom function key labels.
Numeric Keypad		0…9, ., -, Backspace, Enter, Left and Right Tab keys, Shift keys
Navigation Keys		Use the arrow keys for navigation. Use the Alt+arrow keys to activate home, end, page up, and page down functions.

IMPORTANT The keypad is designed for finger or gloved finger operation. The touch screen may be operated with a finger, gloved finger, or plastic touch screen stylus with a minimum tip radius of 1.3 mm (0.051 in.) to prevent damage to the touch screen. Using any other object or tool may damage the touch screen or keypad.

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PanelView Plus 700 to 1500 Terminals

This section gives an overview of the PanelView Plus 700, 1000, 1250, 1250H, and 1500 terminals.

- Modular components
- Base-configured unit
- Communication modules
- Logic module, standard or CE
- Power supply, AC or DC
- Display modules



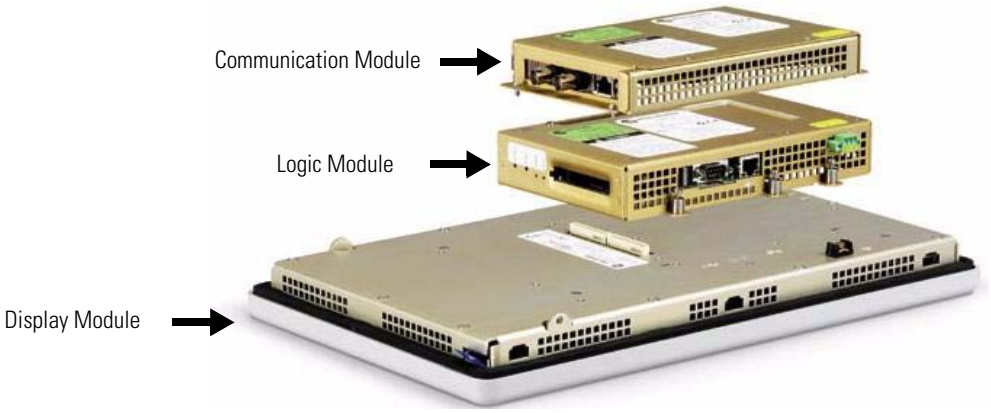
The PanelView Plus 700 to 1500 terminals are HMI devices that offer these features:

- Graphic color-display modules with keypad, touch screen, or keypad and touch screen support
- Analog resistive touch screen
- Ethernet and serial communications
- Modular communication interface for easy add-on capability
- Memory expansion modules for field upgrades to 256 MB RAM and 512 MB CompactFlash
- Power input, AC (85…264V AC) or DC (18…32V DC)
- CompactFlash card slot supports Type 1 CompactFlash cards
- USB ports provide connections for keyboard, mouse, and printer
- Field replaceable bezels
- Same panel cutouts as the PanelView Standard and PanelView Enhanced terminals
- Standard or CE logic module

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Modular Components

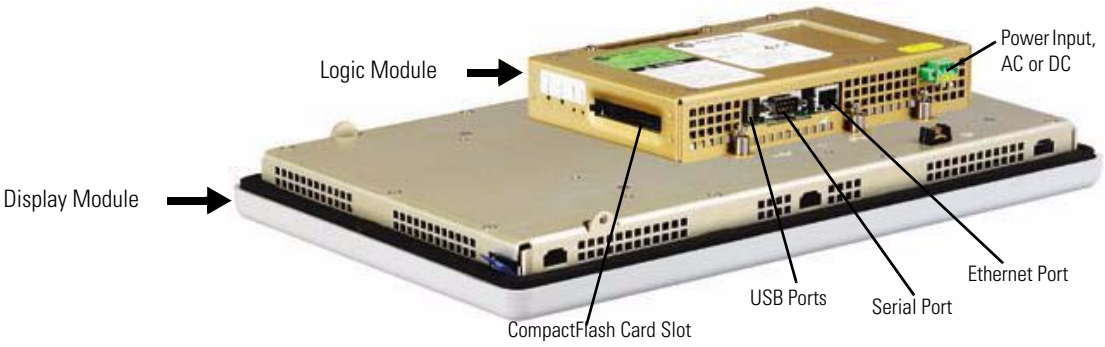
The terminals use modular components allowing for flexible configuration, installation, and upgrades. You can order items as separate components or factory assembled per your configuration.



Base-configured Unit

The base-configured unit of the terminal consists of:

- display module (700, 1000, 1250, 1500) with keypad, touch, or keypad and touch input.
- logic module.



The logic module contains:

- 24V DC input (18…32V) or AC input (85…264V).
- SDRAM and flash memory, various sizes.
- 10/100 BaseT Ethernet port.
- serial RS-232 port for file transfers, printing, and logic controller communications.
- two USB ports for attaching mouse, keyboard, or printer.
- card slot for Type I CompactFlash cards.
- battery-backed real-time clock.

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Logic Modules and CompactFlash

The logic module is available with or without internal CompactFlash. The contents of the internal CompactFlash is what differentiates a PanelView Plus device from a PanelView Plus CE device.

- For the PanelView Plus terminals, the internal CompactFlash contains FactoryTalk View ME software and flash memory.
- For the PanelView Plus CE terminals, the internal CompactFlash contains the open Windows CE operating system, FactoryTalk View ME software, and flash memory.

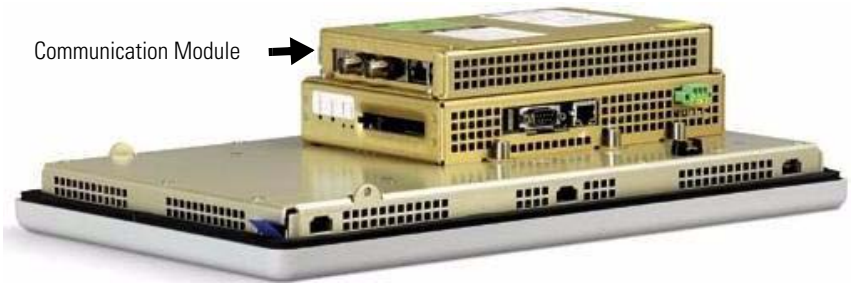
The internal CompactFlash is available in different sizes and can be ordered separately or bundled with the logic module.

Communication Modules

You can attach a communication module with a network interface to the base-configured unit of the terminal to increase your communication capability with these networks:

- DH+/DH-485
- ControlNet

The communication module installs easily on top of the logic module on the back of the unit.



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Power Options

The basic configured units of the 700 to 1500 PanelView Plus terminals provide application flexibility with three available power power options:

- AC (85...264V)
- unisolated DC (18...32V)
- isolated DC (18...32V)

For DC applications using AC power, a remote AC-to-DC power supply, cat. no. 2711P-RSACDIN, is available for DIN-rail mounting.

Display Modules

The terminals offer a range of TFT color graphic displays with either keypad, touch screen, or keypad and touch screen support.

- 700 (6.5 in.)
- 1000 (10.4 in.)
- 1250 (12.1 in.)
- 1500 (15 in.)

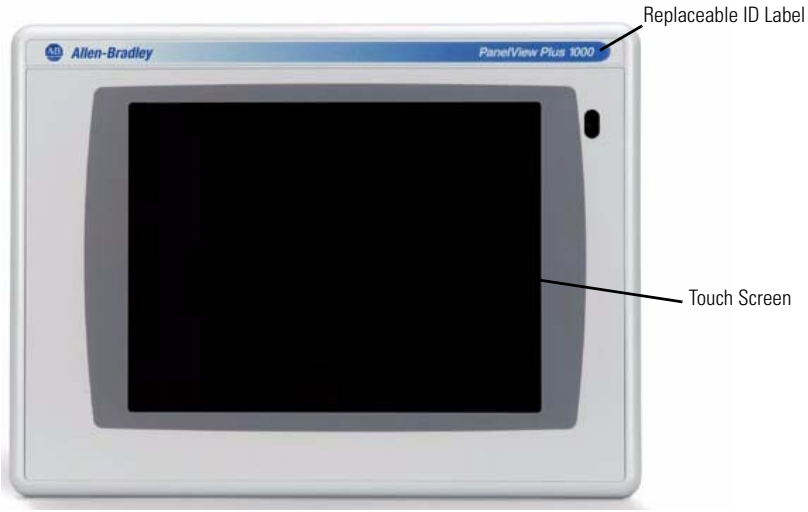
The 700 and 1250 touch displays are available in conformal-coated options. A 1250 high-bright, touch display module is available for outdoor installations. Plus the 1250 and 1500 touch displays offer an integral antiglare overlay.

All displays have common features and firmware providing for easy migration to a larger display. Field-replaceable bezels are also available.

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Touch Screen

Touch-screen displays are analog resistive and similar except for size.

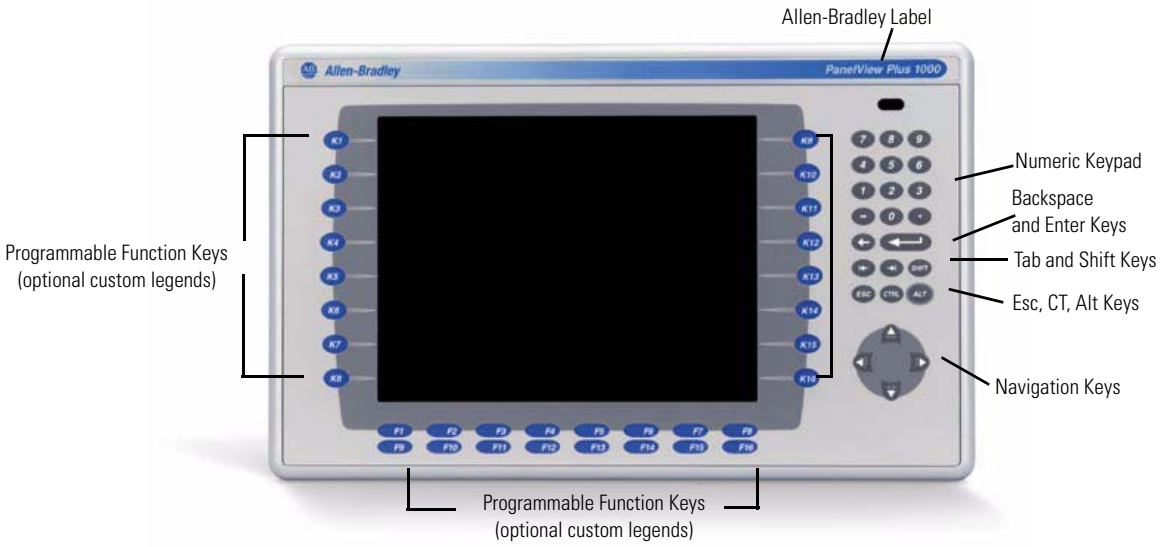


IMPORTANT The touch screen may be operated with a finger, gloved finger, or plastic stylus device with a minimum tip radius of 1.3 mm (0.051 in.) to prevent damage to the touch screen. Using any other object or tool may damage the touch screen.

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Keypad or Keypad and Touch

All displays are similar except for size and the number of function keys available.



IMPORTANT The keypad is designed for finger or gloved finger operation. The touch screen may be operated with a finger, gloved finger, or plastic stylus device with a minimum tip radius of 1.3 mm (0.051 in.) to prevent damage to the touch screen. Using any other object or tool may damage the touch screen or keypad.

The K*xx* and F*xx* function keys on the keypad terminals are programmable.

Function Keys	Description
Function Keys 700 (F1 through F10, K1 through K12) 1000 (F1 through F16, K1 through K16) 1250 (F1 through F20, K1 through K20) 1500 (F1 through F20, K1 through K20)	Programmable keys that initiate functions on terminal display. Replaceable legends are available for the terminals allowing for custom function key labels.
Numeric Keypad	0…9, ., -, Backspace, Enter, Left and Right tab, Shift, Esc, Ctrl, Alt keys.
Navigation Keys	Use the arrow keys to move cursor in lists and select objects. Alt+arrow key activates home, end, page up, page down functions.

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Catalog Number Configuration

The table shows the catalog number explanation for configured versions of the PanelView Plus and PanelView Plus CE terminals. Not all combinations of options are available for sale.

	Input Type	Display Size	Display Type	Communication [1]	Power	Logic Module with Flash and RAM Memory [2]	Special Option[2]
2711P-	**K** = Keypad	**4** = 3.5 in.	**C** = Color	**PanelView Plus 400 and 600**	**A** = AC	**1**= Logic Module 64 MB	**K** = Conformal-Coated[3]
	T = Touch	**6** = 5.5 in.	**M**=Grayscale	**5** = RS-232 & USB	**D** = DC	**2** = Logic Module 128 MB	**M** = Marine Certified
	B = Keypad/Touch	**7** = 6.5 in.		**20** = Ethernet, RS-232 & USB plus Communication Module Interface		**6** = CE Logic Module with 128 MB	
		10 = 10.4 in.				**7** = CE Logic Module with 256 MB	
		12 = 12.1 in.		**PanelView Plus 700 to 1500**			
		15 = 15 in.		**4** = Ethernet, RS-232 & (2) USB			

(1) Additional communication options are available and listed on page 25 in the following section.

(2) Applies to PanelView Plus 700 to 1500 terminals only.

(3) Applies to PanelView Plus 700 and 1250 terminals only.

PanelView Plus Product Components

Components are available as separate catalog numbers for field installation or replacement.

Display Modules (700 to 1500 only)

Cat. No.	Description
2711P-RDK7C	700 keypad color display
2711P-RDT7C	700 touch color display
2711P-RDT7CM	700 touch color display, marine certified
2711P-RDB7C	700 keypad and touch color display
2711P-RDB7CM	700 keypad and touch color display, marine certified
2711P-RDT7CK	Conformal-coated 700 touch color display
2711P-RDK10C	1000 keypad color display
2711P-RDT10C	1000 touch color display
2711P-RDT10CM	1000 touch display, marine certified
2711P-RDB10C	1000 keypad and touch color display
2711P-RDB10CM	1000 keypad and touch display, marine certified
2711P-RDK12C	1250 keypad color display
2711P-RDT12C	1250 touch color display
2711P-RDT12AG	1250 touch color display with antiglare overlay
2711P-RDT12CK	Conformal-coated 1250 touch color display
2711P-RDT12H	1250 high-bright touch color display
2711P-RDB12C	1250 keypad and touch color display

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Display Modules (700 to 1500 only)

Cat. No.	Description
2711P-RDK15C	1500 keypad color display
2711P-RDT15C	1500 touch color display
2711P-RDT15AG	1500 touch color display with antiglare overlay
2711P-RDB15C	1500 keypad and touch color display

Logic Modules (700 to 1500 only)

Cat. No.	Description
Standard Logic Modules for PanelView Plus Terminals	
2711P-RP	Logic module without flash/RAM memory, DC input
2711P-RPD	Logic module, without memory, isolated DC input, marine certified
2711P-RPA	Logic module without flash/RAM memory, AC input, marine certified
2711P-RP1	Logic module with 64 MB flash/64 MB RAM, DC input
2711P-RP1A	Logic module with 64 MB flash/64 MB RAM, AC input, marine certified
2711P-RP1D	Logic module with 64MB, isolated DC input, marine certified
2711P-RP2	Logic module with 128 MB flash/128 MB RAM, DC input (1)
2711P-RP2A	Logic module with 128 MB flash/128 MB RAM, AC input, marine certified (1)
2711P-RP2D	Logic module with 128MB, isolated DC input, marine certified (1)
2711P-RP2DK	Conformal-coated logic module with 128MB, isolated DC input (1)
2711P-RP2K	Conformal-coated logic module with 128 MB flash/128 MB RAM, DC input (1)
2711P-RP3	Logic module with 256 MB flash/256 MB RAM, DC input (1)
2711P-RP3A	Logic module with 256 MB flash/256 MB RAM, AC input, marine certified (1)
2711P-RP3D	Logic module with 256MB, isolated DC input, marine certified (1)
CE Logic Modules for PanelView Plus CE Terminals	
2711P-RP6	CE logic module with 128 MB flash/128 MB RAM, DC input (1)
2711P-RP6A	CE logic module with 128 MB flash/128 MB RAM, AC input, marine certified (1)
2711P-RP6D	CE logic module with 128MB, isolated DC input, marine certified(1)
2711P-RP6DK	CE conformal-coated logic module with 128MB, isolated DC input(1)
2711P-RP6K	CE conformal-coated logic module with 128 MB flash/128 MB RAM, DC input (1)

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Logic Modules (700 to 1500 only)

Cat. No.	Description
2711P-RP7	CE logic module with 256 MB flash/256 MB RAM, DC input [1]
2711P-RP7A	CE logic module with 256 MB flash/256 MB RAM, AC input, marine certified [1]
2711P-RP7D	CE logic module with 256 MB, isolated DC input, marine certified[1]

[1] Compatible with ViewPoint Software.

Communication Modules

Terminal Type	Cat. No.	Description
400 and 600	2711P-RN3	DH-485 communication module
	2711P-RN8	DH+ communication module
	2711P-RN15C	ControlNet communication module
	2711P-RN22C	RS-232 isolated communication module
700 to 1500	2711P-RN6	DH+/DH-485 communication module
	2711P-RN6K	Conformal-coated DH+/DH-485 communication module
	2711P-RN15S	ControlNet communication module, marine certified
	2711P-RN15SK	Conformal-coated ControlNet communication module

Internal Compact Flash

Cat. No.	Description
Internal CompactFlash for Standard Logic Modules	
2711P-RW1	64 MB CompactFlash with FactoryTalk View ME software
2711P-RW2	128 MB CompactFlash with FactoryTalk View ME software
2711P-RW3	256 MB CompactFlash with FactoryTalk View ME software

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Internal Compact Flash

Cat. No.	Description
Internal CompactFlash for CE Logic Modules	
2711P-RW6	128 MB CompactFlash with FactoryTalk View ME software and the open Windows CE operating system for the CE logic module
2711P-RW7	256 MB CompactFlash with FactoryTalk View ME software and the open Windows CE operating system for the CE logic module
2711P-RW8	512 MB CompactFlash with FactoryTalk View ME software and the open Windows CE operating system for the CE logic module

RAM Memory (700 to 1500 only)

Cat. No.	Description
2711P-RR64	64 MB SODIMM memory
2711P-RR128	128 MB SODIMM memory
2711P-RR256	256 MB SODIMM memory

Compact Flash Cards (Blank)

Cat. No.	Description
2711P-RC2	128 MB blank CompactFlash card
2711P-RC3	256 MB blank CompactFlash card
2711P-RC4	512 MB blank CompactFlash card
2711P-RCH	CompactFlash to PCMCIA adapter

Legend Kits

Cat. No.	Description
2711P-RFK6	Replacement legends strips for 600 keypad terminal
2711P-RFK7	Replacement legends strips for 700 keypad terminal
2711P-RFK10	Replacement legends strips for 1000 keypad terminal
2711P-RFK12	Replacement legends strips for 1250 keypad terminal
2711P-RFK15	Replacement legends strips for 1500 keypad terminal

Backlights (700 to 1500 only)

Cat. No.	Description
2711P-RL7C	Replacement color backlight for 700 series A and B display modules
2711P-RL7C2	Replacement color backlight for 700 series C and D display modules
2711P-RL10C	Replacement color backlight for 1000 series A display modules
2711P-RL10C2	Replacement color backlight for 1000 series B display modules
2711P-RL12C	Replacement color backlight for 1250 series A and B display modules
2711P-RL12C2	Replacement color backlight for 1250 series C display modules
2711P-RL15C	Replacement color backlight for 1500 series B display modules

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Replacement Bezels

Cat. No.	Description
2711P-RBK7	Replacement bezel for 700 keypad terminal
2711P-RBT7	Replacement bezel for 700 touch terminal
2711P-RBB7	Replacement bezel for 700 keypad or keypad/touch terminal
2711P-RBK10	Replacement bezel for 1000 keypad terminal
2711P-RBT10	Replacement bezel for 1000 touch terminal
2711P-RBB10	Replacement bezel for 1000 keypad or keypad/touch terminal
2711P-RBK12	Replacement bezel for 1250 keypad terminal
2711P-RBT12	Replacement bezel for 1250 touch terminal
2711P-RBT12H	Replacement bezel for 1250 high-bright touch terminal
2711P-RBB12	Replacement bezel for 1250 keypad or keypad/touch terminal
2711P-RBK15	Replacement bezel for 1500 keypad terminal
2711P-RBT15	Replacement bezel for 1500 touch terminal
2711P-RBB15	Replacement bezel for 1500 keypad or keypad/touch terminal

Protective Antiglare Overlays

Cat. No.[(1)]	Description
2711P-RGK4	Antiglare overlay for PanelView Plus 400 grayscale terminal
2711P-RGB4	Antiglare overlay for PanelView Plus 400 color keypad/touch terminal
2711P-RGK6	Antiglare overlay for PanelView Plus 600 keypad or keypad/touch terminal
2711P-RGT6	Antiglare overlay for PanelView Plus 600 touch terminal
2711P-RGK7	Antiglare overlay for PanelView Plus 700 keypad or keypad/touch terminal
2711P-RGT7	Antiglare overlay for PanelView Plus 700 touch terminal
2711P-RGK10	Antiglare overlay for PanelView Plus 1000 keypad or keypad/touch terminal
2711P-RGT10	Antiglare overlay for PanelView Plus 1000 touch terminal
2711-RGK12	Antiglare overlay for PanelView Plus 1250 keypad or keypad/touch terminal
2711P-RGT12	Antiglare overlay for PanelView Plus 1250 touch and high-bright touch terminal
2711P-RGK15	Antiglare overlay for PanelView Plus 1500 keypad or keypad/touch terminal
2711P-RGT15	Antiglare overlay for PanelView Plus 1500 touch terminal

(1) All catalog numbers ship with a quantity of three overlays.

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Adapter Plates

Cat. No.	Description
2711P-RAK4	Adapts a PanelView Plus 400 keypad terminal to a PanelView Standard 550 keypad cutout
2711P-RAK6	Adapts a PanelView Plus 600 keypad terminal to a PanelView Standard 600 keypad cutout
2711P-RAK7	Adapts a PanelView Plus 700 keypad terminal to a PanelView Standard 900 keypad cutout
2711P-RAT7	Adapts a PanelView Plus 700 touch terminal to a PanelView Standard 900 touch cutout
2711P-RAK10	Adapts a PanelView Plus 1000 keypad terminal to a PanelView 1000/1000E keypad cutout
2711P-RAT10	Adapts a PanelView Plus 1000 touch terminal to a PanelView 1000/1000E touch cutout
2711P-RAK12E	Adapts a PanelView Plus 1250 (or PV1000/1000E) keypad terminal to a PanelView 1200/1400E keypad cutout
2711P-RAT12E2	Adapts a PanelView Plus 1250 (or PV1000/1000E) touch terminal to a PanelView 1200E touch cutout
2711P-RAT12E	Adapts a PanelView Plus 1250 (or PV1000/1000E) touch terminal to a PanelView 1400E touch cutout
2711P-RAK12S	Adapts a PanelView Plus 1250 (or PV1000/1000E) keypad terminal to a PanelView Standard 1400 keypad cutout
2711P-RAT12S	Adapts a PanelView Plus 1250 (or PV1000/1000E) touch terminal to a PanelView Standard 1400 touch cutout
2711P-RAK15	Adapts a PanelView Plus 1500 keypad or keypad/touch terminal to a PanelView 1200E/1400E keypad terminal
2711P-RAT15	Adapts a PanelView Plus 1500 touch terminal to a PanelView 1400E touch cutout

Cables

Cat. No.	Description
2711-NC13	RS-232 operating/programming cable (9-pin D-shell to 9-pin D-shell), 5 m (16.4 ft)
2711-NC14	RS-232 operating/programming cable (9-pin D-shell to 9-pin D-shell), 10 m (32.7 ft)
2711-NC17	Remote RS-232 serial cable (9-pin D-shell to 9-pin D-shell)
2711-NC21	RS-232 operating cable (9-pin D-shell to 8-pin mini DIN), 5 m (16.4 ft)
2711-NC22	RS-232 operating cable (9-pin D-shell to 8-pin mini DIN), 10 m (32.7 ft)
1761-CBL-AS03	DH-485 operating cable (6-pin Phoenix to RJ45), 3 m (10 ft)
1761-CBL-AS09	DH-485 operating cable (6-pin Phoenix to RJ45), 9 m (30 ft)
1746-C10	DH-485 network interface cable (SDL AMP to RJ45), 1.83 m (6 ft)
1746-C11	DH-485 network interface cable (SDL AMP to RJ45), .3 m (1 ft.)
1784-CP14	DH-485 network interface cable (5-pin Phoenix to RJ45)
2711P-CBL-EX04	Ethernet CAT5 crossover cable, industrial grade, 4.3 m (14 ft)

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Communication Adapters

Cat. No.	Description
1761-NET-AIC	AIC+ advanced interface converter
1747-AIC	DH-485 isolated link coupler for use with DH-485 communication modules (2711P-RN3, 2711P-RN6)

Remote AC Power Supply (700 to 1500 only)

Cat. No.	Description
2711P-RSACDIN	DIN-rail power supply, AC-to-DC, 85…265V AC, 47…63 Hz

Miscellaneous

Cat. No.	Description
2711P-RVT12	Solar visor for outdoor high-bright 1250 touch screen display modules
2711P-RY2032	Replacement battery for 700 to 1500 terminals
2711P-RTMC	Replacement mounting clips for 700 to 1500 terminals, quantity of 8
2711P-RTFC	Replacement mounting levers for 400 and 600 terminals, quantity of 8
2711P-RVAC	Replacement AC power terminal block for 400 and 600 terminals
2711-TBDC	Replacement DC power terminal block for 400 and 600 terminals
2711P-RTBDC3 (1)	Three-position terminal block for DC logic modules, series A to D
2711P-RTBDC2 (1)	Two-position terminal block for DC logic modules, series E or later
2711P-RTBAC3(1)	Three-position terminal block for all AC logic modules

(1) Catalog numbers ship with a quantity of ten.

Firmware Upgrade Kits

Cat. No.	Description
2711P-RU310	PanelView Plus media kit includes firmware upgrade wizard, one firmware license, certificate of authenticity, end user license agreement.
2711P-RUA3 10	PanelView Plus advanced media kit includes the 2711P-RU310 media kit, PCMCIA to compact flash adapter, and 32 MB CompactFlash card.
2711P-RUL01	Firmware upgrade license kit with one PanelView Plus firmware license.(1)
2711P-RUL05	Firmware upgrade license kit with five PanelView Plus firmware licenses.(1)
2711P-RUL10	Firmware upgrade license kit with 10 PanelView Plus firmware licenses.(1)
2711P-RUL25	Firmware upgrade license kit with 25 PanelView Plus firmware licenses.(1)
2711P-RUL50	Firmware upgrade license kit with 50 PanelView Plus firmware licenses.(1)

(1) Also includes certificate of authenticity, end user license agreement, installation instructions.

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Installation

Chapter Objectives

This chapter provides pre-installation information and procedures on how to install the terminals.

- Hazardous locations
- Environment and enclosure
- Outdoor installation for 1250 high-bright display module
- Required tools
- Clearances
- Panel cutout dimensions
- Mount the 400 or 600 terminal in a panel
- Mount the 700 to 1500 terminals in a panel
- Product dimensions

Hazardous Locations

When marked, this equipment is suitable for use in these locations:

- Class I, Division 2, Groups A, B, C, D
- Class I, Zone 2, Group IIC
- Class II, Division 2, Groups F, G
- Class III
- ordinary, nonhazardous locations

The following statement applies to use in hazardous locations.

WARNING



Explosion Hazard

- Do not disconnect equipment unless power has been removed and area is known to be nonhazardous.
- Do not disconnect connections to this equipment unless power has been removed and the area is known to be nonhazardous.
- Substitution of components may impair suitability for Class 1, Division 2.
- Peripheral equipment must be suitable for the location it is used in.
- The battery or realtime 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, Division 2 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.

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

USB Ports

The terminals contain universal serial bus (USB) ports that comply with hazardous location environments. This section details the field-wiring compliance requirements and is provided in accordance with the National Electrical Code, article 500.

PanelView Plus 400, 600, and 700 to 1500 Terminals Control Drawing

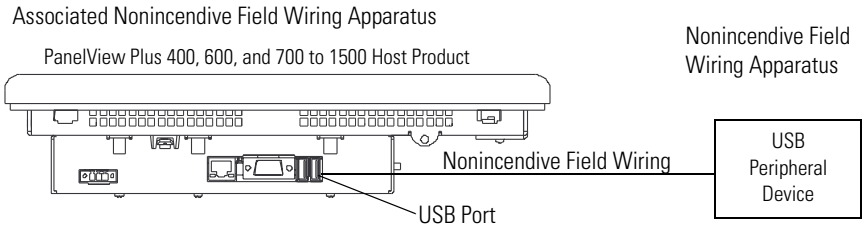


Table 1 - PanelView Plus 400, 600, and 700 to 1500 USB Port Circuit Parameters

Display Size	V_{oc}	I_{sc}	C_a		L_a	
			Groups A and B	Groups C and D	Groups A and B	Groups C and D
400 and 600 Series A and B	5.25V DC	1.68 A	10 µF	10 µF	15 µH	15 µH
400 and 600 Series C or later	5.25V DC	1.68 A	10 µF	10 µF	3.5 µH	15 µH
700 to 1500	5.25V DC	1.68 A	10 µF	10 µF	15 µH	15 µH

Selected nonincendive field wiring apparatus must have nonincendive circuit parameters conforming with Table 2.

Table 2 - Required Circuit Parameters for the USB Peripheral Device

V_{max}	≥	V_{oc}
I_{max}	≥	I_{sc}
$C_i + C_{cable}$	≤	C_a
$L_i + L_{cable}$	≤	L_a

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Application Information

Per the National Electrical Code the circuit parameters of nonincendive field wiring apparatus for use in hazardous locations shall be coordinated with the associated nonincendive field wiring apparatus such that their combination remains nonincendive. The PanelView Plus terminal and the USB peripheral device shall be treated in this manner.

The circuit parameters of the PanelView Plus terminal USB port are given in Table 1. The USB peripheral device and its associated cabling shall have circuit parameters with the limits given in Table 2 for them to remain nonincendive when used with the PanelView Plus terminal USB port. If cable capacitance and inductance are not known the following values from ANSI/ISA-RP 12.06.01-2003 may be used:

C_{cable} = 197pF/m (60 pF/ft)
L_{cable} = 0.7 µH/m (0.20 µH/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.

Symbol Definitions

V_{oc}	Open circuit voltage of the host USB port.
I_{sc}	Maximum output current of the host USB port.
V_{max}	Maximum applied voltage rating of the USB peripheral device. V_{max} shall be greater than or equal to V_{oc} in Table 1. ($V_{max} \geq V_{oc}$).
I_{max}	Maximum current to which the USB peripheral device can be subjected. I_{max} shall be greater than or equal to I_{sc} in Table 1. ($I_{max} \geq I_{sc}$).
C_i	Maximum internal capacitance of the USB peripheral device.
C_a	Maximum allowed capacitance of the USB peripheral device and its associated cable. The sum of C_i of the USB peripheral device and C_{cable} of the associated cable shall be less than or equal to C_a . ($C_i + C_{cable} \leq C_a$).
L_i	Maximum internal inductance of the USB peripheral device.
L_a	Maximum allowed inductance of the USB peripheral device and its associated cable. The sum of L_i of the USB peripheral device and L_{cable} of the associated cable shall be less than or equal to L_a . ($L_i + L_{cable} \leq L_a$).

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Environment and Enclosure

ATTENTION



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. Terminals that are DC Class 2 powered may be supplied from an isolated DC source when used with the indicated fuse kit.

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

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 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:

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

For more enclosure and certification information, refer to the PanelView Plus/PanelView Plus CE Outdoor High-bright Display Modules Installation Instructions, publication 2711P-IN026.

Outdoor Installation for High-bright Displays

When using the high-bright display module, cat. no. 2711P-RDT12H, outdoors, considerations in maximizing the field life of the front bezel and display are:

- selecting the proper enclosure.
- orientation of the terminal.

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Both ultraviolet and infrared radiation can reduce the field life of any electronic device. While the materials used in the terminal bezels provide long field life, that life can be extended by proper installation.

Ultraviolet radiation from the sun causes all plastics to fade or yellow and become brittle over time. Using an antiglare overlay, cat. no. 2711P-RGT12, will protect the front of the terminal from direct exposure to UV radiation and greatly increase its field life.

When installing the high-bright display module in an environment where the front of the terminal will be in direct sunlight during the hottest part of the day and the external ambient temperature can exceed 40 °C (104 °F), use the visor kit, cat. no. 2711P-RVT12. The visor reduces the solar load on the front of the display and helps to maintain internal temperatures within specification.

The high-bright display module has a built-in temperature sensor that automatically reduces the backlight intensity if the temperature inside the cabinet exceeds 55 °C (131 °F). This reduces the risk of damage to the display.

The paint color, size, and power dissipated by the internal components of an enclosure affect the temperature rise inside the cabinet. Hoffman, a Rockwell Automation Encompass Partner, has information to assist you with enclosure selection and heating/cooling accessories to meet the temperature requirements of the installed equipment. See website http://www.hoffmanonline.com.

Stirring fans or active cooling may be required in high altitude and high ambient temperature locations to keep the internal enclosure temperature below 55 °C (131 °F). Use a heater in installations where the ambient temperature is below 0 °C (32 °F).

The backlight of the high-bright display generates a significant amount of heat when set to full intensity. To minimize the amount of heat generated and extend the life of the backlight, decrease the display intensity by using the screen saver with a 5…10 minute delay.

Avoid placing the terminal on the south (north in the southern hemisphere) or west side of the cabinet, if possible. This will reduce the heat rise due to solar loading during the hottest part of the day.

Mount the terminal vertically to minimize solar loading on the display. Do not mount the terminal in a sloped enclosure if it will be exposed to direct sunlight.

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Required Tools

These tools are required for panel installation:

- Panel cutout tools
- Small, slotted screwdriver
- Torque wrench (lb•in) for tightening the mounting clips on the PanelView Plus 700 to 1500 and PanelView Plus CE terminals

Clearances

Allow adequate clearance around the terminal, inside the enclosure, for adequate ventilation. Consider heat produced by other devices in the enclosure. The ambient temperature around the terminals must be between 0…55 °C (32…131 °F).

Clearance Area	400 and 600 Terminals	700 to 1500 Terminals
Top	51 mm (2 in.)	51 mm (2 in.)
Bottom	102 mm (4 in.)	51 mm (2 in.)
Side[1]	25 mm (1 in.)	25 mm (1 in.)
Back	None	25 mm (1 in.)

(1) Minimum side clearance for insertion of memory card and cable wiring is 102 mm (4 in.).

Cutout Dimensions

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

Terminal Type	Height mm (in.)	Width mm (in.)
PanelView Plus 400 and 600 Terminals		
400 Keypad or Keypad and Touch	123 (4.86)	156 (6.15)
600 Keypad or Keypad and Touch	142 (5.61)	241 (9.50)
600 Touch	123 (4.86)	156 (6.15)
PanelView Plus and PanelView Plus CE 700 to 1500 Terminals		
700 Keypad or Keypad and Touch	167 (6.57)	264 (10.39)
700 Touch	154 (6.08)	220 (8.67)
1000 Keypad or Keypad and Touch	224 (8.8)	375 (14.75)
1000 Touch	224 (8.8)	305 (12.00)
1250 Keypad or Keypad and Touch	257 (10.11)	390 (15.35)
1250 Touch and 1250 High-bright Touch	257 (10.11)	338 (13.29)
1500 Keypad or Keypad and Touch	305 (12.00)	419 (16.50)
1500 Touch	305 (12.00)	391 (15.40)

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Mount the 400 or 600 Terminal in a Panel

Mounting levers secure the terminal to the panel. The number of levers you use (4 or 6) varies by terminal type.

ATTENTION



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

Make sure the area around the panel cutout is clear.

Take precautions so metal cuttings do not enter any components already installed in the panel.

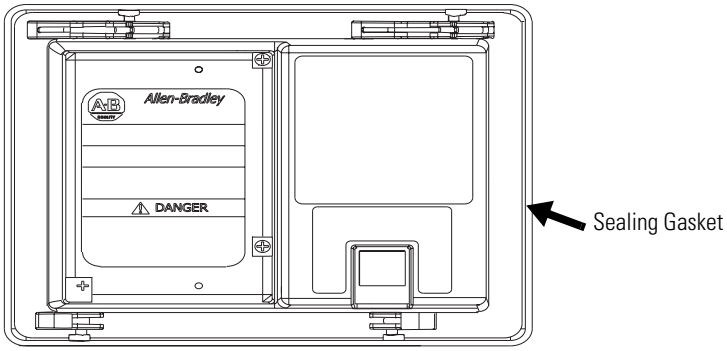
Failure to follow these warnings may result in personal injury or damage to panel components.

Follow these steps to mount the 400 or 600 terminals in a panel.

1. Cut an opening in the panel by using the panel cutout shipped with the terminal.
2. If a communication module is ordered separately, attach the module to the base unit before panel installation.

   Refer to the instructions shipped with module.
3. Make sure the terminal sealing gasket is properly positioned on the terminal.

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



4. Install legend strips before installing the terminal if you are using keypad legend strips on a 600 keypad terminal.

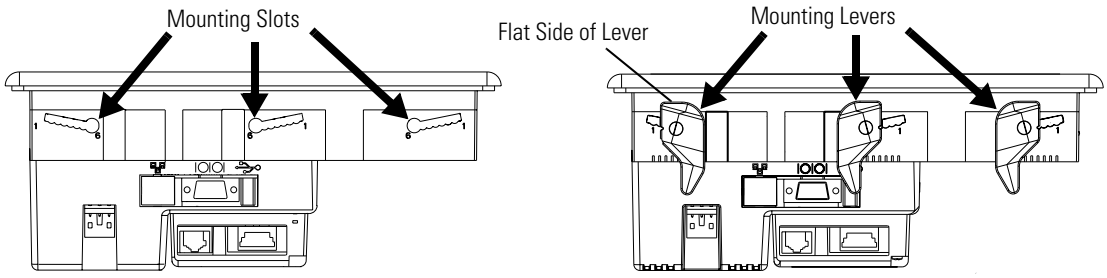
   Be careful not to pinch legend strip during installation.
5. Place the terminal in the panel cutout.

   If installing the terminal in an existing 550 panel cutout, align the terminal with the center of the cutout for best gasket sealing.

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6. Insert all mounting levers into the mounting slots on the terminal.

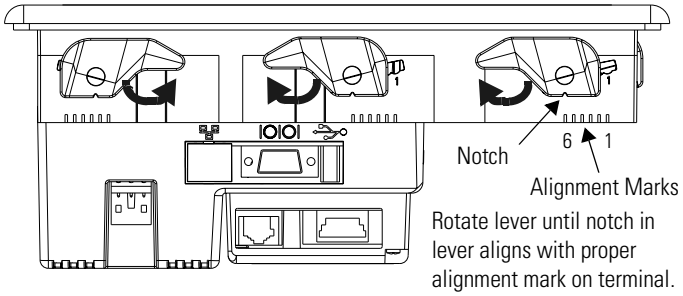
   Slide each lever until the flat side of the lever touches the surface of the panel.

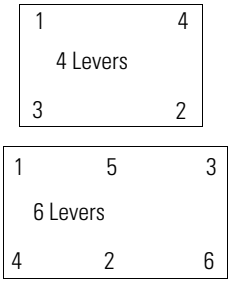


7. When all levers are in place, slide each lever an additional notch or two until you hear a click.

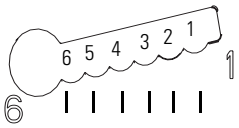
8. Rotate each lever in the direction indicated until it is in the final latch position.

   Follow the latching sequence for the optimum terminal fit.





Use this table as a guide to provide an adequate gasket seal between the terminal and the panel.

	Lever Position	Panel Thickness Range	Typical Gauge
 Terminal Markings	1	1.5…2.01 mm (0.060…0.079 in.)	16
	2	2.03…2.64 mm (0.08…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…4.75 mm (0.165…0.187 in.)	7

ATTENTION



Follow instructions to provide a proper seal and to prevent potential damage to the product. Rockwell Automation assumes no responsibility for water or chemical damage to the terminal or other equipment within the enclosure because of improper installation.

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Mount the 700 to 1500 Terminal in a Panel

Mounting clips secure the terminal to the panel. The number of clips you use (4, 6, or 8) varies by terminal type.

ATTENTION



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

Make sure the area around the panel cutout is clear.

Take precautions so metal cuttings do not enter any components already installed in the panel.

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

Follow these steps to mount a 700 to 1500 terminal in a panel.

1. Cut an opening in the panel by using the panel cutout shipped with the terminal.
2. Make sure the terminal sealing gasket is properly positioned on the terminal.

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

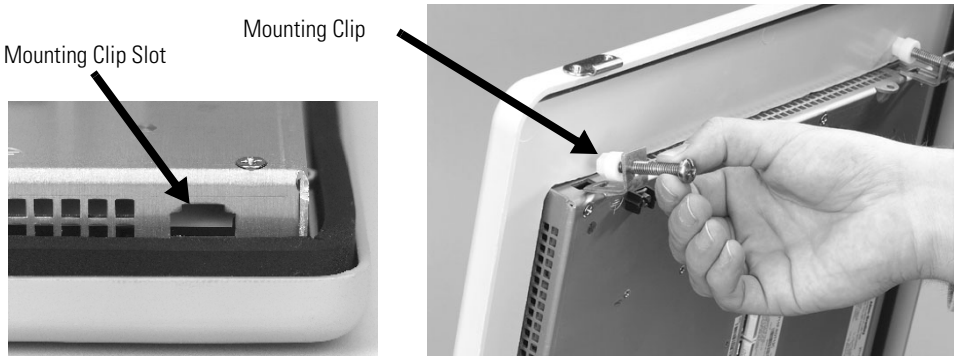


3. Install the legend strips before installing the terminal if you are using keypad legend strips on keypad terminals.

   Be careful not to pinch the legend strip during installation.
4. Place the terminal in the panel cutout.

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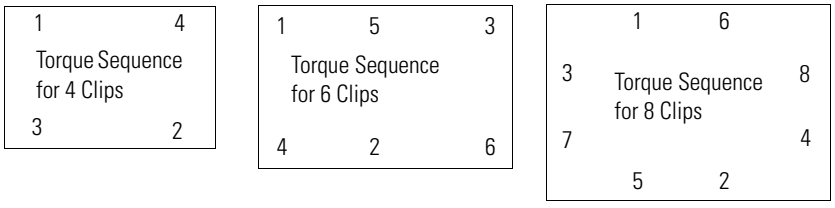
5. Slide the ends of the mounting clips into the slots on the terminal.



6. Tighten the mounting clip screws by hand until the gasket seal contacts the mounting surface uniformly.



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



ATTENTION



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

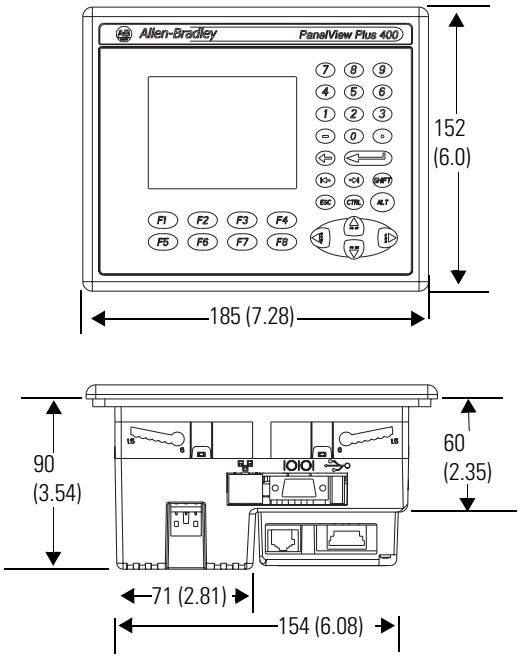
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Product Dimensions

Product dimensions for each terminal are in mm (in.).

PanelView Plus 400 Dimensions

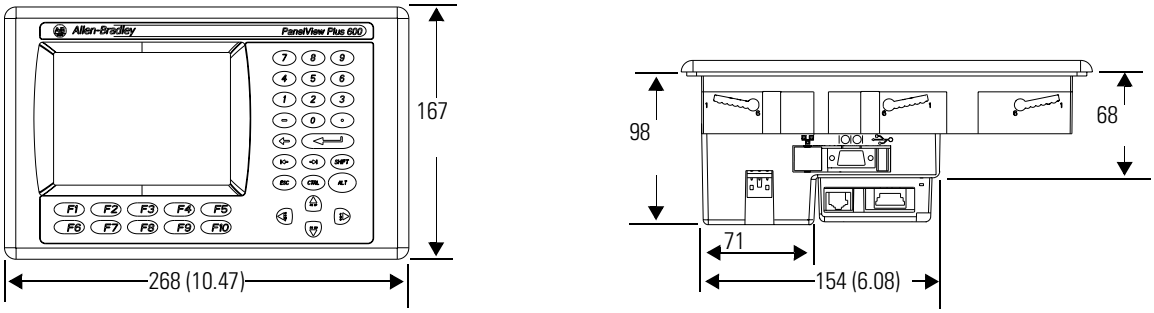
400 Keypad or Keypad/Touch Terminal



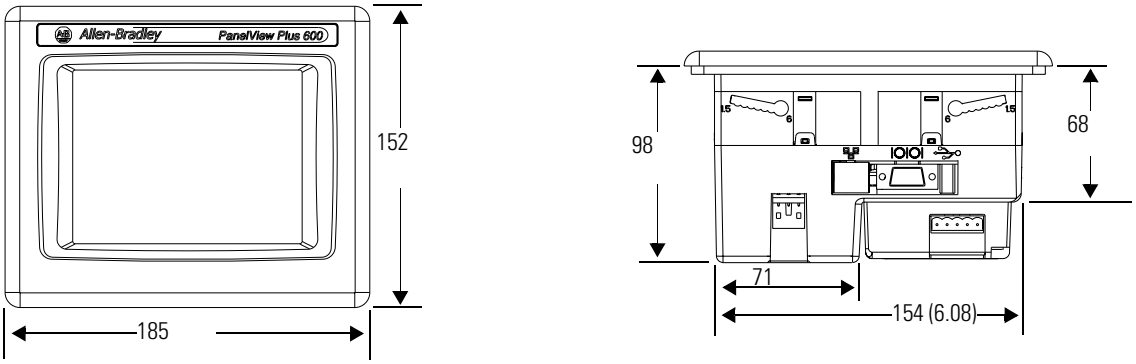
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PanelView Plus 600 Dimensions

600 Keypad or Keypad/Touch Terminal



600 Touch Terminal



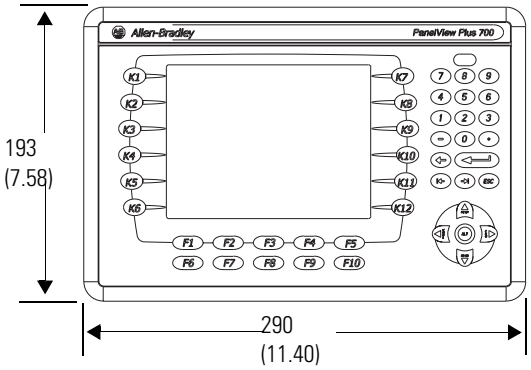
The depth dimensions are shown for:

- base-configured unit (display module and logic module).
- base-configured unit with communication module.

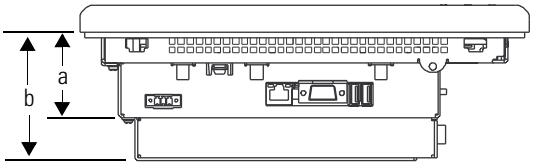
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PanelView Plus and PanelView Plus CE 700 Dimensions

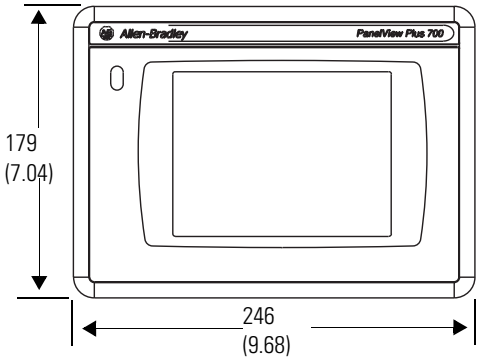
700 Keypad or Keypad/Touch Terminal



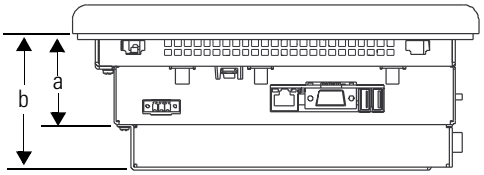
a 55 (2.18) Display to Logic Module



700 Touch Screen Terminal



a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module



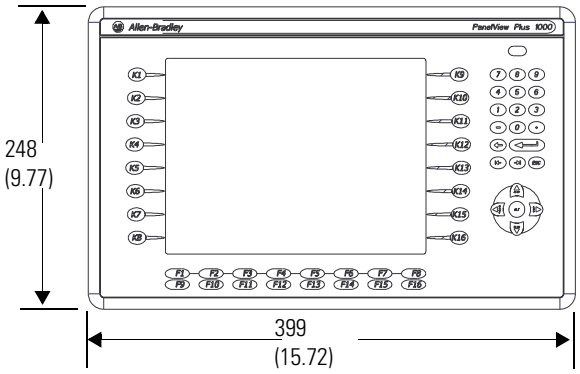
The depth dimensions are shown for:

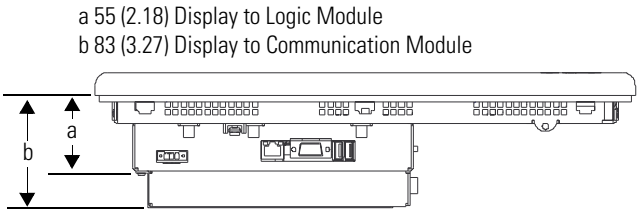
- base-configured unit (display module and logic module).
- base-configured unit with communication module.

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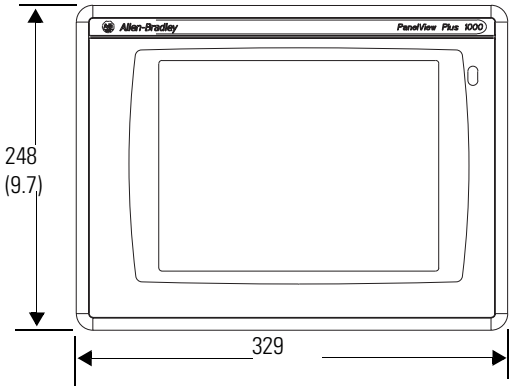
PanelView Plus and PanelView Plus CE 1000 Dimensions

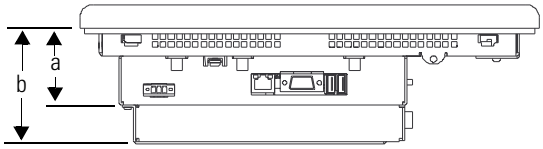
1000 Keypad or Keypad/Touch Terminal





1000 Touch Screen Terminal





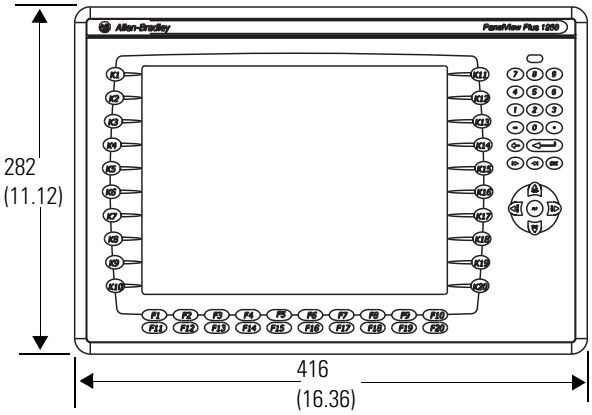
The depth dimensions are shown for:

- base-configured unit (display module and logic module).
- base-configured unit with communication module.

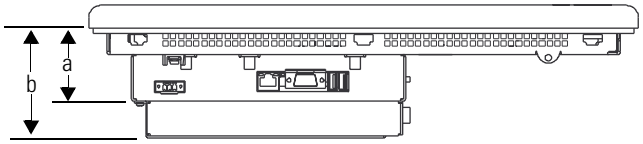
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PanelView Plus and PanelView Plus CE 1250 Dimensions

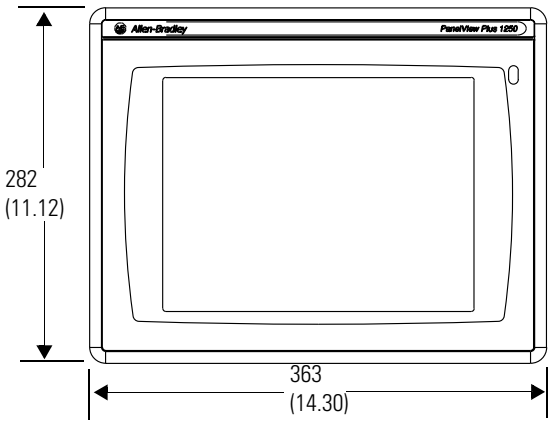
1250 Keypad or Keypad/Touch Terminal



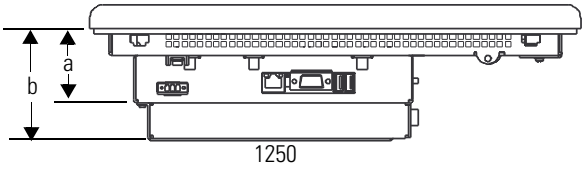
a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module



1250 Touch Screen Terminal

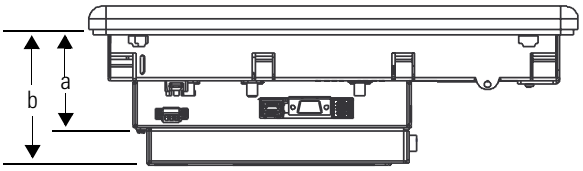


a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module



1250

a 74 (2.90) Display to Logic Module
b 101 (3.99) Display to Communication Module



1250 High-bright

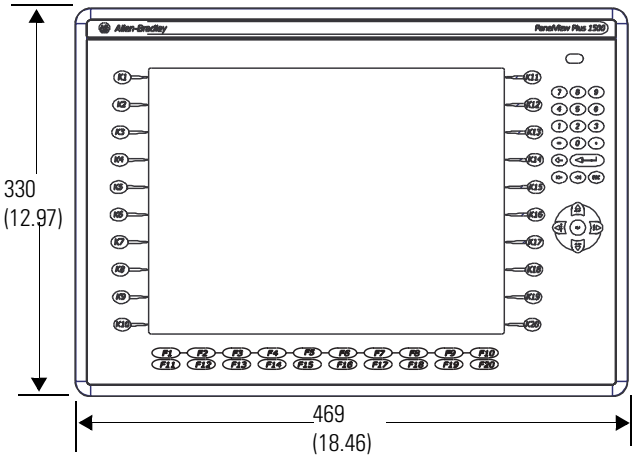
The depth dimensions are shown for:

- base-configured unit (display module and logic module).
- base-configured unit with communication module.

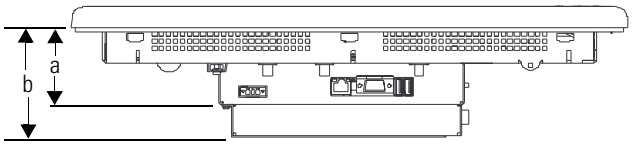
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PanelView Plus and PanelView Plus CE 1500 Dimensions

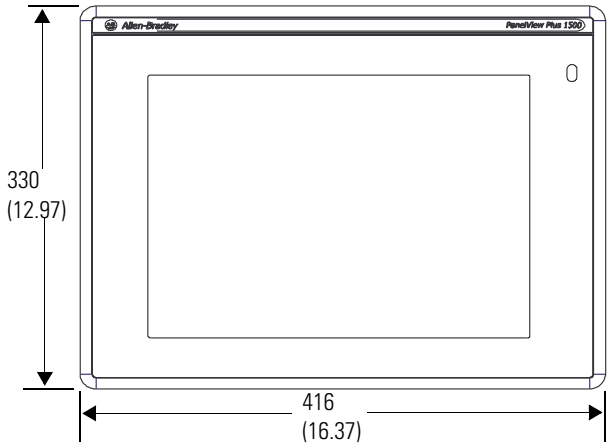
1500 Keypad or Keypad/Touch Terminal



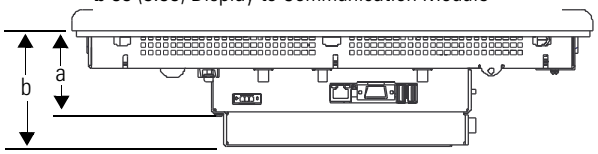
a 65 (2.55) Display to Logic Module
b 93 (3.65) Display to Communication Module



1500 Touch Screen Terminal



a 65 (2.55) Display to Logic Module
b 93 (3.65) Display to Communication Module



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Power Connections

Chapter Objectives

This chapter covers wiring and safety guidelines, and provides procedures to:

- remove and install the power terminal block.
- connect DC power.
- connect AC power.
- reset the terminal.

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:

- 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.

For more information, refer to Wiring and Grounding Guidelines for PanelView Plus Devices, publication 2711P-TD001. You can locate this publication in the literature library at this website http://literature.rockwellautomation.com.

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Remove and Install the Power Terminal Block

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

WARNING



Explosion Hazard

Substitution of components may impair suitability for hazardous locations.

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

Do not connect or disconnect components unless power has been switched off.

All wiring must comply with N.E.C. articles 501, 502, 503, and/or C.E.C. section 18-1J2 as appropriate.

Peripheral equipment must be suitable for the location in which it is used.

ATTENTION



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

400 and 600 Terminals

ATTENTION



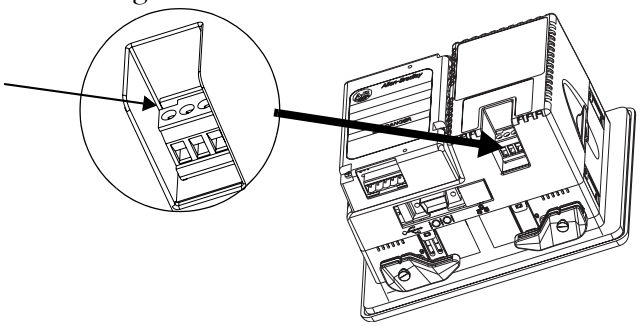
The AC and DC terminal blocks are keyed and marked differently so be sure to follow markings. Do not force terminal blocks into connectors to prevent potential damage to terminal.

Follows these steps to remove the terminal block in the PanelView 400 and 600 terminals.

1. Insert the tip of small, flat-blade, screwdriver into the terminal block access slot.

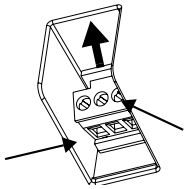
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2. Gently pry the terminal block away from terminal to release the locking mechanism.



Follow these steps to replace the terminal block.

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



2. Gently push the top of the terminal block back to the vertical position to snap in locking tab.

700 to 1500 Terminals

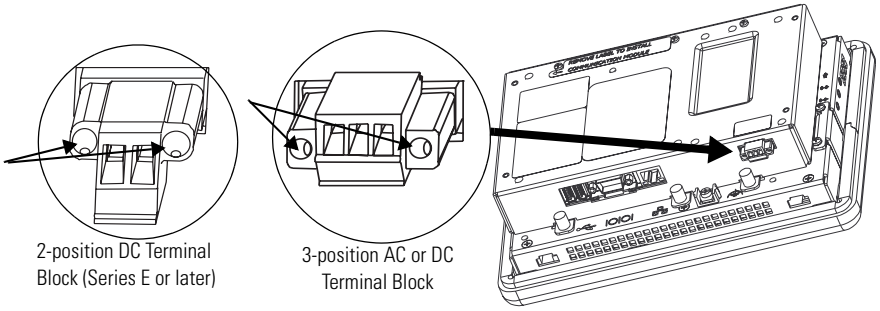
The terminal block used by the 700 to 1500 terminals depends on the series of the logic module and the power input type.

- Series A to D, DC logic modules use a 3-position terminal block.
- Series E or later, DC logic modules use a 2-position terminal block.
- All logic modules with an AC power input use a 3-position terminal block.

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Follow these steps to remove the terminal block.

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 the connector.

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DC Power Connections

PanelView Plus terminals with an integrated, 24V DC power supply have these power ratings

Power Type	Terminal	Input Range
DC	400 and 600	24V DC nom (18…30 V DC) 25 W max (1.0 A at 24V DC)
	700 to 1500	24V DC nom (18…32 V DC) 70 W max (2.9 A at 24V DC)

The power supply is internally protected against reverse polarity of the DC+ and DC- connections. Connecting DC+ or DC- to the earth terminal may damage the device.

The input power terminal block is removeable and supports these wire sizes.

Wire Specifications for DC Power Terminal Block

Terminal	Wire Type		Dual-wire Gauge[1]	Single-wire Gauge	Terminal Screw Torque
400 and 600	Stranded or solid	Cu 90 °C (194 °F)	22…16 AWG	22…14 AWG	0.45…0.56 Nm (4…5 lb•in)
700 to 1500 logic module series A to D					0.23…0.34 Nm (2…3 lb•in)
700 to 1500 logic module series E and later					0.56 Nm (5 lb•in)

(1) Two-wire max. per terminal.

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External Power Supply For Non-insolated DC Terminals

TIP To identify non-isolated DC logic modules refer to the Logic Modules (700 to 1500 only) table on page 24.

TIP All 400 and 600 DC terminals contain non-isolated DC power supplies.

Use a single, 24V DC power supply to power each PanelView Plus device, such as cat. no. 2711P-RSACDIN. Using a separate, isolated and ungrounded source to power each terminal prevents ground loop currents from damaging the terminals.

The output on the power supply must be isolated from the input and not connected to earth/ground.

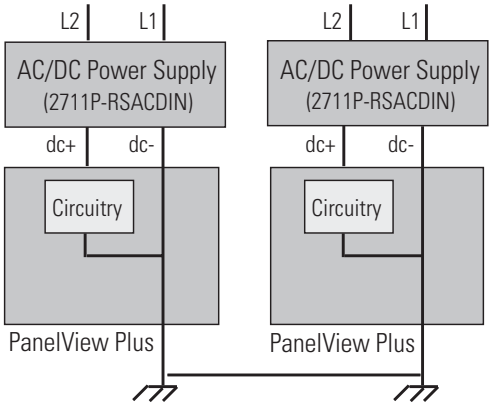
The non-isolated power supply does not provide galvanic isolation. A Class 2 or Safety Extra-Low Voltage (SELV) isolated power supply with a 24V DC nominal output voltage is required to power the terminal.

ATTENTION



Use a Class 2 or SELV supply as required by local wiring codes for your installation. The Class 2 and SELV power sources provide protection so that under normal and single-fault conditions, the voltage between the conductors, and between the conductors and functional earth or protective earth does not exceed a safe value.

Multiple AC Power Supplies to Power Multiple DC Terminals



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External Power for 700 to 1500 Isolated DC Terminals (2711P-R*xx*D*x* Logic Modules)

Use an SELV or PELV 24V DC power supply, such as cat. no. 2711P-RSACDIN, to power the isolated DC PanelView Plus terminal.

The isolated DC terminals may be powered by the same power source as other equipment, by a DC power bus.

ATTENTION



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

Earth/Ground Connection

PanelView Plus devices with a DC power input have an earth/ground terminal that you must connect to a low-impedance earth/ground.

IMPORTANT The earth/ground connection to ground is mandatory. This connection is required for noise immunity, reliability, and Electromagnetic Compliance (EMC) with the European Union (EU) EMC directive for CE-mark conformance and is required for safety by Underwriters Laboratory.

- The 700 to 1500 terminals have the earth/ground connection on the rear of the display module.
- The 400 and 600 terminals have the functional earth/ground connection on the power input terminal block.

The earth terminal requires a minimum wire gauge.

Earth Wire Specifications for DC Power

Terminal	Symbol	Wire Type		Wire Gauge	Terminal Screw Torque
400 and 600	⏚	Stranded or solid	Cu 90 °C (194 °F)	14…12 AWG	0.45…0.56 Nm (4…5 lb•in)
700 to1500	⏚ GND			14…10 AWG	1.13…1.36 Nm (10…12 lb•in)

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On most PanelView Plus DC terminals, the earth/ground terminal is internally connected to the DC- terminal within the product.

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.

The PanelView Plus terminals have isolated and nonisolated communication ports. Refer to Communication Port Isolation on page 169 for details.

IMPORTANT For more information, refer to Wiring and Grounding Guidelines for PanelView Plus Devices, publication 2711P-TD001.

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Connect DC Power

WARNING

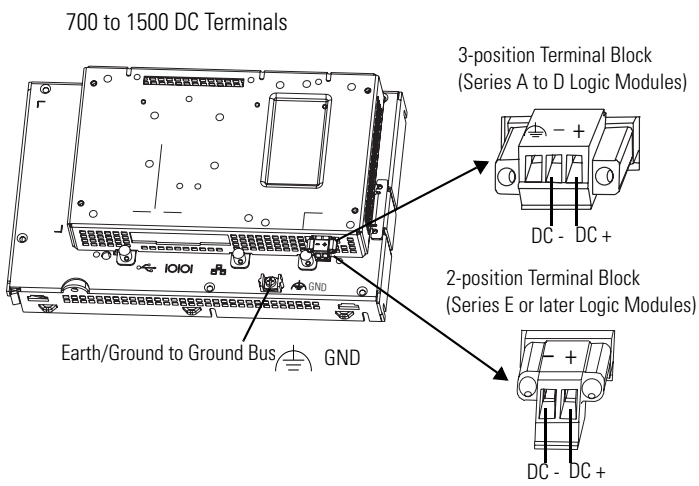


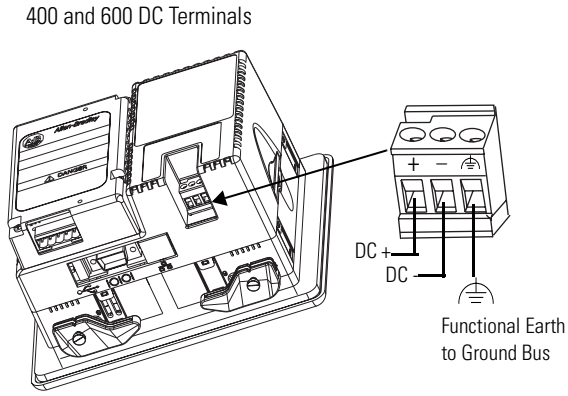
Explosion Hazard - Do not disconnect equipment unless power has been switched off and area is known to be nonhazardous.

Disconnect all power before installing or replacing components. Failure to disconnect power may 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. Secure the DC power wires to the terminal block.
   Follow the markings on terminal blocks and terminal for proper connections.
3. Secure the earth/ground wire.
   - On the 400 and 600 terminals, secure the earth/ground wire to the functional earth/ground terminal on the input power terminal block.
   - On the 700 to 1500 terminals, secure the earth/ground wire to the earth/ground terminal screw at the bottom of the display.





4. Apply 24V DC power to the terminal.

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AC Power Connections

PanelView Plus devices with an integrated AC power supply have these power ratings.

Terminal	Voltage Range	Frequency	V A
400 and 600	85…264V AC	47…63 Hz	60V A max
700 to 1500	85…264V AC	47…63 Hz	160V A max

The input power terminal block supports these wire sizes.

Wire Specifications for AC Power Terminal Block

Terminal	Wire Type		Dual-wire Gauge[1]	Single-wire Gauge	Terminal Screw Torque
400 and 600	Stranded or solid	Cu 90 °C (194 °F)	22…16 AWG	22…14 AWG	0.45…0.56 Nm (4…5 lb•in)
700 to 1500			22…16 AWG	22…14 AWG	0.56 Nm (5 lb•in)

(1) Two-wire max. per terminal

Protective Earth Connection

PanelView Plus devices with an AC power input have a protective earth/ground terminal that you must connect to a low-impedance earth/ground.

ATTENTION



The protective earth connection is required for both electrical safety and Electromagnetic Compliance (EMC) with the European Union (EU) EMC directive for CE-mark conformance.

The protective earth/ground connection is on the power input terminal block. The protective earth terminal requires a minimum wire gauge.

Protective Earth Wire Specifications for AC Power

Terminal	PE Symbol	Wire Type		Wire Gauge	Terminal Screw Torque
400 and 600		Stranded or solid	Cu 90 °C (194 °F)	14…12 AWG	0.45…0.56 Nm (4…5 lb•in)
700 to 1500				14…12 AWG	0.56 Nm (5 lb•in)

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Functional Earth Connection

The PanelView Plus 700 to 1500 devices with an AC power input also have a functional earth connection on the back of the display.

IMPORTANT On 700 to 1500 devices, you must connect both protective earth and functional earth to ground.

The functional earth terminal requires a minimum wire gauge.

Functional Earth Wire Specifications for AC Power

Terminal	FE Symbol	Wire Type		Wire Gauge	Terminal Screw Torque
700 to 1500	GND	Stranded or solid	Cu 90 °C (194 °F)	14…10 AWG	1.13…1.36 Nm (10…12 lb•in)

ATTENTION



The functional earth and protective earth connections to ground are mandatory. The functional earth is required for Electromagnetic Compliance (EMC) with the European Union (EU) EMC directive for CE-mark conformance. The protective earth/ground connection is required for safety and regulatory compliance.

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Connect AC 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 may result in electrical shock or damage to the terminal.

ATTENTION

Improper wiring of the power terminals may result in voltage at the communication connector shells.

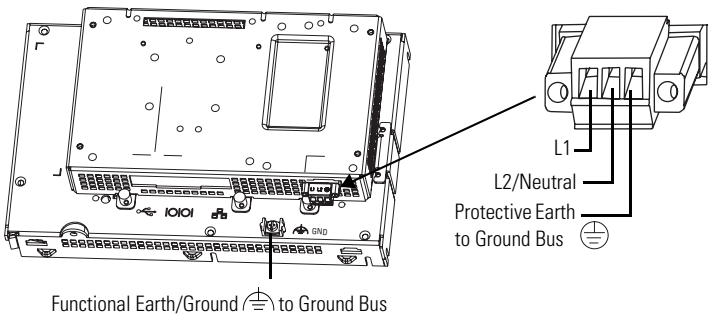
Do not apply power to the terminal until all wiring connections have been made. Failure to do so may result in electrical shock.

Follow these steps to connect the terminal to AC power.

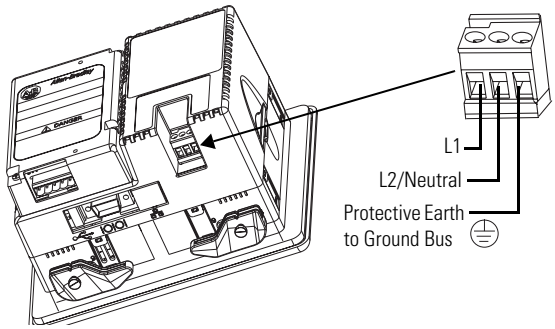
1. Verify that the terminal is not connected to a power source.
2. Secure the AC power wires to the terminal block.

   Follow the markings on terminal blocks and terminal for proper connections.
3. Secure the protective earth/ground wire to the marked position of the power input terminal block.
4. On the 700 to 1500 devices, also secure the functional earth/ground wire to the functional earth terminal screw on the back of the display to ground bus.

700 to 1500 AC Terminals



400 and 600 AC Terminals



5. Apply AC power to the terminal.

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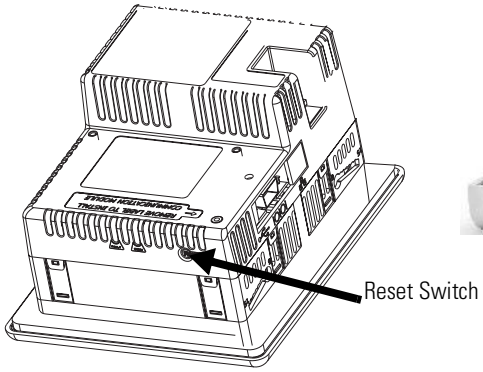
Reset the Terminals

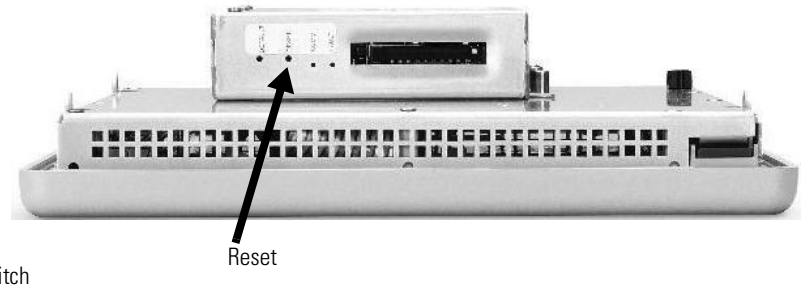
Use the reset switch to restart a terminal without having to disconnect and reapply power. After a reset, the terminal performs a series of startup tests and then either:

- runs the .MER application loaded in the terminal.
- opens the desktop on CE terminals only.
- enters Configuration mode.

The action that occurs depends on the startup options configured for your terminal.

Refer to Chapter 9, Troubleshoot the System, for a list of startup information and error messages.





- On 400 to 600 terminals, press the reset switch with your finger or a nonconductive object.
- On 700 to 1500 terminals, insert a thin, nonconductive probe into the hole marked reset and press the switch.

ATTENTION



Use a nonconductive object to press the reset or default switch. Do not use a conducting object such as a paper clip or you may damage the terminal. Do not use the tip of a pencil; graphite may damage the terminal.

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Configuration Mode

Chapter Objectives

This chapter shows how to use the Configuration mode of your PanelView Plus terminal to:

- perform data entry and navigation.
- load an application.
- run an application.
- modify application settings.
- modify terminal settings.
- configure startup shortcuts for PanelView Plus CE devices.

Access Configuration Mode

Your PanelView Plus device has onboard software, FactoryTalk View ME Station, to perform and configure terminal operations. When you reset or start the terminal, you automatically enter Configuration mode, unless your .MER application is automatically set to run on startup.

To access Configuration mode from a running application, press the Goto Configuration Mode button. This button is added to the application screen in FactoryTalk View Studio. The application stops running but is still loaded.

IMPORTANT To access Configuration mode from a running application, you must add a Goto Configuration Mode button to an application screen.

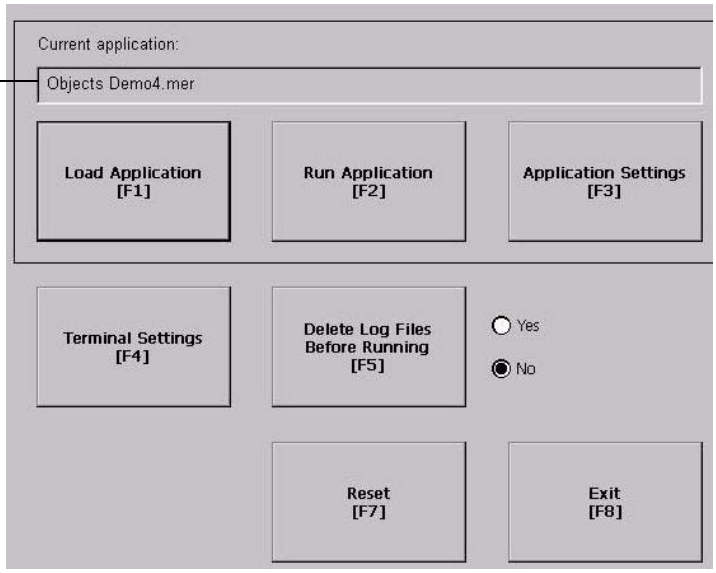
On PanelView Plus CE devices, you can enter Configuration mode from the Start menu or the desktop.

- Select Start>Programs>Rockwell Software>FactoryTalk View>FactoryTalkView ME Station.
- Select the FactoryTalk View ME Station icon on the desktop.

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Configuration Mode Main Screen

Name of application that is currently loaded. Only appears if application is loaded.



Terminal Operation	Description
Load Application (F1)	Opens another screen where you can select an application to load. Once loaded, the application name will appear under Current Application.
Run Application (F2)	Runs the .mer application displayed under Current Application. An application must be loaded before you can run it.
Application Settings (F3)	Opens a menu of application-specific configuration settings.
Terminal Settings (F4)	Opens a menu of options to configure non-application, specific terminal settings for the PanelView Plus device.
Delete Log Files Before Running (F5)	Toggles between Yes and No. If you select Yes, all data log files, alarm history and alarm status file will be deleted before the application is run. If you select No, log files are not deleted first.
Reset (F7)	Resets the terminal. The action that occurs on startup for PanelView Plus CE devices depends on whether you defined shortcut paths in the Windows Startup folder. On other PanelView Plus devices, the action on startup depends on configured startup options.
Exit (F8)	Exits Configuration mode.

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Navigation Buttons

Screen buttons are used for data entry and navigation.

- On touch-screen terminals, tap the button with your finger or stylus.
- On keypad terminals, select the function key listed on the button, or in some cases, the corresponding key on the keypad.
- If a mouse is attached, click a button.

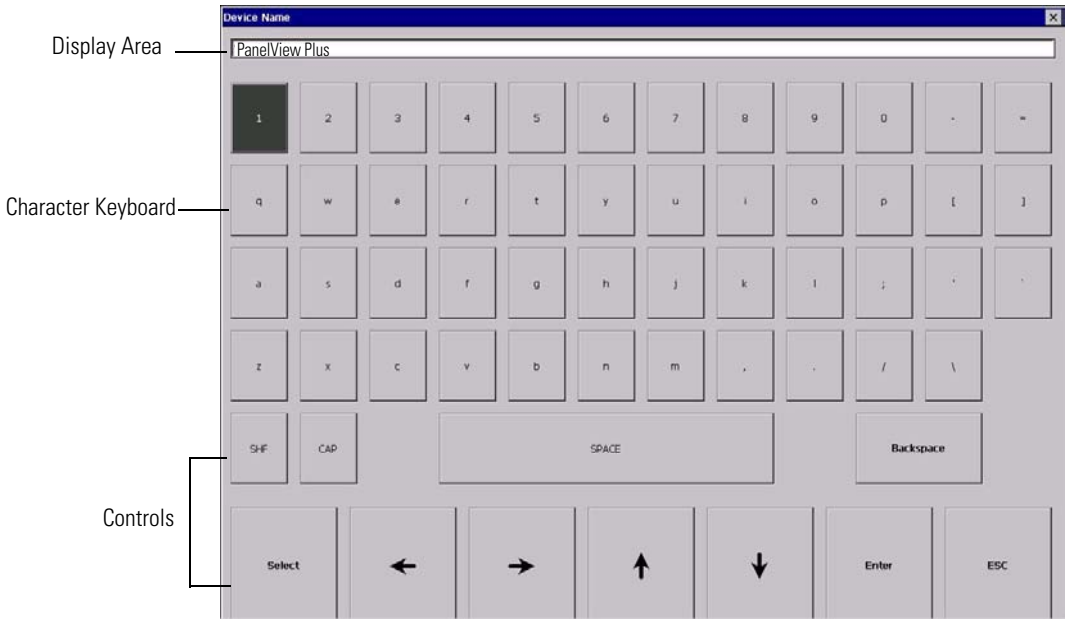
In addition to operation specific buttons, most screens have a combination of these buttons.

Navigation Buttons	Description
Close [F8]	Returns to the previous screen.
OK [F7]	Accepts modified values and returns to previous screen.
Cancel [F8]	Cancels the current operation without saving any changes.
▲ ▼	Moves highlight up or down a list.
↵	Selects a highlighted screen or item from a list.

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Enter or Edit Data

Many screens have buttons that access fields where you must enter or edit data. When you press the button or function key, the input panel opens ready for you to enter data. If a field is restricted to a numeric value, only the 0…9 keys will be enabled. If the value is an IP address, the 0…9 and decimal point keys will be enabled. All other buttons will be disabled.



Input Panel Controls	Function
SHF	Switches keys between their shifted and unshifted state. The initial default is shifted.
CAPS	Switches keys between lowercase and uppercase characters. The initial default is lowercase.
SPACE	Enters a space between characters in the Display Area.
Backspace	Deletes the previous character (to the left of the cursor) in the Display Area.
Select	Selects a character and enters it in the Display Area.
Right, Left, Up, Down Arrow Keys	Selects the character to the right, left, above or below the currently selected character.
Enter	Accepts the entered characters and returns to the previous screen
ESC	Cancels the current operation and returns to the previous screen.

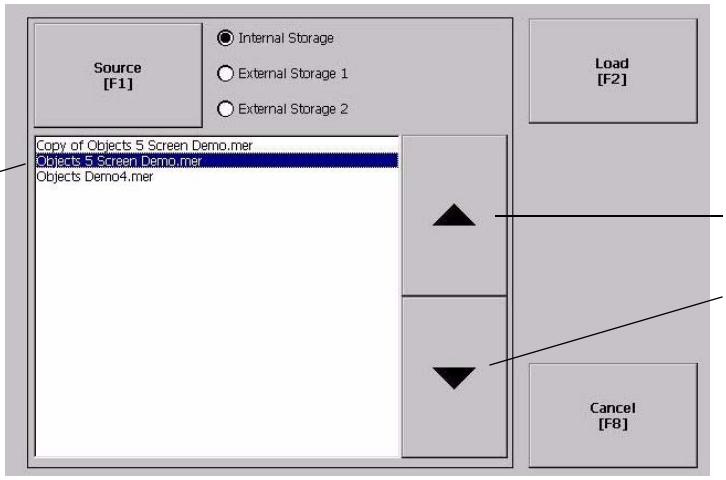
Follow these steps to enter characters in the display area.

1. Select a character on the character keyboard.
   - On a touch-screen terminal, tap or press a key.
   - On a keypad terminal, use the arrow keys on the keypad to select a key.
   - If a mouse is attached, click a key.
2. Press the Select button to copy the character to the display area.
3. Press Enter when done to exit the input panel.

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Load an Application

You can load a FactoryTalk View ME .MER application from the internal CompactFlash in the terminal or an external CompactFlash card.



Follows these steps to load an application.

1. Select Load Application from the main screen.

2. Press the Source button to select the storage location of the application file you want to load.
   - Internal Storage - the internal CompactFlash in the terminal.
   - External Storage 1 - the external CompactFlash card loaded in the card slot of the terminal.
   - External Storage 2 - for future use.

   TIP FactoryTalk View ME software only recognizes files in the \Rockwell Software\RSViewME\Runtime\ folder.

3. Select an .MER file from the list by using the up and down cursor keys.

4. Press the Load button to load the selected application.

   You will be asked if you want to replace the terminal's communication configuration with the configuration in the application.

5. Select Yes or No.

   If you select Yes, any changes to the device addresses or driver properties in the RSLinx Communications screen will be lost.

The name of the currently loaded application will appear at the top of the main configuration screen.

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Run an Application

After loading an .MER application, you can run the application. To load an application, select the Run Application button on the main screen.

Log files are generated by the application. To delete the log files before running an application, select the Delete Log Files Before Running button on the main screen.

Application Settings

You can show device shortcuts defined for the loaded .MER application. For example, your .MER application might have SLC defined as a device shortcut name for the SLC 5/05 controller. Device shortcuts are read-only and cannot be edited. To view device shortcuts, select the Application Settings button from the main screen.

Terminal Settings

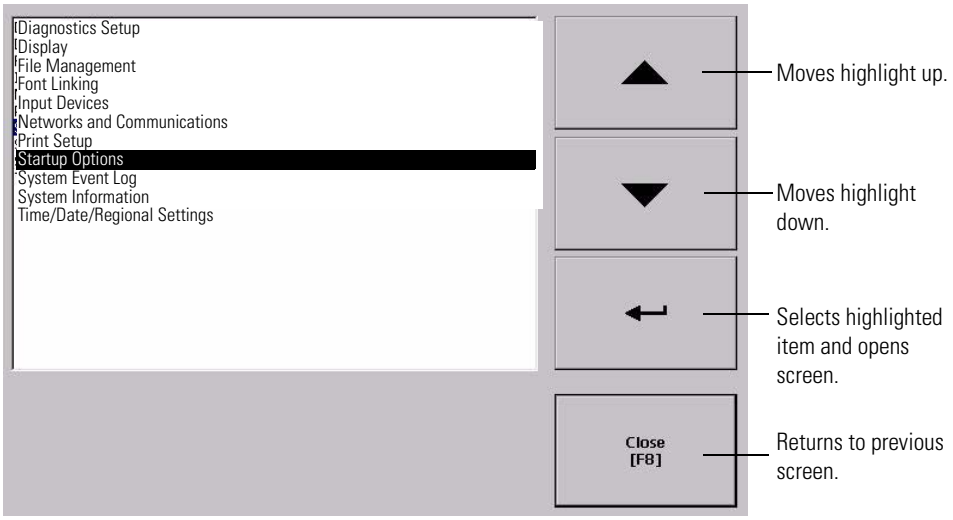
You can modify settings on the terminal that are not specific to the application.

Terminal Settings	Description
Diagnostic	Forwards diagnostic messages form a remote log destination to a computer running diagnostics.
Display	Shows the temperature of the display, sets the intensity of the backlight, and enables/disables the screen saver.
File Management	Copies or deletes application files or font files from a storage location.
Font Linking	Links a font file to a base font loaded on the terminal.
Input Devices	Configures settings for the keypad, touch screen, or attached keyboard and mouse.
Networks and Communications	Configures network connections and communication settings specific to the application (DHPlus, DH-485, remote I/O, ControlNet, DeviceNet, serial).
Print Setup	Configures settings for printing displays, alarm messages, and diagnostics messages generated by the application.
Startup Options	Specifies whether the terminal starts up in configure or run mode. Also lets you enable/disable tests to run on the terminal at startup.
System Event Log	Displays a list of system events currently logged by the terminal.
System Information	Displays power, temperature, battery and memory details for the terminal. Also shows the firmware number for FactoryTalk View ME software and technical support information.
Time/Date/Regional Settings	Sets the date, time, language, and numeric format used by the terminal and applications.

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Follow these steps to access terminal settings and select a function.

1. Select Terminal Settings from the main screen.



2. Highlight an option by using the up and down cursor buttons.
   - On touch screen terminals, press the buttons.
   - On keypad terminals, press a key on the keypad or the corresponding function key.

3. Press the Enter key to access the highlighted function.

Configure Communication

You configure communication for your application and controller by using RSLinx Enterprise software.

- Access KEPServer Serial Port ID's.
- Edit or view the driver settings for the communication protocol used by your .MER application.
- Edit the device address of the controller on the network.

KEPServer Serial Port ID's

To access the KEPServer Serial Port ID's screen, you must have KEPServer Enterprise installed on your terminal. Otherwise, you will get an error message when accessing this screen. If you plan on using KEPServer Enterprise and serial communication, you must specify which COM port to use.

To access the KEPServer Serial Port ID screen, select Terminal Settings>Networks and Communications>KEPServer Serial Port ID's.

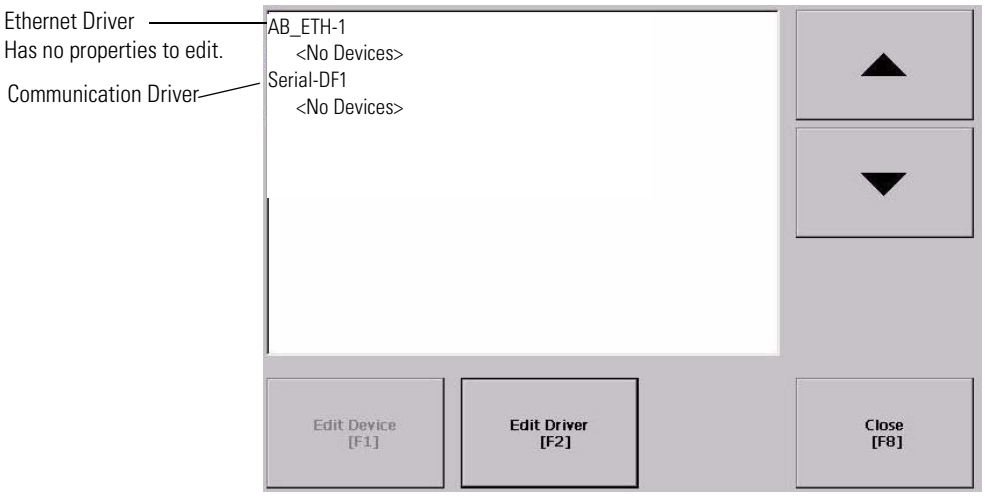
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Configure Communication Properties

Follow these steps to configure driver settings for the communication protocol used by your application.

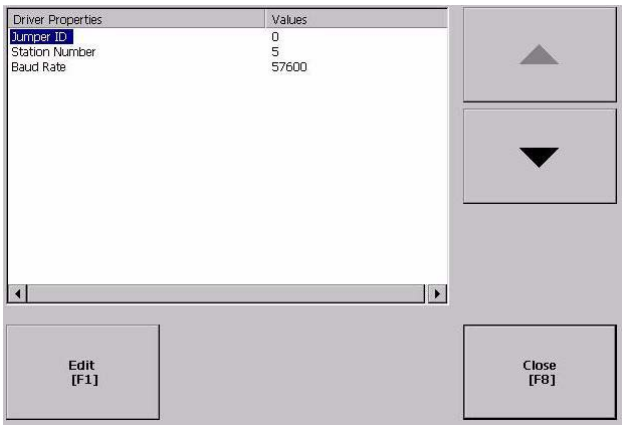
1. Select Terminal Settings>Networks and Communications>RSLinx Enterprise Communications.

   You see a tree view of installed communication cards and network configurations.



2. Select the communication card installed on your terminal.

3. Press the Edit Driver button to view the current properties for the communication driver.



4. Select the property you want to modify, then press the Edit button.

5. Modify the setting and then press the Enter button.

   You return to the previous screen with the newly entered data.

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DHPlus Properties

Field	Description	Valid Values
Jumper ID	Identifies the communication card if multiple cards are installed on terminal.	0…3
Station Number	The unique address of the terminal on the DHPlus network.	0…77 (octal)
Baud Rate	The communication rate of the DHPlus network.	57,600 (default) 115,200 230,400

DH-485 Properties

Field	Description	Valid Values
Jumper ID	Identifies the communication card if multiple cards are installed on terminal.	0…3
Station Number	The unique station number of the terminal on the DH-485 network.	0…31 (decimal)
Baud Rate	The communication rate of the DH-485 network.	9600 19,200
MaxStationNumber	The maximum station number on the DH-485 network. The value must be greater than or equal to the Station Number.	0…31 (decimal)

Remote I/O Properties

Field	Description	Valid Values
Jumper ID	Identifies the communication card if multiple cards are installed on terminal.	0…3
Baud Rate	The communication rate of the remote I/O network.	57,600 (default) 115,200 230,400

ControlNet Properties

Field	Description	Valid Values
Device ID	Unique address of the PanelView Plus terminal on the ControlNet network.	1…99

DeviceNet Properties

Field	Description	Valid Values
MacID	Unique address of the terminal on the DeviceNet network.	0…63
Baud Rate	The communication rate at which the DeviceNet driver communicates.	125 Kbps (default) 250 Kbps 500 Kbps

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Serial Properties

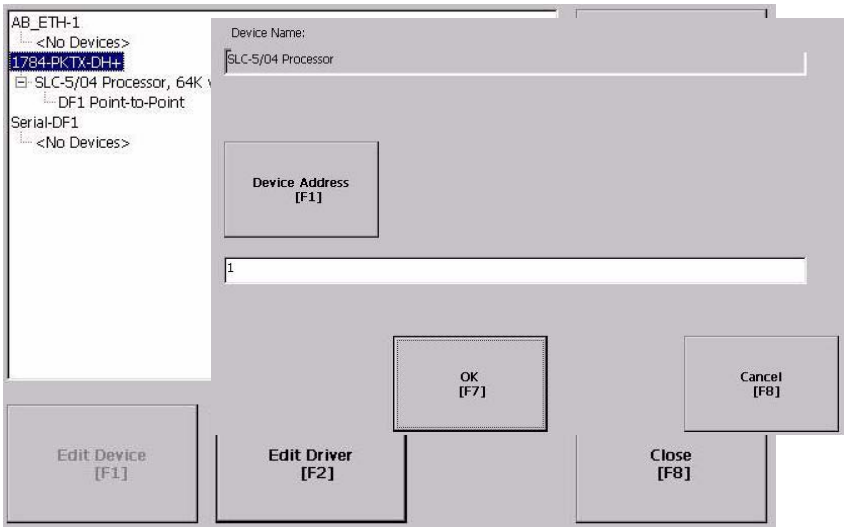
Field	Description	Valid Values
Device	The serial device your terminal is connected to.	PLC_CH0 KF2 SLC_CH0 KF3 KFC KFC15 AC_CH0
Error Check	Type of error checking used. Error checking is automatically configured if Use Auto Config is set to Yes.	BCC, CRC
Parity	Type of parity used. The parity is automatically configured if Use Auto Config is set to Yes.	None, Odd, Even
Stop Bits	Number of stop bits used.	1 or 2
Ack Timeout	Ack/Poll timeout value in ms.	20…60,000 ms
Max Retries	Maximum number of retries before the serial driver fails.	0…255
Station	Station number based on a specific device.	PLC_CH0 0…77 (octal) KF2 0…77 (octal) SLC_CH0 0…31 KF3 0…31 KFC 1…99 KFC15 1…99 AC_CH0 0…255
Baud Rate	Data rate at which serial driver communicates. The baud rate is automatically configured if Use Auto Config is set to Yes.	110 300 600 1200 4800 9600 19,200 38,400 115,200
Use Auto Config	Automatically or manually configures the baud rate, parity, and error checking parameters.	Yes (auto configure) No (manual configure)
Com Port	Communication port used on the terminal.	1 (COM1) 2 (COM2)

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Configure the Controller Address

Follow these steps to edit the device address of the logic controller.

1. From the RSLinx Configuration screen, select a device node.
2. Press the Edit Device button to view the device name and current address of the logic controller.



3. Press the Device Address button to modify the address.

   The input panel opens with the current address.

4. Use the Input Panel to modify the address and then press the Enter button.

   You return to the previous screen with the new address.

5. Press OK.

IMPORTANT Modified settings do not take effect until the terminal is restarted.

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Configure Network Information

You can configure network information for your terminal.

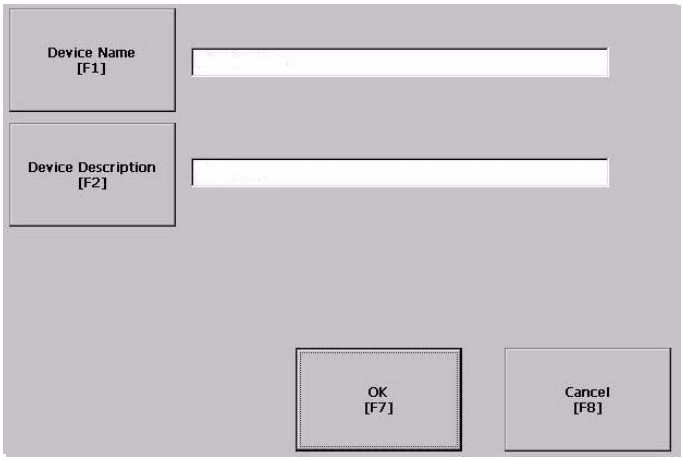
- Device name to identify terminal on network
- IP address of terminal on network
- Username and password to access network resources

Define a Device Name for the Terminal

You can configure a device name and description to identify your your terminal on the network.

Follow these steps to enter a device name and description for your terminal.

1. Select Terminal Settings>Networks and Communications>Network Connections>Device Name.



2. Press the Device Name button to enter or edit the device name.

3. Press the Device Description button to enter or edit the description for the device.

Field	Description	Valid Values
Device Name (1)	Name that identifies the terminal to other computers on the network.	1…15 characters A leading character in the range of a through z or A through Z. Remaining characters in the range of a through z, A through Z, 0…9, or - (hyphen)
Device Description	Provides a description of the terminal.	50 characters max

(1) Check with your network administrator to determine a valid device name.

4. Press OK.

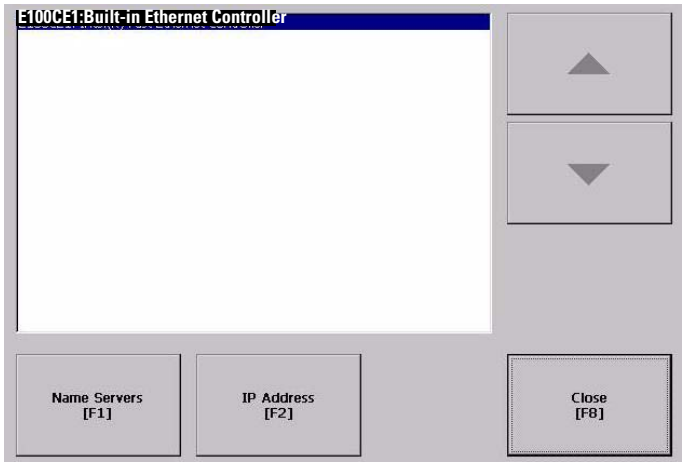
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Define an Ethernet IP Address

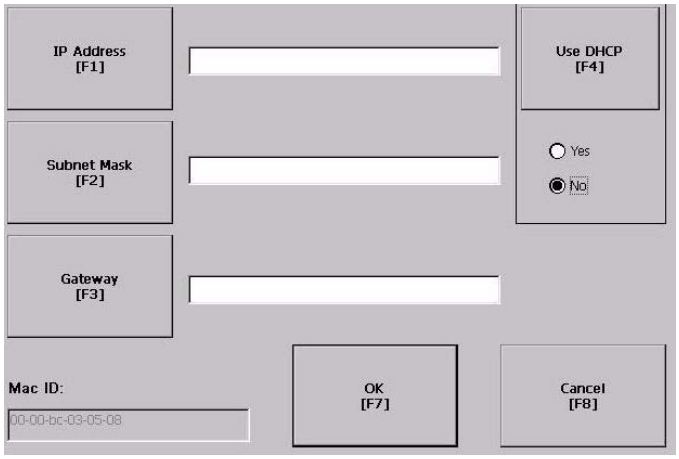
Some networks automatically assign IP addresses to Ethernet devices if DHCP is enabled. If DHCP is not enabled, you can manually enter an IP address for the terminal.

Follow these steps to view or enter an IP address for your terminal.

1. Select Terminal Settings>Networks and Communications>Network Connections>Network Adapters.



2. Press the IP Address button to view or modify the IP address.



3. Press the DHCP button to enable or disable DHCP assignment of addresses.

4. Press the IP address, Subnet Mask, and Gateway buttons, then enter the appropriate information.

5. Press OK when done.

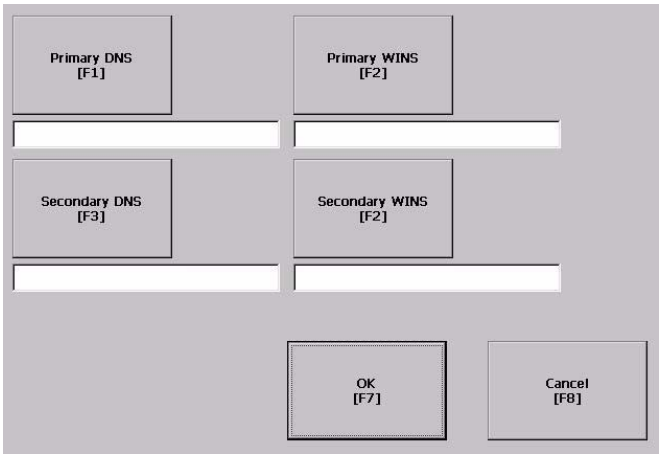
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Field	Description	Valid Values
Use DHCP	Enables or disables Dynamic Host Configuration Protocol (DHCP) settings. DHCP automatically allocates network devices and configurations to newly attached devices on the network. If DHCP is set to Yes, the terminal is automatically assigned an IP address, Subnet Mask, and Gateway. The fields are disabled. If DHCP is set to No, you can enter the IP address, Subnet Mask, and Gateway address.	Yes (default) No
IP Address	A unique address identifying the terminal on the Ethernet network.	xxx.xxx.xxx.xxx 000.000.000.000 (default) Range of values for the first set of decimal numbers is 1…255 unless all fields are set to 000. The range of values for the last three sets of decimal numbers is 0…255.
Subnet Mask	Address must be identical to the server subnet mask.	xxx.xxx.xxx.xxx
Gateway	Optional Gateway address.	xxx.xxx.xxx.xxx
Mac ID	Read-only field.	

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Define Name Server Addresses

You can define name server addresses for the EtherNet/IP network adapter. These addresses are automatically assigned if DHCP is enabled for the network adapter.



Follow these steps to define name server address.

1. Select Terminal Settings>Networks and Communications>Network Connections>Network Adapters.
2. Press a button to enter a name server address.

Field	Description	Valid Values
Primary DNS	The address of the primary DNS resolver.	xxx.xxx.xxx.xxx
Secondary DNS	The address of the secondary DNS resolver.	xxx.xxx.xxx.xxx
Primary WINS	The address of the primary WINS resolver.	xxx.xxx.xxx.xxx
Secondary WINS	The address of the secondary WINS resolver.	xxx.xxx.xxx.xxx

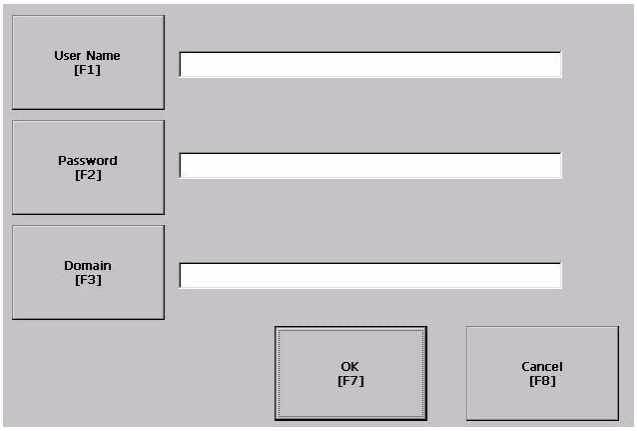
3. Press OK when done.

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Authorize Terminal to Access Network Resources

The terminal can access network resources with proper identification. A user name, password, and domain must be provided by your network administrator.

1. Select Terminal Settings>Network and Communications>Network Connections>Network Identification.



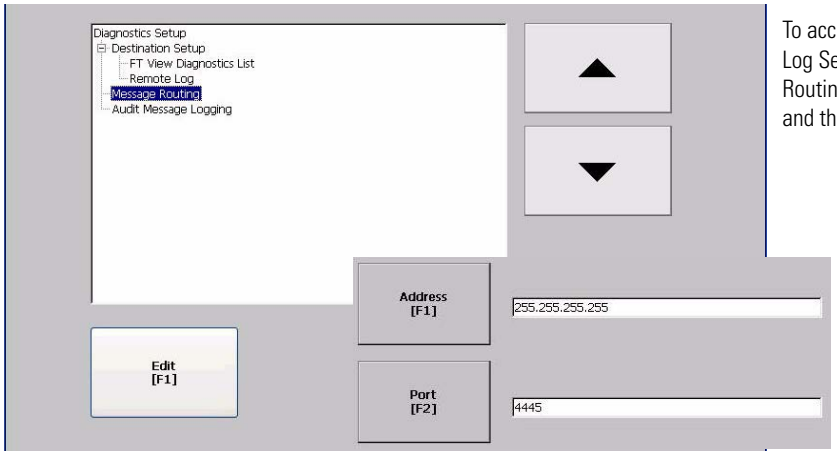
2. Press the user name, password and domain buttons and enter the information provided by your network administrator.

Field	Description	Valid Values
User Name	Identifies the user to the network.	70 characters max
Password	Characters that gain access to network along with the user name.	No character limitation
Domain Name	Provided by network administrator.	15 characters max

3. Press OK when done.

Configure Diagnostics

You can configure diagnostics for the current computer. To access the diagnostic screen, select Terminal Settings>Diagnostic Setup from the main screen. The screen shows a tree view of diagnostic nodes.



To access the Remote Log Setup or Message Routing, select the node and then the Edit button.

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Remote Log Destination

The Remote Log Destination forwards messages that it receives to a Windows 2000/XP computer running diagnostics. The location is determined by the IP address and port number.

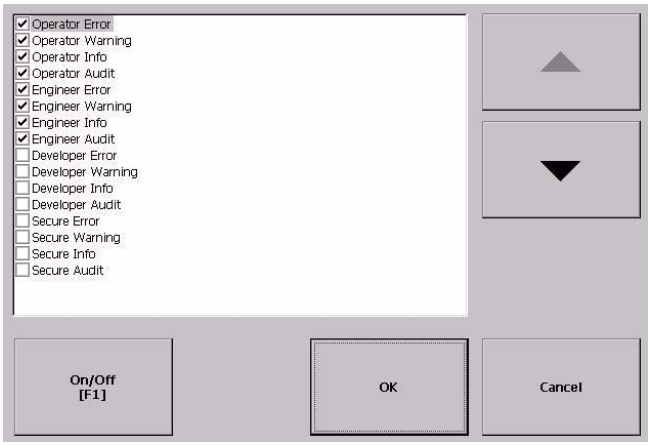
Field	Description	Valid Values
Address	Address of the remote Windows 2000/XP computer.	xxx.xxx.xxx.xxx
Port	The port used to communicate with the remote Windows 2000/XP computer.	4445 (default)

Message Routing

The Message Routing screen lets you access these screens:

- Remote Log
- FactoryTalk View Diagnostics List

Each of the above screens shows a list of messages that can be sent to that destination. The list shows the On/Off status of each message type. Use the On/Off button to turn a message type on or off. A message type is enabled if it has a checked box.



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Manage Files on the Terminal

The terminal provides operations for managing files that are stored on the terminal.

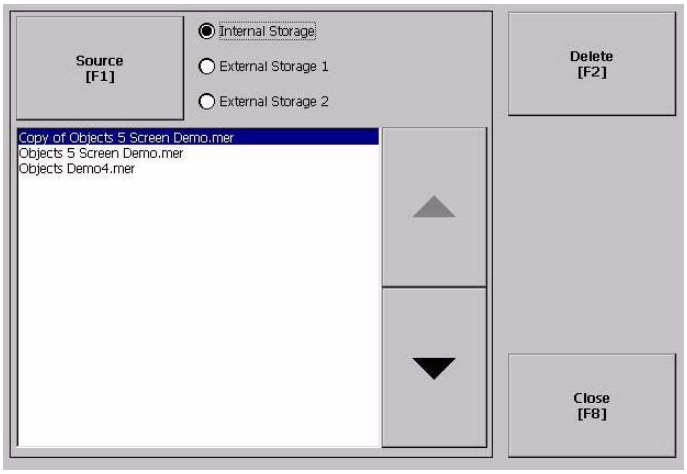
- Delete application .MER files, font files, or log files that reside in a storage location on the terminal.
- Copy application .MER files or font files from one storage location to another.

Delete an Application File or a Font File

The procedure for deleting an application file or a font file from the terminal is the same except for the type of file you are deleting.

1. Select Terminal Settings>File Management>Delete Files>Delete Applications or Delete Fonts.

2. Press the Source button to choose the storage location of the application or font file you want to delete.
   - Internal Storage - the internal CompactFlash in the terminal.
   - External Storage 1 - the external CompactFlash card loaded in the card slot of the terminal.
   - External Storage 2 - for future use.



3. Select a file from the list.
4. Press the Delete button.
5. Select Yes or No when asked if you want to delete the selected application or font file from the storage location.

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Delete Log Files from Terminal

You can delete log files, alarm history files, and alarm status files from the System Default location on the terminal.

1. Select Terminal Settings>File Management>Delete Files>Delete Log Files.

   You are asked to confirm the deletion of the files.

   Do you want to delete all of the FactoryTalk View ME Station Log Files?

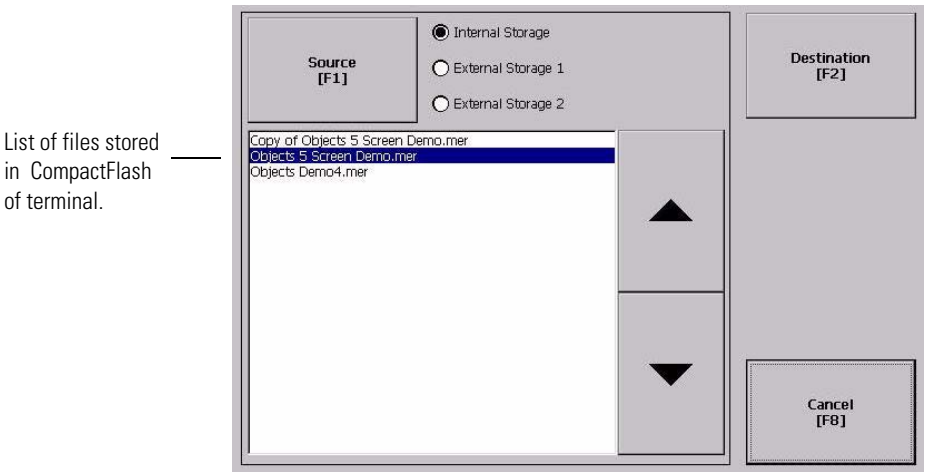
2. Select Yes or No.

   Log files not located in the System Default location will not be deleted.

Copy an Application File or Font File

The procedure for copying an application .MER file or a font file from one storage location on the terminal to another is the same.

1. Select Terminal Settings>File Management>Copy Files>Copy Applications or Copy Fonts.

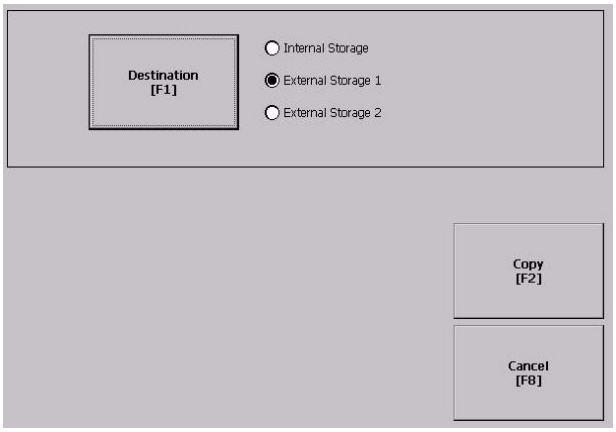


2. Press the Source button to choose the location of the application or font file you want to copy.
   - Internal Storage - the internal CompactFlash in the terminal.
   - External Storage 1 - the external CompactFlash card loaded in the card slot of the terminal.
   - External Storage 2 - for future use.

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3. Select a file from the storage location.

4. Press the Destination button on the same screen.



5. Press the Destination button to choose the storage location where you want to copy the application or font file.

   The destination must be different than the source location.

   - Internal Storage - the internal CompactFlash in the terminal.
   - External Storage 1 - the external CompactFlash card loaded in the card slot of the terminal.
   - External Storage 2 - for future use.

6. Press the Copy button to copy the selected application or font file to the selected destination.

   If the file exists, you will receive a warning and will be asked if you want to overwrite the existing application.

7. Select Yes or No.

TIP FactoryTalk View ME software looks for .MER files in the \Rockwell Software\RSViewME\Runtime folder and font files in the \Rockwell Software\RSViewME\Fonts\ folder.

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Modify Display Settings

You can access and modify these display settings for your terminal:

- View display temperature
- Adjust display contrast
- Adjust display intensity
- Configure the screen saver
- Enable or disable the screen cursor

View the Display Temperature

To view the current temperature of the display, select Terminal Settings>Display>Display Temperature.



The PanelView Plus 600 to 1500 terminals have a cold-cathode fluorescent lamp (CCFL) backlight. This backlight requires temperature control when the internal temperature of the product is below 10 °C (50 °F) or above 60 °C (140 °F). The terminal monitors low and high temperature conditions.

- If the internal temperature of the product is below 10 °C (50 °F), the backlight is set to overdrive or the full-rated current setting for at least five minutes.
- If the internal temperature is at or above 60 °C (50 °F), the backlight is set to underdrive; 40% or less of full brightness. This reduces heat generation from the backlight.

Temperature monitoring begins when the terminal powers on, or when the backlight turns on, for example, exiting Screen Saver mode. The temperature control affects only display intensity; it does not restrict the use or operation of the terminal.

When a low or high temperature condition is detected, an error is sent to the system event log. If the temperature control is not functioning, a noncritical error is sent to the system event log but the terminal continues to operate normally.

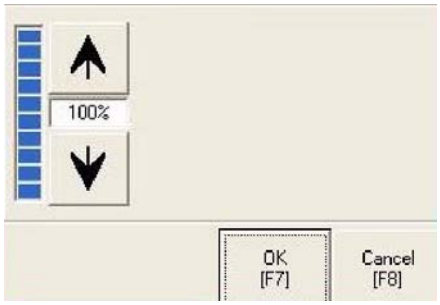
TIP The CCFL backlight temperature control takes precedence over the application Backlight Settings.

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Adjust the Display Contrast

You can view or modify the display contrast for PanelView 400 and 600 grayscale terminals. Displays are shipped with the contrast level set at 50%, which is the optimum setting.

1. Select Terminal Settings>Display>Display Contrast.



2. Press the up an down cursor buttons to adjust the contrast.

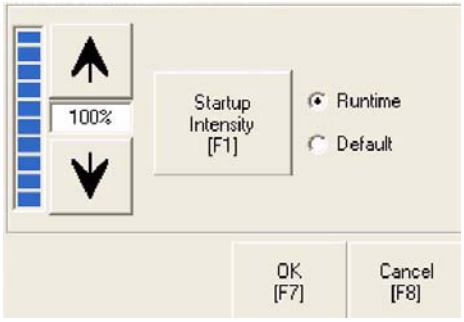
   The current contrast level is shown as a percentage. The change is not permanent until you press OK.

3. Press OK when done.

Adjust the Display Intensity

You can view or modify the intensity of the terminal backlight. You can use the default intensity of 100% or you can set the intensity for runtime operations.

1. Select Terminal Settings>Display>Display Intensity.



2. Press the Startup Intensity button to switch between the Default intensity and the Runtime intensity.
   - If you choose Runtime, the startup screens will use the runtime intensity.
   - If you choose Default, the startup screens will use the default setting of 100%

3. Increase or decrease the intensity for runtime operations, by pressing the up or down arrow keys.

   Intensity changes are not permanent until you press OK.

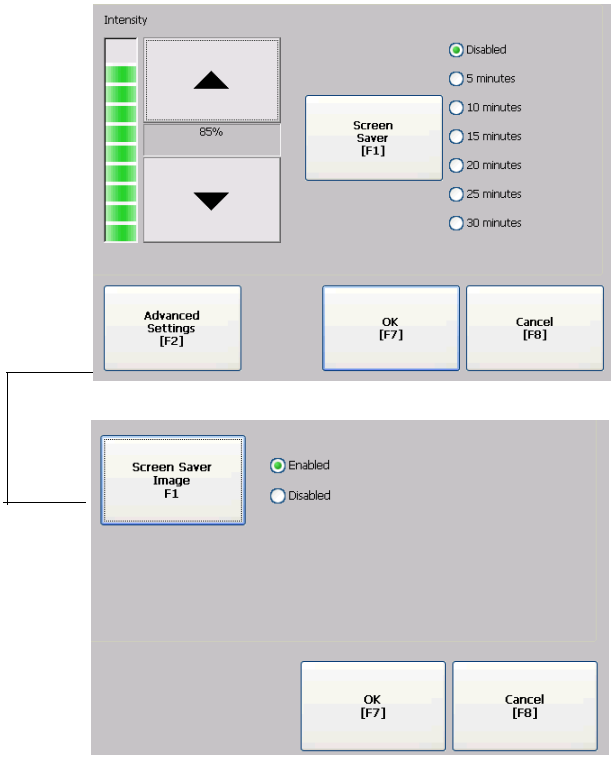
4. Press OK when done.

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Configure the Screen Saver

The terminal screen saver activates after an idle period using a specific intensity. You can adjust the idle timeout and intensity, disable the screen saver, and enable or disable the screen saver bitmap.

1. Select Terminal Settings>Display>Screen Saver.



2. Press the Screen Saver button to select an idle timeout for activating the screen saver.

   To disable the screen saver, select the Disabled option.

3. Increase or decrease the brightness intensity of the screen saver by pressing the up and down cursor buttons.

4. Press the Advanced Settings button to access the bitmap option.
   - Select the Screen Saver Image button to enable or disable the screen saver bitmap.
   - Press OK to return to the previous.

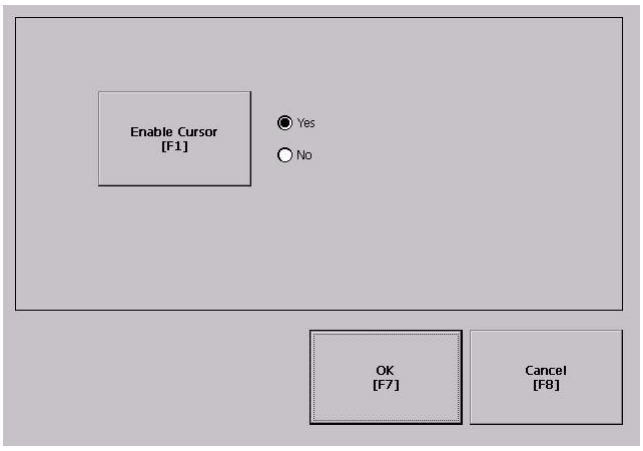
5. Press OK to exit and return to the terminal settings.

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Enable or Disable the Screen Cursor

The terminal has a screen cursor that you can enable or disable.

1. Select Terminal Settings>Display>Cursor.



2. Press the Enable Cursor button to enable or disable the cursor.
3. Press OK to exit and return to Terminal Settings.

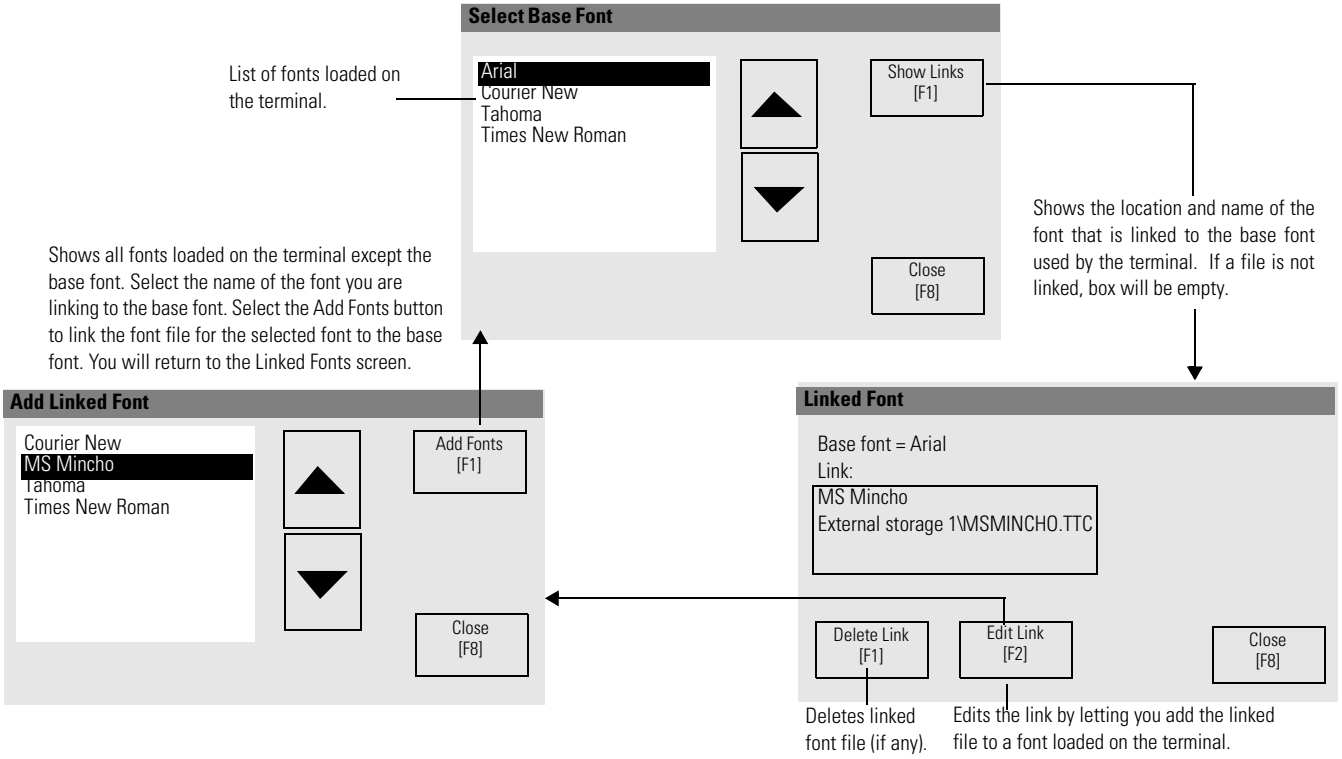
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Font Linking

Terminal Settings
↓
Font Linking

Font linking lets you run a translated application on the terminal by linking a font file to the base font (for example, linking a Chinese font file to the base font Arial).

For more details on preinstalled terminal fonts and additional fonts available for downloading, see Appendix C.



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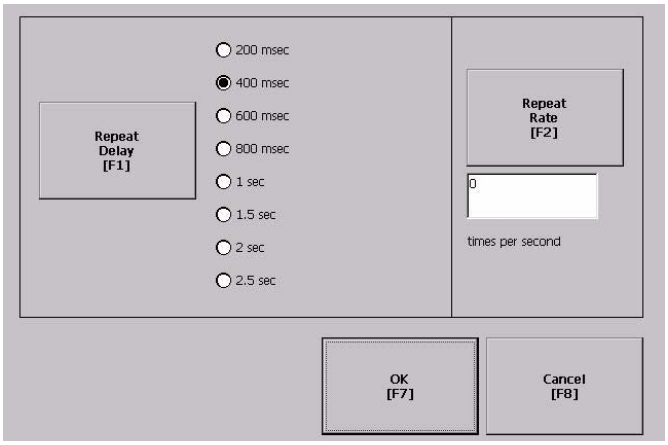
Configure Keypad, Keyboard, or Mouse

You can configure input devices used with your terminal, including the keyboard, keypad, mouse, and attached keyboard.

Configure Keyboard Settings

You can adjust settings for the keys on the terminal keypad or for keys on an attached keyboard.

1. Select Terminal Settings>Input Devices>Keyboard.



2. Press the Repeat Rate button to specify the number of times a key is repeated per second when you hold a key down.

   Valid values for the keypad are 0 and 2…30. The keyboard is device dependent but typical values are the same.

3. Press the Repeat Delay button to select the amount of time that elapses per second before a key is repeated.

   Values are device dependent. Unsupported values are dimmed.

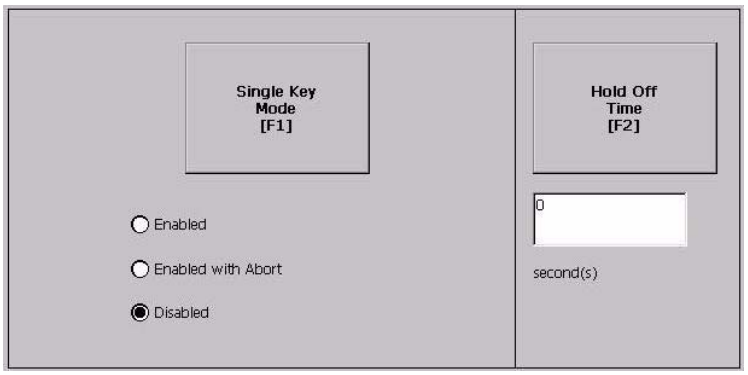
4. Press OK when done.

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Configure Keypad Settings for the Terminal

You can restrict multiple or simultaneous key presses on the keypad of your terminal.

1. Select Terminal Settings>Input Devices>Keypad.



2. Press the Single Key Mode button to select a key option.
   - If Enabled, any programmable key that is pressed inhibits all keys until the programmable key is pressed again. This includes the Alt, Ctrl, Shift keys.
   - If Enabled with Abort, any secondary key press will terminate the initial key press immediately.
   - If Disabled, there are no restrictions on key presses. This is the default.

IMPORTANT The keypad cannot produce Home, End, Page Up or Page Down when Single Key mode is enabled.

3. Press the Hold Off Time button to enter the length of time, in seconds, to ignore multiple presses of the same key.

4. Press OK when done.

Configure the Sensitivity of the Mouse

You can set and test the sensitivity for both the speed and physical distance between mouse clicks. The process is identical to setting the double-tap sensitivity for the touch screen.

To set the mouse sensitivity, select Terminal Settings>Input Devices>Mouse.

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Configure the Touch Screen

You can configure these operations for terminals with a touch screen:

- Calibrate the touch screen
- Enable or disable Cursor
- Set the double-tap sensitivity

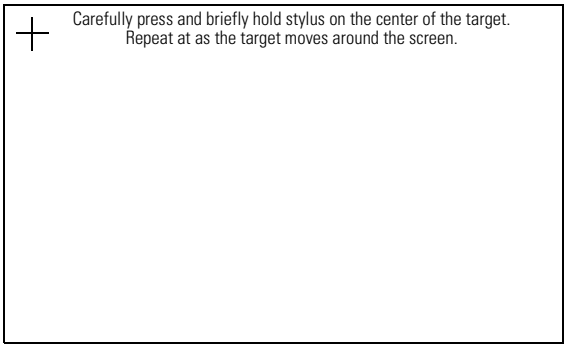
Calibrate the Touch-screen

IMPORTANT Use a plastic stylus device with a minimum tip radius of 1.3 mm (0.051 in.) to prevent damage to the touch screen.

Follow these steps to calibrate the touch screen.

1. Select Terminal Settings>Input Devices>Touch Screen>Calibration.

   The screen for calibrating the touch screen appears.



2. Touch the center of the target (+) each of the four times it appears on the screen.

   When the calibration is complete, you will see this message.

   Tap the screen to register saved data. Wait for 30 seconds to cancel saved data and keep the current settings.

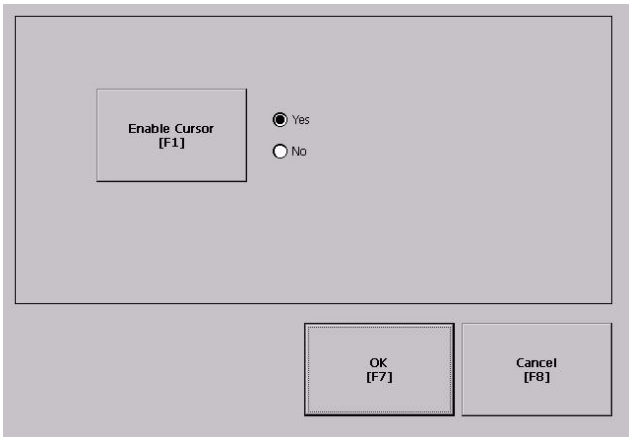
3. Tap the screen to save the data or wait 30 seconds to cancel the saved data, retaining the current settings.

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Enable or Disable the Cursor on Touch Screens

You can enable or disable the cursor on terminals with a touch screen. Disabling the cursor will not disable the mouse.

1. Select Terminal Settings>Input Devices>Touch Screen>Cursor.



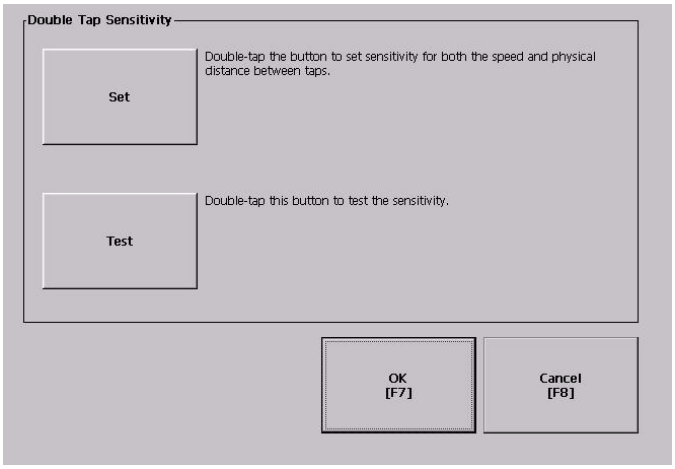
2. Press the Enable Cursor button to enable or disable the cursor.
3. Press OK.

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Set the Double-tap Sensitivity

You can set and test the sensitivity for both the speed and physical distance between touch-screen presses. The process is identical to setting the double-tap sensitivity for the mouse.

1. Select Terminal Settings>Input Devices>Touch Screen>Double-tap Sensitivity.



2. Double-tap the Set button to set the sensitivity of touch-screen presses.

3. Double-tap the Test button to test the sensitivity of touch-screen presses.

   If you double-tap the test button with the time set using the Set button, the Test button will reverse its foreground and background colors.

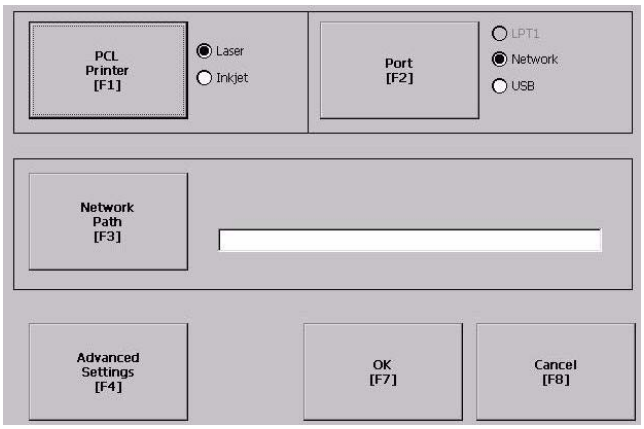
4. Press OK when done.

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Configure Print Options

You can configure settings for printing displays, alarm messages, or diagnostic messages from FactoryTalk View ME .MER applications. The general setup for printing displays and messages is the same, however, the advanced settings are different.

1. Select a Terminal Settings>Networks and Communications>Print Setup> option.
   - Displays
   - Alarms
   - Diagnostic Messages



2. Update properties by selecting the appropriate button and changing the value, if necessary.

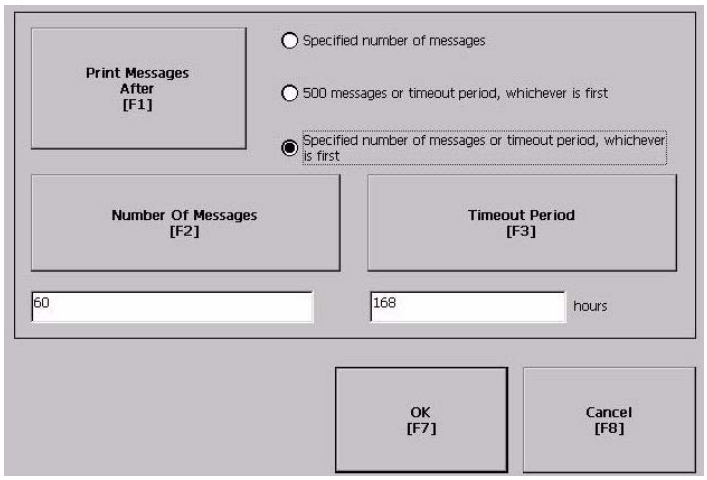
Field	Description	Valid Values
PCL Printer	Type of printer to use.	Laser (default) Inkjet
Port	Port to use for printing displays, alarm messages, and diagnostic messages.	Network (default) USB
Network Path	Network path of printer to use if the Port selection is Network.	519 characters max
Advanced Settings	Accesses additional settings.	

3. Press the Advanced button to access additional settings.

   The advanced settings for printing displays are:
   - print orientation (portrait or landscape).
   - draft mode (enable or disable).

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- The advanced settings for printing diagnostic and alarm messages determines when to print messages that are sent to the network or USB port.



Print Messages After	Default Value	Example
Specified number of messages	60 messages	When the queue has 60 messages, the messages are printed regardless of how long they have been in the queue. You can change the number of messages.
500 messages or timeout period, whichever is first	168 hours (7 days)	If the queue has 350 messages after 168 hours, the 350 messages are printed. You can change the timeout period.
Specified number of messages or timeout period, whichever is first.	60 messages 168 hours (7 days)	If the queue has 60 messages after 24 hours, then the 60 messages are printed. You can change the number of messages and the timeout period. For example, the number of messages is set to 75 and the timeout period is set to 48 hours. • If the queue has 75 messages after 24 hours, then the 75 messages are printed before the set timeout of 48 hours. • If the queue has 15 messages after 48 hours, the 15 messages are printed after the set timeout period.

4. Press OK when done.

5. Press OK to return to Terminal Settings.

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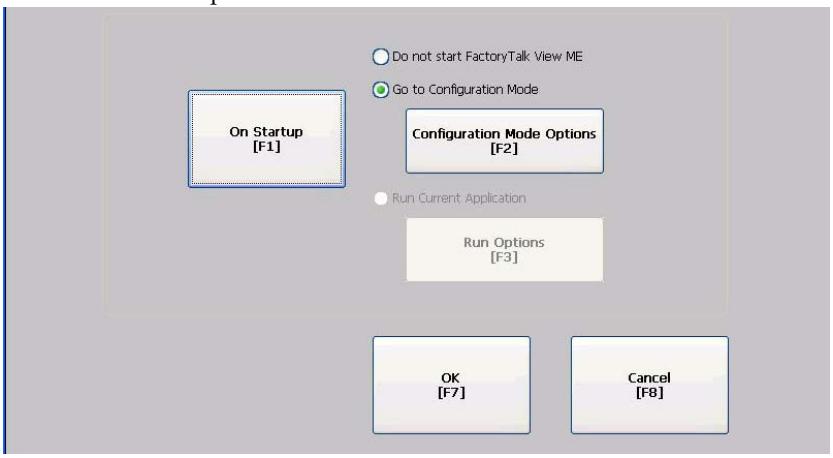
Configure Startup Options

FactoryTalk View ME Station software starts based on shortcuts in the Windows startup folder and whether an application is loaded. You can modify the action the terminal takes on startup.

- Disable FactoryTalk View ME Station software
- Go to FactoryTalk View Configure mode
- Run the current application

Disable FactoryTalk View ME Station Software on Startup

1. Select Terminal Settings>Startup Options>FactoryTalk View ME Station Startup.



2. Press the On Startup button until Do not start FactoryTalk View ME is selected.

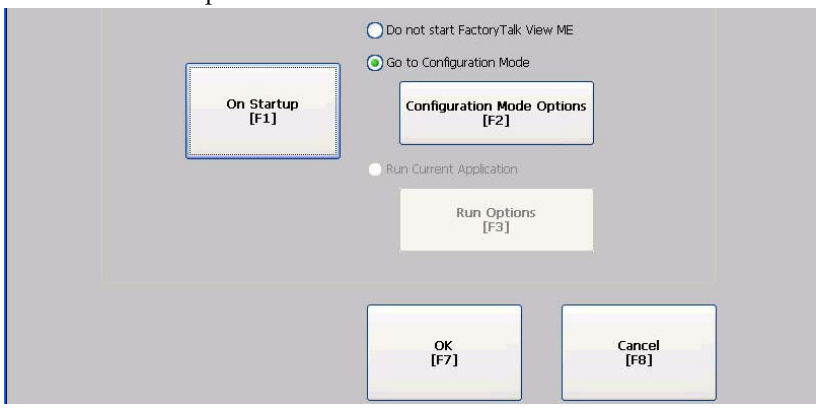
3. Press OK.

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Enter Configuration Mode on Startup

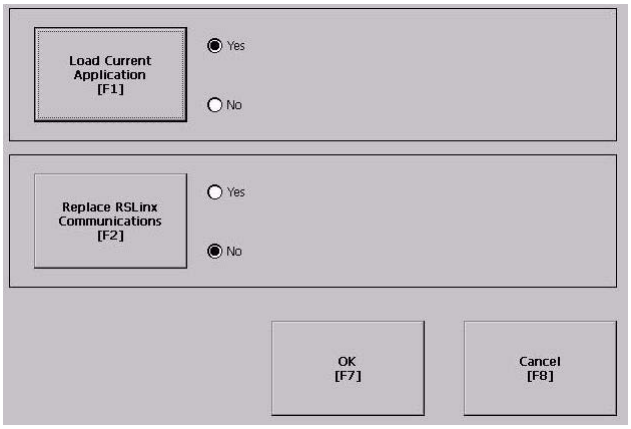
Follow these steps to enter Configuration mode on startup.

1. Select Terminal Settings>Startup Options>FactoryTalk View ME Station Startup.



2. Press the On Startup button to select Go to Configuration Mode.

3. Press the Configuration Mode Options button.



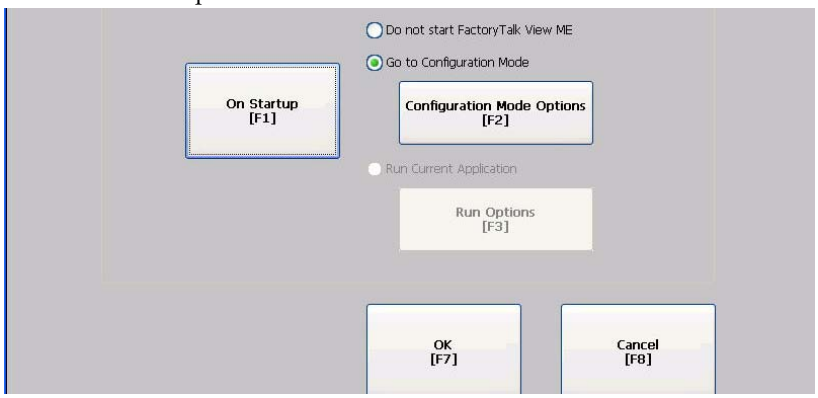
4. Press the Load Current Application button to specify whether you want to load the current application on startup.
5. Press the Replace RSLinx Communications button to specify whether to use the communication configuration of the current application or the terminal on startup.
   - Select No to use the RSLinx configuration of the terminal.
   - Select Yes to use the configuration of the application. The terminal configuration is replaced with the application settings. Any changes to device addresses or driver properties in RSLinx communication will be lost.
6. Press OK to return to the previous screen.
7. Press OK to return to Terminal Settings.

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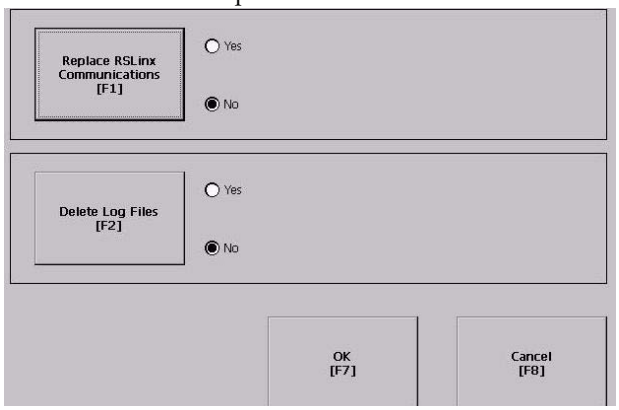
Run the Loaded Application on Startup

Follow these steps to run the loaded application on startup.

1. Select Terminal Settings>Startup Options>FactoryTalk View ME Station Startup.



2. Press the On Startup button to select Run Current Application.



   If an application is not loaded, the options are disabled.

3. Press the Replace RSLinx Communications button to specify what configuration settings to use when running the application.
   - Select No to use the RSLinx configuration of the terminal.
   - Select Yes to use the configuration of the application. The terminal configuration is replaced with the application settings. Any changes to device addresses or driver properties in RSLinx communication will be lost.

4. Press the Delete Log Files to specify what action to take with the log files on startup.
   - Select Yes to delete all log files (data, alarm history, alarm status) generated by the terminal before running application. The files are deleted from the system default location.
   - Select No to retain all log files.
5. Press OK twice to return to Terminal Settings.

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Startup Shortcuts for PanelView Plus CE Devices

On PanelView Plus CE devices, FactoryTalk View ME Station software starts based on shortcuts in the Windows startup folder and whether an application is loaded. FactoryTalk View ME Station software can start:

- without loading or running an .MER application.
- automatically loading an .MER application.
- automatically loading and running an .MER application.

Start without Loading or Running .MER Application

To start FactoryTalk View ME runtime software without loading or running a CompactFlash application, do one of the following:

- Open the FactoryTalk View ME Station icon from the desktop.
- Select FactoryTalk View ME Station from the Start menu.

  Programs>Rockwell Software>FactoryTalk View> FactoryTalk View ME Station

- Type MERuntime.exe and its path in the Run dialog of the Windows Start menu.

  Path to MERuntime.exe

  If the path to FactoryTalk View ME runtime contains spaces, you must enclose the path in double quotes.

  Example:
  "Storage Card\Rockwell Software\RSViewME\MERuntime.exe"

If you copy the FactoryTalk View ME Station shortcut from the desktop to the Windows Startup folder (\Storage Card\Windows\Startup), FactoryTalk View ME Station software will automatically run on startup.

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Start FactoryTalk View ME Station Software and Load .MER Application

To start FactoryTalk View ME Station software and automatically load an .MER application, type the appropriate shortcut path in the Run dialog on the Windows Start menu.

Path to MERuntime.exe, followed by a space, followed by the path to the .MER

If the path to FactoryTalk View ME runtime or the path to the application contains spaces, you must enclose the path in double quotes.

Example:
"Storage Card\Rockwell Software\RSViewME\MERuntime.exe" "Storage Card\Rockwell Software\RSViewME\Runtime\MYAPP.MER"

If you place a shortcut to the .MER application into the Windows Startup (\Storage Card\Windows\Startup) folder, the ME Runtime will automatically start and load the .MER application on terminal startup.

If the application specified in the Run dialog or the Startup folder does not exist or is corrupted, the main FactoryTalk View ME Configuration Mode screen will open.

Start FactoryTalk View ME Station and Run .MER Application

To start FactoryTalk View ME Station software and automatically run an .MER application:

- in FactoryTalk View Studio software, select Tools>Transfer Utility and select Run application when download completes on the Download tab.
- type the appropriate shortcut path in the Run dialog on the Windows Start menu.

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r

  If the path to FactoryTalk View ME runtime or the path to the application contains spaces, you must enclose the path in double quotes.

Example:
"Storage Card\Rockwell Software\RSViewME\MERuntime.exe" "Storage Card\Rockwell Software\RSViewME\Runtime\MYAPP.MER" **/r**

If you place a shortcut with the above command line in the Windows Startup folder (\Storage Card\Windows\Startup), the ME Runtime will start and automatically run the .MER application.

If the application specified in the Run dialog or the Startup folder does not exist or is corrupted, the main FactoryTalk View ME Configuration Mode screen will open and display the following message:

Unable to load application

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Other Shortcut Paths for FactoryTalk View ME Station Software

IMPORTANT If the path to FactoryTalk View ME software or the path to the application contains spaces, you must enclose the path in double quotes.

- To run the .MER application and delete its log files without replacing the terminal's communication configuration with that of the applications, use the following path:

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r/d.

Example:

"Storage Card\Rockwell Software\RSViewME\MERuntime.exe" "Storage Card\Rockwell Software\RSViewME\Runtime\MYAPP.MER" **/r/d**

- To run the .MER application and replace the terminal's communication configuration with that of the applications without deleting its log files, use the following path:

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r/o

Example:

"Storage Card\Rockwell\Software\RSViewME\MERuntime.exe" "Storage Card\Rockwell\Software\RSViewME\Runtime\MYAPP.MER" **/r/o**

- To run the .MER application, delete its log files, and replace the terminal's communication configuration with that of the applications, use the following path:

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r/d/o

Example:

"Storage Card\Rockwell\Software\RSViewME\MERuntime.exe" "Storage Card\Rockwell\Software\RSViewME\Runtime\MYAPP.MER" **/r/d/o**

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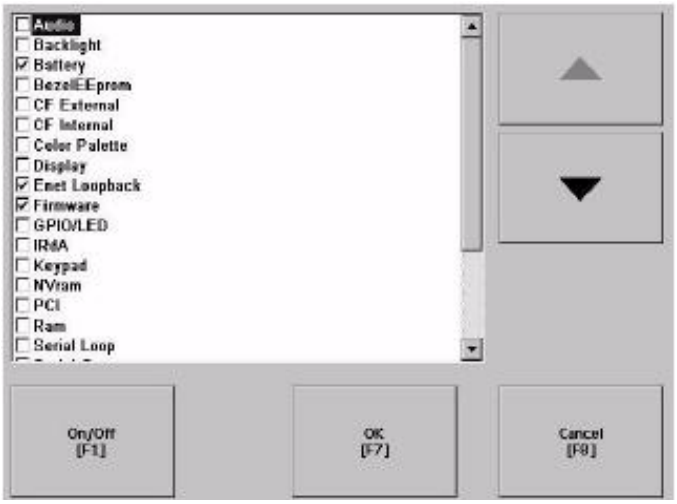
Configure Startup Tests

The terminal can run extended tests on startup. You can select which test to run and also specify test settings on startup.

Select Tests to Run on Startup

Follows these steps to select which tests you want to run on startup.

1. Select Terminal Settings>Startup Options>Startup Tests.



   The screen shows a list of each test that can be performed on the terminal at startup and its current On/Off status. You can turn any test in the list on or off by selecting the On/Off button. The terminal will run tests only with a checked box.

2. Select the tests you want to run on startup.
   - Use the up and down cursor buttons to highlight a test.
   - Press the On/Off button to select a test. A checked box means the test is selected to run. Press the button again to clear the check box.

3. Press OK.

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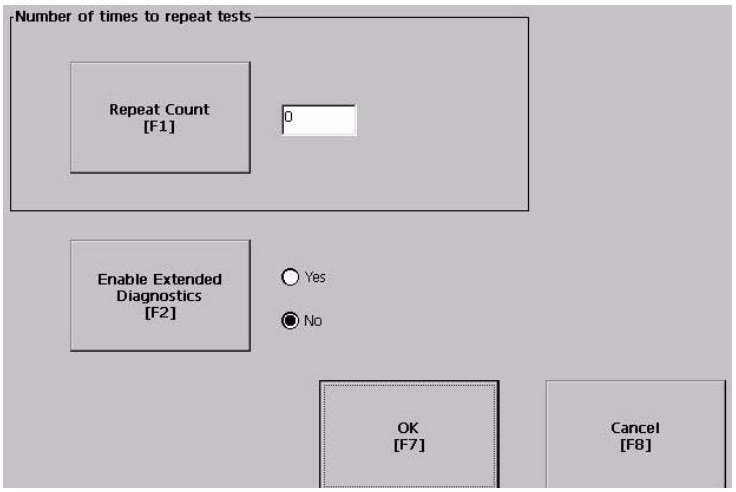
Configure Startup Test Settings

Follow these steps to specify how many times to run the selected tests on startup and to enable extended diagnostics.

IMPORTANT Enabling extended diagnostics and setting a high repeat count will increase the time it takes the terminal to reboot.

The tests will run each time you reset or cycle power to the terminal until you disable extended diagnostics. Setting a low repeat count will also decrease the startup time.

1. Select Terminal Settings>Startup Options>Startup Test Settings.



2. Press the Repeat Count button to specify the number of times, 0… 128, to run the selected tests on startup.

3. Press the Enable Extended Diagnostics button to enable or disable extended diagnostics on startup.
   - Select Yes to enable extended diagnostics.
   - Select No to disable extended diagnostics.

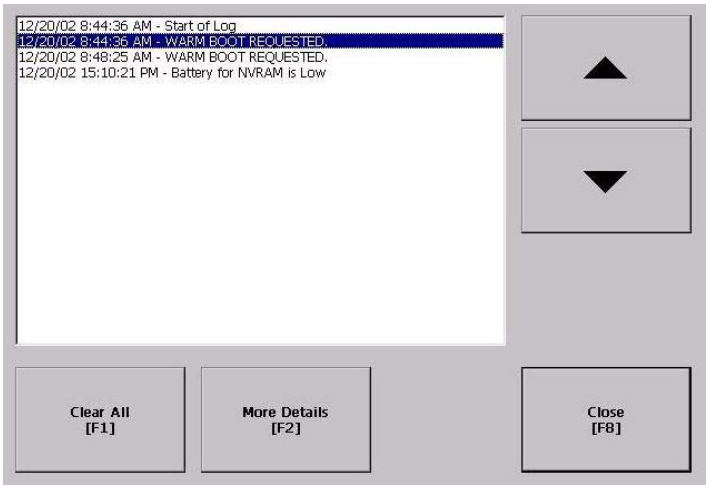
4. Press OK.

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View and Clear the System Event Log

The System Event Log screen displays a list of system events logged by the terminal.

1. Select Terminal Settings>System Event Log.



2. Select an event and then press the More Details button to display system event log details for that event.

3. Press the Clear All button to clear all system event logs.

4. Press OK.

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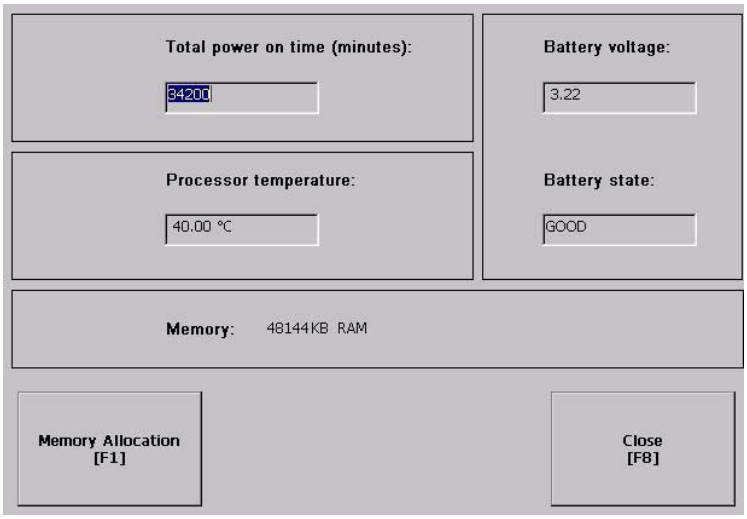
Display Terminal Information

You can view these details for your terminal:

- Total power on time
- Processor temperature
- Battery voltage and battery state
- Amount of memory on terminal

Follow these steps to display terminal information.

1. Select Terminal Settings>System>Information>Terminal Information.



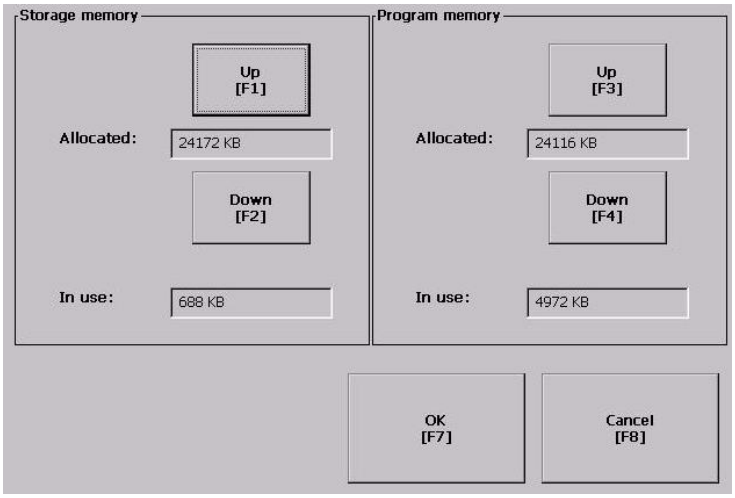
All fields are read-only except for memory allocation.

Battery State	PanelView Plus 400 and 600 Terminals	PanelView Plus 700 to 1500 Terminals
Good	Good battery condition.	Good battery condition.
Failing	Does not have a replaceable battery. Replace the terminal.	Low battery. Replace the battery.
Bad	Does not apply.	Battery is missing or bad. Replace the battery.

IMPORTANT For the 400 and 600 terminals, the Battery Voltage indicates the battery state only and the Processor Temperature shows the temperature of the display.

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2. Press the Memory Allocation button to view or adjust the:
   - amount of allocated storage or program memory.
   - amount of storage or program memory in use.



3. Press the Up or Down button to increase or decrease the allocation of storage or program memory.

   Each button press changes the allocation by a value of four. If you change the allocation for one type of memory, the other is updated accordingly.

IMPORTANT These settings are not retained after a power cycle. The settings return to the defaults.

4. Press OK to return to previous screen.

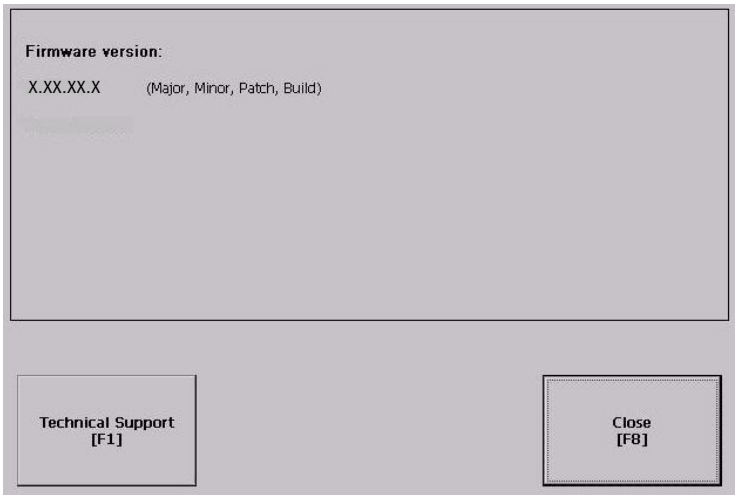
5. Press OK to return to terminal settings.

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Display FactoryTalk View ME Station Information

You can display the firmware number of FactoryTalk View ME Station software and the Rockwell Automation technical support number.

1. Select Terminal Settings>System>Information>About FactoryTalk View ME Station.



2. Press the Technical Support button, if desired.

3. Press Close.

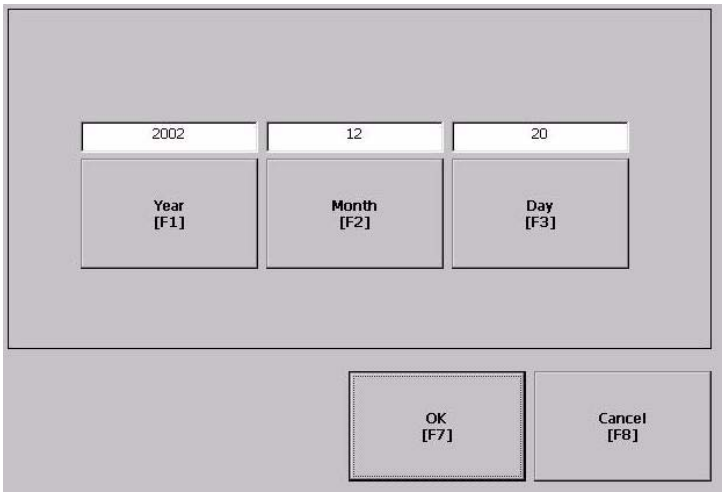
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Modify the Date, Time, or Time Zone

You can adjust the date and time for terminal operations, or change the time zone.

Change the Date

1. Select Terminal Settings>Time/Date/Regional Settings>Date. The current date appears in the Year, Month, and Day fields.



2. Press the Year, Month, and Day buttons to change the values.

Field	Description	Valid Values
Year	The current year in a four-digit format.	1980…2099
Month	The current month.	1…12
Day	The current day. The day of the month is validated based on the month.	0…31

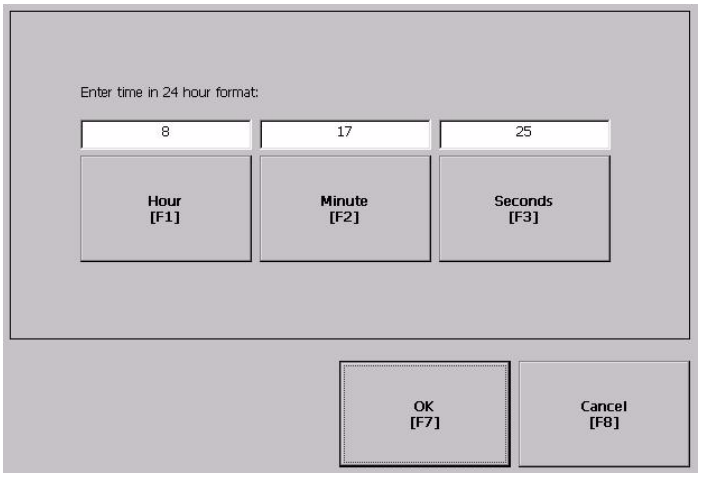
3. Press OK when done.

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Change the Time

1. Select Terminal Settings>Time/Date/Regional Settings>Time.

   The current time appears in 24-hour format in separate Hour, Minute, and Second fields.



2. Press the Hour, Minute, and Seconds buttons to change the values.

Field	Description	Valid Values
Hour	The current hour in 24-hour format.	0…23
Minute	The current minute in 24-hour format.	0…59
Seconds	The current second in 24-hour format.	0…59

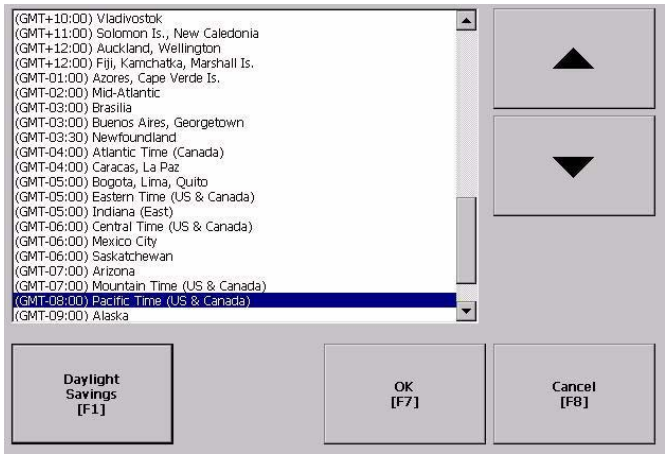
3. Press OK when done.

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Change the Time Zone

You can view or modify the current time zone that is installed on the terminal. Time zones are installed as a part of the operating system. Changing the time zone adjusts the current time and date to match the new time zone.

1. Select Terminal Settings>Time/Date/Regional Settings>Time Zone.



2. Press the up and down cursor buttons to select a time zone.

Language	Default Time Zone
English	(GMT -05:00) Eastern Time (US and Canada)
French	(GMT +01:00) Brussels, Copenhagen, Madrid, Paris
German	(GMT +01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
Japanese	(GMT +09:00) Osaka, Sapporo, Tokyo

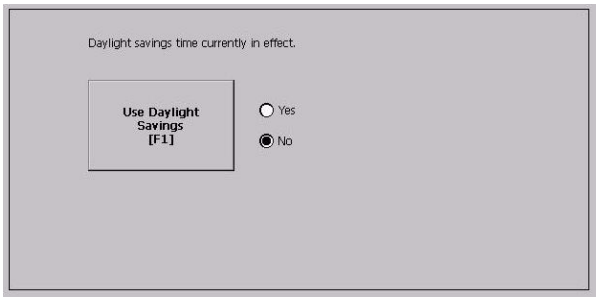
If the selected time zone supports Daylight Savings, you can press the Daylight Savings button.

3. Press the Daylight Savings button to enable or disable daylight savings for the selected time zone.

Daylight Savings is set to Yes for all time zones except for Japanese, which does not support daylight savings. Daylight savings changes are not permanently applied until you close the Time Zone screen.

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4. Press the Use Daylight Savings Button to select Yes or No.



5. Click OK when done.

6. Click OK to return to Terminal Settings.

Modify Regional Settings

You can adjust regional settings for a specific language installed on the terminal, including the date, time and numeric formats.

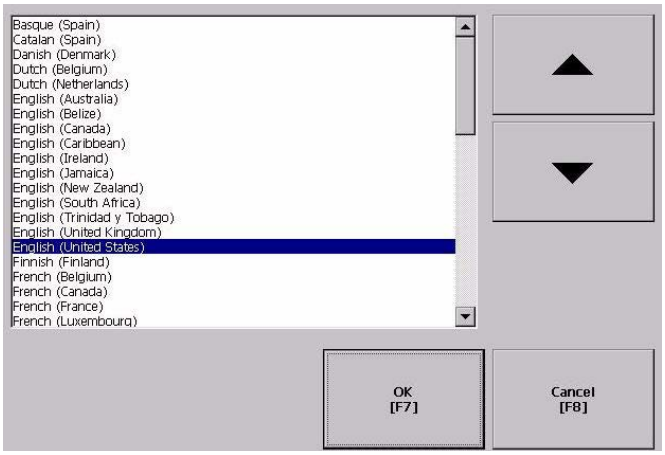
To access regional settings, select Terminal Settings>Time/Date/Regional Settings>Regional Settings.

The current language is shown at the bottom of the Regional Settings screen.

Select a Language

You can select a language that is installed on the terminal. Languages are installed as a part of the operating system.

1. Select Terminal Settings>Time/Date/Regional Settings>Regional Settings>Language.



2. Select a language by pressing the up and down cursor keys.

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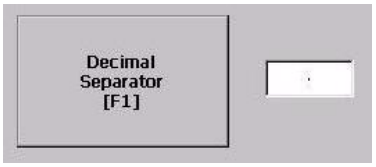
3. Press OK.

   The selected language will appear at the bottom of the Regional Settings screen.

Change the Decimal Separator for Numeric Formats

You can change the decimal separator used in numerics for the current language. The default decimal separator is a period.

1. Select Terminal Settings>Time/Date/Regional Settings>Regional Settings>Numeric Format.



   The field shows the default decimal separator. The field will accept a separator up to three characters.

2. Enter up to three characters for the new separator.

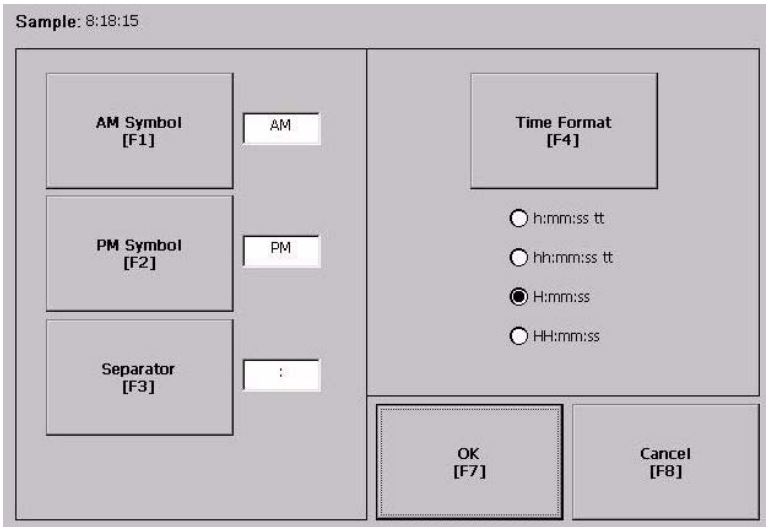
3. Click OK.

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Change the Time Format

You can change the time format for the selected language.

1. Select Terminal Settings>Time/Date/Regional Settings>Regional Settings>Time Format.



   The current time is shown using the currently selected format.

2. Press the appropriate buttons to adjust the formats.

Field	Description	Example
Time Format	h:mm:ss tt (default) h = hour, no leading zero tt = AM or PM symbol	7:23:02 AM or 1:13:31 PM 11:43:59 AM
	hh:mm:ss tt hh = hour with leading zero tt = AM or PM symbol	07:23:02 AM or 01:13:31 PM 11:43:59 PM
	H:mm:ss H = hour in 24-hour format, no leading zero	7:03:42 or 1:13:32 23:43:59
	HH:mm:ss HH = hour in 24-hour format with leading zero	07:03:42 or 01:13:22 23:43:59
AM Symbol	Characters to indicate AM. If the time format is set to h:mm:ss tt or hh:mm:ss tt, you can modify the AM symbol.	AM (default) 12 character max
PM Symbol	Characters to indicate PM. If the time format is set to h:mm:ss tt or hh:mm:ss tt, you can modify the PM symbol.	PM (default) 12 character max
Separator	Characters that separate fields in time format.	: (default) 3 character max

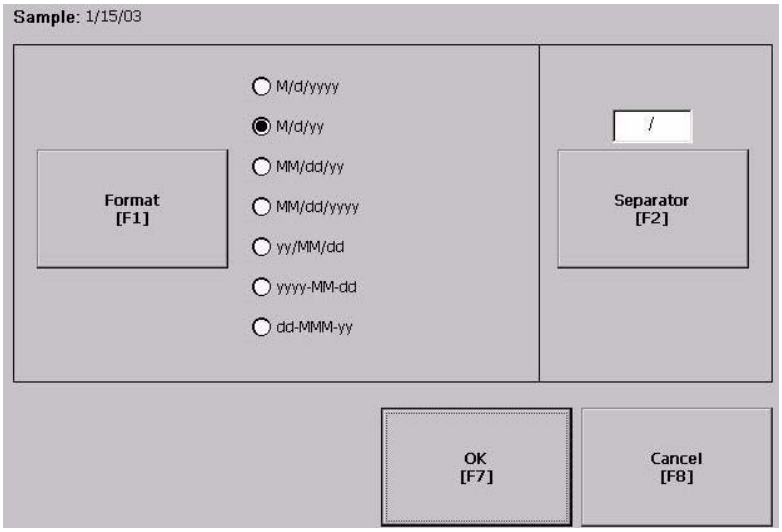
3. Click OK.

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Change the Short Date Format

You can change the short date format for the selected language.

1. Select Terminal Settings>Time/Date/Regional Settings>Regional Settings>Short Date Format.



The current date is shown in the selected, short date format.

Field	Short Date Formats	Example
Format	M/d/yyyy (default) M/d/yy MM/dd/yy MM/dd/yyyy yy/MM/dd yyyy-MM-dd dd-MMM-yy	1/2/2003 1/2/03 01/02/03 01/02/2003 03/01/02 2003-01-02 02-Jan-03
Separator	Character separator for fields in time format. The default separator is either - or / depending on short date format.	- or / (default) 3 character max

2. Press the Format button to select an available format.

3. Press the Separator button to change the field separator for the date elements.

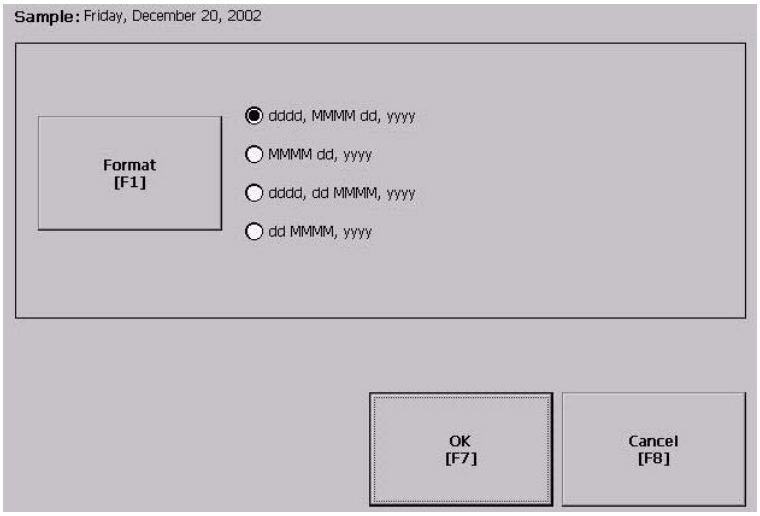
4. Click OK when done.

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Change the Long Date Format

You can change the long date format used by the selected language.

1. Select Terminal Settings>Time/Date/Regional Settings>Regional Settings>Long Date Format.



   The current date is shown in the selected long date format.

2. Press the Long Date Format button to select a date format.

Long Date Formats	Example
dddd, MMMM, dd, yyyy (default) dddd is name of week day MMMM is name of month dd is two-digit day of month with leading zero yyyy is four-digit year	Monday, January 01, 2003
MMMM dd, yyyy MMMM is name of month dd is two-digit day of month with leading zero yyyy is four-digit year	January 01, 2003
dddd, dd MMMM, yyyy dddd is name of week day dd is two-digit day of month with leading zero MMMM is name of month yyyy is four-digit year	Monday, 01 January, 2003
dd MMMM, yyyy dd is two-digit day of month with leading zero MMMM is name of month yyyy is four-digit year	01 January, 2003

3. Click OK when done.

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Windows CE .NET Operating System

Chapter Objectives

This chapter applies only to PanelView Plus CE terminals and provides information on these topics:

- Windows CE .NET architecture
- Windows CE .NET programs for PanelView Plus CE terminals
- Using Windows CE .NET operating system
- PanelView Plus CE terminal memory
- Control panel applications for configuring PanelView Plus CE terminals

Windows CE .NET Architecture

The Windows CE .NET operating system from Microsoft provides a portable, scalable, real-time operating system for embedded devices. The modular design of Windows CE .NET allows the platform builder to include only those features required for the specific product application. However, the Windows CE .NET operating system is still a subset of the other Microsoft operating systems, and it runs Win32 applications.

Windows CE .NET Benefits

There are three major differences between the Windows CE .NET operating system and other Microsoft Windows operating systems. The Windows CE .NET operating system:

- has a small memory footprint requirement.
- runs on a wide variety of processor architectures.
- has a real-time scheduler.

The small memory footprint allows the Windows CE .NET operating system to operate in small solid-state memory devices (8 MB typical). In contrast, computers that run Windows operating systems require hundreds of megabytes of storage space.

The PanelView Plus CE terminal has an x86-based processor to maximize the consistency between Windows 2000/XP and Windows CE .NET applications.

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Compile Windows CE .NET Applications

While the Windows CE .NET operating system brings a higher level of standardization to embedded computing devices, third-party software applications must still be compiled and tested to run on each Windows CE .NET device. The compilation is required to tailor the software application to the device's processor and unique hardware features.

Microsoft created hardware reference models for the handheld (HPC) and the pocket (PPC) personal computer so that third-party applications can run on these standard platforms. There are no hardware standards for embedded devices.

The PanelView Plus CE terminal is largely compatible with HPC and PPC, so applications that are compiled for the x86 may run on the PanelView Plus CE terminal.

Windows CE .NET Programs

The PanelView Plus CE terminal includes FactoryTalk View ME software. Refer to the user manual and online help shipped with FactoryTalk View Studio software for information about using this software.

The Windows CE .NET operating system and applications are stored on the internal CompactFlash of the PanelView Plus CE terminal for permanent storage and can be accessed as the \Storage Card directory in the Windows Explorer. (They are also available on the PanelView Plus CE Accessory CD). The operating system and FactoryTalk View ME software are loaded into RAM at startup to improve response time.

Additional programs can be installed by using ActiveSync or an external CompactFlash card on the PanelView Plus CE terminal.

The PanelView Plus CE terminal ships with the following programs preloaded.

Application	Description
Microsoft Internet Explorer, version 5.5	Web browser
ActiveSync Support	Connects the PanelView Plus CE terminal to a desktop computer running ActiveSync software
Control Panel	Set of configuration tools for setting up the PanelView Plus CE terminal
Windows Explorer (Shell)	User interface to the system much like a desktop computer
Remote Desktop Connection	Services for thin client applications included on the PanelView Plus CE Accessory CD (formerly Terminal Server Client)
WordPad	Text editor
PDF Viewer	Reader for Adobe Acrobat PDF files

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Other Windows CE .NET programs are available.

Most of these programs have been written for PPC devices, and some may run on the PanelView Plus CE terminals. For more information on Windows CE .NET programs, see the Knowledgebase at http://support.automation.rockwell.com.

Install Applications

The PanelView Plus CE terminal allows field-installation of third-party software.

Refer to Chapter 8 for details on how to use Microsoft ActiveSync software to install and remove application programs on the PanelView Plus CE terminal. Each application program must be compiled for the x86 processor.

If the application program literature does not specifically identify the PanelView Plus CE terminal as a compatible hardware platform, take caution if trying to install and run it on the terminal. While the program may operate on the X86 processor, there could be conflicts with running it on the PanelView Plus CE terminal. Testing is essential.

Windows CE .NET Operating System

The Windows CE .NET operating system provides a user interface similar to other Microsoft Windows operating systems. This user interface has been simplified to reduce the memory footprint. Therefore, minor differences exist between the desktop Windows interface and the Windows CE .NET interface.

The Windows CE .NET graphical interface simplifies interaction with the computer. You simply select and move objects on the screen by tapping and dragging them using your finger or stylus on the touch screen, or using an external mouse.

TIP If you have difficulty selecting objects using the touch screen, run the calibration program.

The PanelView Plus CE terminal has a keypad, touch screen, or input panel for operator input. In addition, an external keyboard or mouse can be connected to one of the USB ports of the terminal.

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You may find it convenient to use the following shortcuts. These shortcuts work with the PanelView Plus CE terminal keypad, an attached keyboard, or the input panel.

Keyboard Shortcuts

Shortcut	Description
Ctrl+Esc	Opens the Windows CE .NET Start menu. Use arrow keys to select a program and Enter to run.
Alt+Tab	Starts the Task Manager.
Enter	This key is equivalent to double-tap. In a dialog, you can select Enter or OK.
Shift + Tab or ⇤	Selects the previous control in a dialog.
Tab or ⇥	Selects the next control in a dialog.
Ctrl+Tab	Opens the next tab in a tabbed dialog.
Esc	Closes a dialog without saving changes.
Arrow keys	Selects controls or items from a list in a dialog.
Alt	Activates menus.

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Start Menu and Taskbar

Use the Start menu to run programs, configure settings, and open recently-used documents. A single-click on the Start menu button on the bottom left of the screen brings up the menu. Subsequent clicks select the program or item you want to open. The key sequence Ctrl+Esc also activates the Start menu.

The taskbar across the bottom of the screen contains buttons for programs already running, along with a status area and a Desktop icon. You can alternately minimize and maximize an open application by clicking on its taskbar button. Double-clicking on any icon in the status area shows more information about that function. A single-click on the Show Desktop button (far right side of taskbar) minimizes all open windows and displays the PanelView Plus CE computer desktop. You can close an application by clicking with the right mouse button on its taskbar button and choosing Close.



Command Bar

A Windows CE.NET program has a command bar located across its top. This command bar contains pull-down menu names and toolbar buttons for the application.

Click on a menu name or toolbar icon to interact with the specific program. The Help (?) button on the right side of the command bar provides application-specific help. The Exit (X) button on the far right side of the command bar exits the application.

Windows CE .NET command bar does not have a Minimize button. Click the taskbar button to minimize a program window, or use the Show Desktop button to minimize all open program windows.

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Find Files

Select Start>Programs>Windows Explorer to locate files on the PanelView Plus CE terminal. You can alternately double-click the My Computer icon on the Desktop to open the Windows Explorer program. The Windows Explorer web browser lets you browse and manipulate the PanelView Plus CE files and folders. The Edit menu lets you move files from one location to another by using the Copy or Cut and Paste commands. When you create and save a new file, it is stored in the My Documents folder unless you specify another location.

TIP The PanelView Plus CE file system resides in RAM and flash memory. RAM is volatile and is not persistent after a power cycle. Save files that must be persistent to the\Storage Card Folder that resides on the internal CompactFlash card.

Browse Web Pages

Select Start>Programs>Internet Explorer to view Web pages. You can alternately double-click the Internet Explorer icon on the desktop to open the Internet Explorer program. To access pages stored on the PanelView Plus CE terminal, use the File>Open command and select the Browse button to locate the file. To view Internet or intranet pages, type a URL in the Address box.

Before you can access remote Web pages, the PanelView Plus CE terminal must be connected to a network. See the section on Network and Dialup Connections for details on configuring the Ethernet interface. Additional network settings such as a Proxy Server can be configured in the Internet Explorer application by using the Options command under the View menu.

The Microsoft Internet Explorer application is similar to the personal computer version. It offers many of the same features of the personal computer version, and can be used to view most Internet HTML Web pages. Some advanced Web features may not be fully supported.

Print

Some PanelView Plus CE software applications may support printing. To print from these applications, select the File>Print command. A PCL compatible printer must be connected to the USB or Ethernet port on the PanelView Plus CE terminal.

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PanelView Plus CE Memory

The PanelView Plus CE has the following memory areas:

- Boot ROM
- Internal CompactFlash
- Dynamic RAM
- External CompactFlash cards
- USB mass storage devices

Boot ROM

The boot ROM is used to start up the PanelView Plus CE terminal, perform power on self tests, and load the Windows CE .NET operating system into dynamic RAM. The boot ROM code is not user accessible.

Internal CompactFlash

The internal CompactFlash is the main storage memory in the PanelView Plus CE terminal. The Windows CE .NET operating system and user applications are stored in flash memory. On startup, the operating system and any auto-start applications are transferred to dynamic RAM, where they are executed.

The remainder of the flash memory is a FAT partition that appears as a folder named \Storage Card in Windows CE .NET. Files stored here are persistent (saved even after a reset or power cycle).

WARNING



Only programs and files loaded in the \Storage Card folder are permanently saved to flash memory. All other folders or files existing in RAM are lost when power is cycled.

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Dynamic RAM

The RAM memory is split into two segments: Storage and Program memory. The System application in the Control Panel has a slider control that determines the allocation mix between Storage and Program memory.

The Storage memory segment is a virtual RAM disk known as the Object Store. It provides specialized storage for the Windows CE .NET Registry, the file system, and system databases. The RAM-based Storage memory segment is **not** persistent as in HPC devices, so all files stored here must be recreated at every startup.

The Program memory segment provides traditional computer RAM-like functions for holding application code, heaps, stacks, and data at runtime. The PanelView Plus CE terminal loads the Windows CE .NET operating system and any auto-start applications from flash memory into the Program memory at powerup.

External CompactFlash Cards

External CompactFlash cards are available for the PanelView Plus CE terminal to increase the space for storing files. When a CompactFlash card is installed in the card slot of the PanelView Plus CE terminal, a StorageCard2 icon is displayed under My Computer, and files on the memory card can be manipulated by using the Windows Explorer program.

The card slot on the PanelView Plus CE terminal supports Type 1 CompactFlash cards. The cards (2711P-RCx) are available in different sizes.

For details on how to install/remove cards from the card slot, refer to page 164.

USB Mass Storage Devices

USB devices that comply with the USB Mass Storage Class Specification, version 1.0, are supported to enable a wide variety of USB-based storage devices such as hard drives, floppy disks, CD-ROM drives and ATA flash readers. Up to 10 devices are supported, concurrently. DVD drives are not supported.

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Control Panel Applications

The PanelView Plus CE terminal has user-configurable settings that are accessed from the Windows CE .NET Control Panel applications. These applications are similar to other Microsoft Windows operating systems. Select Start>Settings>Control Panel to open the Control Panel window.



Application	Description	See page
Certificates	Manages digital certificates used by some applications for establishing trust and secure communications.	139
Date/Time	Sets the date and time on the terminal.	137
Dialing	Configures dialing rules for telephone and modem communications.	123
Display	Configures the display and color settings, the brightness of the backlight, and the screen saver.	130
Extended Diagnostics	Enables tests to run on the terminal at each startup and the number of times to run each test.	132
Hardware Monitor	Views the current voltage and temperature, and system events logged on the terminal.	134
Input Panel	Configures an input panel for entering/editing data on a touch screen terminal.	129
Internet Options	Configures start and search pages, clears cache and history, and specifies connection and security settings for Internet Explorer web browser.	139
Keyboard	Configures settings for an attached keyboard.	127
Keypad	Configures settings for keys on the PanelView Plus CE terminal.	128
Mouse	Sets the sensitivity of the mouse, if attached.	129
Network and Dial-up Connection	Configures ActiveSync and Ethernet network connections between your terminal and a computer.	124
Owner	Configures network and user identification information for your terminal.	122
Password	Sets a password to protect your terminal against unauthorized use. The password can be enabled at system startup or when the screen saver is activated.	123
PC Connection	Selects a configured connection for connecting your PanelView Plus CE terminal to another computer.	125

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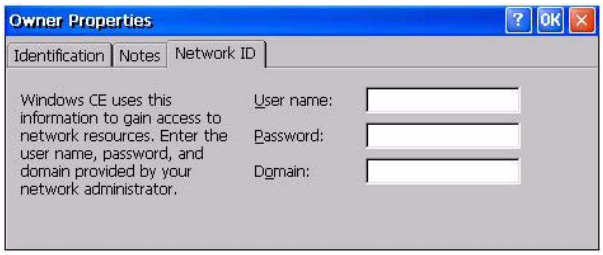
Application	Description	See page
Power	Provides information on the battery condition of the terminal and other power management features.	134
Regional Settings	Sets the clock, date and language, and configures formats for numbers, currency, time, date, and regional settings.	137
Remove Programs	Removes programs installed on your terminal.	140
Storage Manager	Displays information on terminal's hard drive. Also reformats and manages partitions for hard drive.	140
System	Lists system properties like memory allocation, device information, operating system version.	135
Touch	Calibrates the touch screen, sets the sensitivity of touch screen taps, and enables/disables the touch screen cursor.	126

Owner

The Owner dialog provides network and user identification information for your PanelView Plus CE terminal.

Network ID

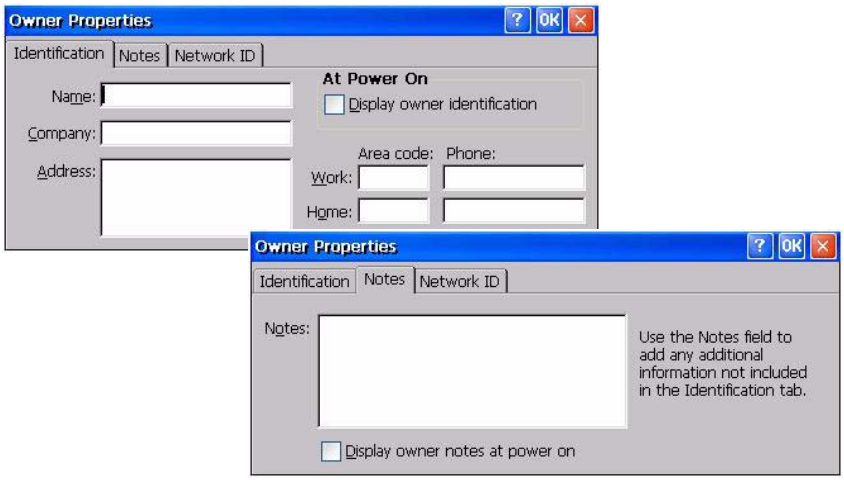
The Network ID tab identifies the PanelView Plus CE terminal to a network so it can gain access to network resources. A username, password, and domain may be necessary; if so, contact your system administrator. When done, click OK.



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Identification and Notes

The Identification tab defines optional user information for your PanelView Plus CE terminal. Use the Notes tab if it is necessary to document additional information.



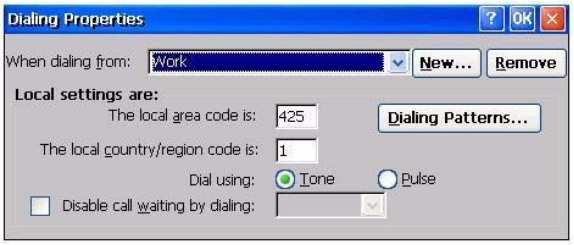
Password

The Password dialog lets you define a password to protect your terminal against unauthorized use. You can require that the defined password be entered each time the terminal is restarted and/or when the screen saver is activated. Select OK to activate settings.



Dialing

The Dialing dialog is a standard Windows control-panel application that configures dialing rules for modem communication.



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