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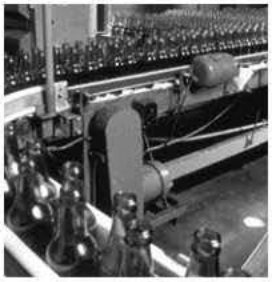
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PanelView Standard Operator Terminals











User Manual

(Catalog Numbers PV300 Micro, PV300, PV550, PV600, PV900, PV1000, PV1400)

ALLEN-BRADLEY • ROCKWELL SOFTWARE Rockwell Automation

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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://literature.rockwellautomation.com) 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.

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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 publication.

To help you find new and updated information in this release of the manual, we have included change bars as shown to the right of this paragraph.

Topic	Page
Updated list of supported memory cards.	105
Added information on the proper placement of the sealing gasket.	136 143 150 158 167 173
Added information on airborne contaminants for the PanelView 300 terminal.	235
Added EU Battery Directive to the list of agency certifications.	248
Added information on battery replacement and disposal.	271

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Objectives

Read this preface to familiarize yourself with the rest of this manual.

- Intended audience
- Conventions used
- Terminology
- Installing PanelView terminals
- European Union Directive Compliance
- Related publications
- Technical support

Intended Audience

No special knowledge is required to understand this manual or operate the PanelView terminals. Before running an application, you must know the functions of all screens and screen objects. This information is available from the application designer.

Equipment installers must be familiar with standard panel installation techniques.

Conventions

The manual uses these conventions:

- For specific PanelView terminals, PanelView is replaced with the PV abbreviation. For example: PV1000 refers to the PanelView 1000 terminal.
- PanelView terminal refers to any one of the PanelView terminals.

Terminology

This manual contains some terms that may be unfamiliar.

Use the Glossary on page 273 of this manual for assistance.

Installing PanelView Terminals

Each terminal is shipped with installation instructions and a panel cutout. Please follow these instructions when installing your PanelView terminal in a panel or enclosure.

European Union Directive Compliance

Refer to Appendix C for details on installing the PanelView terminals in industrial environments requiring compliance with European Union Directives.

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Additional Resources

Refer to the extensive online help for the PanelBuilder32 Software or the following publications if necessary.

Resource	Description
PanelBuilder32 Software Getting Results Manual, publication 2711-GR003	Information about using PanelBuilder32 software
PanelBuilder32 Quick Start Manual, publication 2711-QS003	Information about starting PanelBuilder32 software
WinPFT File Transfer Utility, publication 2711-TD006	Information about the WinPFT file transfer utility
PROFIBUS DP Communication for PanelView Terminals, publication 2711-6.3	Information about PROFIBUS DP communication for PanelView terminals
Modbus Communication for PanelView Terminals, publication 2711-6.9	Information about Modbus communication for PanelView terminals
Programmable Controller Wiring and Grounding Guidelines, publication 1770-4.1	Information on wiring and grounding
Data Highway/Data Highway Plus/Data Highway-485 Cable Installation Manual, publication 1770-6.2.2	Information about installing Data Highway/Data Highway Plus/Data Highway-485 cable

For information relating to your controller, refer to the appropriate manual.

Technical Support

If you have questions about the PanelView terminals or the PanelBuilder32 software, please refer to the online manuals or online help provided with the PanelBuilder32 installation CD. These publications are also available from the literature library at:

http://literature.rockwellautomation.com

Frequently Asked Questions
Documents on frequently asked questions are available at:

http://www.rockwellautomation.com/knowledgebase

Software and Firmware Upgrades

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

- locate on PanelBuilder32 installation CD.
- call Rockwell Software at 1-440-646-7700 or fax 1-440-646-7701.
- access www.software.rockwell.com.

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Terminal Overview

Chapter Objectives

This chapter gives an overview of the PanelView Operator Terminals.

- Intended uses
- Terminal types and features
- Applications
- Configuration mode
- Terminal messages
- Printing
- Accessories and replacement parts

Intended Uses

You can use the PanelView operator terminals for a wide variety of machine control and monitoring applications.

ATTENTION



Do not use a PanelView terminal for emergency stops or other controls critical to the safety of personnel or equipment. Use separate hardwired operator interface devices that do not depend on solid state electronics. See the inside front cover of this manual for guidelines.

Terminal Types

PanelView terminals are available in a variety of options.

- Display size and type (monochrome, grayscale, color)
- Operator input (touch screen or keypad)
- Communication port (DH-485, RS-232, remote I/O, DH+, ControlNet, DeviceNet, Ethernet, EtherNet/IP, DF1)
- RS-232 printer port support

In addition, some terminals are available with:

- AC or DC power (L1 at the end of a catalog number indicates a DC terminal, for example, 2711-B5A1L1, or -T9C1L1).
- stainless steel bezel available on PanelView 550 keypad or keypad & touch terminals.

Contact your Allen-Bradley representative for availability.

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Color and Grayscale Terminals

Color terminals support a fixed palette of 32 standard EGA colors. Grayscale terminals support a fixed palette of four colors (shades of gray). All color in an application is defined when the application is created. Colors are not selectable at the terminal.

PanelView 300 Monochrome Terminals

The PanelView 300 terminal is only available with 24V DC input power.

Operator Input	Communication Port				Printer Port RS-232	Catalog Number
	DH-485	RS-232 (DH-485)	DeviceNet	RS-232 (DF1)		
Keypad	x					2711-K3A2L1
		x				2711-K3A5L1
			x		x	2711-K3A10L1
				x		2711-K3A17L1

PanelView 300 Micro Monochrome Terminals

The PanelView 300 Micro terminal is available only with 24V DC input power and does not have a printer port. The PV300 Micro terminal contains a single RS-232 communication port which supports either DF1 or DH485 communication protocols as specified in the table below.

Operator Input	Communication Port		Catalog Number
	DH-485	DF1	
Keypad	x		2711-M3A19L1
		x	2711-M3A18L1

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PanelView 550 Monochrome Terminals

The touch screen version of the PanelView 550 terminal is available only with 24V DC power. The L1 in the catalog number indicates DC power.

Operator Input	Communication Port								Printer Port RS-232	Catalog Number(1)
	RIO	DH-485	RS-232 (DH-485)	DH+	DeviceNet	ControlNet	RS-232 (DF1)	Ethernet		
Touch Screen and Keypad	x								x	2711-B5A1
		x								2711-B5A2
		x							x	2711-B5A3
			x							2711-B5A5
				x					x	2711-B5A8
			x						x	2711-B5A9
					x				x	2711-B5A10
						x			x	2711-B5A15
							x		x	2711-B5A16
								x	x	2711-B5A20
Keypad	x								x	2711-K5A1
		x								2711-K5A2
		x							x	2711-K5A3
			x							2711-K5A5
				x					x	2711-K5A8
			x						x	2711-K5A9
					x				x	2711-K5A10
						x			x	2711-K5A15
							x		x	2711-K5A16
								x	x	2711-K5A20
Touch Screen (24V DC only)	x								x	2711-T5A1L1
		x								2711-T5A2L1
		x							x	2711-T5A3L1
			x							2711-T5A5L1
				x					x	2711-T5A8L1
			x						x	2711-T5A9L1
					x				x	2711-T5A10L1
						x			x	2711-T5A15L1
							x		x	2711-T5A16L1
								x	x	2711-T5A20L1

(1) Add L1 to the end of the catalog number for 24V DC power.
Add L2 to the end of a catalog number for stainless steel. Not available for the touch screen terminals.
Add L3 to the end of a catalog number for 24V DC power and stainless steel. Stainless steel is not available for the touch screen terminals.

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PanelView 600 Color Terminals

Operator Input	Communication Port								Printer Port RS-232	Catalog Number(1)
	RIO	DH-485	RS-232 (DH-485)	DH+	DeviceNet	ControlNet	RS-232 (DF1)	Ethernet		
Touch Screen and Keypad	x								x	2711-B6C1
		x								2711-B6C2
		x							x	2711-B6C3
			x							2711-B6C5
				x					x	2711-B6C8
			x						x	2711-B6C9
					x				x	2711-B6C10
						x			x	2711-B6C15
							x		x	2711-B6C16
								x	x	2711-B6C20
Keypad	x								x	2711-K6C1
		x								2711-K6C2
		x							x	2711-K6C3
			x							2711-K6C5
				x					x	2711-K6C8
			x						x	2711-K6C9
					x				x	2711-K6C10
						x			x	2711-K6C15
							x		x	2711-K6C16
								x	x	2711-K6C20
Touch Screen (24V DC only)	x								x	2711-T6C1L1
		x								2711-T6C2L1
		x							x	2711-T6C3L1
			x							2711-T6C5L1
				x					x	2711-T6C8L1
			x						x	2711-T6C9L1
					x				x	2711-T6C10L1
						x			x	2711-T6C15L1
							x		x	2711-T6C16L1
								x	x	2711-T6C20L1

(1) Add L1 to the end of the catalog number for 24V DC power.

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PanelView 900 Monochrome Terminals

These terminals are no longer available for purchase.

Operator Input	Communication Port							Printer Port RS-232	Catalog Number[1]
	RIO	DH-485	RS-232 (DH-485)	DH+	DeviceNet	ControlNet	RS-232 (DF1)		
Touch Screen	x							x	2711-T9A1
		x							2711-T9A2
		x						x	2711-T9A3
			x						2711-T9A5
				x				x	2711-T9A8
			x					x	2711-T9A9
					x			x	2711-T9A10
						x		x	2711-T9A15
							x	x	2711-T9A16
Keypad	x							x	2711-K9A1
		x							2711-K9A2
		x						x	2711-K9A3
			x						2711-K9A5
				x				x	2711-K9A8
			x					x	2711-K9A9
					x			x	2711-K9A10
						x		x	2711-K9A15
							x	x	2711-K9A16

(1) Add L1 to the end of the catalog number for 24V DC power.

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PanelView 900 Color Terminals

These terminals are no longer available for purchase.

Operator Input	Communication Port								Printer Port RS-232	Catalog Number(1)
	RIO	DH-485	RS-232 (DH-485)	DH+	DeviceNet	ControlNet	RS-232 (DF1)	Ethernet		
Touch Screen	x								x	2711-T9C1
		x							x	2711-T9C3
				x					x	2711-T9C8
			x						x	2711-T9C9
					x				x	2711-T9C10
						x			x	2711-T9C15
							x		x	2711-T9C16
								x	x	2711-T9C20
Keypad	x								x	2711-K9C1
		x							x	2711-K9C3
				x					x	2711-K9C8
			x						x	2711-K9C9
					x				x	2711-K9C10
						x			x	2711-K9C15
							x		x	2711-K9C16
								x	x	2711-K9C20

(1) Add L1 to the end of the catalog number for 24V DC power.

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PanelView 1000 Color Terminals

Operator Input	Communication Port								Printer Port RS-232	Catalog Number(1)
	RIO	DH-485	RS-232 (DH-485)	DH+	DeviceNet	ControlNet	RS-232 (DF1)	Ethernet		
Touch Screen	x								x	2711-T10C1
		x							x	2711-T10C3
				x					x	2711-T10C8
			x						x	2711-T10C9
					x				x	2711-T10C10
						x			x	2711-T10C15
							x		x	2711-T10C16
								x	x	2711-T10C20
Keypad	x								x	2711-K10C1
		x							x	2711-K10C3
				x					x	2711-K10C8
			x						x	2711-K10C9
					x				x	2711-K10C10
						x			x	2711-K10C15
							x		x	2711-K10C16
								x	x	2711-K10C20

(1) Add L1 to the end of the catalog number for 24V DC power.

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PanelView 1000 Grayscale Terminals

Operator Input	Communication Port								Printer Port RS-232	Catalog Number(1)
	RIO	DH-485	RS-232 (DH-485)	DH+	DeviceNet	ControlNet	RS-232 (DF1)	Ethernet		
Touch Screen	x								x	2711-T10G1
		x							x	2711-T10G3
				x					x	2711-T10G8
			x						x	2711-T10G9
					x				x	2711-T10G10
						x			x	2711-T10G15
							x		x	2711-T10G16
								x	x	2711-T10G20
Keypad	x								x	2711-K10G1
		x							x	2711-K10G3
				x					x	2711-K10G8
			x						x	2711-K10G9
					x				x	2711-K10G10
						x			x	2711-K10G15
							x		x	2711-K10G16
								x	x	2711-K10G20

(1) Add L1 to the end of the catalog number for 24V DC power.

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PanelView 1400 Color Terminals

These terminals are no longer available for purchase.

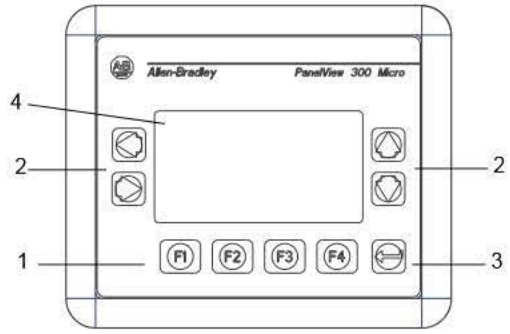
Operator Input	Communication Port								Printer Port RS-232	Catalog Number
	RIO	DH-485	RS-232 (DH-485)	DH+	DeviceNet	ControlNet	RS-232 (DF1)	Ethernet		
Touch Screen	x								x	2711-T14C1
		x							x	2711-T14C3
				x					x	2711-T14C8
			x						x	2711-T14C9
					x				x	2711-T14C10
						x			x	2711-T14C15
							x		x	2711-T14C16
									x	2711-T14C20
Keypad	x							x	x	2711-K14C1
		x							x	2711-K14C3
				x					x	2711-K14C8
			x						x	2711-K14C9
					x				x	2711-K14C10
						x			x	2711-K14C15
							x		x	2711-K14C16
								x	x	2711-K14C20

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PanelView 300 Micro Terminal Features

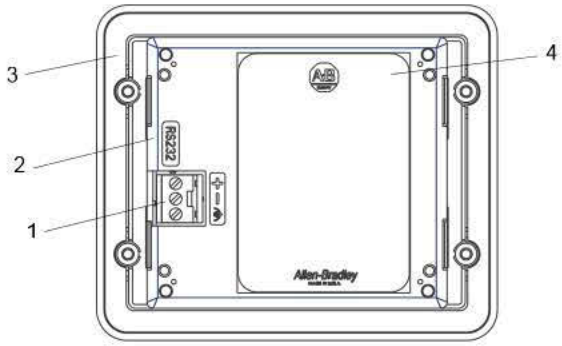
This section defines features of the PanelView 300 Micro keypad terminal.

PanelView 300 Micro Terminal Features (front)



#	Feature	Description
1	Function keys (F1 F4)	Use the function keys to initiate functions on the terminal display.
2	Cursor keys	Use the cursor keys (left, right, up, down) as programmed function keys in addition to the F1 F4 function keys or to move the cursor in displayed lists, to select a numeric entry object, to enter configuration mode, or to enter/modify numeric and ascii data.
3	↵	Stores an entered value.
4	Keypad terminal display	Liquid crystal display with integral backlight. Displays application text, controls, graphics.

PanelView 300 Micro Terminal Features (back)



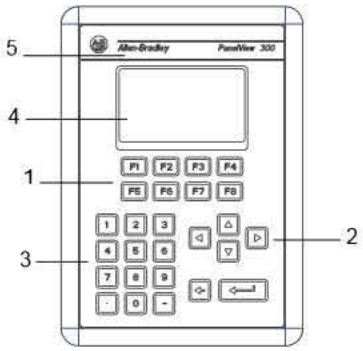
#	Feature	Description
1	Power connection terminals	Connects to a 24V DC (11-30V DC) external power source.
2	DF1 or DH-485 (RS232) communication port	Connects to an SLC, PLC, or MicroLogix controller by using an RS-232 connection. Also used for downloading applications directly from a computer.
3	Sealing gasket	Seals the front of the terminal to an enclosure or panel.
4	Nameplate label	Provides product information.

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PanelView 300 Terminal Features

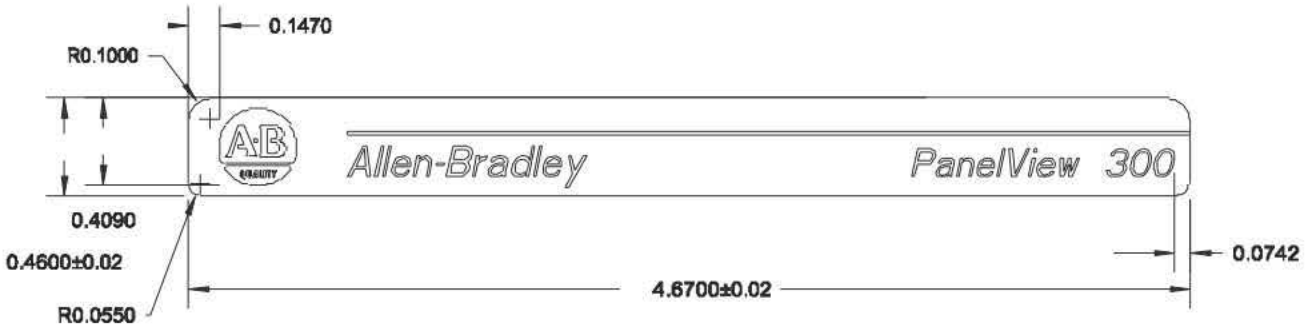
This section defines features of the PanelView 300 keypad terminal.

PanelView 300 Terminal Features (front)



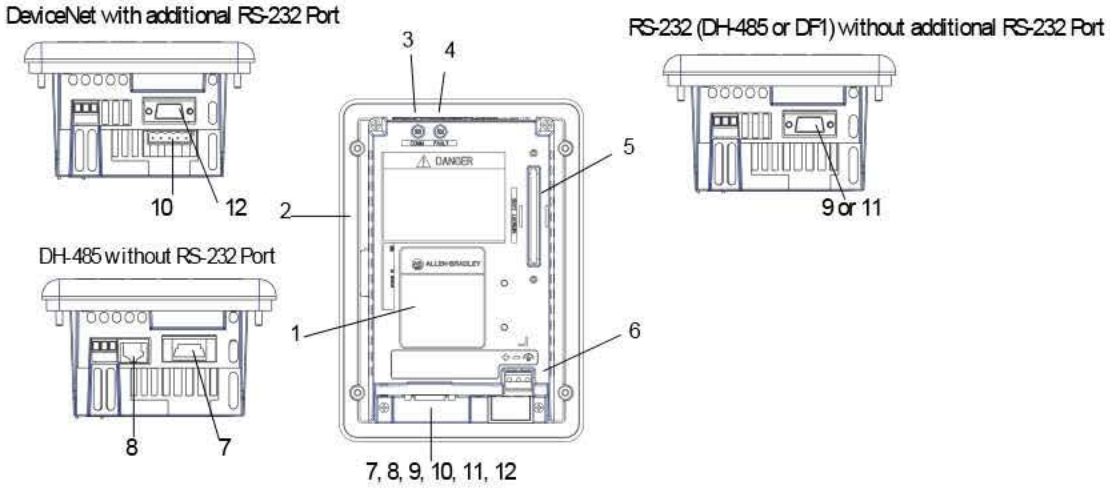
#	Feature	Description
1	Function keys (F1 F8)	Use the function keys to initiate functions on the terminal display. These keys may have custom legends.
2	Cursor keys	Use the up or down cursor keys to move the cursor up or down in a list or to increment/decrement values. Use the left or right cursor keys to select an object with an indicator bar, or to enter configuration mode.
3	Numeric entry keys	0 9 - Enters numeric values. . Enters a decimal point. - Enters a negative value. Clears entered digits or cancels the scratchpad. Stores an entered value.
4	Keypad terminal display	Initiate the function of a displayed object, such as an ON or OFF push button, by pressing the corresponding function key (F1...F8).
5	OEM label option (series B and later)	Contact Rockwell Automation or your authorized distributor for custom label information.

The following illustration shows the dimensions for the OEM label.



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PanelView 300 Terminal Features (back)



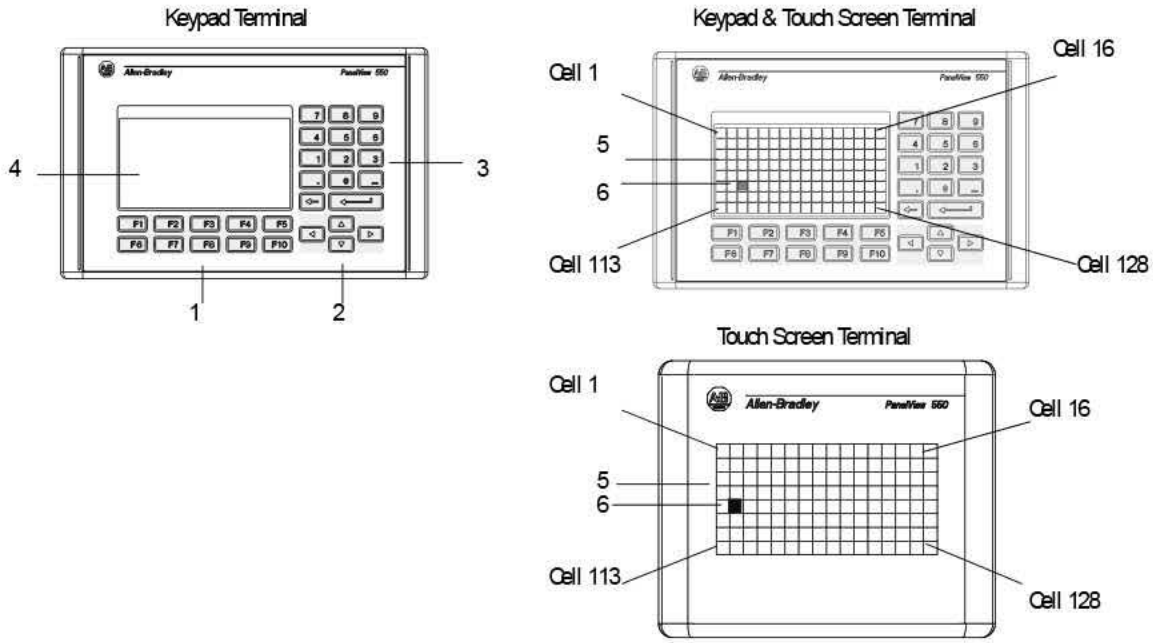
#	Feature	Description
1	Nameplate label	Provides product information.
2	Sealing gasket	Seals the front of the terminal to an enclosure or panel.
3	COMM Status indicator (green)	Indicates when communication is occurring.
4	FAULT Status indicator (red)	Indicates firmware or hardware faults.
5	Memory card slot	Accepts a memory card which stores applications.
6	Power connection terminals	Connects to an external 24V DC power source (18 32V DC).
7	DH-485 communication port	Connects to an SLC or MicroLogix controller, DH-485 network, or Wallmount Power Supply (Cat. No. 1747-NP1).
8	DH-485 programming connector	Connects to a Personal Computer Interface Converter (Cat. No. 1747-PIC) for transferring applications. Also connects to an SLC programmer, such as the Hand-held Terminal (Cat. No. 1747-PT1).
9	RS-232 (DH-485) communication port	Connects to the Channel 0 port of an SLC 5/03, SLC 5/04, or SLC 5/05 controller for point-to-point DH-485 communication. Connects to a MicroLogix controller through an AIC+ Link Coupler. Also connects to the RS-232 serial port of a computer for transferring applications.
10	DeviceNet connector	Connects to a DeviceNet network.
11	RS-232 (DF1) communication port	Connects to a PLC, SLC, or MicroLogix controller with a DF1 port. This port also connects to the RS-232 port of a computer.
12	RS-232 Printer/File transfer port	Connects to a printer (K3A10L1 version only). On a DeviceNet terminal, this port also connects to the RS-232 port of a computer for transferring applications.

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PanelView 550 Terminal Features

This section defines features of the PanelView 550 terminals.

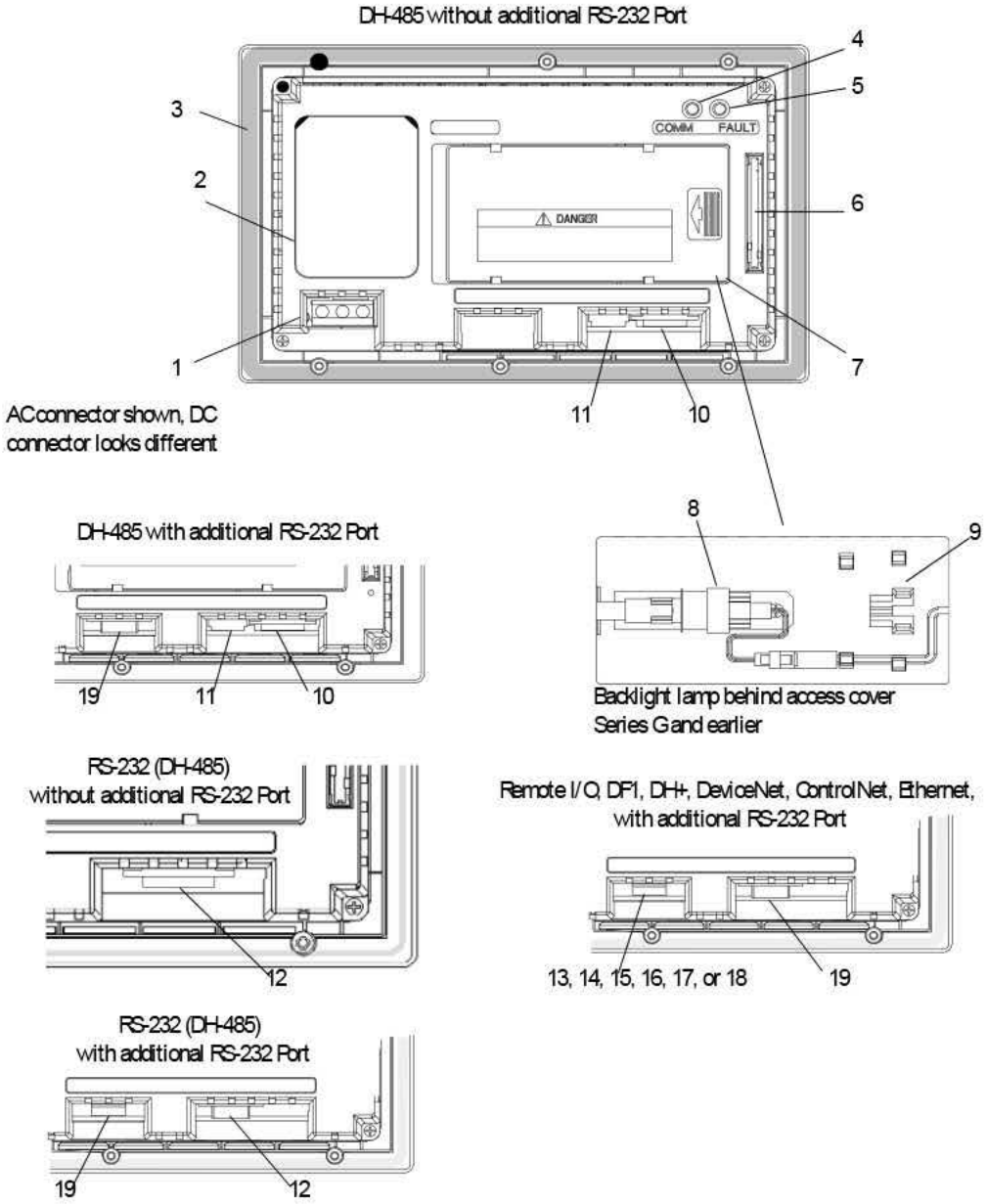
PanelView 550 Terminal Features (front)



#	Feature	Description
1	Function Keys (F1 F10)	On keypad terminals, use the function keys to initiate functions on the terminal display. These keys may have custom legends. On keypad and touch screen terminals, you can initiate functions by using the function keys and/or touch screen objects.
2	Cursor Keys	Use the cursor keys to move the cursor in displayed lists, to select a numeric entry object, or to enter configuration mode.
3	Numeric Entry Keys	0 9 - Enters numeric values. . Enters a decimal point. - Enters a negative value. Clears entered digits or cancels the scratchpad. Stores an entered value.
4	Keypad Terminal Display	On keypad terminals, initiate the function of a displayed object, such as an ON or OFF push button, by pressing a function key (F1 F10).
5	Touch Screen Terminal Display	On touch screen or keypad & touch screen terminals, initiate the function of a displayed object, such as an ON or OFF push button, by touching the screen object. Each interactive screen object occupies one or more of 128 cells. On keypad and touch screen terminals, you can initiate functions by using the function keys and/or touch screen objects.
6	Touch Cells (Touch Screen terminal)	The 128 touch cells (16 columns x 8 rows) let you initiate functions by touching the screen. Interactive screen objects are aligned with touch cells when the application is created.

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PanelView 550 Keypad or Keypad and Touch Screen Terminals (back)



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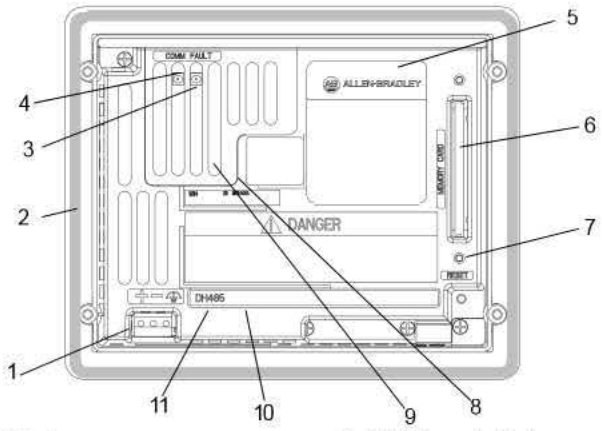
#	Feature	Description
1	Power Connection Terminals	Connects to external power source.
2	Nameplate Label	Provides product information.
3	Sealing Gasket	Seals the front of the terminal to an enclosure or panel.
4	COMM Status (Green) Indicator	Indicates when communication is occurring.
5	FAULT Status (Red) Indicator	Indicates firmware or hardware faults.
6	Memory Card Slot	Accepts a memory card which stores applications.
7	Access Cover	Provides access to the replaceable backlight lamp.
8	Backlight Lamp	Light source for the display backlight. Light transmits through a fiber-optic bundle to the back of the LCD display.(1)
9	Spare Bulb Holder	Stores a spare backlight lamp.(1)
10	DH-485 Communication Port	Connects to an SLC or MicroLogix controller, DH-485 network, or Wallmount Power Supply (Cat. No. 1747-NP1).
11	DH-485 Programming Connector	Connects to a Personal Computer Interface Converter (Cat. No. 1747-PIC) for transferring applications. Also connects to an SLC programmer, such as the Hand-held Terminal (Cat. No. 1747-PT1).
12	RS-232 (DH-485) Communication Port	Connects to the Channel 0 port of an SLC 5/03, SLC 5/04, or SLC 5/05 controller for point-to-point DH-485 communication. Connects to a MicroLogix controller through an AIC+ Link Coupler. Also connects to the RS-232 serial port of a computer for transferring applications.
13	Remote I/O Port	Connects to a scanner or sub-scanner on a remote I/O network.
14	DH+ Communication Port	Connects to a PLC-5, SLC 5/04, or ControlLogix controller on a DH+ link.
15	DeviceNet Connector	Connects to a DeviceNet network.
16	ControlNet Connector	Connects to a ControlLogix controller (with 1756-CNB module) or PLC-5 on a ControlNet network.
17	RS-232 (DF1) Communication Port	Connects to a PLC, SLC, or MicroLogix controller with a DF1 port.
18	Ethernet Connector	Connects to a PLC-5E or SLC 5/05 controller, or a ControlLogix, MicroLogix, FlexLogix, or CompactLogix controller (with appropriate bridge module) on an EtherNet/IP network.
19	RS-232 Printer/ File Transfer Port	Connects to a printer. On remote I/O, DH+, DF1, DeviceNet, EtherNet/IP, or ControlNet terminals, this port also connects to the RS-232 port of a computer for transferring applications. The RS-232 port on the DH-485 or RS-232 (DH-485) terminal is used to connect a printer but not for file transfers.

(1) Series H and later PanelView 550 Keypad and Keypad Touch Terminals have an integrated LED backlight. This backlight is non-replaceable.

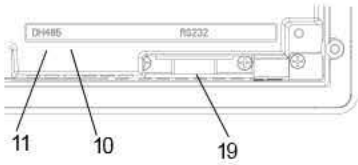
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PanelView 550 Touch Screen Terminal Features (back)

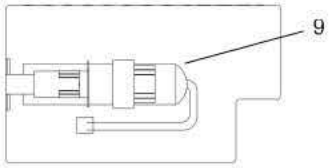
DH-485 without additional RS-232 Port



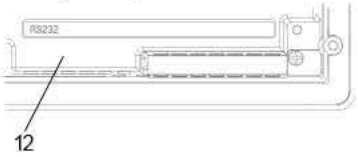
DH-485 with RS-232 Port



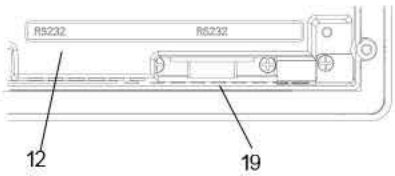
Backlight lamp behind access cover
Series A only



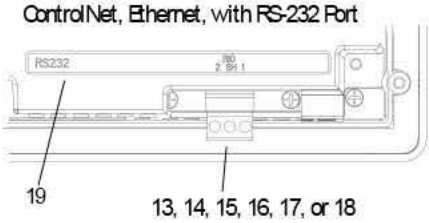
RS-232 (DH-485) without additional RS-232 Port



RS-232 (DH-485) with additional RS-232 Port



Remote I/O, DF1, DH+, DeviceNet,
ControlNet, Ethernet, with RS-232 Port



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#	Feature	Description
1	Power Connection Terminals	Connects to external DC power source.
2	Sealing Gasket	Seals the front of the terminal to an enclosure or panel.
3	FAULT Status (Red) Indicator	Indicates firmware or hardware faults.
4	COMM Status (Green) Indicator	Indicates when communication is occurring.
5	Nameplate Label	Provides product information.
6	Memory Card Slot	Accepts a memory card which stores applications.
7	Reset Button	Resets the terminal.
8	Access Cover	Provides access to the replaceable backlight lamp.(1)
9	Backlight Lamp	Light source for the display backlight. (1)
10	DH-485 Communication Port	Connects to an SLC or MicroLogix controller, DH-485 network, or Wallmount Power Supply (Cat. No. 1747-NP1).
11	DH-485 Programming Connector	Connects to a Personal Computer Interface Converter (Cat. No. 1747-PIC) for transferring applications. Also connects to an SLC programmer, such as the Hand-held Terminal (Cat. No. 1747-PT1).
12	RS-232 (DH-485) Communication Port	Connects to the Channel 0 port of an SLC 5/03, 5/04, or 5/05 for point-to-point DH-485 communication. Connects to a MicroLogix controller through an AIC+ Link Coupler. Also connects to the RS-232 serial port of a computer for transferring applications.
13	Remote I/O Port	Connects to a scanner or sub-scanner on a remote I/O network.
14	DH+ Communication Port	Connects to a PLC-5, SLC 5/04, or ControlLogix controller on a DH+ link.
15	DeviceNet Connector	Connects to a DeviceNet network.
16	ControlNet Connector	Connects to a ControlLogix controller (with 1756-CNB module) or PLC-5 on a ControlNet network.
17	RS-232 (DF1) Communication Port	Connects to a PLC, SLC, or MicroLogix controller with a DF1 port.
18	Ethernet Connector	Connects to a PLC-5E or SLC 5/05 controller, or a ControlLogix, MicroLogix, FlexLogix or CompactLogix (with appropriate bridge module) on an EtherNet/IP network.
19	RS-232 Printer/File Transfer Port	Connects to a printer. On remote I/O, DH+, DF1, DeviceNet, EtherNet/IP, or ControlNet terminals, this port also connects to the RS-232 port of a computer for transferring applications. The RS-232 port on the DH-485 or RS-232 (DH-485) terminal is used to connect a printer but not for file transfers.

(1) Series B and later PanelView 550 Touch Terminals have an integrated LED backlight. This backlight is non-replaceable.

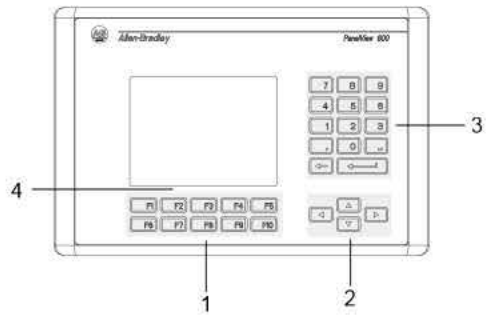
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PanelView 600 Terminal Features

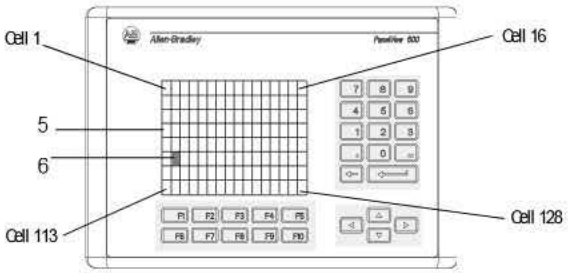
This section defines features of the PanelView 600 terminals.

PanelView 600 Terminal Features (front)

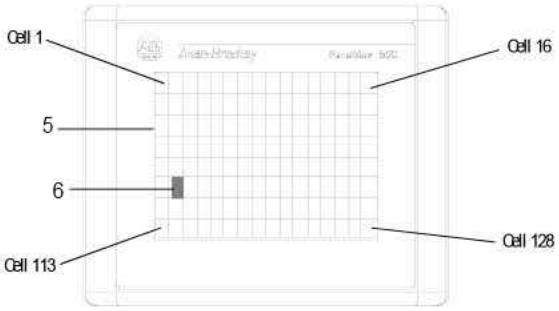
Keypad Terminal



Keypad & Touch Screen Terminal



Touch Screen Terminal



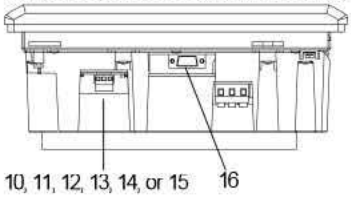
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#	Feature	Description
1	Function Keys (F1 F10)	Use the function keys on keypad terminals to initiate functions on the terminal display. These keys may have custom legends. On the keypad & touch screen terminals, you can initiate functions by using the function keys and/or touch screen objects.
2	Cursor Keys	Use the cursor keys to move the cursor in displayed lists, to select a numeric entry object, or to enter configuration mode.
3	Numeric Entry Keys	0 9 - Enters numeric values. . Enters a decimal point. - Enters a negative value. Clears entered digits or cancels the scratchpad. Stores an entered value.
4	Keypad Terminal Display	On keypad terminals, initiate the function of a displayed object, such as an ON or OFF push button, by pressing a function key (F1...F10).
5	Touch Screen Terminal Display	On keypad and touch screen terminals, initiate the function of a displayed object, such as an ON or OFF push button, by touching the screen object. Each interactive screen object occupies one or more of 128 cells. On touch screen and keypad terminals, you can initiate functions, by using the function keys and/or touch screen objects.
6	Touch Cells (Touch Screen terminal)	The 128 touch cells (16 columns x 8 rows) let you initiate functions by touching the screen. Interactive screen objects are aligned with touch cells when the application is created.

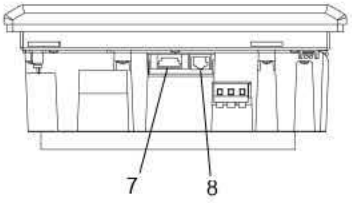
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PanelView 600 Keypad or Keypad & Touch Screen Terminal (back)

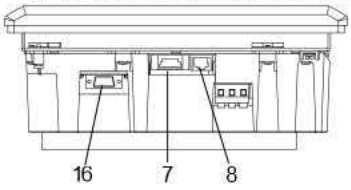
Remote I/O, DF1, DH+, DeviceNet, ControlNet, or Ethernet with additional RS-232 Port



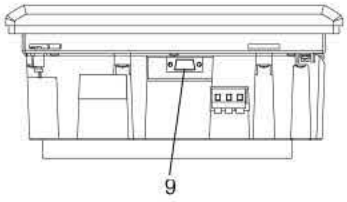
DH-485 without additional RS-232 Port

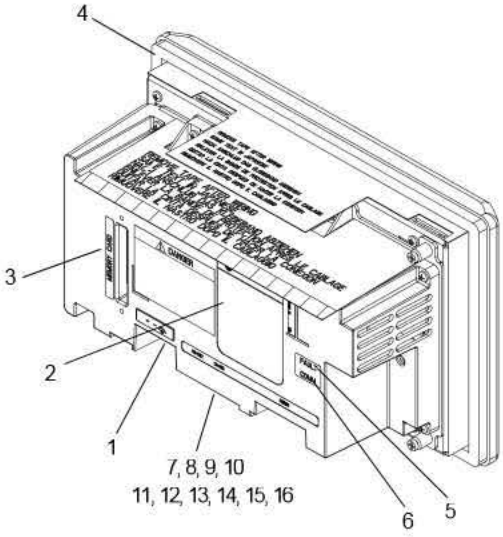


DH-485 with additional RS-232 Port

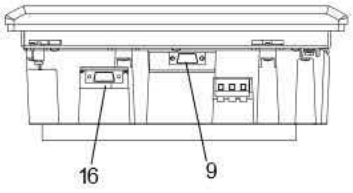


RS-232 (DH-485) without additional RS-232 Port





RS-232 (DH-485) with additional RS-232 Port



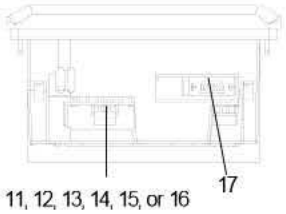
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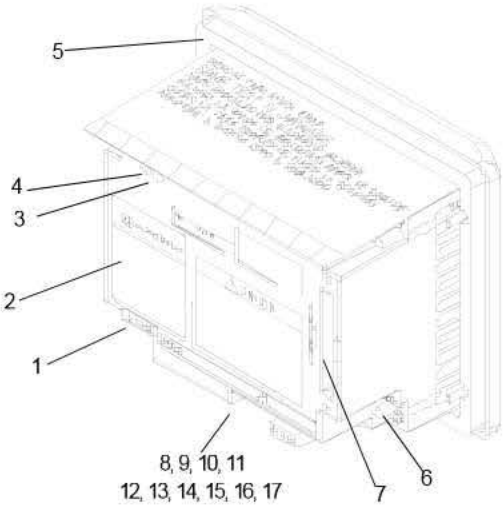
#	Feature	Description
1	Power Connection Terminals	Connects to external power source.
2	Nameplate Label	Provides product information.
3	Memory Card Slot	Accepts a memory card which stores applications.
4	Sealing Gasket	Seals the front of the terminal to an enclosure or panel.
5	FAULT Status (Red) Indicator	Indicates firmware or hardware faults.
6	COMM Status (Green) Indicator	Indicates when communication is occurring.
7	DH-485 Communication Port	Connects to an SLC or MicroLogix controller, DH-485 network, or Wallmount Power Supply (Cat. No. 1747-NP1).
8	DH-485 Programming Connector	Connects to a Personal Computer Interface Converter (Cat. No. 1747-PIC) for transferring applications. Also connects to an SLC programmer, such as the Hand-held Terminal (Cat. No. 1747-PT1).
9	RS-232 (DH-485) Communication Port	Connects to the Channel 0 port of an SLC 5/03, 5/04, or 5/05 for point-to-point DH-485 communication. Connects to a MicroLogix controller through an AIC+ Link Coupler. Also connects to the RS-232 serial port of a computer for transferring applications.
10	Remote I/O Port	Connects to a scanner or sub-scanner on a remote I/O network.
11	DH+ Communication Port	Connects to a PLC-5, SLC 5/04, or ControlLogix controller on a DH+ link.
12	DeviceNet Connector	Connects to a DeviceNet network.
13	ControlNet Connector	Connects to a ControlLogix controller (with 1756-CNB module) or PLC-5 on a ControlNet network.
14	(RS-232) DF1 Communication Port	Connects to a PLC, SLC, or MicroLogix controller with a DF1 port.
15	Ethernet Connector	Connects to a PLC-5E or SLC 5/05 controller, or a ControlLogix, MicroLogix, FlexLogix, or CompactLogix (with appropriate bridge module) on an EtherNet/IP network.
16	RS-232 Printer/File Transfer Port	Connects to a printer. On remote I/O, DH+, DF1, DeviceNet, EtherNet/IP, or ControlNet terminals, this port also connects to the RS-232 port of a computer for transferring applications. The RS-232 port on the DH-485 or RS-232 (DH-485) terminal is used to connect a printer but not for file transfers.

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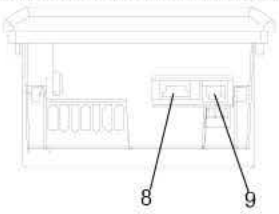
PanelView 600 Touch Screen Terminal Features (back)

Remote I/O, DF1, DH+, DeviceNet, ControlNet, or Ethernet with additional RS-232 Port

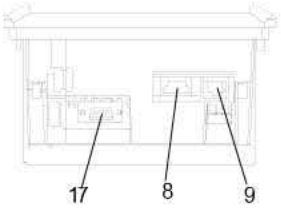




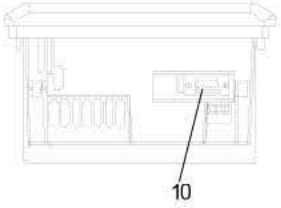
DH-485 without additional RS-232 Port



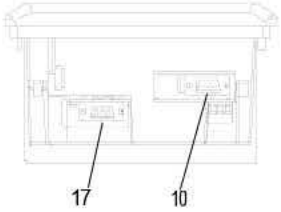
DH-485 with additional RS-232 Port



RS-232 (DH-485) without additional RS-232 Port



RS-232 (DH-485) with additional RS-232 Port



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#	Feature	Description
1	Power Connection Terminals	Connects to external power source.
2	Nameplate Label	Provides product information.
3	Fault Status (Red)	Indicates firmware or hardware faults.
4	COMM Status (Green)	Indicates when communication is occurring.
5	Sealing Gasket	Seals the front of the terminal to an enclosure or panel.
6	Reset Button	Resets the terminal.
7	Memory Card Slot	Accepts a memory card which stores applications.
8	DH-485 Communication Port	Connects to an SLC or MicroLogix controller, DH-485 network, or Wallmount Power Supply (Cat. No. 1747-NP1).
9	DH-485 Programming Connector	Connects to a Personal Computer Interface Converter (Cat. No. 1747-PIC) for transferring applications. Also connects to an SLC programmer, such as the Hand-held Terminal (Cat. No. 1747-PT1).
10	RS-232 (DH-485) Communication Port	Connects to the Channel 0 port of an SLC 5/03, 5/04, or 5/05 for point-to-point DH-485 communication. Connects to a MicroLogix controller through an AIC+ Link Coupler. Also connects to the RS-232 serial port of a computer for transferring applications.
11	Remote I/O Port	Connects to a scanner or sub-scanner on a remote I/O network.
12	DH+ Communication Port	Connects to a PLC-5, SLC 5/04, or ControlLogix controller on a DH+ link.
13	DeviceNet Connector	Connects to a DeviceNet network.
14	ControlNet Connector	Connects to a ControlLogix controller (with 1756-CNB module) or PLC-5 on a ControlNet network.
15	RS-232 (DF1) Communication Port	Connects to a PLC, SLC, or MicroLogix controller with a DF1 port.
16	Ethernet Connector	Connects to a PLC-5E or SLC 5/05 controller, or a ControlLogix, MicroLogix, FlexLogix, or CompactLogix (with appropriate bridge module) on an EtherNet/IP network.
17	RS-232 Printer/File Transfer Port	Connects to a printer. On remote I/O, DH+, DF1, DeviceNet, EtherNet/IP, or ControlNet terminals, this port also connects to the RS-232 port of a computer for transferring applications. The RS-232 port on the DH-485 or RS-232 (DH-485) terminal is used to connect a printer but not for file transfers.

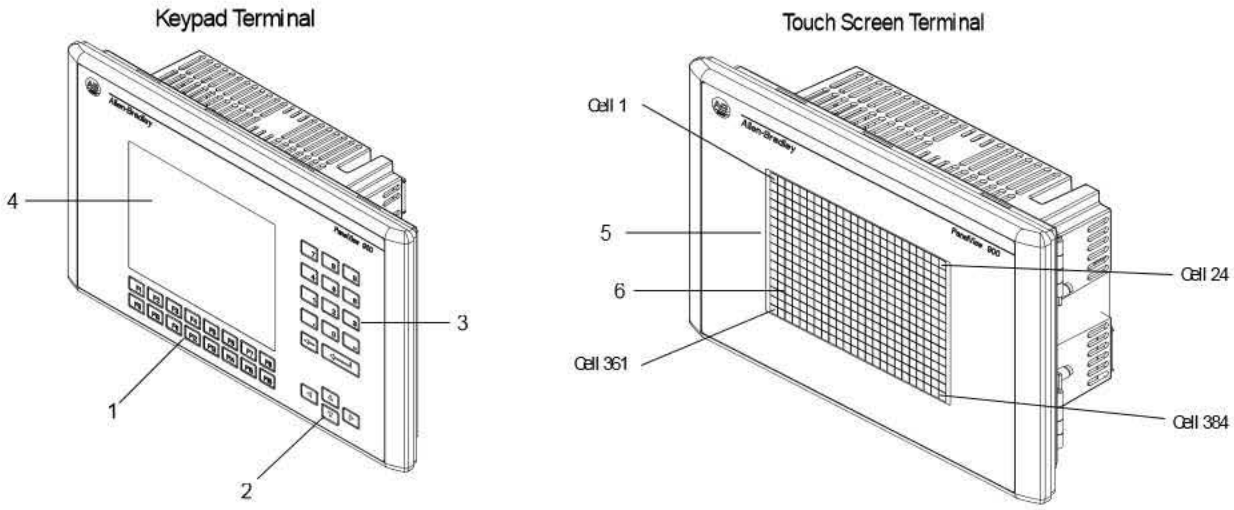
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PanelView 900/1000 Terminal Features

This section defines features of the PanelView 900 and 1000 terminals.

IMPORTANT PanelView 900 terminals are no longer available. Contact your local sales office or authorized Rockwell Automation Distributor for suitable substitutes.

PanelView 900/1000 Terminal Features (front)



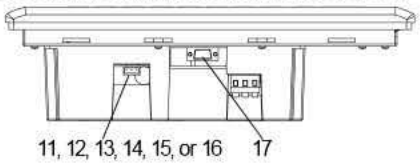
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#	Feature	Description
1	Function Keys (F1 F16)	Use the function keys on keypad terminals to initiate functions on the terminal display. These keys may have custom legends.
2	Cursor Keys	Use the cursor keys to move the cursor in displayed lists, to select a numeric entry object or to enter configuration mode.
3	Numeric Entry Keys	0 9 - Enters numeric values. . Enters a decimal point. - Enters a negative value. Clears entered digits or cancels the scratchpad. Stores an entered value.
4	Keypad Terminal Display	On keypad terminals, initiate the function of a displayed object, such as an ON or OFF push button, by pressing a function key (F1 F16).
5	Touch Screen Terminal Display	On touch screen terminals, initiate the function of a displayed object, such as an ON or OFF push button, by touching the screen object. Each interactive screen object occupies one or more of 384 cells.
6	Touch Cells (Touch Screen terminal)	The 384 touch cells (24 columns x 16 rows) let you initiate functions by touching the screen. Interactive screen objects are aligned with touch cells when the application is created.

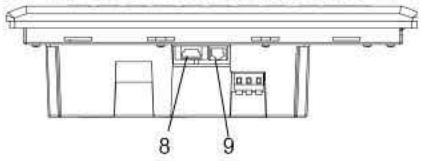
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PanelView 900/1000 Terminal Features (back)

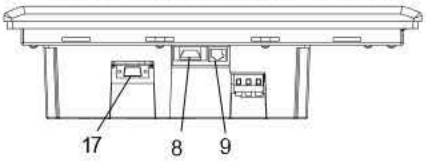
Remote I/O, DF1, DH+, DeviceNet, Ethernet, or ControlNet with additional RS-232 Port



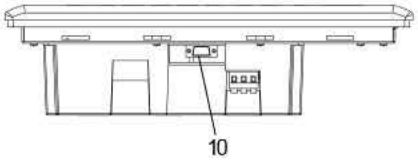
DH-485 Version without additional RS-232 Port



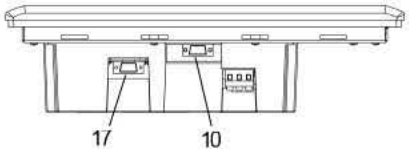
DH-485 with additional RS-232 Port

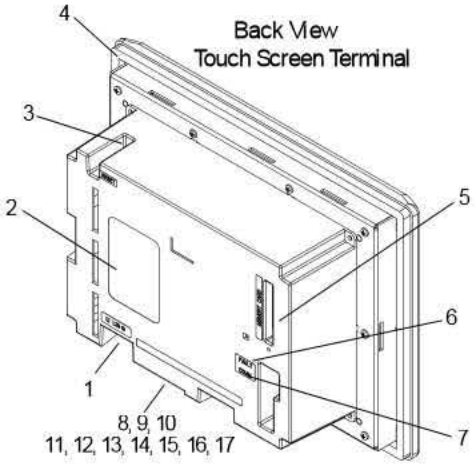


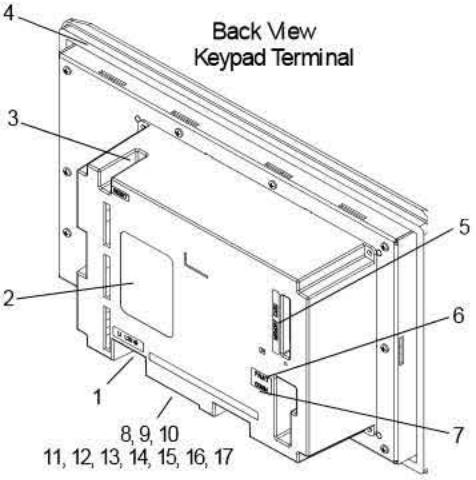
RS-232 (DH-485) without additional RS-232 Port



RS-232 (DH-485) with additional RS-232 Port







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#	Feature	Description
1	Power Connection Terminals	Connects to external power source.
2	Nameplate Label	Provides product information.
3	Reset Button	Resets the terminal.
4	Sealing Gasket	Seals the front of the terminal to an enclosure or panel.
5	Memory Card Slot	Accepts a memory card which stores applications.
6	FAULT Status (Red) Indicator	Indicates firmware or hardware faults.
7	COMM Status (Green) Indicator	Indicates when communication is occurring.
8	DH-485 Communication Port	Connects to an SLC or MicroLogix controller, DH-485 network, or Wallmount Power Supply (Cat. No. 1747-NP1).
9	DH-485 Programming Connector	Connects to a Personal Computer Interface Converter (Cat. No. 1747-PIC) for transferring applications. Also connects to an SLC programmer, such as the Hand-held Terminal (Cat. No. 1747-PT1).
10	RS-232 (DH-485) Communication Port	Connects to the Channel 0 port of an SLC 5/03, 5/04, or 5/05 for point-to-point DH-485 communication. Connects to a MicroLogix controller through an AIC+ Link Coupler. Also connects to the RS-232 serial port of a computer for transferring applications.
11	Remote I/O Port	Connects to a scanner or sub-scanner on a remote I/O network.
12	DH+ Communication Port	Connects to a PLC-5, SLC 5/04, or ControlLogix controller on a DH+ link.
13	DeviceNet Connector	Connects to a DeviceNet network.
14	ControlNet Connector	Connects to a ControlLogix controller (with 1756-CNB module) or PLC-5 on a ControlNet network.
15	RS-232 (DF1) Communication Port	Connects to a PLC, SLC, or MicroLogix controller with a DF1 port.
16	Ethernet Connector	Connects to a PLC-5E or SLC 5/05 controller, or a ControlLogix, MicroLogix, FlexLogix, or CompactLogix (with appropriate bridge module) on an EtherNet/IP network.
17	RS-232 Printer/File Transfer Port	Connects to a printer. On remote I/O, DH+, DF1, DeviceNet, EtherNet/IP, or ControlNet terminals, this port also connects to the RS-232 port of a computer for transferring applications. The RS-232 port on the DH-485 or RS-232 (DH-485) terminal is used to connect a printer but not for file transfers.

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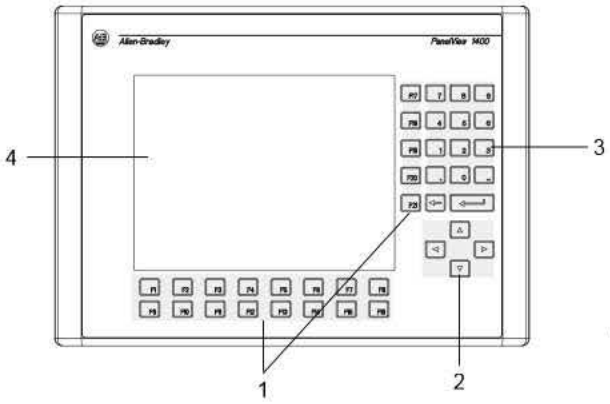
PanelView 1400 Terminal Features

This section defines features of the PanelView 1400 terminals.

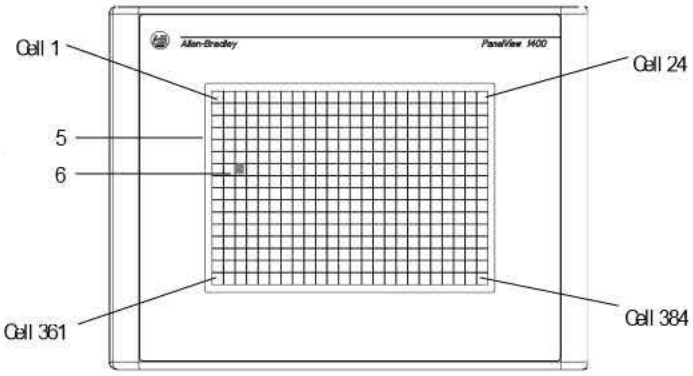
IMPORTANT PanelView 1400 terminals are no longer available. Contact your local sales office or authorized Rockwell Automation Distributor for suitable substitutes.

PanelView 1400 Terminal Features (front)

Keypad Terminal



Touch Screen Terminal



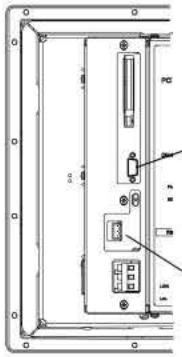
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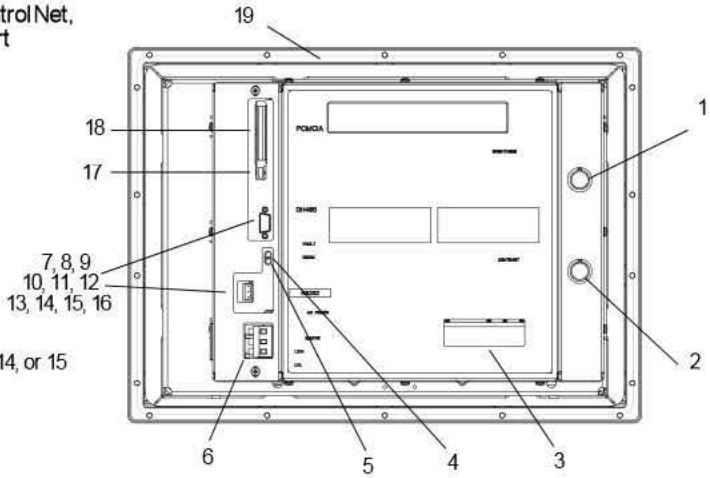
#	Feature	Description
1	Function Keys (F1 F21)	Use the function keys on keypad terminals to initiate functions on the terminal display. These keys may have custom legends.
2	Cursor Keys	Use the cursor keys to move the cursor in displayed lists, to select a numeric entry object, or to enter configuration mode.
3	Numeric Entry Keys	0 9 - Enters numeric values. . Enters a decimal point. - Enters a negative value. Clears entered digits or cancels the scratchpad. Stores an entered value.
4	Keypad Terminal Display	On keypad terminals, initiate the function of a displayed object, such as an ON or OFF push button, by pressing a function key (F1 F21).
5	Touch Screen Terminal Display	On touch screen terminals, initiate the function of a displayed object, such as an ON or OFF push button, by touching the screen object. Each interactive screen object occupies one or more of 384 cells.
6	Touch Cells (Touch Screen terminal)	The 384 touch cells (24 columns x 16 rows) let you initiate functions by touching the screen. Interactive screen objects are aligned with touch cells when the application is created.

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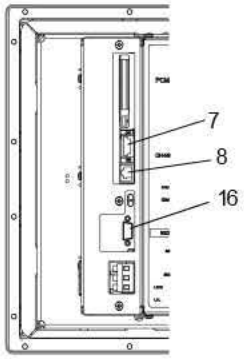
PanelView 1400 Terminal Features (back and sides)

Remote I/O, DF1, DH+, DeviceNet, ControlNet, or Ethernet with additional RS-232 Port

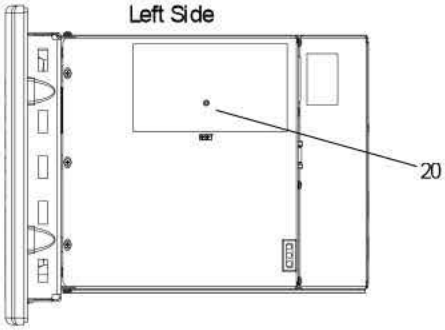




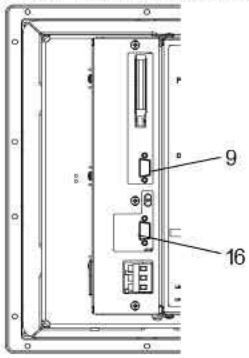
DH-485 with additional RS-232 Port



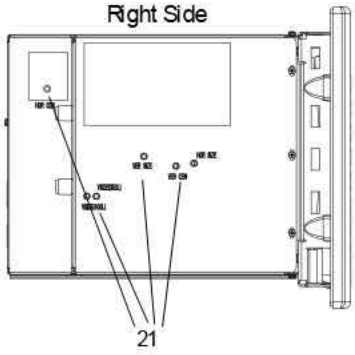
Left Side



RS-232 (DH-485) with additional RS-232 Port



Right Side



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#	Feature	Description
1	Brightness Control	Adjusts the brightness of the color display.
2	Contrast Control	Adjusts the contrast of the color display.
3	Nameplate Label	Provides product information.
4	FAULT Status (Red)	Indicates firmware or hardware faults.
5	COMM Status (Green)	Indicates when communication is occurring.
6	Power Connection Terminals	Connects to external power source.
7	DH-485 Communication Port	Connects to an SLC or MicroLogix controller, DH-485 network, or Wallmount Power Supply (Cat. No. 1747-NP1).
8	DH-485 Programming Connector	Connects to a Personal Computer Interface Converter (Cat. No. 1747-PIC) for transferring applications. Also connects to an SLC programmer, such as the Hand-held Terminal (Cat. No. 1747-PT1).
9	RS-232 (DH-485) Communication Port	Connects to the Channel 0 port of an SLC 5/03, 5/04, or 5/05 for point-to-point DH-485 communication. Connects to a MicroLogix controller through an AIC+ Link Coupler. Also connects to the RS-232 serial port of a computer for transferring applications.
10	Remote I/O Port	Connects to a scanner or sub-scanner on a remote I/O network.
11	DH+ Communication Port	Connects to a PLC-5, SLC 5/04, or ControlLogix controller on a DH+ link.
12	DeviceNet Connector	Connects to a DeviceNet network.
13	ControlNet Connector	Connects to a ControlLogix controller (with 1756-CNB module) or PLC-5 on a ControlNet network.
14	RS-232 (DF1) Communication Port	Connects to a PLC, SLC or MicroLogix controller with a DF1 port.
15	Ethernet Connector	Connects to a PLC-5E or SLC 5/05 controller, or a ControlLogix, MicroLogix, FlexLogix, or CompactLogix (with appropriate bridge module) on an EtherNet/IP network.
16	RS-232 Printer/File Transfer Port	Connects to a printer. On remote I/O, DH+, DF1, DeviceNet, EtherNet/IP, or ControlNet terminals, this port also connects to the RS-232 port of a computer for transferring applications. The RS-232 port on the DH-485 or RS-232 (DH-485) terminal is used to connect a printer but not for file transfers.
17	Memory Card Eject Button	Ejects memory card from slot.
18	Memory Card Slot	Accepts a memory card which stores applications.
19	Sealing Gasket	Seals the front of the terminal to an enclosure or panel.
20	Reset Button	Resets the terminal.
21	CRT Board Adjustments	See the warning below.

ATTENTION



Only qualified service technicians should access the CRT board adjustments. Failure to follow this caution could result in electrical shock, a misadjusted monitor, or a damaged monitor.

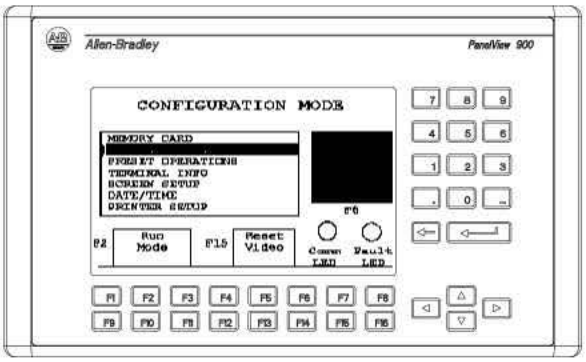
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Applications

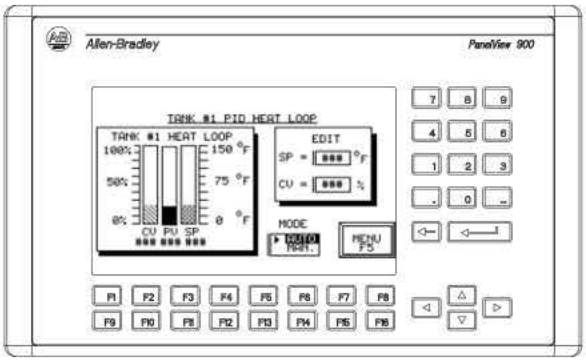
PanelView terminals operate with custom designed applications. The first time you power on the terminal, (no application file loaded), the terminal displays the Configuration Mode menu.

Chapter 3 describes the terminal functions you can configure from this menu.

TIP Remote I/O terminals provide an out-of-box application for setting remote I/O communication parameters.



If an application is loaded, the terminal displays the application's start-up screen.



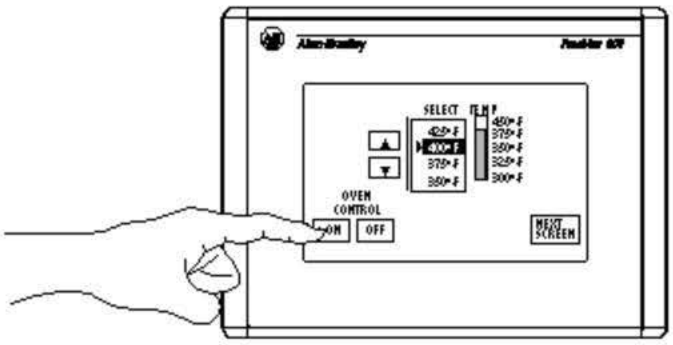
TIP The application designer is responsible for documenting the operation of the application and selecting a startup screen.

How the terminal operates depends on the application and the type of terminal (touch screen or keypad).

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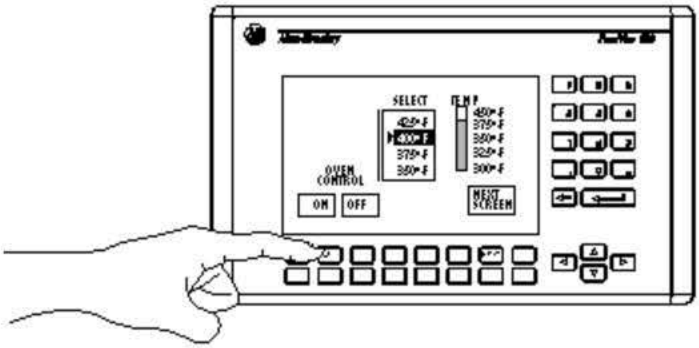
Touch Screen Operation

Applications for touch screen terminals are controlled by touching screen objects.



Keypad Operation

Applications for keypad terminals are controlled by pressing function keys that correspond to screen objects. Data is entered manually by using the numeric entry keys.



A function key legend kit is available for each terminal (except the PV300 Micro terminal) to create custom labels for the function keys.

See the accessories at the end of this chapter.

ATTENTION Do not press multiple touch screen objects or multiple function keys at the same time. This may result in unintended operation.

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IMPORTANT The keypad is designed for finger or gloved finger operation. The touch screen may be operated with a finger, gloved finger, or with a touch screen plastic stylus device with a minimum tip radius of 1 mm (0.040 in) to prevent damage to the touch screen. Using any other object or tool may damage the keypad or touch screen.

Configuration Mode Menu

You can configure terminal functions from the Configuration Mode menu. These functions include how to:

- select a language.
- upload/download applications with a memory card.
- set or display serial communication parameters.
- select preset values.
- obtain terminal and application information.
- adjust screen parameters.
- set time and date.
- set printer parameters (for terminals with an RS-232 printer port).
- return to run mode.

Chapter 3 describes how to enter configuration mode and operations you can perform by using the Configuration Mode menu.

Terminal Messages

Terminal messages display:

- status of an operation.
- minor faults, errors, or numeric entry mistakes.
- operator prompts.

Appendix B describes terminal messages and provides a list of recommended actions.

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Printing

PanelView terminals equipped with an RS-232 printer port can print:

- triggered messages in a message display.
- triggered states of a multistate indicator.
- alarm messages.
- alarm lists.

Print attributes for objects are defined in the application.

Any printer that supports the IBM enhanced character set can be connected to the RS-232 printer port of a PanelView terminal.

Alarm List

PanelView terminals support an Alarm List queue to store information on triggered alarms. The Alarm List stores a maximum of 100 alarms or as many as the terminal can hold in nonvolatile RAM. The number of alarms stored in the list is configured by using the PanelBuilder32 software.

The Alarm List stores the following data for each alarm:

- Acknowledge indicator
- Alarm date and time
- Acknowledge date and time
- Alarm trigger value
- Alarm text including variables

The Alarm List is cleared:

- when an application is downloaded to the terminal.
- when the terminal is reset or power is cycled.

The Alarm List object may appear on the Alarm Banner or other application screens. The data that displays in the Alarm List is configured using the PanelBuilder32 software.

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Accessories

This section lists the accessories available for the PanelView terminals.

Software

Cat. No.	300M	300	550	600	900	1000	1400	Description
2711-ND3	x	x	x	x	x	x	x	Windows software required for creating PanelView applications on a personal computer.

Function Key Legend Kits

Cat. No.	300	550	600	900	1000	1400	Description
2711-NF1		x					5 legend inserts with key labels F1 F10 on one side. Use blank side to create custom labels.
2711-NF2A				x			1 legend insert for PV900 keypad (monochrome) terminal with key labels F1 F16 on one side. Use blank side to create custom labels.
2711-NF2C				x			1 legend insert for PV900 keypad (color) terminal with key labels F1 F16 on one side. Use blank side to create custom labels.
2711-NF4			x				1 legend insert with key labels F1 F10 on one side. Use blank side to create custom labels.
2711-NF5						x	2 legend inserts. One has key labels F1 F16; the other has key labels F17 F21. Use blank sides to create custom labels.
2711-NF6					x		1 legend insert with key labels F1 F16. Use blank side to create custom labels.
2711-NF7	x						2 legend inserts with key labels F1 F4 and F5 F8. Use blank side to create custom labels.

Memory Cards and Retainer

Cat. No.	300	550	600	900	1000	1400	Description
2711-NM11(1)	x	x	x	x	x	x	256K memory card for storing applications.
2711-NM13	x	x	x	x	x	x	2M flash memory card for storing applications.
2711-NM14	x	x	x	x	x	x	4M flash memory card for storing applications.
2711-NM15	x	x	x	x	x	x	10M flash memory card for storing applications.
2711-NM216(1)	x	x	x	x	x	x	16M flash ATA card for storing applications and font files.
2711-NM232	x	x	x	x	x	x	32M flash ATA card for storing applications and font files.
2711-NMCC		x	x	x	x		Secures memory card in the PanelView 500/600 keypad or the PanelView 900/1000 keypad and touch screen. Prevents electrostatic discharge.
2711-NMCD		x					Secures memory card in 550 touch screen terminal and prevents electrostatic discharge.
2711-NMCE	x		x				Secures memory card in PanelView 300 keypad and 600 touch screen terminals and prevents electrostatic discharge.

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(1) Contact Rockwell Automation for availability.

Antiglare Overlay

Self-adhesive filters minimize the reflection of terminal displays.

Cat. No.	300M	300	550	600	900	1000	1400
2711-NV4 (Keypad)			x				
2711-NV4T (Touch Screen Terminals)			x	x			
2711-NV3K (Keypad)					x		
2711-NV3T (Touch Screen Terminals)					x		
2711-NV5 (Keypad)				x			
2711-NV7K (Keypad Terminals)							x
2711-NV7T (Touch Screen Terminals)							x
2711-NV6K (Keypad Terminals)						x	
2711-NV6T (Touch Screen Terminals)						x	
2711-NV8 (Keypad Terminals)		x					

DH-485 Operating and Programming Cables

Cat. No.	Description
1747-PIC	Personal Computer Interface Converter converts RS-232 signals to/from RS-485 signals. Use to transfer applications between a DH-485 terminal and a computer.
1747-C10	1.83 m (6 ft) cable connects a DH-485 terminal to an SLC or DH-485 network.
1747-C11	0.30 m (1 ft) cable connects a DH-485 terminal to an SLC or DH-485 network.
1747-C20	6.1 m (20 ft) cable connects a DH-485 terminal to an SLC or DH-485 network.
1747-CP3	45 cm (17.7 in.) cable connects an RS-232 terminal to an AIC+ (Port 1) through a null modem adapter.
1761-CBL-AP00	45 cm (17.7 in.) cable connects an RS-232 terminal to an AIC+ (Port 2) through a null modem adapter.
1761-CBL-AC00	3 m (9.8 ft) cable connects an RS-232 terminal to an AIC+ (Port 1) through a null modem adapter.
1761-CBL-AS03	3 m (9.8 ft) cable connects a DH-485 terminal to an AIC+ (Port 3).
1761-CBL-AS09	9.9 m (29.5 ft) cable connects a DH-485 terminal to an AIC+ (Port 3).
1761-CBL-AM00	45 cm (17.7 in.) cable with 2 mini DIN, right angle connectors.
1761-CBL-HM02	2 m (6.5 ft) cable with 2 mini DIN, right angle connectors.
2711-CBL-HM05	5 m runtime cable with 2 mini DIN, right angle connectors.
2711-CBL-HM10	10 m runtime cable with 2 mini DIN, right angle connectors.
1761-CBL-PM00	45 cm (17.7 in.) cable connects an RS-232 terminal to an AIC+ (Port 2) through a null modem adapter.

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Cat. No.	Description
1761-CBL-PM02	2 m (6.5 ft) cable connects an RS-232 terminal to an AIC+ (Port2) through a null modem adapter.
2711-CBL-PM05	5 m programming cable with a D-shell and mini DIN connector.
2711-CBL-PM10	10 m programming cable with a D-shell and mini DIN connector.

PanelView File Transfer Utility

Cat. No.	Description
2711-ND7	Transfers .PVA files between a PanelView terminal and a computer running Windows.

Power Supply and Link Couplers

The following items are available for all PanelView terminals.

Cat. No.	Description
1747-NP1	Wallmount power supply provides power for DH-485 communication when an SLC controller or network is not connected.
1747-AIC	AIC Link Coupler links devices on a DH-485 network.
1761-NET-AIC	AIC+ Advanced Interface Converter links devices on a DH-485 network including MicroLogix.
1761-NET-DNI	DeviceNet Interface links DF1 PanelViews on a DeviceNet network.
1761-NET-ENI	Ethernet Interface links DF1 or Ethernet devices on an EtherNet/IP network.

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RS-232 Cables

Cat. No.	Description
2711-NC13	5 m (15 ft) connects an RS-232 terminal to the Channel 0 port of an SLC 5/03 controller or the RS-232 port of a computer or printer.
2711-NC14	10 m (32 ft) cable connects an RS-232 terminal to the Channel 0 port of an SLC 5/03 controller or the RS-232 port of a computer or printer.
2711-NC21	5 m (15 ft) connects an RS-232 terminal to a MicroLogix controller (except PV300 Micro).
2711-NC22	15 m (49 ft) cable connects an RS-232 terminal to a MicroLogix controller (except PV300 Micro).
2706-NC13	3 m (10 ft) cable connects an RS-232 terminal to an SLC 5/03 controller or the RS-232 port of a computer or printer.
1761-CBL-AP00	0.5 m (1.5 ft) cable connects a PanelView 300 Micro RS-232 terminal to an SLC or PLC.
1761-CBL-PM02	2 m (6.5 ft) cable connects a PanelView 300 Micro RS-232 terminal to an SLC or PLC.
2711-CBL-PM05	5 m (15 ft) cable connects a PanelView 300 Micro RS-232 terminal to a ControlLogix, AIC+, SLC controller, or computer RS-232 port.
2711-CBL-PM10	10 m (30 ft) cable connects a PanelView 300 Micro RS-232 terminal to a ControlLogix, AIC+, SLC controller, or computer RS-232 port.
1761-CBL-AMCO	0.5 m (1.5 ft) cable connects a PanelView 300 Micro RS-232 terminal to a MicroLogix.
1761-CBL-HM02	2 m (6.5 ft) cable connects a PanelView 300 Micro RS-232 terminal to a MicroLogix.
2711-CBL-HM05	5 m (15 ft) cable connects a PanelView 300 Micro RS-232 terminal to a MicroLogix 1000/1200/1500, DeviceNet DNI, or AIC+ module.
2711-CBL-HM10	10 m (30 ft) cable connects a PanelView 300 Micro RS-232 terminal to a MicroLogix 1000/1200/1500, DeviceNet DNI, or AIC+ module.

Remote I/O or DH+ Cable

Cat. No.	Description
1770-CD	Shielded, 3-conductor cable (Belden 9463) for connecting a remote I/O terminal to a remote I/O network.

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Replacement Parts

This section lists the replacement parts available for the PanelView terminals.

Backlight Lamps

Cat. No.	550	600	900	1000	Description
2711-NL1	x				Halogen backlight lamp for all PV550 terminals. Provides backlighting for LCD display.
2711-NL2			x		Backlight for PV900 color terminal.
2711-NL3		x			Backlight for PV600 color terminal.
2711-NL4				x	Backlight for PV1000 color terminal.
2711-NL5		x			Backlight for PV600 (Series C only)
2711-NL6				x	Backlight for PV1000 color terminal (Series B only)
2711-NL7				x	Backlight for PV1000 color terminal (Series C only)
2711-NL9				x	Backlight for PV1000 color terminal (Series D and Series E only) Backlight for PV1000 grayscale terminal (Series C and Series D only)
2711-NL10				x	Backlight for PV1000 color terminal (Series F only) Backlight for PV1000 grayscale terminal (Series E only)

Real Time Clock Modules

Cat. No.	300	550	600	900	1000	1400	Description
2711-NB2		x					Real time clock module for PV550 (Series D or earlier). Does not apply to the PV550 touch screen terminals. Contains lithium battery.
2711-NB3		x	x	x	x	x	Real time clock module for PV600, PV900, PV1000, PV1400 or PV550 (Series E and F). Does not apply to PV550/PV600 touch screen terminals. Contains lithium battery.
2711-NB4	x	x	x		x		Real time clock module for PV300, PV550 (Series G and later), PV550/PV600 touch screen, PV600 (Series C and later), PV1000 color (Series D and later), and PV1000 grayscale (Series B and later) terminals. Contains lithium battery.

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Panel Mount Clips and Studs

Cat. No.	600	900	1000	1400	Description
2711-NP1				x	10 panel mount clips for PV1400 terminal.
2711-NP2	x	x	x		6 panel mount clips for PV600, PV900 or PV1000 terminals.
2711-NP3				x	Optional panel mount studs (18) for PV1400 terminals.

Remote I/O Connector

Cat. No.	550	600	900	1000	1400	Description
22112-046-03	x	x	x	x	x	Terminal block connector plugs into remote I/O port of remote I/O terminals.

Power Input Connector

Cat. No.	300M	600 (touch only)	Description
2711-TBDC	x	x	Removable dc power input connectors for PanelView 300 Micro (qty. of 10).

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Applying Power and Resetting Terminal

Chapter Objectives

This chapter provides information on:

- wiring and safety guidelines.
- connecting AC or DC power.
- resetting the terminal.
- power-up sequence.

Wiring and Safety Guidelines

Use publication NFPA 70E, Electrical Safety Requirements for Employee Workplaces when wiring the PanelView terminals. In addition to the NFPA general guidelines:

- connect the terminal to its own branch circuit.
- the input power should be protected by a fuse or circuit breaker rated at no more than 15 Amps.
- route incoming power to the PanelView terminal by a separate path from the communication cable.

IMPORTANT Do not run signal wiring and power wiring in the same conduit.

where power and communication lines must cross, they should cross at right angles. Communication lines can be installed in the same conduit as low level DC I/O lines (less than 10V).

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Hazardous Location Considerations

This equipment is suitable for use in Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F and G; Class III; or non-hazardous locations only. The following WARNING statement applies to use in hazardous locations.

WARNING EXPLOSION HAZARD



Substitution of components may impair suitability for Class I, Class II, Class III Division 2.

Do not replace components or disconnect equipment unless power has been switched off or the area is known to be non-hazardous.

Do not connect or disconnect components unless power has been switched off or the area is known to be non-hazardous.

This product must be installed in an enclosure. All cables connected to the product must remain in the enclosure or be protected by conduit or other means.

All wiring must comply with N.E.C. article 501-4(b), 502-4(b), 503-3(b) as appropriate.

See the nameplate on terminal for hazardous locations certifications.

ATTENTION



In Class I, Class II, Class III Division 2 Hazardous locations, the PanelView terminal must be wired per the National Electric Code as it applies to hazardous locations. Peripheral equipment must also be suitable for the location in which it is installed.

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Connect AC Power

Below are AC electrical ratings for the PanelView terminals. The PV550/PV600 touch screen only terminal is available only with DC power, not AC power.

Terminal Type	Supply Voltage	Power Consumption, Max
PV550	85 264V AC, 47 63 Hz	45 VA
PV600	85 264V AC, 43 63 Hz	60 VA
PV900M/PV900C	85 264V AC, 47 63 Hz	110 VA
PV1000G/PV1000C	85 264V AC, 47 63 Hz	55 VA
PV1400	85 264V AC, 43 63 Hz	200 VA

ATTENTION



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

The PanelView terminals are IEC 1131-2 Equipment Class I devices and require you to connect the GND (Ground) or ⏚ (Protective Earth) terminal to an earth conductor.

IMPORTANT

The PanelView terminals are designed for safe use when installed in a NEMA Type 12, 13, 4X (indoor use only), IP54 or IP65 rated enclosure.

Follow these steps to connect power to the AC versions of the PanelView.

1. Secure AC power wires to the L1 and L2N terminal block screws.
2. Secure the Earth Ground/Protective Earth wire to the GND or the ⏚ screw on the terminal block.

ATTENTION



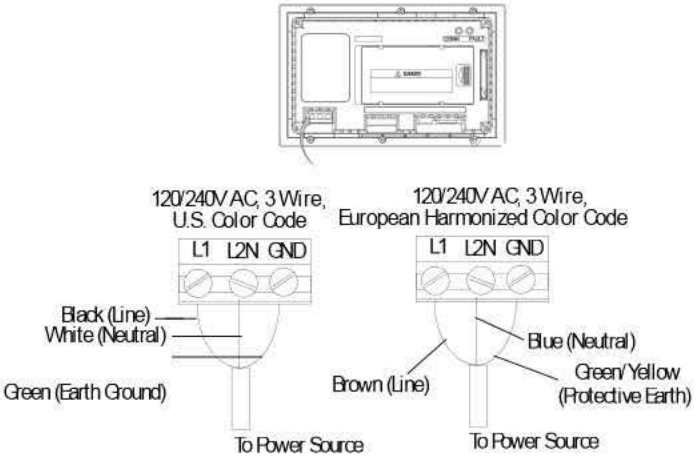
Improper wiring of the power terminals may result in voltage at the communication connector shells.

See the appropriate wiring diagram on page 62.

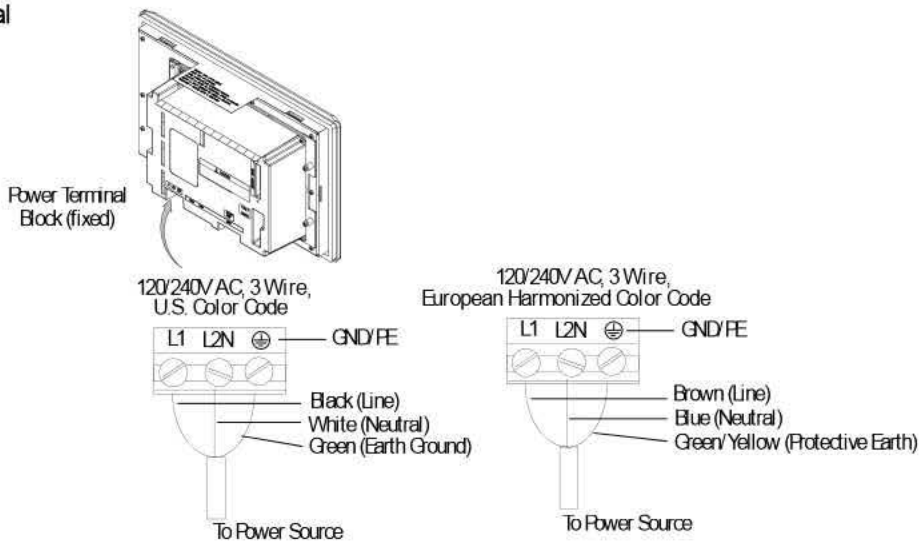
3. Apply power to the terminal.

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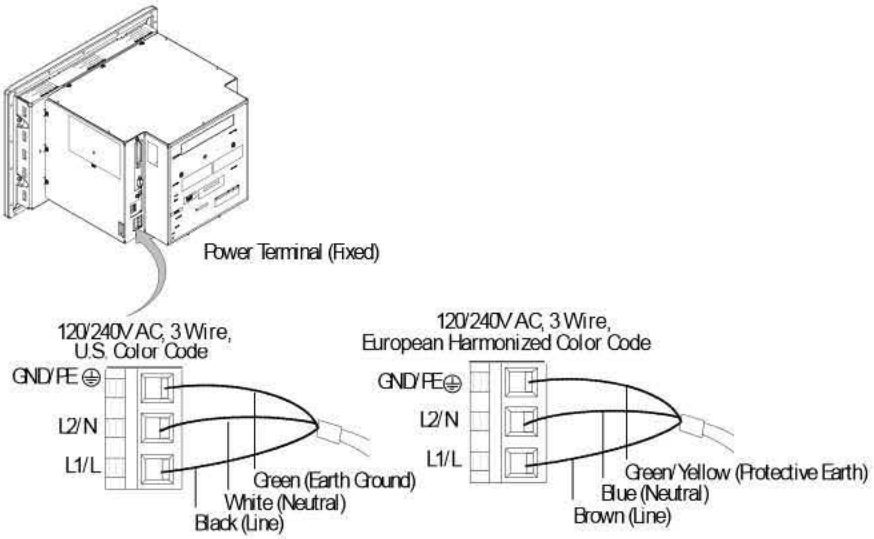
PanelView 550 Terminal



PanelView 900/1000 Terminal



PanelView 1400 Terminal



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Connect DC Power

The L1 versions (Cat. No. 2711-K5 A5 A18...32V1L1, 2711-T9C1L1) of the PV300, PV300 Micro, PV550, PV600, PV900, and PV1000 terminals connect to a 24V DC power source.

The table below shows the electrical ratings for the DC versions of the terminals. Electronic circuitry and an internal fuse protect the terminals from reverse polarity and over-voltage conditions.

Terminal Type	Supply Voltage (24V DC nominal)	Power Consumption, Max
PV300 Micro	11...30V DC	2.5 W (0.105 A @24V DC)
PV300	18...32V DC	6 W (0.25 A @24V DC)
PV550	18...30V DC	18 W (0.75 A @24V DC)
PV550 (touch only)	18...32V DC	18 W (0.75 A @24V DC)
PV600	18...32V DC	24 W (1.0 A @24V DC)
PV600 (touch only)	18...32V DC	24 W (1.0 A @24V DC)
PV900M	18...30V DC	58 W (2.5 A @24V DC)
PV900C	18...32V DC	50 W (2.1 A @24V DC)
PV1000G	18...32V DC	24 W (1.0 A @24V DC)
PV1000C	18...32V DC	24 W (1.0 A @24V DC)

ATTENTION



Do not connect a DC rated PanelView terminal to an AC power source. Connecting to an AC power source may damage the terminal.

IMPORTANT

The PanelView terminals are designed for use when installed in a NEMA Type 12, 13, NEMA 4X (indoor use only), IP54 or IP65 rated enclosure.

ATTENTION



Do not power PanelView terminals from the I/O power on a controller or from DeviceNet network power. If you try to do this, the PanelView will not power up and the DeviceNet or controller power supply may be over-stressed.

ATTENTION



Use only a safety extra-low voltage (SELV) power supply as a source for the PanelView 300 Micro, PanelView 300 or 550 touch screen terminal. A SELV power supply does not exceed 42.4V DC.

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Connect the power source to the terminal at the 3-screw terminal block (PV300 Micro removable and PV600 Touch only, all others fixed).

WARNING



Explosion Hazard

Substitution of components may impair suitability for Class I, Class II, Class III, Division 2.

Do not replace components or disconnect equipment unless power has been switched off or the area is known to be non-hazardous.

Do not connect or disconnect components unless power has been switched off or the area is known to be non-hazardous.

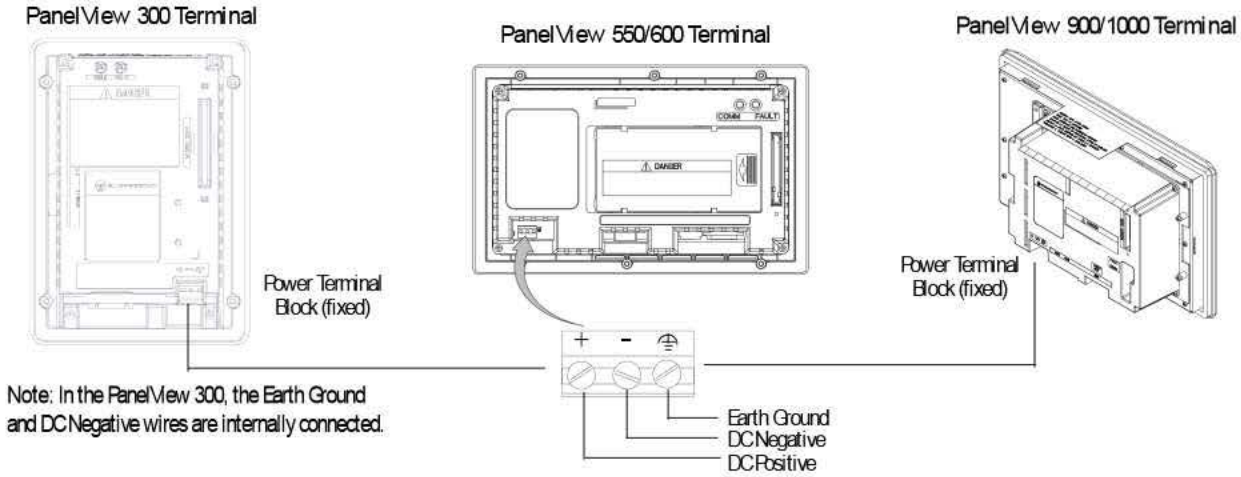
This product must be installed in an enclosure. All cables connected to the product must remain in the enclosure or be protected by conduit or other means.

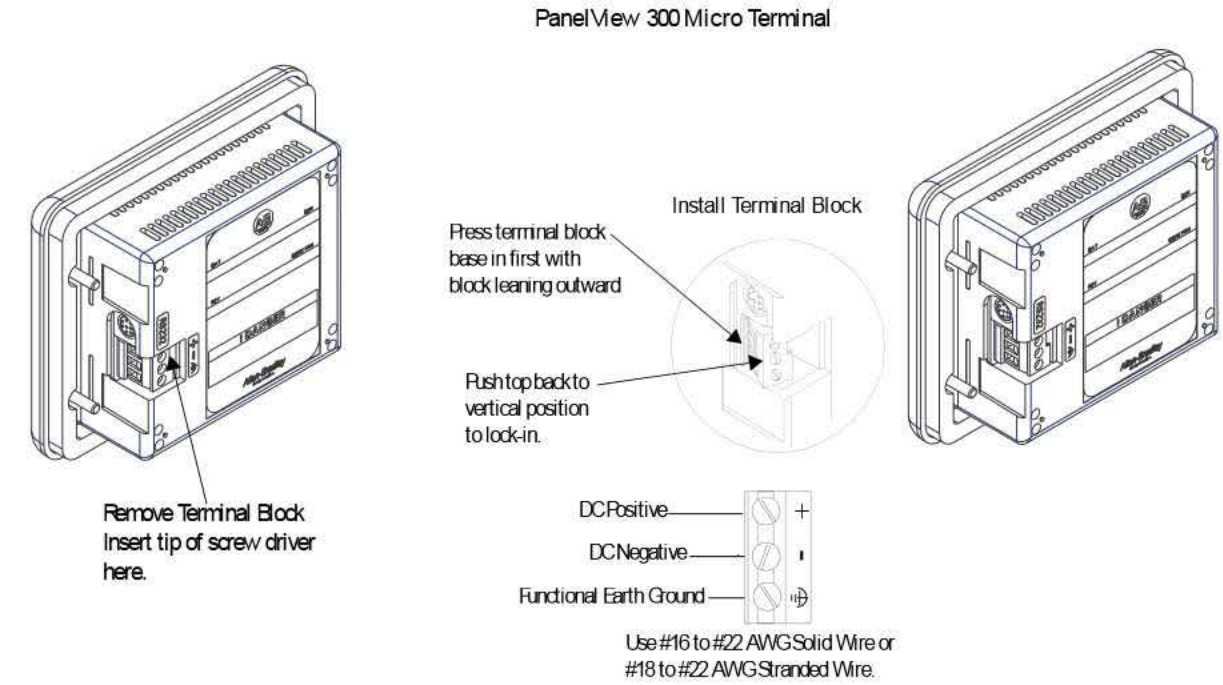
All wiring must comply with N.E.C. article 501-4(b).

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Follow these steps to connect power to the dc versions of the PanelView.

1. Secure the DC power wires to the terminal block screws.





2. Secure the Functional Earth Ground (FE) wire to the correct terminal block screw.

   The dc negative and Functional Earth Ground wires are internally connected in the PanelView 300 Micro terminal.

3. Apply 24V DC power to the terminal.

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Reset the Terminal

Resetting the terminal re-initializes the PanelView terminal (same as cycling power).

Follow these steps to reset the PV300, PV300 Micro, PV550 (keypad, keypad and touch) or the PV600 (keypad, keypad and touch) terminals.

Simultaneously press the Left arrow ◄, Right arrow ►, and Enter keys. The terminal performs its powerup sequence.

The sequence in which keys are pressed (while running an application), determines what appears after the reset.

If you press the Left ◄ and Right ► arrow keys before the Enter key, the Configuration Mode menu appears.

If you press the Enter key before the arrow keys, the terminal runs the loaded application.

TIP If the Left ◄ or Right ► arrow keys on the PanelView 300 Micro are assigned as function keys, you must use the GoTo Configuration Screen button.

Follow these steps to reset the PV550 and PV600 (touch only)/ PV900/PV1000/PV1400 terminals.

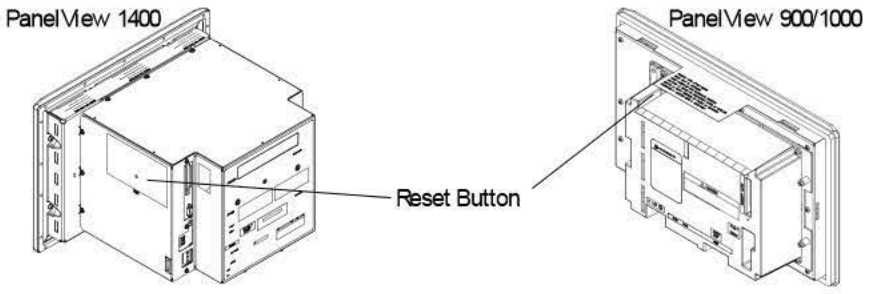
1. Use a narrow, non-conductive tool to press the reset button.

   The terminal performs its powerup sequence.

ATTENTION



Use a nonconducting object to press the Reset button. Do not use a conducting object such as a paper clip that may damage the terminal. Do not use the tip of a pencil; graphite may damage the terminal. The normally-open, momentarily-closed Reset button is designed for only 1.3 N (0.29 lb) operating force. Use of excessive force may damage the button or cause it to stick.



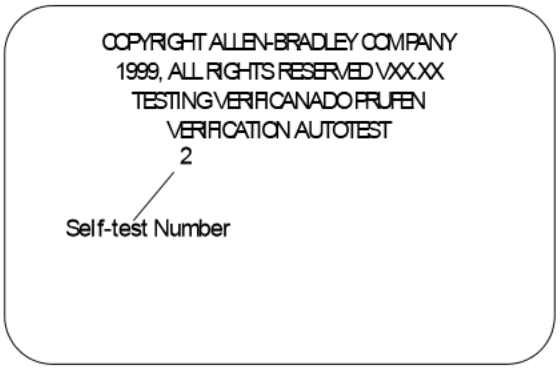
On the PV550/PV600 touch screen terminals, the Reset button is on the right, below the Memory Card slot.

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Power-up Sequence

When resetting or applying power to a PanelView terminal, the terminal runs a series of self-tests. The initial display shows copyright information and the status of each self-test number.

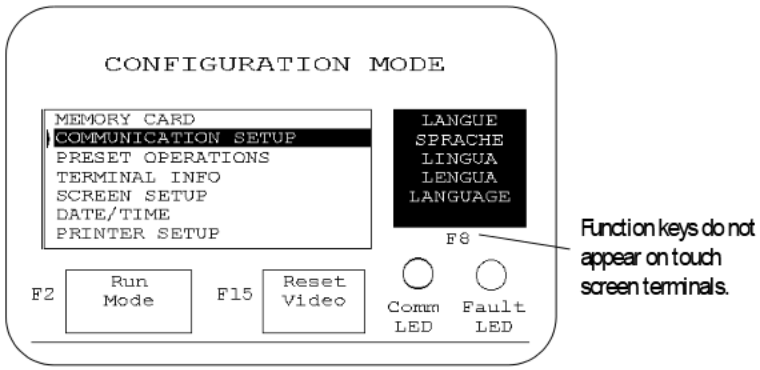
See Appendix B for a description of the self-test numbers.



For DH-485 and RS-232 Terminals

If an application is loaded, the terminal displays either the screen that was present prior to reset or power down, or the startup screen.

If an application is not loaded, the Configuration Mode menu appears.



PV900 Keypad Terminal

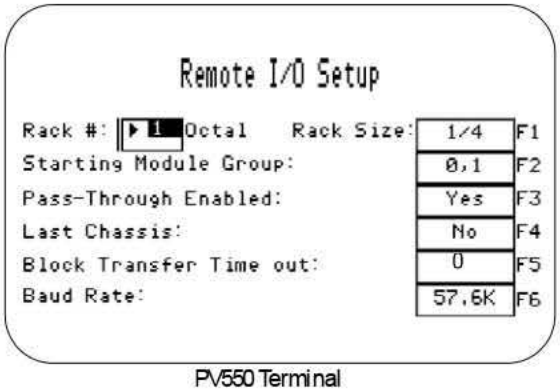
Note: On PV550/600 terminals, the Reset Video is F9.
On PV300 and PV300 Micro terminals, the Reset Video is F2.

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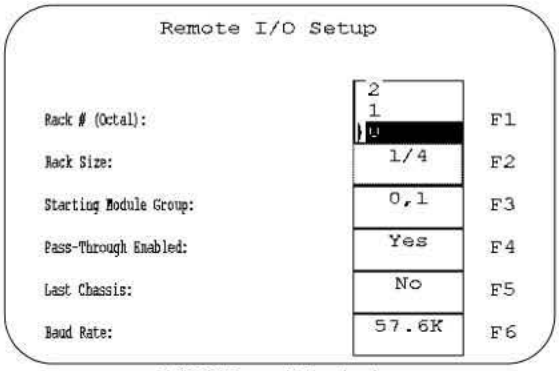
For Remote I/O Terminals

An out-of-box application screen opens allowing you to set remote I/O parameters for the terminal. This screen is only available for initial setup. Once an application is downloaded, the remote I/O setup screen is erased.

The table on the next page defines the remote I/O Parameters.



PV550 Terminal



PV900 Keypad Terminal

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Press this function key on		To set this RIO parameter	Description	Options
550/600	900/1000/1400			
▶	F1	Rack #	Rack address of terminal on RIO network. On PV550/600: Press to open the scratchpad. Enter the rack address and press again. On PV900/PV1000/PV1400: Press F1 to set the rack #, then use the up and down arrow keys to select an address.	0 76
F1	F2	Rack Size	Rack size of terminal. Each key press displays a different size. The terminal occupies a single rack.	1/4, 1/2, 3/4, Full
F2	F3	Starting Module Group	Starting module group number of the terminal in the assigned rack. Each key press displays a different module group.	0,1 2,3 4,5 6,7
F3	F4	Pass-through Enabled	Enables or Disables Pass-through, which lets you transfer applications between a computer on a DH+ link and a terminal on a remote I/O link. A PLC-5 controller passes data between the networks.	Yes or No
F4	F5	Last Chassis	Specifies whether the terminal occupies the last module group in the assigned rack (applies only to PLC2 controllers).	Yes or No
F5		Block Transfer Timeout	Timeout value for block transfers. Each key press toggles a value.	0 60 seconds (0 is the default)
F6	F6	Baud Rate	Communication rate at which the terminal will communicate on the RIO network.	Baud Max. Cable Length 57.6K 10,000 ft 115.2K 5,000 ft 230.4K 2,500 ft

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Configuring the Terminal

Chapter Objectives

This chapter shows how to use the Configuration Mode menu to configure terminal settings and perform operations including how to:

- access the Configuration Mode menu.
- select a language.
- use a memory card.
- configure communication (DH485, DH+, remote I/O, ControlNet, DeviceNet, DF1, EtherNet/IP).
- configure presets.
- view terminal information.
- set the time and date.
- adjust display parameters.
- set up the printer.

Application Settings

Configuration parameters are set from the terminal or from the PanelBuilder32 software when creating the application. Settings downloaded with the application have priority over terminal settings if the following option is enabled in the Terminal Setup dialog of the PanelBuilder32 software.

☒ Use Downloaded configuration settings

In addition, the application may allow the controller to change the following while the application is running:

- time and date
- current display screen
- piloted control lists

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Access the Configuration Mode Menu

The Configuration Mode menu appears on powerup if an application is not loaded or if the menu was last displayed prior to a reset or power down.

To access Configuration Mode on keypad terminals if an application is running, simultaneously press the Left ◄ and Right ► arrow keys on the terminal keypad.

TIP If the Left ◄ or Right ► arrow keys on the PanelView 300 Micro are assigned as function keys, you must use the GoTo Config. Screen button.

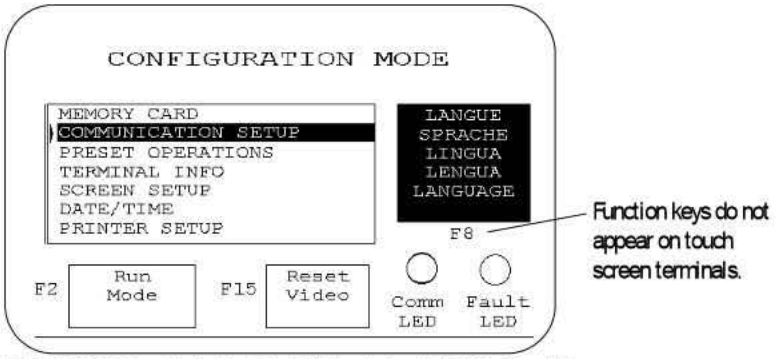
To access Configuration Mode on touch screen terminals:

press the GoTo Config. Screen button on application screen or press the filled box in the lower right corner of the screen during powerup.

TIP Most of the screens in this chapter are for the PanelView 900 keypad terminal. The screens for other terminals are similar. On keypad terminals you press terminal function keys to modify settings. These keys may differ between terminals depending on the screen size and function key placement. On touch screen terminals, you press the screen field or button.



PV300/PV300 Micro Keypad Terminal



On PV550/600 terminals, the Reset Video button is F9. On PanelView 300, 300 Micro terminals, the Reset Video button is F2.

Operations List

Select an operation using the Up ▲ or Down ▼ arrow keys. Press the Enter key (keypad terminals) or press ↵ (touch screen terminals) to enter the selection.

Language

Displays the language menu.

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Run Mode

Runs the loaded application.

Reset Video

Resets the video to default settings. The reset video function is useful if the screen is set to non-viewable settings.

Comm and Fault Status Indicators

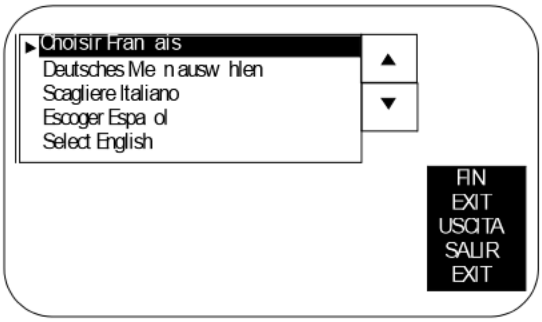
The two status indicators on the Configuration Mode menu indicate the operating state of the terminal. The operating states vary for each communication protocol (and the PV300 Micro terminal).

See Chapter 13.

Select a Language

Press the Language button, [F8] key, from the Configuration Mode menu to display the Language Selection screen.

TIP On PV300 and PV300 Micro terminals, scroll down on the main configuration menu to select a language.



The terminal supports five languages.

French
German
Italian
Spanish
English

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Language List

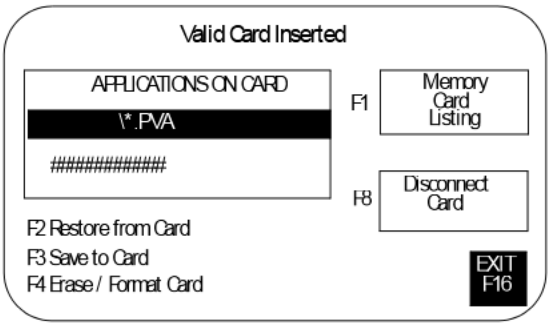
Select a language using the up or down arrow keys. All configuration screens and terminal messages will be displayed in the selected language.

Exit

Returns to the Configuration Mode menu.

Use a Memory Card

Select Memory Card from the Configuration Mode menu to transfer applications between a memory card and the terminal. The PanelView 300 Micro does not support a memory card. Chapter 4 describes the transfer procedure.



Memory Card Listing

Displays the file names of applications on the memory card. Only 1 file name is displayed at a time. Press the Memory Card Listing button or [F1] to scroll through the file names. This button does not display the names of font files (*.OTF).

Disconnect Card

Closes all files on the memory card. Press Disconnect before removing the card from the slot to ensure all files are closed. A message appears when you can remove the card from the card slot. Failure to follow this procedure could damage the card.

Applications on Card

Displays the selected application file stored on the memory card.

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Restore From Card

Transfers the application under Applications on Card to the terminal. Any application in the terminal is overwritten.

Save to Card

Saves the current application in the terminal to the memory card.

Erase/Format Card

Erases and formats a 2711-NM11, -12, -13, -14, 15 memory card. This function deletes all applications on the card. You can't delete individual files. Don't perform this operation on a 2711-NM2xx ATA card or the card will be inoperable.

Exit

Returns to the Configuration Mode menu.

Configure Communication

Select Communication Setup from the Configuration Mode menu to display or change the communication settings for your PanelView terminal. The screen that appears depends on the communication protocol of the terminal.

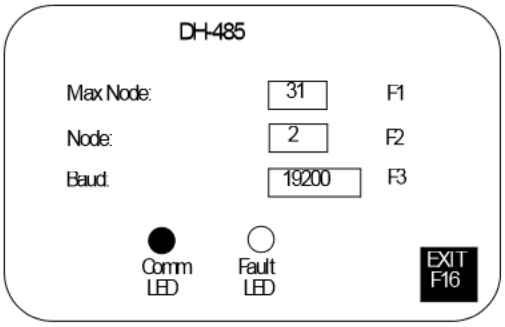
DH-485 Communication

The DH-485 screen lets you modify or display DH-485 settings for either a DH-485 or RS-232 PanelView terminal. These are the default settings.

Max Node Address = 31
Node Address = 2
Communication Rate = 19200

IMPORTANT Settings downloaded with a DH-485 application take priority over terminal settings and take effect immediately after the download.

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Max Node

Opens the numeric entry scratchpad. Enter the highest node number on the network (up to 31) and press the Enter key. (On touch screen terminals, press the key on the scratchpad). A change to the maximum node address takes effect immediately.

Node

Opens the numeric entry scratchpad. Enter the node address of the terminal (0 31) and press the Enter key. (On touch screen terminals, press the key on the scratchpad). If you enter a value greater than the maximum node address, the value is accepted and the maximum node address is updated. A node address change takes effect immediately.

Baud

Steps through the communication rates with each key press: 1200, 2400, 9600, and 19200. The selected communication rate takes effect immediately.

Comm Status Indicator

solid fill - normal operating state

blinking - no communication established

no fill - hardware failure

Fault Status Indicator

no fill - normal operating state

blinking - hardware is functioning but an application is not loaded or the current application is corrupted.

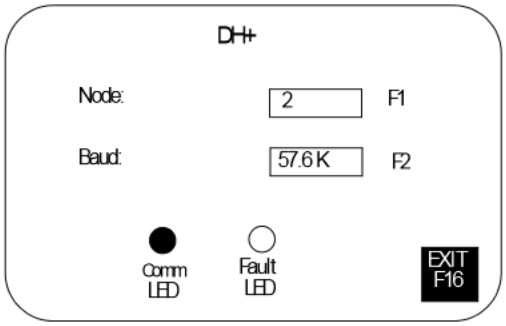
solid fill - hardware failure

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DH+ Communication

The DH+ screen lets you display or modify communication settings for the DH+ version of the PanelView terminals.

IMPORTANT Settings downloaded with a DH+ application take priority over terminal settings and take effect immediately after the download.



Node

Opens the numeric entry scratchpad. Enter the node address (0 77 octal) of the terminal on the DH+ link and press the Enter key. (On touch screen terminals, press the Enter key on the scratchpad). A node change takes effect immediately.

Baud

Steps through the communication rates with each key press: 57.6K (default), 115.2K, and 230.4K. The selected rate takes effect immediately. The maximum cable length is restricted at higher communication rates.

Comm Status Indicator

solid fill - normal operating state

blinking - no communication established

no fill - hardware failure

Fault Status Indicator

no fill - normal operating state

blinking - hardware is functioning but an application is not loaded or the current application is corrupted.

solid fill - hardware failure

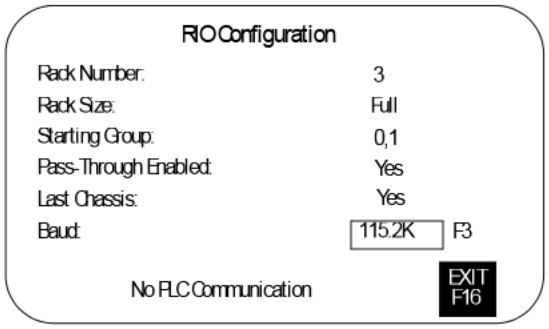
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Exit

Returns to the Configuration Mode menu.

Remote I/O Communication

The remote I/O configuration screen lets you display communication settings for a remote I/O terminal. Remote I/O settings are configured with the out-of-box application provided with the terminal or from the PanelBuilder32 software.



Settings are read only, except for communication rate.

Rack Number (read only)

Displays the current rack number (0 76 octal) of the terminal.

Rack Size (read only)

Displays the current rack size (1/4, 1/2, 3/4, or Full) of the terminal.

Starting Group (read only)

Displays the starting module group of the terminal: 0,1 2,3 4,5 6,7

Pass-through Enabled (read only)

Enables/disables Pass-through which allows you to transfer applications between a computer on the Allen-Bradley DH+ network and a terminal on the remote I/O link. A PLC-5 controller passes data between the two networks.

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Last Chassis (ready only)

Indicates whether the terminal occupies the last module group in its assigned rack.

Baud

Steps through the communication rates with each key press: 57.6K (default), 115.2K, and 230.4K. The selected rate takes effect immediately. The maximum cable length is restricted at higher communication rates.

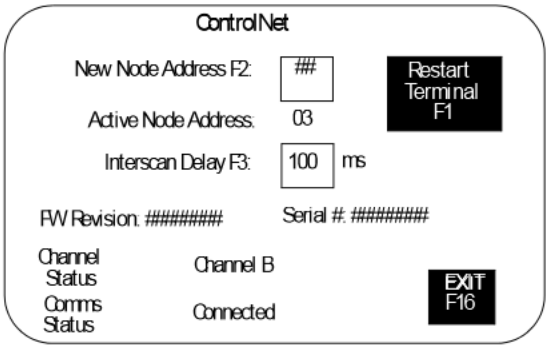
Exit

Returns to the Configuration Mode menu.

ControlNet Communication

The ControlNet screen lets you display communication settings for a ControlNet terminal. You are only allowed to change the Node Address and Underscan Delay settings.

IMPORTANT Settings downloaded with a ControlNet application take priority over terminal settings and take effect immediately after the download.



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New Node Address

Opens the numeric entry scratchpad. Enter the node address (01 99 decimal) of the terminal and press the Enter key. On touch screen terminals, press the key on the scratchpad. The initial default is 3. The change takes effect after the terminal is reset. If you enter a value greater than the UMAX node address, the terminal will not go online with the network.

Active Node Address (read only)

Displays the current address of the PanelView terminal.

Underscan Delay

Opens the numeric entry scratchpad so you can change the Interscan Delay. Enter the delay (100 1000 milliseconds in multiples of 100) and press the Enter key. On touch screen terminals, press the key on the scratchpad. The initial default is 100. A change takes effect immediately.

FW Revision (read only)

Shows the revision # of the firmware in the ControlNet terminal.

Serial Number (read only)

Displays a unique, 32-bit serial number for the PanelView terminal.

Comms Status

Displays the current status of the communication card. Connected appears when the PanelView is connected to the network and operating properly.

Channel Status

Displays a value indicating the current status of channel A and B. The definition of each status condition follows the table. If multiple status conditions apply, the highest priority condition is displayed.

Displayed Value	Status AB	Displayed Value	Status AB	Displayed Value	Status AB	Displayed Value	Status AB
119	7 7	87	7 5	55	7 3	23	7 1
118	6 7	86	6 5	54	6 3	22	6 1
117	5 7	85	5 5	53	5 3	21	5 1
116	4 7	84	4 5	52	4 3	20	4 1

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Displayed Value	Status AB	Displayed Value	Status AB	Displayed Value	Status AB	Displayed Value	Status AB
115	3 7	83	3 5	51	3 3	19	3 1
114	2 7	82	2 5	50	2 3	18	2 1
113	1 7	81	1 5	49	1 3	17	1 1
112	0 7	80	0 5	48	0 3	16	0 1
103	7 6	71	7 4	39	7 2	7	7 0
102	6 6	70	6 4	38	6 2	6	6 0
101	5 6	69	5 4	37	5 2	5	5 0
100	4 6	68	4 4	36	4 2	4	4 0
99	3 6	67	3 4	35	3 2	3	3 0
98	2 6	66	2 4	34	2 2	2	2 0
97	1 6	65	1 4	33	1 2	1	1 0
96	0 6	64	0 4	32	0 2	0	0 0

Status	Indicates	Priority
7	Terminal failure. Contact Allen-Bradley for technical support.	1 (Highest)
6	Self test being performed. Wait for end of test.	2
5	Incorrect node configuration. Check for duplicate nodes.	3
4	Incorrect network configuration (such as overflow/underflow if signaled by host, out-of-step). Check for a node greater than UMAX.	4
3	Cable fault or lonely connection (such as disconnected cable, redundancy warning).	5
2	Temporary network errors (such as bad MAC frame, screeners not programmed).	6
1	Channel ok.	7
0	Channel disabled.	8 (Lowest)

Restart Terminal

Resets the PanelView terminal. A new node address takes affect after a reset.

Exit

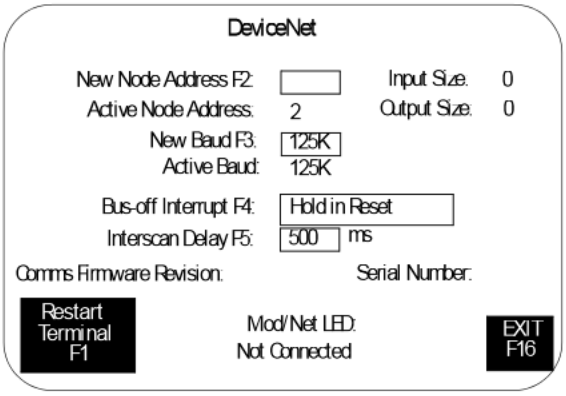
Returns to the Configuration Mode menu.

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DeviceNet Communication

The DeviceNet screen lets you display or modify communication settings for a DeviceNet terminal.

IMPORTANT Settings downloaded with a DeviceNet application take priority over terminal settings and take effect immediately after the download.



Restart Terminal

Resets the terminal.

New Node Address

Opens the numeric entry scratchpad. Type the node address (0 63) of the PanelView on the DeviceNet link or enter 64 to use the address stored on the communication card, Program Mode PGM displayed. Press the Enter key to store the address. On touch screen terminals, press the key on the scratchpad. A node change takes effect on reset. If 64 is entered, the node address can be set from the network using a DeviceNet network configuration tool.

Active Node Address (read only)

Displays the current network operating address of the PanelView terminal. The default is 63.

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New Baud

Step through the communication rates with each key press: 125K (default), 250K, 500K, AutoBaud, PGM. If you select AutoBaud, the terminal determines the communication rate on startup (provided there is sufficient network traffic). If you select PGM, the terminal uses the most recent communication rate stored on the communication card. The selected communication rate takes effect on reset. The maximum cable length is restricted at higher communication rates.

Active Baud (read only)

Displays the current communication rate of the PanelView terminal. The new communication rate is displayed after a reset. If the communication rate was set to AutoBaud, active baud displays the rate set by the terminal. If the communication rate was set to PGM, the active baud displays the most recent communication rate stored on the communication card.

Bus-off Interrupt

Specifies what occurs when a CAN bus-off interrupt occurs on the DeviceNet network. The PanelView is not allowed network access when Hold on Reset is selected and a Bus-off Interrupt occurs.

Hold in Reset: holds the PanelView and waits for a communication reset or a terminal reset.

Reset and Continue Communication: resets DeviceNet communication and re-establishes the communication link.

Interscan Delay

Opens the numeric entry scratchpad so you can change the delay between scans of the Explicit-Client tags. Enter a value of 0 65535 milliseconds and press the Enter key. (On touch screen terminals, press the key on the scratchpad.) The default is 500 milliseconds.

This time delay is inserted between each full scan of the Explicit-Client tags in the current screen context. The value is initially set by the downloaded application but can be changed by an operator. The new value takes effect at the end of the current scan delay.

Explicit-client mode will generate low priority, network messaging at intervals less than 500 milliseconds.

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Input Size

Displays the number of words (0 64) sent by the PanelView in an I/O message. The default value is 0, which indicates that no input data is exchanged with the scanner. This value is set by the downloaded application.

Output Size

Displays the number of words (0 64) received by the PanelView in an I/O message. The default value is 0, which indicates no output data is exchanged with the scanner. This value is set by the downloaded application.

Comm Status Indicator

solid fill - normal operating state

blinking - no communication established

no fill - hardware failure

Exit

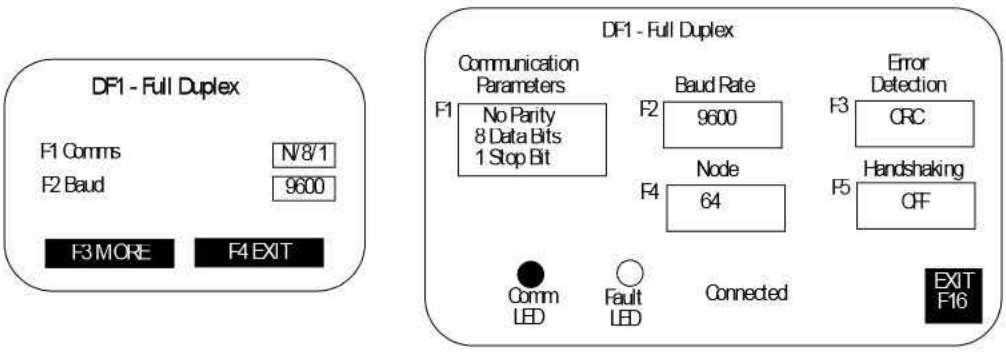
Returns to the Configuration Mode menu.

DF1 Communication

The DF1 screen lets you display or modify DF1/full duplex communication settings for a DF1 PanelView terminal.

IMPORTANT Settings downloaded with a DF1 application have priority over terminal settings and take effect immediately after the download.

Typical DF1 Setup Screens



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Communication Parameters

Sets the communication parameters for the DF1 port on the PanelView terminal. The settings must match the target device. Each key press toggles through the available combinations for:

Parity = None (default), Even or Odd

Data Bits = 8

Stop Bits = 1 (default) or 2

The DF1 port on the PLC-5 controllers allows a parity of Even or None parity with 8 Data Bits. For the SLC controllers, the parity is fixed at None and uses CRC error detection.

Baud Rate

Steps through the communication rates for the DF1 communication port with each key press: 1200, 2400, 4800, 9600, and 19200. The initial default is 9600.The communication rate must match the communication rate of the target device.

Error Detection

Specifies the type of error checking performed on data. The default is Cyclic Redundancy Check (CRC).

Block Check Character (BCC) - modulo-256 arithmetic sum of an array of data bytes used for medium-level data verification.

Cyclic Redundancy Code (CRC) - calculated on an array of data bytes and used for high-level data verification.

Node

Specifies the node number (0 254 decimal) for DF1 network communication. For point-to-point communication with an SLC, PLC, MicroLogix controller or a 1761-NET DNI module, the default node number of 64 is used.

When you press F4, the numeric entry scratchpad opens. Enter a node number and press the Enter key. (On touch screen terminals, press the key on the scratchpad.)

Handshaking

Specifies the type of handshaking used by the RS-232 port.

On (CTS/RTS enabled)

OFF (CTS/RTS disabled)

Press F5 or touch the box to select an option. The default is Off.

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Comm Status Indicator

solid fill - normal operating state

blinking - no communication established with logic controller

no fill - hardware failure

Fault Status Indicator

no fill - normal operating state

blinking - hardware is functioning but an application is not loaded or the current application is corrupted.

Exit

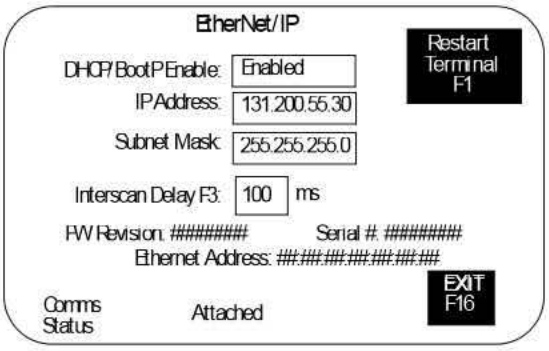
Returns to the Configuration Mode menu.

EtherNet/IP Communication

The EtherNet/IP screen lets you display or modify some of the EtherNet/IP communication settings for an Ethernet PanelView terminal.

Additional parameters (Gateway Address, DNS Server and Domain Name, and Timeout values) are set in the Communication Setup dialog of the PanelBuilder32 software and downloaded with the application.

IMPORTANT Settings downloaded with an EtherNet/IP application have priority over terminal settings and take effect immediately after the download.



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DHCP/BootP Enable

DHCP/BootP Enable (Dynamic Host Configuration Protocol) automatically allocates network devices and configurations to newly attached devices on a TCP/IP network. When DHCP/BootP Enable is enabled, the PanelView terminal is automatically assigned an IP Address and Subnet Mask. These fields will be read only. Select disable to manually enter an IP Address or Subnet Mask for the PanelView terminal.

IMPORTANT If DHCP/BootP is enabled in the downloaded application and then disabled on the terminal, the terminal will not have the necessary information (Gateway Address, IP address, Subnet Mask) to connect to the network on a restart. The Gateway Address cannot be entered at the terminal; you must configure this address in the Communication Setup dialog of PanelBuilder32.

IP Address

A unique address identifying the PanelView node on the EtherNet/IP network. The IP address is formatted as four sets of decimal numbers with periods between them (10.0.0.1). The range of values for the first set of decimal numbers is 1 255, unless all fields are set to 0.0.0.0. The range of values for the last three sets of decimal numbers is 0 255. The default value is 0.0.0.0. A change is not effective until you reset the terminal.

Subnet Mask

A 32-bit value forming the PanelView terminal's subnet mask. This parameter interprets IP addresses when the network is divided into multiple networks. The subnet mask is formatted as four sets of decimal numbers with periods between them (255.255.255.1). The range of values for the first set of decimal numbers is 1 255. The range of values for the last three sets of decimal numbers is 0 255. The value of 0.0.0.0 is not a valid subnet mask.

Interscan Delay

The length of time the PanelView terminal delays before re-reading data from the logic controller. Valid values range from 100 1,000 milliseconds. The default is 100. The terminal must be restarted for a new interscan delay value to be accepted.

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Restart Terminal

Resets the terminal.

Exit

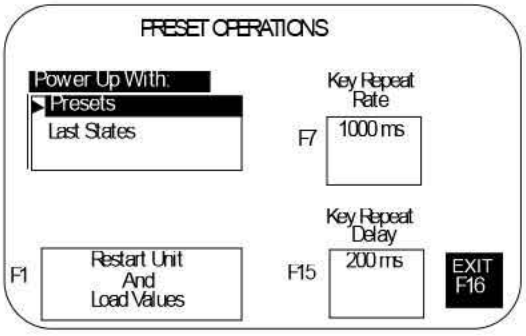
Returns to the Configuration Mode menu.

Configure Presets

Select Preset Operations from the Configuration Mode menu to set the values of control objects after a reset or power cycle. You can set presets to:

values provided by the PanelView application.

last values entered from terminal prior to a reset or power down.



Power-up with Presets or Last States

Displays the current power-up selection. Use the up and down arrow keys on keypad terminals (or the up and down keys on touch screen terminals) to select an option. The selection takes effect the next time the terminal is powered on.

Select Presets to load initial values of control objects (into controller data tables) with values supplied by the application.

Select Last States to load initial values of control objects (into controller data tables) with values entered at the terminal prior to a terminal reset or power down.

Restart Unit and Load Values

Loads the values selected in the Power-up With list and resets the terminal.

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Key Repeat Rate

Specifies the number of repeats that occur per second when a key is pressed and held. Steps through key repeat rates: 0 (disabled), 200 ms (5 times/s), 250 ms (4 times/s), 330 ms (3 times/sec), 500 ms (2 times/s), 1000 ms (1 time/s).

Key Repeat Delay

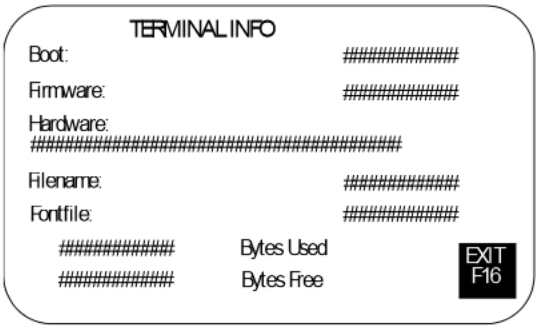
Specifies how long a key must be pressed before it is repeated. Steps through delay rates: 200 ms, 400 ms, 600 ms, 800 ms, 1000 ms, 1500 ms, 2000 ms, 2500 ms.

Exit

Returns to the Configuration Mode menu.

Viewing Terminal Information

Select Terminal Info from the Configuration Mode menu to display information about your terminal. This information may be needed when calling for technical support.



Boot

Displays the boot code revision.

Firmware

Displays the firmware revision.

Hardware

Displays the hardware configuration.

Keypad (CPS)
Touch Screen (TS)
Keypad and Touch Screen (TS CPS)

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Communication Port (P#.xxx, for example, P0.485 or P1.232)
Screen Size (SS5.5, SS6.0, SS9.0, SS10.0, SS14.0)

Filename

Displays the name of the active application file. If the application file exists but is invalid, the file name appears as ********.

Bytes Used displays the number of bytes used by the loaded application.
Bytes Free displays the number of bytes available.

Font File

Displays the name of the external font file used by the application.

Exit

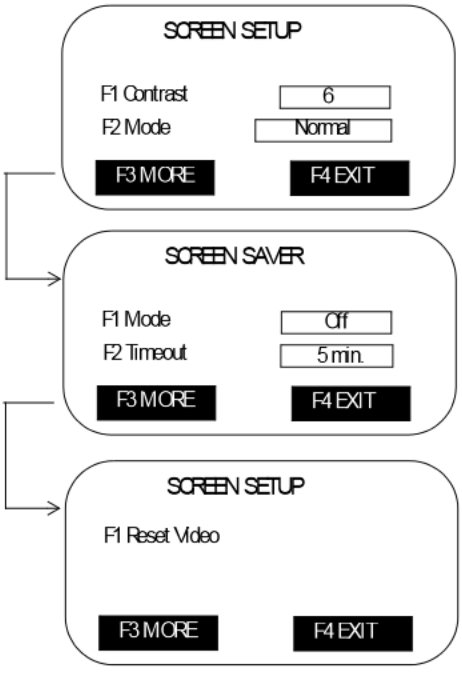
Returns to the Configuration Mode menu.

Adjust Screen Parameters

Select Screen Setup from the Configuration Mode menu to adjust settings of the terminal display. Changes take effect immediately.

PanelView 300 Micro Terminal Screen Setup

The PanelView 300 Micro terminal backlight is always on and intensity is not adjustable.



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Contrast

Increases or decreases the display contrast. The contrast settings range from 0 10.

Video Mode

Toggles between normal video (dark text/graphics on a light background) and reverse video (light text/graphics on a dark background). Changes take effect immediately.

Screen Saver Mode

Mode - Select Timed or Off screen saver. When Timed, the screen intensity is reduced if user input or a controller screen change is not received within the time specified in the Screen Saver Timeout

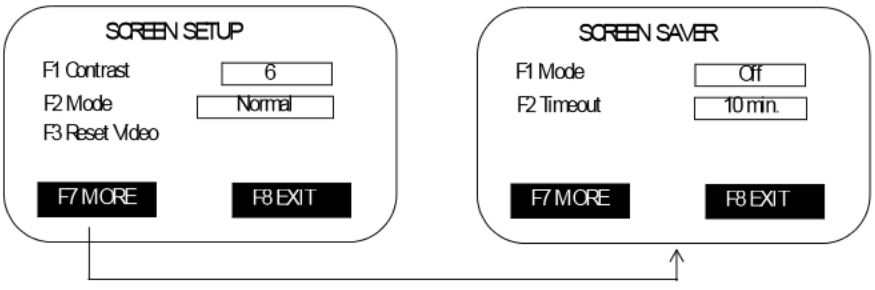
Timeout

Specifies when an inactive screen enters screen saver mode. The timeout is adjusted in steps with each key press: 5, 10, 15, 20, 25, or 30 minutes.

Reset Video

Resets the display to normal (default settings). If the screen is set to a non-viewable setting, press the Left ◄ and Right ► arrow keys simultaneously to enter the configuration mode and enter screen setup to reset the screen settings.

PanelView 300 Terminal Screen Setup



IMPORTANT Certain settings may make viewing the screen difficult. Do not exit this screen until viewing adjustments are acceptable.

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Contrast

Increases or decreases the display contrast. The contrast settings range from 0 10.

Video Mode

Toggles between normal video (dark text/graphics on a light background) and reverse video (light text/graphics on a dark background). Changes take effect immediately.

Reset Video

Resets the display to normal (default settings). The [F3] key is also active on the Configuration Mode menu. If the screen is set to a non-viewable setting, press the Left ◄ and Right ► arrow keys simultaneously. Then press [F3] to reset the screen.

Screen Saver Mode

Mode - Select Timed or Off screen saver. When Timed, the screen intensity is reduced if user input or a controller screen change is not received within the time specified in the Screen Saver Timeout

Timeout

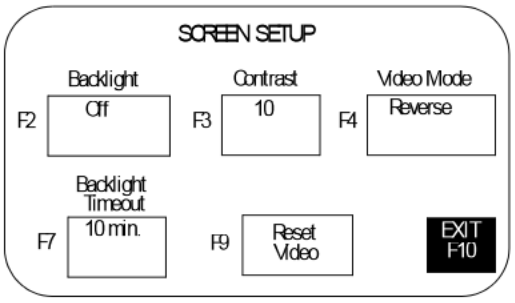
Specifies when an inactive screen enters screen saver mode. The timeout is adjusted in steps with each key press: 5, 10, 15, 20, 25, or 30 minutes.

Exit

Returns to the Configuration Mode menu.

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PanelView 550 Terminal Screen Setup



IMPORTANT Certain settings may make viewing the screen difficult. Do not exit this screen until viewing adjustments are acceptable.

Backlight

Turns the backlight On, Off or to Timed mode. When set to Timed, the Backlight Timeout value determines when the backlight is turned off.

Contrast

Increases or decreases the display contrast. The contrast settings range from 0 10.

Video Mode

Toggles between normal video (dark text/graphics on a light background) and reverse video (light text/graphics on a dark background). Changes take effect immediately.

Backlight Timeout

Specifies when the backlight turns off if user input or a controller screen change is not received. The timeout settings are 5, 10, 20, 25, or 30 minutes. The Backlight Timeout value is used when the Backlight parameter is set to Timed.

Reset Video

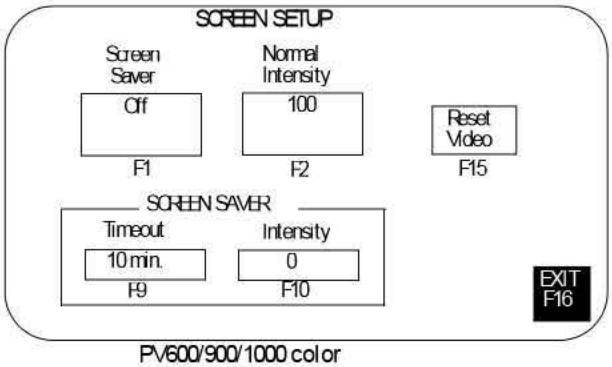
Resets the display to normal (default settings). The reset video [F9] key is also active on the Configuration Mode menu. If the screen is set to a non-viewable setting, press the Left ◄ and Right ► arrow keys simultaneously. Then press [F9] to reset the screen.

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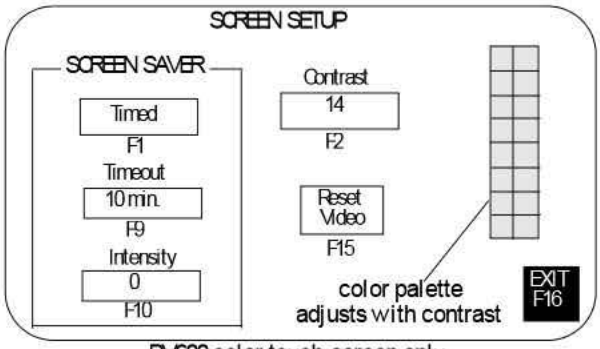
Exit

Returns to the Configuration Mode menu.

PanelView 600/900/1000 Color Terminal Screen Setup



PV600/900/1000 color



PV600 color touch-screen only

IMPORTANT Certain settings may make viewing the screen difficult. Do not exit this screen until viewing adjustments are acceptable.

Normal Intensity

Adjusts the intensity of the display with each key press. PV600/1000 terminal settings are 10 100, in 10 step increments. PV900 terminal settings are 50 100, in 10 step increments.

Contrast (PV600 touch-screen terminal only)

Adjusts the contrast of the display with each key press. Valid settings are 1 32. The initial default is 14.

Screen Saver Mode

Sets the screen saver to Timed or Off. When Timed, the screen intensity is reduced if user input or a controller screen change is not received within the time specified in the Screen Saver Timeout box.

Screen Saver Timeout

Specifies when an inactive screen enters screen saver mode. The timeout is adjusted in steps with each key press: 5, 10, 15, 20, 25, or 30 minutes.

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Screen Saver Intensity

Adjusts the intensity of the display during screen saver mode. PV600/1000 settings are 0 100, in 10 step increments. PV600 touch-screen only settings are 0 or 100. PV900 settings are 0, and 50 100, in 10 step increments. It is recommended that you set the intensity to a value less than 100 to prolong the life of the backlight.

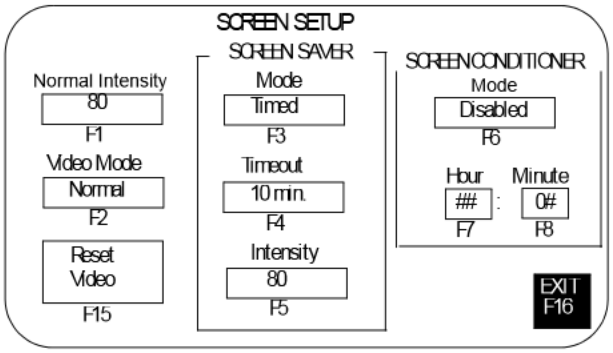
Reset Video

Resets the display to normal video (default settings). The reset video [F9] and [F15] keys are active on the Configuration Mode menu. If the screen is non-viewable, press the left ◄ and right ► arrow keys simultaneously. Then press [F9] or [F15] to reset the screen.

Exit

Returns to the Configuration Mode menu.

PanelView 900 Monochrome Terminal Screen Setup



IMPORTANT Certain settings may make viewing the screen difficult. Do not exit this screen until viewing adjustments are acceptable.

Normal Intensity

Adjusts the intensity of the display with each key press: 35, 40, 50, 60, 70, 80, 90, 100. A new setting takes effect immediately.

Video Mode

Toggles between normal video (light text/graphics on a dark background) and reverse video (dark text/graphics on a light background). The change takes effect immediately. Normal video is recommended.

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Screen Saver Mode

Sets the screen saver to Timed or Off. When Timed, the screen intensity is reduced if user input or a controller screen change is not received within the time specified in the Screen Saver Timeout box.

Screen Saver Timeout

Specifies when an inactive screen enters screen saver mode. The timeout is adjusted in steps with each key press: 5, 10, 15, 20, 25, or 30 minutes.

Screen Saver Intensity

Adjusts the intensity of the display during screen saver mode. The intensity is adjusted with each key press: 0, 35, 40, 50, 60, 70, 80, 90, 100.

Screen Conditioner Mode

Enables or disables the screen conditioner. This parameter sets a daily schedule for conditioning the display of a PV900 monochrome terminal to prevent image burn-in.

The conditioning process takes approximately 30 minutes and will not start until the terminal is inactive and in screen saver mode. You can interrupt the screen saver or conditioner at any time by pressing a key or the touch screen. If the screen conditioner is interrupted, it will resume when the screen saver is reactivated.

If you do not use the conditioner, random pixels will illuminate around objects after a period of time (approximately one year).

Screen Conditioner Hour

Specifies the hour at which to start the screen conditioner. The numeric entry scratchpad opens. Enter a value between 0 23, then press the Enter key (on touch screen terminals, press the Enter key on the scratchpad).

Screen Conditioner Minute

Specifies the minute at which to start the screen conditioner. The numeric entry scratchpad opens. Enter a value between 0 59, then press the Enter key (on touch screen terminals, press the Enter key on the scratchpad).

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Reset Video

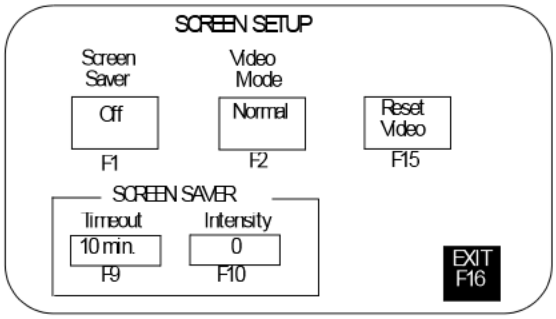
Resets the display to normal video (default settings).

On keypad terminals, the reset video [F15] key is also active on the Configuration Mode menu. If the screen is non-viewable, press the Left ◄ and Right ► arrow keys simultaneously. Then press [F15] to reset the screen.

Exit

Returns to the Configuration Mode menu.

PanelView 1000 Grayscale Terminal Screen Setup



IMPORTANT Certain settings may make viewing the screen difficult. Do not exit this screen until viewing adjustments are acceptable.

Video Mode

Toggles between normal video (darker text/graphics on a light background) and reverse video (lighter text/graphics on a dark background). The change takes effect immediately. Normal video is recommended.

Screen Saver Mode

Sets the screen saver to Timed or Off. When Timed, the screen intensity is reduced if user input or a controller screen change is not received within the time specified in the Screen Saver Timeout box.

Screen Saver Timeout

Specifies when an inactive screen enters screen saver mode. The timeout is adjusted in 5 minute increments with each key press, from 5 30 minutes.

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Screen Saver Intensity

Adjusts the intensity of the display during screen saver mode. Settings are 0 (lowest intensity) or 100 (highest intensity). 0 is recommended to prolong the display life.

Reset Video

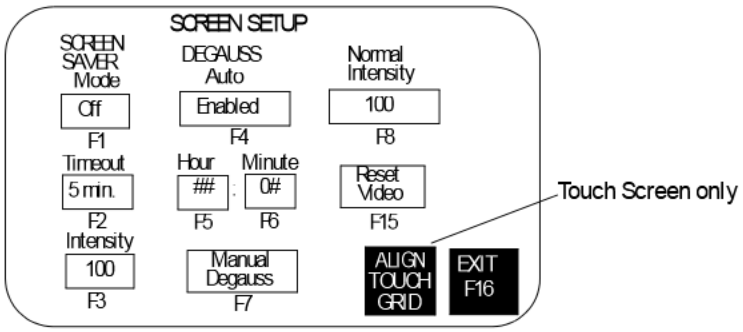
Resets the display to normal video (default settings).

On keypad terminals, the reset video [F15] key is also active on the Configuration Mode menu. If the screen is non-viewable, press the Left ◄ and Right ► arrow keys simultaneously. Then press reset video [F15] to reset the screen.

Exit

Returns to the Configuration Mode menu.

PanelView 1400 Color Terminal Screen Setup



IMPORTANT Certain settings may make viewing the screen difficult. Do not exit this screen until viewing adjustments are acceptable.

Screen Saver Mode

Sets the screen saver to Timed or Off. When Timed, the screen intensity is reduced if user input or a controller screen change is not received within the time specified in the Screen Saver Timeout box.

Screen Saver Timeout

Specifies when an inactive screen enters screen saver mode. The timeout is adjusted in 5 minute increments with each key press, from 5 30 minutes.

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Screen Saver Intensity

Adjusts the intensity of the display during screen saver mode. The intensity is adjusted with each key press: 0, 25, 50, 75, or 100.

Degauss Auto

Enables or disables automatic degaussing. The degauss process takes a few seconds and will not start until the terminal is inactive. Automatic degaussing occurs at midnight unless you adjust the hour and time parameters.

Degauss Hour

Specifies the hour to start automatic degaussing. The numeric entry scratchpad opens. Enter a value between 0 23, then press the Enter key (on touch screen terminals, press the Enter key on the scratchpad).

Degauss Minute

Specifies the minute to start automatic degaussing. The numeric entry scratchpad opens. Enter a value between 0 59, then press the Enter key (on touch screen terminals, press the Enter key on the scratchpad).

Manual Degauss

Allows you to manually degauss the display. When you press [F7], the display is degaussed immediately.

Normal Intensity

Adjusts the intensity of the display with each key press: 25, 50, 75, or 100. The new setting takes effect immediately.

Reset Video

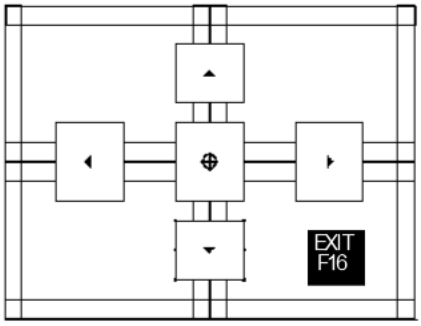
Resets the display to normal video (default settings).

On keypad terminals, the reset video [F15] key is also active on the Configuration Mode menu. If the screen is non-viewable, press the Left ◄ and Right ► arrow keys simultaneously. Then press [F15] to reset the screen.

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Align Touch Grid - PV1400 Touch Screen Terminal only

Opens the touch alignment screen, which lets you realign the screen with the touch grid. This function is useful when the terminal is positioned at an angle and viewing the screen is difficult unless you realign the screen.



Move the screen until it aligns with the touch cells. Alignment changes are permanent.

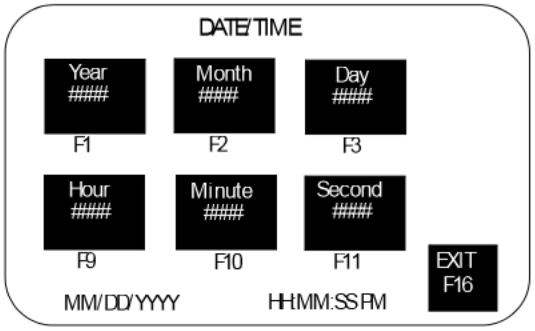
Press	To
▲	Move the screen up one pixel.
▼	Move the screen down one pixel.
►	Move the screen to the right two pixels.
◄	Move the screen to the left two pixels.
⊕	Move the screen to its factory default position.
Exit	Exit the touch alignment screen and return to Screen Setup.

Exit

Returns to the Configuration Mode menu.

Set the Time and Date

Select Date/Time from the Configuration Mode menu to reset the date and/or time.



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Set the Time

Use screen buttons (touch screens) or function keys to set the time.

On PV300, PV300 Micro Terminals	On PV550/PV600 Terminals Press	On PV900/1000/1400 Terminals Press	To Set
Use the left and right cursor keys to select the time or date item you want to change. Use the up and down cursor keys to adjust the selected date or time variable.	Hours button [F6]	Hour button [F9] key	Current hour
	Minute button [F7]	Minute button [F10]	Minutes
	Second button [F8]	Second button [F11]	Seconds

The scratchpad opens to enter each setting. Use the terminal keypad to enter the values. Press after each entry. Changes take effect immediately.

Set the Date

Use screen buttons (touch screens) or function keys to set the date.

Press	To
Year button [F1] key	Set current year
Month button [F2]	Set month (1 12)
Day button [F3]	Set day (1 31)

The scratchpad opens to enter each setting. Use the terminal keypad to enter the values. Press after each entry. Changes take effect immediately.

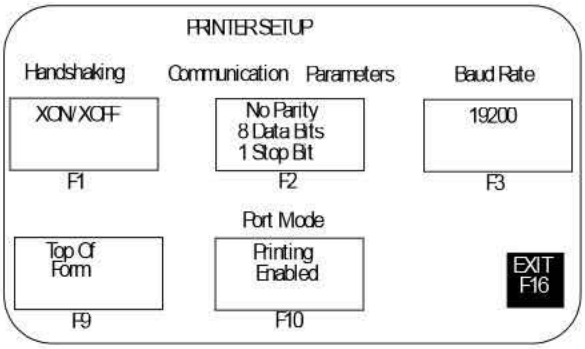
Exit

Returns to the Configuration Mode menu.

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Set Up the Printer

Select Printer Setup from the Configuration Mode menu to set parameters for those terminals equipped with an RS-232 printer port. Any printer that supports the IBM enhanced character set can be connected to the RS-232 printer port.



IMPORTANT The PanelView 300 Micro terminal does not support printer functions.

Printer settings are maintained between power cycles.

Page format parameters for printing are defined in the Terminal Setup dialog of PanelBuilder32 software and downloaded with the application.

Handshaking

Specifies the type of handshaking used by the RS-232 port.

None (initial default)
Hardware
XON/XOFF

If you change the type of handshaking used, you must reset your PanelView before the change takes effect.

Communication Parameters

Sets the communication parameters for the printer port. Each key press toggles through the available combinations for:

Parity (None, Even or Odd)
Data Bits (7 or 8)
Stop Bits (1 or 2)

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Baud Rate

Sets the communication rate of the printer port. The communication rate must match the communication rate of the printer. The communication rate is adjusted with each key press: 1200, 2400, 4800, 9600, and 19200. The initial default is 9600.

Top of Form

Notifies the PanelView terminal the printer is at the top of a page.

Manually adjust the printer to the top of the page before pressing the Top of Form button. The printer also uses the Perforation Skip Value (if defined in the Printer Setup of the PanelBuilder32 software) when the Top of Form button is pressed.

On powerup, the terminal assumes the printer is at the top of a page. We recommend that you also set the PanelView terminal to the top of the page so that the printer and PanelView are at the same starting point. Otherwise your printout may not start at the top of the page.

Port Mode

Enables or disables printing for the RS-232 port.

The RS-232 port on some terminals supports both printing and application transfers. If you disable printing, the port is used for application transfers.

Exit

Returns to the Configuration Mode menu.

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Using a Memory Card

Chapter Objectives

This chapter describes:

- supported memory cards.
- using the memory card retainer.
- loading application from a memory card.
- loading application on a memory card.
- storing font files on a memory card.
- removing a memory card.

Supported Memory Cards

Memory cards are available to transfer application files to/from a PanelView terminal with a memory card slot. The PanelView 300 Micro terminal does not support a memory card.

PanelView terminals running firmware 3.0 (or later) and computers with an ATA card drive support the following cards.

- 4M flash ATA card (Cat. No. 2711-NM24)(1)
- 8M flash ATA card (Cat. No. 2711-NM28)(1)
- 16M flash ATA card (Cat. No. 2711-NM216)(1)
- 64M flash ATA card (Cat. No. 2711-NM232)

All PanelView terminals and computers with a DataBook TMB240 or TMB250 card drive support these cards:

- 256K flash memory card (Cat. No. 2711-NM11)(1)
- 1M flash memory card (Cat. No. 2711-NM12)(1)
- 2M flash memory card (Cat. No. 2711-NM13)(2)
- 4M flash memory card (Cat. No. 2711-NM14)(2)
- 10M flash memory card (Cat. No. 2711-NM15)(2)

(1) No longer available.

(2) Limited availability.

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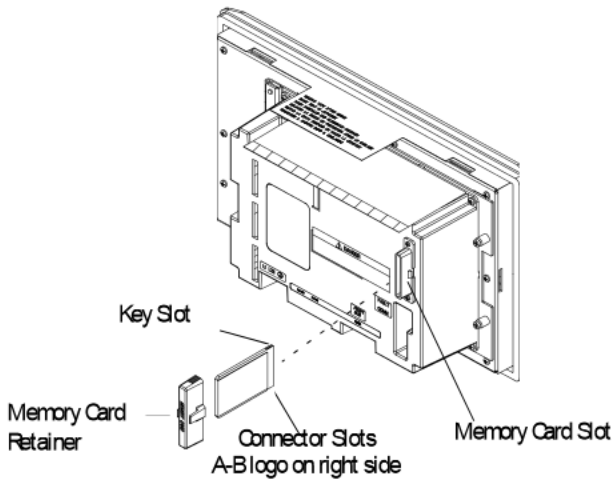
Use the Memory Card Retainer

A memory card retainer (catalog no. 2711-NMCC, -NMCD, -NMCE) is shipped with all PanelView terminals, except the PV300 Micro terminal and the PV1400 terminal. It is required for:

- UL508 installations.
- vibration/mechanical shock environments.
- CE certified installations.
- installations where the application uses a font file on a memory card, and the card must remain in the terminal during operation.

The following illustration shows the memory card and the memory card retainer. The card loads in the back of the terminal with the key slot on top.

Memory Card and Memory Card Retainer



TIP The back of the PanelView 900 terminal is shown above. The location of the card slot will vary between the different terminals.

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The memory card retainer protects against:

electrical shock from loose high voltage wires in an electrical enclosure per UL508.

ATTENTION



When permanently installing a memory card in an electrical enclosure, the memory card retainer must be used to avoid accidental contact of high voltage leads to metal surfaces on the card. Failure to use the retainer could result in physical injury or damage to the terminal.

electrostatic discharge (ESD) up to 15KV.

ATTENTION



Without the memory card retainer installed, electrostatic discharge could reset or damage the PanelView terminal.

accidental removal or ejection of the memory card from the card slot.

ATTENTION



Accidental removal of an ATA flash card from the card slot could result in damage to the card.

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Load Application from a Memory Card

The procedure below shows how to load an application on a memory card into the PanelView terminal.

WARNING



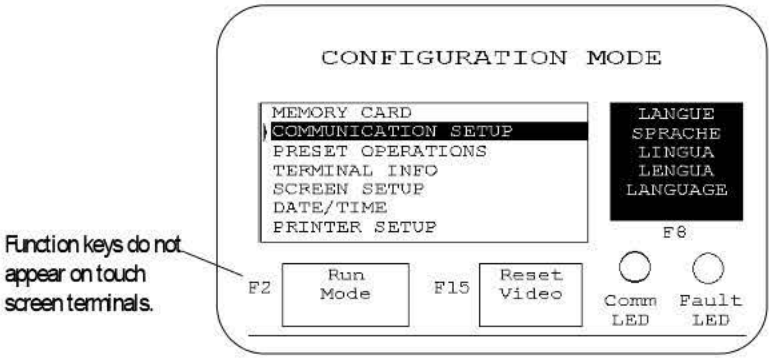
Explosion Hazard - Do not install or remove memory card unless power has been switched off or the area is known to be non-hazardous.

Follow these steps to load an application from a memory card.

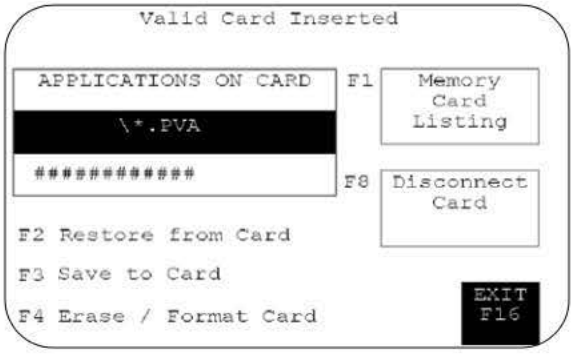
1. Insert the memory card in the card slot of the terminal.

   If the terminal does not have an application loaded, the Configuration Mode menu appears. Skip step 2.

2. Open the Configuration Mode menu by simultaneously pressing the Left ◄ and Right ► arrows (on keypad terminals), or the Goto Config. Screen button (on touch screen terminals).



3. Select Memory Card and press the Enter key.



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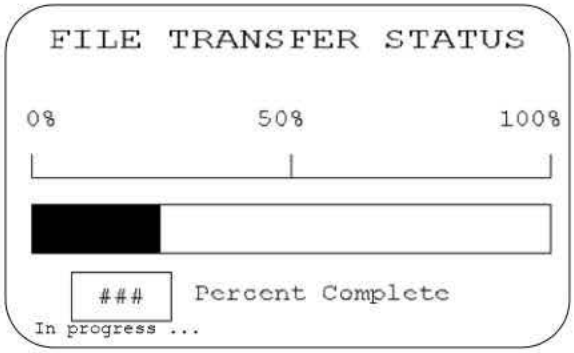
4. Press Memory Card Listing, [F1] on keypad terminals, until the application file you want to load is displayed.

5. Press Restore From Card, [F2] on keypad terminals, to begin the transfer.

   Because this operation overwrites the current application in the terminal, you are prompted to abort or continue.

   ```
   Proceed with download?
   F1 - Abort|
   F2 - Continue
   ```

   The terminal displays the status of the transfer.



6. When the transfer is complete, the PanelView terminal checks the validity of the application, resets and runs the application.

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Load Application on a Memory Card

The steps below show how to load an application in the terminal onto a memory card.

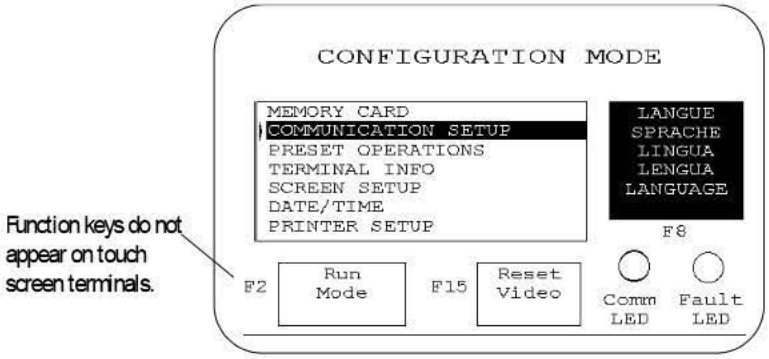
WARNING



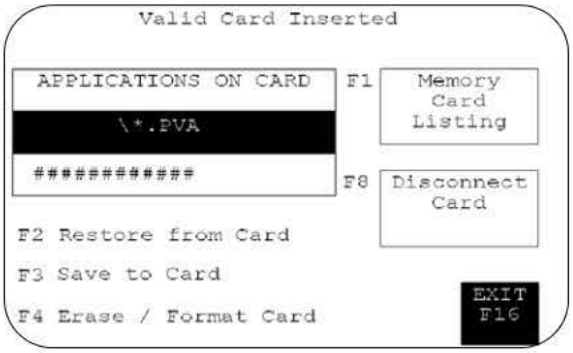
Explosion Hazard - Do not install or remove memory card unless power has been switched off or the area is known to be non-hazardous.

Follow these steps to transfer an application to a memory card.

1. Insert the memory card into the card slot of the terminal.
2. Open the Configuration Mode menu by simultaneously pressing the Left ◄ and Right ► arrows (on keypad terminals), or the Goto Config. Screen button (on touch screen terminals).



3. Select Memory Card and press the Enter key.



4. If necessary, press Erase/Format Card, [F4] key on keypad terminals, to format or erase a 2711-NM11, 2711-NM12, 2711-NM13, 2711-NM14, or 2711-NM15 memory card.

IMPORTANT

Do not perform this operation on a 2711-NM2xx ATA card (where xx is size in megabytes). The card becomes inoperable.

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Because this operation erases all data on the memory card, you are prompted to abort or continue.

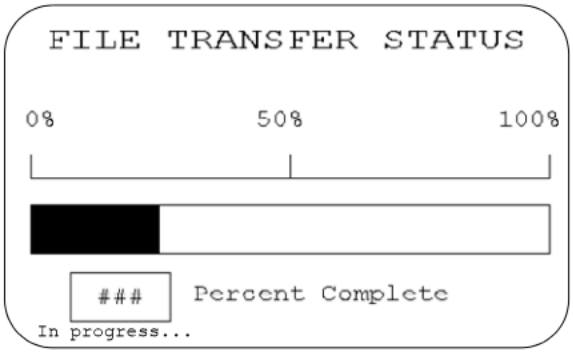
Format erases entire card?
F1 - Abort
F2 - Continue

5. Press Save to Card, [F3] on keypad terminals, to transfer the application in the terminal to the card.

   If the application already exists on the memory card, you are prompted to abort or continue.

   The .PVA file exits:
   F1 - Abort
   F2 - Upload with new PVA file

   The terminal displays the status of the transfer.



   When the transfer is complete, the application file name appears in the Applications on Card list.

6. Press Memory Card Listing, [F1] key on keypad terminals, to scroll through the list.

   TIP If you upload a file that exists on the memory card, the uploaded file name is altered with a sequential digit as a suffix. For example, Control.pva becomes Control0.pva.

   For files with eight character names, a digit overwrites the last character. For example, Motorcon.pva becomes Motorco0.pva.

Store Font Files on a Memory Card

Memory cards also store font files for languages used by PanelView terminal applications. The font file contains the character set for the language.

The memory card containing the font file must be inserted in the PanelView terminal while the application is running. The terminal uses the font file to display characters on the application screen.

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To view the name of the font file used by an application, select Terminal Info from the Configuration Mode menu.

Because the memory card must remain in the terminal while the application is running, we recommend that you use the memory card retainer (Cat. No. 2711-NMCC, 2711-NMCD, 2711-NMCE) to secure the card in the card slot. The retainer ensures the card is not accidentally removed or dislodged during terminal operation.

Remove a Memory Card

Follow the procedure below to remove a memory card from the PanelView terminal. Failure to follow this procedure may result in damage to the card.

1. Select Memory Card from the Configuration Mode menu.
2. Press the Disconnect Card button.

   This ensures that all files are closed on the card. A message prompts you to remove the card from the slot. You can continue or abort the operation.
3. Press the Continue button.
4. Remove the memory card from the card slot.

   On PV1400 terminals, press the Memory Card Eject button.

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Running Applications

Chapter Objectives

This chapter describes operating procedures common to most applications.

- Screen security
- Push button operation
- Control lists
- Numeric entry controls
- ASCII entry controls
- Screen selectors
- List indicators
- Multistate indicators
- Alarms
- Printing
- Time or date
- Message displays
- Numeric data displays
- Bar graphs
- Analog gauges

Application Information

The application designer is responsible for documenting the operation of an application. Before running the application, you should understand what processes are being controlled and monitored.

ATTENTION



Do not press multiple touch screen objects at the same time. Pressing multiple objects simultaneously may result in unintended operation.

Important Information for PanelView 300 Micro Terminal Operations

The Up/Down and Left/Right cursor keys on the PanelView 300 Micro terminal may be assigned as additional function keys. It is the responsibility of the application designer to inform the operator of the assigned functions.

If cursor keys are assigned as function keys, the following (applies to the currently active screen):

- List Selectors and Increment / Decrement objects are disabled if the Up or Down cursor keys are used as function keys.

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Simultaneous pressing of Left and Right cursor keys does not cause the terminal to enter Configuration Mode if the Left and Right cursor keys are assigned as function keys anywhere in the application.

If both the Left/Right cursor keys are used on a screen and more than one cursor operated object is present on the screen, all of the cursor operated objects must be assigned to a function key.

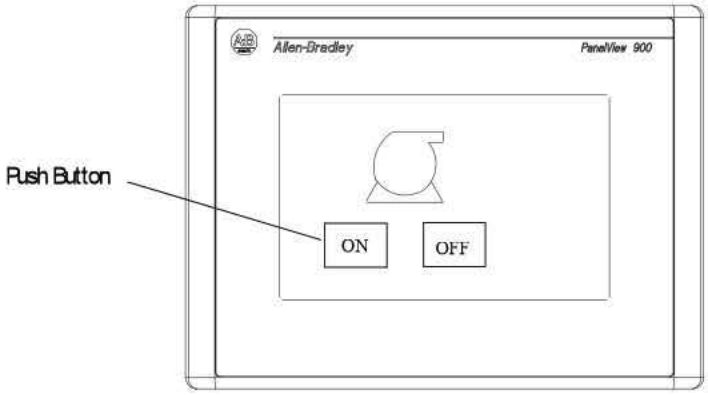
Screen Security

Access to some application screens (including the terminal configuration screens) may be restricted. Secured screens require you to enter a password before the screen is displayed. It is the responsibility of the application designer to provide operators with required passwords.

Other screens may allow an authorized operator to select and change the passwords of operators at the terminal.

Push Button Operation

Screen push buttons function like mechanical push buttons.



Push buttons have a variety of appearances. Push buttons may change their inner text, fill pattern, border, or shape when pressed (each state assigned different attributes).



The following are common to most push buttons:

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