



## Operator Interface



Machine builders and manufacturing system designers increasingly recognize the benefits of using electronic operator interface devices to replace pushbuttons, lights, gauges and other traditional hardwired devices.

Most choose dedicated operator interface systems because they are easy to use, fully integrated and cost effective.

### PanelMate: The Industry Standard

PanelMate units are flexible, expandable, cost-effective alternatives to traditional operator control panels. A single PanelMate unit easily replaces panels that once contained numerous pushbuttons, indicator lights, thumbwheels, message displays and alarm annunciators.

### PanelMate Technology

- Replaces conventional control panels at less than half the cost.
- Gives operators more information for better control decisions.
- Standardizes operator stations and minimizes operator training.
- Saves processor memory by utilizing Boolean logic and math functions.
- Reduces hardwiring costs and minimizes installation time.
- Adds advanced capabilities such as machine diagnostics, troubleshooting, trending and alarms at no additional cost.
- Automates documentation.
- Meets tight panel space requirements.

## PanelMate System Components

Each PanelMate system requires component selection from three major categories:

- Operator Stations – The online unit or operator interface
- Configuration Software – PC-based software, used to configure and transfer applications to and from the Operator Station
- Connectivity – includes optional cables, hardware interfaces and software utilities

### PanelMate Systems — How to Specify and Order

- First, select the most appropriate Operator Station, Display Type and Size, and Operator Input options for the customer's application.
  - The selection of the Operator Station model line is driven by such considerations as the size and complexity of the operator interface application, as well as the economic factors of the overall control system.
  - The Display Type is chosen based on the operator's needs — text only, text and graphics, color or grayscale. Display Size is selected based on application complexity and the operator's proximity to the Operator Station.
  - Operator Input options include either keypad or touchscreen operator stations (depending on model line). Criteria for selection of the best input method include environmental factors (airborne particles, grease, etc.), and application design (numeric input, one-touch control, etc.)

- Second, select the appropriate configuration editing software for the chosen Operator Station.

**NOTE:** A site license applies to all PanelMate configuration packages. Therefore, if the customer already has the configuration software, they need only update to the latest revision if they don't already have it.

- Finally, select required connectivity features, such as interface cables, optional high-speed interface cards, and, for some Allen-Bradley drivers, licensing enabler utilities.

Cutler-Hammer interface cables are ideal for system and application testing. For actual plant floor applications, custom cables are generally required to meet customers' requirements for length, environment, termination, etc.

**NOTE:** In order to specify the proper cabling and other connectivity options, you must know the target PLC or controller that the operator station will interface to. Required information may include the PLC brand, Model Number, software/firmware revision level, and hardware/software interface type.

### PanelMate Operator Stations at a Glance

Model	Description	Typical Application	Price Range
D820MPM	2 x 16 LCD Display 8 Keys	Small applications with D50 PLC	\$ 400.
D830MPM	2 x 20 LCD Display 20 Keys including numeric keypad	Small applications with Micro PLC	550.
D840MPM	3.0" Graphic LCD Display 20 Keys including numeric keypad	Small to medium applications	800.
D850MPM	5.0" Graphic LCD Display Touchscreen	Small to medium applications	1100.
PM 500	2 x 20 and 4 x 20 LCD or VFD Displays 19 Keys including numeric keypad 4 "soft" keys and 4 or 8 function keys	Small to medium applications	800. to 1600.
PM 1000	5.0" Monochrome Display TouchPanel™	Small to medium applications	1600. to 2100.
PM 1500	7.4" Grayscale, 8.0" Color Dual-Scan, 8.4" Color TFT Full VGA, TouchPanel or Touchscreen	Smaller applications, operator in close proximity	1800. to 4500.
PM 1700	7.4" Grayscale, 8.0" Color Dual-Scan, 8.4" Color TFT Full VGA, TouchPanel or Touchscreen	Medium to large applications, local to machine	1800. to 4000.
PM 2000	9" Grayscale CRT Full VGA, TouchPanel only	Low cost, retrofit	3700. to 4600.
PM 3000	10.4" Color Dual-Scan, 10.4" Color TFT Full VGA, TouchPanel or Touchscreen	Medium to large applications, local to machine	5200. to 8200.
PM 4000	14" Color CRT Full VGA, TouchPanel or Touchscreen	Large applications, extended visibility required	5900. to 6900.
PM 5000	13.8" Color TFT Full VGA, TouchPanel or Touchscreen	Large applications, extended visibility required	9300. to 9800.
PMPC-RT	PanelMate PC Runtime Software License	Large applications, PC applications, OPC and EtherNet connectivity	1750.

## PanelMate Ordering Examples

*Example: Micro PanelMate D820 interfaced to a C-H D50 PLC.*

<b>Operator Station</b>	<b>D820MPM</b> Includes D800CBLCH1 which is used for PC to OI downloading (D820 only) and OI to C-H PLC communication
<b>Configuration Software</b>	<b>D800CCSCH</b> , Micro PanelMate Configuration Editor with C-H Driver.  Includes a 9-pin female to female gender changer (needed with the D820) and D800CBLXFR which is used for PC to OI downloading on the D830, D840 and D850  <b>NOTE:</b> RS-232/485 converter needed for downloading to MPM. Comes with PLC programming software.
<b>Connectivity</b>	No additional components required

*Example: Micro PanelMate D830 interfaced to a C-H D50 PLC.*

<b>Operator Station</b>	<b>D830MPM</b>
<b>Configuration Software</b>	<b>D800CCSCH</b> : Micro PanelMate Configuration Editor with C-H Driver.  Includes a 9-pin female to female gender changer (needed only with the D820) and D800CBLXFR which is used for PC to OI downloading on the D830, D840 and D850
<b>Connectivity</b>	<b>D800CBLCH1</b>

*Example: Micro PanelMate D840 interfaced to a Modicon Micro PLC.*

<b>Operator Station</b>	<b>D840MPM</b>
<b>Configuration Software</b>	<b>D800CCSSET</b> : Micro PanelMate Configuration Editor with all Drivers.  Includes D800CBLXFR which is used for PC to OI downloading on the D830, D840 and D850; D800DWNLD which is used with D800CBLXFR when enabling a D830, D840 and D850 and when downloading drivers to these units; and (1) D800ENABLE
<b>Connectivity</b>	<b>D800ENABLE</b> and <b>D800CBLMB2</b>

*Example: Micro PanelMate D850 interfaced to an A-B SLC500 PLC running DH-485.*

<b>Operator Station</b>	<b>D850MPM</b>
<b>Configuration Software</b>	<b>D800CCSSET</b> : Micro PanelMate Configuration Editor with all Drivers.  Includes D800CBLXFR which is used for PC to OI downloading on the D830, D840 and D850; D800DWNLD which is used with D800CBLXFR when enabling a D830, D840 and D850 and when downloading drivers to these units; and (1) D800ENABLE
<b>Connectivity</b>	<b>D800ENABLEDH</b> and <b>D800CBLAB1</b>

*Example: PanelMate 500, 4 x 20 LCD display, communicating via GE Fanuc Series 90*

<b>Operator Station</b>	<b>542L</b> , 4 x 20 LCD display
<b>Configuration Software</b>	<b>08GE</b> , PanelMate 500 Configuration Editor  Includes all communications drivers for all GE (site license applies)
<b>Connectivity</b>	<b>GE31</b> , GE Series 90 cable, 15 ft. (4.6m)

*Example: PanelMate 1700, color TFT w/Touchscreen input, communicating via Allen-Bradley DH-485 direct to A-B SLC500*

<b>Operator Station</b>	<b>1785T</b> , 8.4" color TFT display, Touchscreen
<b>Configuration Software</b>	<b>06ALL</b> , PanelMate Configuration Editor for PM 1500, 1700, 2000, 3000, 4000, 5000 and PanelMate PC, includes all available communications drivers, upload/download cables (site license applies)
<b>Connectivity</b>	<b>1525</b> , One-time use diskette to enable license for use of Allen-Bradley patented technology  <b>AB24A</b> , SLC500 direct cable, 6 ft. (1.8m)

*Example: PanelMate 3000 with color TFT flatpanel display, TouchPanel operator input, communicating over DeviceNet.*

<b>Operator Station</b>	<b>39PKX</b> , PanelMate Power Series, 10.4" color TFT display, TouchPanel
<b>Configuration Software</b>	<b>06ALL</b> , PanelMate Configuration Editor for PM 1500, 1700, 2000, 3000, 4000, 5000 and PanelMate PC, includes all available communications drivers, upload/download cables (site license applies)
<b>Connectivity</b>	<b>0745DN</b> , DeviceNet Interface Board for PanelMate Power Series 2000, 3000, 4000, 5000

*Example: PanelMate PC 7000 running on a D720iPC, communicating to DeviceNet via NetSolver*

<b>Operator Station</b>	<b>D72WTSP664HDWNTN54</b> , 10.4" color TFT display, TouchPanel, 200 MHz Pentium, 64 MB RAM, 1GB HD
<b>Configuration Software</b>	<b>06ALL</b> , PanelMate Configuration Editor for PM 1500, 1700, 2000, 3000, 4000, 5000 and PanelMate PC, includes all available communications drivers, upload/download cables (site license applies)
<b>Connectivity</b>	Requires C-H NetSolver software installed on the D720 unit  No additional components required



## Simplified Machine Control



The Micro PanelMate series of products offers unsurpassed capabilities in electronic operator interfaces. Most of the models

offer multiple, simultaneous triggers creating a Windows-like display environment. All are designed for use with Cutler-Hammer's D50 and D300 PLCs, and most of the models also communicate with other brands of PLCs.

## Operator Features

- Large, bright Liquid Crystal Displays (LCD) with LED backlight make these units easy to view.
- Units with membrane keypads offer tactile feedback so that operators receive a physical response for sure and accurate operation.
- Navigation keys, definable function keys, selection and enter keys allow operators to easily step through screens to start, run and monitor their equipment.

## Online Operation

- High/Low limits for data entry fields eliminate the potential for erroneous data being allowed into the PLC data table.
- An 8-bit scaling value converts values coming from the PLC into operator-recognizable data. Values can be displayed in decimal, binary, hex and ASCII.
- 15 levels of password protection allow for the same pages to be used for both maintenance and operation personnel with access to only the appropriate data.

## Simplified Configuration

The configuration software offers an easy way to configure the Micro PanelMate family of products. Its upward/downward compatibility means you don't have to re-invent your application as you move up in features of the different models. The WYSIWYG (What You See Is What You Get) editing and off-line verification testing of displays work together for effortless integration.

## Features

- Data Tag Reference Editor allows for tags to be created or imported from many PLC programming software packages, reducing application development time.
- Download files from Excel and Word™, and sort, copy, paste, etc. Once the database has been created, use it for any host driver with simple modifications to references.
- A resident simulator allows you to "dry-run" your entire application saving you "on-the-floor" debug time. No need to have the Micro PanelMate and PLC tied together. Trigger screens, enter data and try your entire application before downloading it.
- A memory usage monitor calculates the total memory consumed by the application after each integrity check. See at a glance the memory available while configuring your application.
- Fly-by prompting with tool tips as you move your cursor over the icons and a dialogue bar along the bottom of the editor software eliminate confusion and make configuration simpler.
- Single piece construction with captive mounting studs for panel mounting, and designed for NEMA 4, 4X and 12 installation when properly mounted in a correspondingly-rated enclosure.
- Micro PanelMate security is provided with assignable four digit combination locks for data access fields.
- All Micro PanelMate systems meet UL, CSA and UL Class 1 Division 2 Groups A, B, C, D requirements.
- Micro PanelMate systems D830, D840 and D850 meet CE requirements.

## D820 / D830

## D820 Micro PanelMate

**Description**

The D820 Micro PanelMate is designed for use exclusively with Cutler-Hammer's D50 and D300 PLCs and

can be used for manipulating timers, counters and word registers. The D820 can also be configured to combine text with read/write or read-only data from the PLC registers.

**Features**

- A 2 line x 16 character display provides operator information. 8 mm high characters make the display easy to view.
- Four navigation/increment/decrement keys, along with a YES, a NO, a SELECT, and an ENTER key, make changing process variables and stepping through screens easy.
- Meets UL, CSA and UL Class 1 Division 2 Groups A, B, C, D requirements.
- Designed to CE requirements.

**D820 Micro PanelMate**

Description	Catalog Number
Base unit with D50/D300 PLC driver and interface cable (C-H D50/D300 PLC cable included)	<b>D820MPM</b>

**Specifications**

Description	D820MPM
Display Type	Liquid crystal display with LED backlight
Resolution	2 x 16 character resolution, 8 mm characters
Operator Entry	Membrane keypad 4 navigation 2 definable function keys Enter key
Mounting	Single piece construction with captive mounting studs
NEMA Rating ①	NEMA 4, 4X, 12
Connections	25 pin D-shell port for connection to D50/D300 PLCs
Power Supply	Voltage: 5V DC ② Consumption: 300 mA
Dimensions in Inches (mm)	5.03"H 7.98"W 1.41"D (127.8) (202.7) (35.8)
Ship Wt.	1.5 lbs (.68 kg)

① When properly mounted in a correspondingly rated enclosure

② Power can be supplied by D50/D300 PLC front port

## D830 Micro PanelMate

**Description**

With the capability to view and edit PLC Data on the same page, define push-buttons and selector switches per page,

and display two pages simultaneously, the D830 changes the definition of a text-based product.

**Features**

- The 2 line x 20 character display provides operator information. Messages can scroll both vertically and horizontally to provide up to 255 characters of information, without changing screens.
- Four function keys (F1, F2, YES, NO) are re-definable on each page and can be configured as momentary pushbuttons, maintained selector switches, exclusive selector switches or page triggers. Two definable navigation keys (PREV/NEXT) allow for simple "Step Through" operation.
- The 10-digit keypad along with ENTER, SELECT, LOCK and CANCEL keys makes changing production variables simple.
- Meets UL, CSA, CE and UL Class 1 Division 2 Groups A, B, C D requirements.

**D830 Micro PanelMate**

Description	Catalog Number
Base unit with D50/D300 PLC driver	<b>D830MPM</b>

**Specifications**

Description	D830MPM
Display Type	Liquid crystal display with LED backlight
Resolution	2 x 20 character resolution, 5.5 mm characters
Number of Simultaneous Trigger Pages	2
Operator Entry	Membrane keypad 4 navigation 2 definable function keys Enter, Selection, Lock, Cancel
Mounting	Single piece construction with captive mounting studs
NEMA Rating ①	NEMA 4, 4X, 12
Connections	25 pin D-shell port for connection to PLCs
Power Supply	Voltage: 24V DC Consumption: 100 mA
Dimensions in Inches (mm)	5.03"H 7.98"W 1.41"D (127.8) (202.7) (35.8)
Ship Wt.	1.5 lbs (.68 kg)

① When properly mounted in a correspondingly rated enclosure

## D840 Micro PanelMate

**Description**

The D840 Micro PanelMate is a highly functional graphical interface at a price associated with text-based

units. Pushbuttons and selector switches can be assigned custom bitmap images so operators can respond quicker than to text commands. The D840 supports multiple font sizes, dynamic graphics, recipes, and up to 8 variables simultaneously.

**Features**

- The 128 x 64 display has the capability to display bitmap images such as pushbuttons and switches to enhance operator understanding and response.
- Like the D830, the tactile membrane keypad, navigation, re-definable function, and command keys allow operators a simple way to step through changing production variables.
- Meets UL, CSA, CE and UL Class 1 Division 2 Groups A, B, C, D requirements.

**D840 Micro PanelMate**

Description	Catalog Number
Base unit with D50/D300 PLC driver	<b>D840MPM</b>

**Specifications**

Description	D840MPM
Display Type	Liquid crystal display with LED backlight
Display Size	1-3/8" x 2-1/4"
Resolution	128 x 64 pixel, text and graphics
Number of Simultaneous Trigger Pages	2
Operator Entry	Membrane keypad 4 navigation 2 definable function keys Enter, Selection, Lock, Cancel
Mounting	Single piece construction with captive mounting studs
NEMA Rating ①	NEMA 4, 4X, 12
Connections	25 pin D-shell port for connection to PLCs
Power Supply	Voltage: 24V DC Consumption: 150 mA
Dimensions in Inches (mm)	5.03"H 7.98"W 1.41"D (127.8) (202.7) (35.8)
Ship Wt.	1.5 lbs (.68 kg)

① When properly mounted in a correspondingly rated enclosure

## D850 Micro PanelMate

**Description**

The D850 Micro PanelMate offers a graphics-based touchscreen with high-end graphic user interface capabilities at an economical price.

Images can be used in both static and dynamic functions. Like the D840, the D850 supports multiple font sizes, bitmap images, recipes, and up to 16 variables simultaneously.

**Features**

- The monochrome, backlit LCD display has a 160 x 128 pixel resolution.
- The 10 x 8 grid touch cell resistive touchscreen allows convenient operator entry.
- Customizing menus and pushbuttons with dynamic bitmap images can reduce training time on the device.
- Assignable "pop-up" numeric and alphanumeric keypads allow for more flexible design choices. Part numbers, IDs, and access codes are keyed in alphanumerically versus using a cryptic code.
- Invisible buttons allow "Hot Spots" to be placed on a graphical image.
- Meets UL, CSA, CE and UL Class 1 Division 2 Groups A, B, C, D requirements.

**D850 Micro PanelMate**

Description	Catalog Number
Base unit with D50/D300 PLC interface	<b>D850MPM</b>

**Specifications**

Description	D850MPM
Display Type	Liquid crystal display with LED backlight
Display Size	3" x 3-3/4"
Resolution	160 x 128 pixel / BMP format Flexible text / 8 fonts (8pt to 64pt)
Number of Simultaneous Trigger Pages	2
Operator Entry	10 x 8 grid touch cell resistive touchscreen
Mounting	Single piece construction with captive mounting studs
NEMA Rating ①	NEMA 4, 4X, 12
Connections	25 pin D-shell port for connection to PLCs
Power Supply	Voltage: 24V DC Consumption: 250 mA
Dimensions in Inches (mm)	6.33"H 6.88"W 1.51"D (160.8) (174.8) (38.4)
Ship Wt.	1.5 lbs (.68 kg)

① When properly mounted in a correspondingly rated enclosure



### Reduced Logic Requirements

The PanelMate 500 significantly reduces PLC logic requirements, saving development and integration time. It provides everything needed to fully address all five critical phases of machine operation. Our exclusive Virtual Mentor™ technology eliminates confusion and helps increase production by providing the assistance you need from start-up through shutdown sequences, as well as troubleshooting and clearing machine faults.

### Customize Faceplates to Match Your Unique Application

Face templates can be designed to match your application with function keys labeled and sealed under the removable keypad overlay. Design your application exactly the way you want it using the Windows-based configuration software. The PanelMate 500 provides all the tools you need; just fill in the blanks of the configuration format and let the machine do the rest.

### Use Them Everywhere

The versatile, intelligent, cost-effective PanelMate 500 can be used just about anywhere you need sophisticated operator interface. Unmatched in price and performance, the PanelMate 500 revolutionizes the way machines are operated. Incredibly powerful, yet remarkably affordable, the PanelMate 500 operator interface station is part of a complete line of industrial control and automation solutions from Cutler-Hammer. From automation PCs to the most sophisticated intelligent devices, trust

Cutler-Hammer to keep your facility on the cutting edge, well into the 21st century.

### Intelligent, Onboard Operator Guidance

Using the Virtual Mentor technology, operators can be guided through all critical machine phases. Here's how:

#### Start-Up

The PanelMate 500 leads the operator through the start-up procedure and allows initiating any operation. Virtual Mentor guidance ensures all procedures are followed in the correct sequence.

#### Run

The monitor displays the machine status and production process. Alphanumeric displays keep operators informed.

#### Change

The PanelMate 500 leads the operator through the change procedures. The PanelMate 500's Virtual Mentor displays available choices for initiating a change and ensures all required procedures are followed.

#### Problem/Troubleshooting

The PanelMate 500 alarms the symptoms, leads the operator to the cause and guides the operator in restoring normal operation. Virtual Mentor provides the intelligence to determine the cause — and the solution — to the problem.

#### Shutdown

The PanelMate 500 leads the operator through all appropriate procedures and confirms shutdown decisions.

- With Windows-based, "fill-in-the-blank" configuration software, the PanelMate 500 greatly reduces machine design, assembly and modification time compared to hardwired operator control panels. The PanelMate 500 is compatible with most brands of PLCs.
- The PanelMate 500 is designed for NEMA 4, NEMA 12 and NEMA 4X panel-mount installations.
- Meets UL, CSA and CE requirements.

- The application flexibility to design just the system you need with hardware and display features like:

- Six text-based models with monochrome LCD (liquid crystal) or VFD (vacuum fluorescent) displays.
- Four tri-color LED indicators with eight customizable, fixed-function buttons for menu selection and control on the two-line display models.
- Eight tri-color LED indicators with eight customizable, fixed-function buttons for menu selection and control on the four-line display models.
- Four soft-key control buttons for screen-linked menu selection.
- Customizable front panel.
- Two-line by 20-character displays in both LCD and VFD.
- Four-line by 20-character displays in both LCD and VFD.

### On-Line Units

Description	Catalog Number
-------------	----------------

#### Series 500 Operator Stations

<b>Liquid Crystal Display (LCD)</b>	
2x20 LCD Operator Station	522L
4x20 LCD Operator Station	542L
4x20 LCD Operator Station with Virtual Mentor	542LM
<b>Vacuum Fluorescent Display (VFD)</b>	
2x20 VFD Operator Station	522V
4x20 VFD Operator Station	542V
4x20 VFD Operator Station with Virtual Mentor	542VM



The PanelMate Series 1000 is a cost-efficient, easy-to-integrate alternative to smaller (6+ pilot devices) hardwired operator panels in PLC-based machine control systems.

Control functions such as machine status indication and pushbutton-style control are accomplished using built-in templates displayed on a compact, vivid, backlit screen. Sealed control buttons and fast screen updates simulate the action and performance of hardwired push-buttons. Higher level functions such as machine setup, diagnostic indication and alarm annunciation can be configured easily on this intuitive video control panel.

With DOS-based, off-line, "fill-in-the-blank" configuration software, the PanelMate Series 1000 greatly reduces machine design, assembly and modification time compared to hardwired operator control panels. The PanelMate Series 1000 is compatible with many brands of PLCs and intelligent control devices.

The PanelMate Series 1000 is designed for NEMA 4 and NEMA 12 panel-mount installations. Stainless steel front panels are available for NEMA 4X installations.

Application flexibility is provided in hardware features that include:

- Packaging designed for NEMA 4/12 installation
- Nonvolatile Flash memory
- RS-232C/RS-422 Serial Port for PLC communications
- Available direct connection to Allen-Bradley Remote I/O, Data Highway™ and Data Highway Plus
- Built-in annunciator for control button actuation and alarm conditions
- System diagnostics
- 5" diagonal backlit monochrome Liquid Crystal Display (LCD)
- Meets UL, CSA and CE requirements.
- 320 x 240 pixels resolution
- 7.8"H x 9.0" W x 1.8" D
- 4 redefinable membrane control buttons, TouchPanel, cancel key, and numeric keypad
- Connector for optional Accelerat/On™ Interface

#### Software Features

- 8-page capacity
- 20-alarm summary capacity
- 100-message capacity

## On-Line Units

The PanelMate Series 1000 video control panel is an LCD-based (Liquid Crystal Display), 8-page video control panel.

Description	Catalog Number
<b>PanelMate Series 1000</b> Each PanelMate Model #1218 video control panel is shipped with an installation manual. Its ultra-compact, one-piece design enables it to be mounted in a 2-inch deep enclosure.	<b>1218</b>
<b>PanelMate</b> PanelMate Model #1211 video control panel provides all of the features of Model #1218. However, Model #1211 incorporates a special version of the Accelerat/On Interface for communication exclusively to Allen-Bradley's 1771 Remote I/O Link™. Its compact, one-piece design enables it to be mounted in a 4-inch deep enclosure.	<b>1211</b>
<b>Stainless Steel Housing</b> Replaces standard painted front bezel of the unit with type 316 stainless steel to meet NEMA 4X installation requirements. This option must be specified at the time an order is placed for the online unit.	<b>1215</b>

**NOTE:** Model #1211 does NOT communicate to Allen-Bradley's Data Highway or any other type of PLC or PLC network.





The PanelMate Power Series operator stations are a cost-efficient, easy-to-integrate alternative to traditional hard-wired operator panels in control systems. The PanelMate Power Series packs the latest advanced-technology operator interface functionality into a unique, versatile line of CRT-based and flatpanel designs.

Control functions, such as machine status indication and pushbutton-style control, are accomplished using built-in templates displayed on a vivid screen. The PanelMate Power Series simulates the action and performance of hardwired pushbuttons using sealed, recessed membrane control buttons on the TouchPanel version or on-screen buttons on the Touchscreen version. The proven intuitive operation remains the same in all PanelMate Series products.

Operators select templates or exclusive PowerGraphics™ by moving a finger around the TouchPanel or touchscreen. After selecting a template, the operator performs control actions by pressing control buttons. New functionality also allows users to navigate and initiate control action with just one touch (Touchscreen only), if such functionality is configured for the unit using the PanelMate Power Series Windows-based configuration software.

## Simplified Machine Control

- Higher level functions such as machine setup, diagnostics, alarming, trending and custom graphics can be configured easily using the PanelMate Power Series configuration software. This intuitive software significantly reduces the time and effort needed to create your application. The software also provides complete compatibility of configuration files with other PanelMate Series products (Version 2.1 or later).
- For realistic representations of machines and processes, the Panel-

Mate Power Series' PowerGraphics delivers detailed pixel graphics capability in the full palette of 256 VGA colors. These object-based graphics systems provide scalable multi-layer images, PowerBlink™ eight-state blinking and PowerAnimation™ for fast operator recognition of dynamic machine characteristics.

- Application flexibility is provided by hardware features that include:
  - Painted steel models designed for NEMA 4/12 installation and stainless steel, thermoset or powder coated models designed for NEMA 4X installation.
  - Executive firmware stored in nonvolatile flash memory for easy upgrades.
  - Battery-backed clock that can be synchronized externally.
  - Two RS-232/RS-422 serial ports for communications or printing alarms and messages (except 1500 models).
  - A variety of optional, high-speed, network interface boards for connectivity to device, fieldbus and proprietary PLC networks.
  - System diagnostics.
  - All PanelMate Power Series systems meet UL, CSA and CE requirements and PanelMate

1500 and 1700 also meet UL Class 1 Division 2 Groups A, B, C, D requirements.

- Series 1500 has up to 50-page, 2500-message capacity. Series 1700, 2000, 3000, 4000 and 5000 have up to 100-page, 5000-message capacity.
- Display features on all units provide VGA (640 x 480) resolution with:
  - 256-level grayscale on the grayscale versions or 256-color palette on color versions.
  - Some Series 1500 and 1700 models provide 4-level grayscale or 8-color.
- TouchPanel for all models include a display with electronics module and membrane keypad with off-screen 3 x 5 cell control selection, cancel key and numeric entry keypad, with 4 redefinable membrane control buttons to the right of the display. The Series 4000 and 5000 units have five membrane control buttons.
- Touchscreen for all models (except Series 2000) include a display with electronics module and on-screen 3 x 5 cell control selection, 4 redefinable on-screen control buttons, on-screen cancel key and non-intrusive, pop-up, on-screen numeric keypad. The Series 4000 and 5000 units have five on-screen control buttons.

### Displays available:

- 7.4-inch grayscale LCD Flatpanel (PM 1500, 1700)
- 8-inch color Dual-Scan Flatpanel (PM 1500, 1700)
- 8.4-inch color TFT Flatpanel (PM 1500, 1700)
- 9-inch grayscale CRT (PM 2000)
- 10.4-inch color Dual-Scan Flatpanel (PM 3000)
- 10.4-inch color TFT Flatpanel (PM 3000)
- 14-inch color CRT (PM 4000)
- Split Architecture 14-inch color CRT (PM 4000)
- 14-inch color TFT Flatpanel (PM 5000)
- Split Architecture 14-inch color TFT Flatpanel (PM 5000)
- All models available in Touchscreen and TouchPanel except 9" Grayscale (PM 2000)

**PanelMate Power Series  
1500 — Flatpanel**

The Series 1500 is available in 7.4-inch grayscale, 8-inch color Dual-Scan and 8.4-inch color TFT models with full VGA resolution in either 4-level/8-color or 256-level/color versions. All are available in either Touchscreen or TouchPanel version and can be mounted in a 4" deep enclosure.

Description	Catalog Number
7.4" Grayscale LCD, 4 Shades and 4 Blinks with Touchscreen	<b>1550THX</b>
7.4" Grayscale LCD 256 Shades with Touchscreen	<b>1555THX</b>
8" Color Dual-Scan 256 Colors with Touchscreen	<b>1575THX</b>
8.4" Color TFT 256 Colors with Touchscreen	<b>1585THX</b>
7.4" Grayscale LCD 4 Shades and 4 Blinks with TouchPanel	<b>1550KHX</b>
7.4" Grayscale LCD 256 Shades with TouchPanel	<b>1555KHX</b>
8" Color Dual-Scan 8 Colors and 8 Blinks with TouchPanel	<b>1570KHX</b>
8" Color Dual-Scan 256 Colors with TouchPanel	<b>1575KHX</b>
8.4" Color TFT 256 Colors with TouchPanel	<b>1585KHX</b>

**PanelMate Power Series  
1700 — Flatpanel**

The Series 1700 is available in 7.4-inch grayscale, 8-inch color Dual-Scan and 8.4-inch color TFT models with full VGA resolution with either 8-color or 256-level/color. All are available in either Touchscreen or TouchPanel version and can be mounted in a 4" deep enclosure.

Description	Catalog Number
7.4" Grayscale LCD 256 Shades with Touchscreen	<b>1755T</b>
8" Color Dual-Scan 256 Colors with Touchscreen	<b>1775T</b>
8.4" Color TFT 256 Colors with Touchscreen	<b>1785T</b>
7.4" Grayscale LCD 256 Shades with TouchPanel	<b>1755K</b>

Description	Catalog Number
8" Color Dual-Scan, 256 Colors with TouchPanel	<b>1775K</b>
8.4" Color TFT, 256 Colors with TouchPanel	<b>1785K</b>

**PanelMate Power Series  
2000 — 9" CRT**

The Series 2000 9-inch CRT is available with grayscale displays in the TouchPanel keypad. All units feature a three-piece design and can be mounted in a 12" deep enclosure.

*The 24XX is designed with a smaller front panel to fit in the same cutouts as the following discontinued models: PanelMate Compact 2510, 2530 and PanelMate Series 2410, 2430.*

Description	Catalog Number
9" CRT Grayscale, Painted steel finish with TouchPanel	<b>24PKHX</b>
9" CRT Grayscale, Painted steel finish with TouchPanel	<b>26PKHX</b>

**PanelMate Power Series  
3000 — Flatpanel**

The Series 3000 Flatpanel is available in two display types: 10.4-inch dual-scan color (passive matrix) or 10.4-inch TFT color (active matrix). All versions fit in the same cutout and feature a two-piece design. PanelMate Power Series 3000 units are touchscreen or TouchPanel and can be mounted in a 6" deep enclosure.

Description	Catalog Number
10.4" Color Dual-Scan, Painted steel finish with TouchPanel	<b>37PKHX</b>
10.4" Color Dual-Scan, Painted steel finish with Touchscreen	<b>37PTHX</b>
10.4" Color TFT, Painted steel finish with TouchPanel	<b>39PKHX</b>
10.4" Color TFT, Stainless steel finish with TouchPanel	<b>39SKHX</b>
10.4" Color TFT, Painted steel finish with Touchscreen	<b>39PTHX</b>
10.4" Color TFT, Stainless steel finish with Touchscreen	<b>39STHX</b>

**PanelMate Power Series  
4000 — 14" CRT**

The Series 4000 is packaged with a large, easy-to-see 14" color CRT designed for larger, more complex industrial machinery applications. The TouchPanel version is available with either of two designs — single-piece front panel design or the Split Architecture front panel design. Both can be 19" rack-mounted or panel-mounted.

Description	Catalog Number
14" CRT Color, Painted steel finish with TouchPanel	<b>45PKHX</b>
14" CRT Color, Stainless steel finish with TouchPanel	<b>45SKHX</b>
14" CRT Color, Painted steel finish with Touchscreen	<b>45PTHX</b>
14" CRT Color, Stainless steel finish with Touchscreen	<b>45STHX</b>
14" CRT Color Split Architecture, Painted steel finish with TouchPanel	<b>42PKHX</b>
14" CRT Color Split Architecture, Stainless steel finish with TouchPanel	<b>42SKHX</b>

**PanelMate Power Series  
5000 — 14" Flatpanel**

The Series 5000 is packed with a large, easy-to-see 14" color TFT flat-panel designed for larger, more complex industrial machinery applications. The TouchPanel version is available with either of two designs — single-piece front panel design or the Split Architecture front panel design. Both can be 19" rack-mounted or panel-mounted. PanelMate 5000 models are interchangeable with all previous PanelMate 14" CRT models.

Description	Catalog Number
14" Color TFT, Painted steel finish with TouchPanel	<b>55PKHX</b>
14" Color TFT, Painted steel finish with Touchscreen	<b>55PTHX</b>
14" Color TFT Split Architecture, Painted steel finish with TouchPanel	<b>52PKHX</b>



## PanelMate PC

PanelMate PC is an online version of the PanelMate Power Series executive software and communication drivers, designed to run on an industry-standard Intel-based personal computer and the Windows NT 4.0 operating system. PanelMate PC is a full 32-bit, Windows NT-compliant software package with 32-bit Windows NT PLC drivers, created to take advantage of standard, open architecture hardware and software developed by other vendors, while maintaining the PanelMate's legendary simplicity and ease of use.

## PanelMate PC and Automation PC

### *Integrated PanelMate PC Software/Industrial PC Hardware Packages*

PanelMate PC comes configured, tested and ready to run with PanelMate PC Runtime software when purchased as an option on the popular Cutler-Hammer D700 Series Automation PC. These integrated PanelMate PC systems have been tested and certified to run with popular options such as Allen-Bradley Data Highway Plus direct connect cards, DeviceNet scanner cards and Ethernet cards, reducing system integration time and ensuring optimal runtime performance with PanelMate PC's Windows NT communication drivers.

PanelMate PC software can be bundled with any PC configuration from the Cutler-Hammer Automation PC section of this catalog (Section 4) as an option, or it can be installed on any PC running Windows NT 4.0 or greater which meets the following minimum requirements:

- Intel Pentium 133 MHz (200 MHz recommended)
- 32 MB DRAM (64 MB recommended)
- 1GB Hard Drive
- VGA controller and monitor
- Pointing Device (Touchscreen preferred)
- Windows NT Workstation V 4.0

## PanelMate PC Benefits

- PanelMate PC allows the user to tap into the valuable data in PanelMate from other PC applications because PanelMate PC is open — Bring data from the plant level down to PanelMate, or feed data from PanelMate PC to other information systems in the plant.
- PanelMate PC adheres to Windows standards and is 100% Windows compatible, allowing you to use the extensive networking capabilities of Windows NT.
- Use of an open hardware/software platform allows the customer to precisely meet their ever-changing needs with easy processor or capacity upgrades, using off-the-shelf hardware. Supplemental functionality can be added using off-the-shelf software, allowing the user to incorporate control, operator interface, analysis, reporting, communications, etc., into one workstation.
- Use an efficient, Dynamic Link Library (DLL) interface to connect the tried-and-true PanelMate operator interface with Cutler-Hammer's popular NetSolver soft logic PC control package.
- PanelMate PC has the same functionality as the PanelMate Power Series and is fully compatible with applications created for PanelMate Power Series products. Any Power Series application will run on PanelMate PC. PanelMate Version 4.0 and higher configuration software provides a common configuration software package for PanelMate PC and PanelMate Power Series.

Communications Drivers

All available PanelMate Power Series and PanelMate PC communications drivers are included as standard with the #06ALL PanelMate Configuration Software package.

**NetSolver Dynamic Link Library (DLL)** – The NetSolver DLL provides a high-performance, tightly integrated interface to Cutler-Hammer’s popular NetSolver PC-based control package. *Running the PanelMate PC operator interface in tandem with NetSolver on a single Windows NT workstation provides the best combination of control and operator interface available in the industry.*

**Dynamic Data Exchange (DDE)** – Using the Microsoft® standard DDE interface, PanelMate PC data can be

easily and efficiently shared with any other application that supports DDE, such as Microsoft Excel, Microsoft Access, Visual Basic and Visual C++. PanelMate PC’s built-in DDE connectivity provides simple integration with other applications for report generation, recipe management, machine setup, data analysis and archiving.

**Allen-Bradley** Serial, Data Highway, Data Highway Plus — Note that Data Highway and Data Highway Plus require the #D712-DHP-ISA interface card.

**OLE for Process Control (OPC)** – Using Microsoft and industry standard OPC interface, PanelMate PC can receive data from a wide selec-

tion of third party OPC Servers for those communication interfaces that are not currently part of the Cutler-Hammer supplied drivers. PanelMate PC’s built-in OPC-client driver provides simple configuration of OPC Server applications for open connectivity to industrial communication protocols.

- Allen-Bradley** DH-485 (through AB-KF3 module)
- Cutler-Hammer** D50, D300, D320
- GE** Series 5/6/6+, Series 90, 90P
- Modicon** Modbus ASCII
- PLC Direct**
- Symantic/TI** 305/500, 405/505

Other PanelMate PC Drivers  
(available Q2’99)

- **Allen-Bradley** ControlNet
- **Modicon** Modbus Plus
- **Mitsubishi** Series A, Fx/Fxo
- **PROFIBUS**
- **Siemens** AS511, 3964R
- **Square D**
- **Toshiba** TOSH T2, TOSH T2P

Call factory for latest drivers and availability

PanelMate PC

Description	Catalog Number
<b>PanelMate PC Runtime Software</b>	
<b>PanelMate PC Stand-Alone Runtime Software License</b> Includes Hardware Key only (Development Software not included)	<b>PMPC-RT</b>

**NOTE:** PanelMate PC is also available as an integrated add-on to all Cutler-Hammer Industrial PCs.  
**NOTE:** Runtime Software is distributed free with the PanelMate Power Series Configuration Editor (#06ALL).

## Micro PanelMate Configuration Software

### Easy to Use

When installed on a Windows-based PC, this software permits access to all configuration operations. The easy, fill-in-the-blanks software provides WYSIWYG (What You See Is What You Get) creation of pages. In addition, you can download pages and PLC communication interfaces, options and completed pages from your personal computer.

A minimum 386-based personal computer with VGA graphics, 4 MB RAM and Windows 3.1 or higher is required to run the configuration software. Twenty megabytes of free hard disk space is required to load the configuration software with all the PLC communication interfaces and to configure a typical PanelMate Power Series configuration. To fully view configurations, 256 colors are needed. Software is supplied on 3-1/2" high density diskettes.

**NOTE:** Configuration software can be installed and used on one or more personal computers or on a shared access computer network, so long as all use takes place at no more than one (1) site at any time.

Configuration software can be used to configure an unlimited number of PanelMate units. You only need to buy one package for each series you are using. RS-485/RS-232 Adapter is needed (#D50CPM485).

### Configuration Software Packages

Description	Catalog Number
3-1/2" diskettes with Cutler-Hammer D50/D300 PLC interface Only Included in package: D800CBLXFR Manuals Gender Adapter	<b>D800CCSCH</b>
3-1/2" diskettes with all interfaces: AB SLC 500 DH-485 ① AB PLC 5 DF1 AB SLC-5/03, 5/04, DF1 AB Micrologix DF1 ASCII Communication Cutler-Hammer D50 and D300 GE 90 Series using SNP Protocol Mitsubishi FX Series Modicon Modbus, RTU Omron Host Link Siemens S5 Series Included in package: D800CBLXFR D800DWNLD D800ENABLE Manuals	<b>D800CCSSET</b>

① Requires D800ENABLEDH.

## PanelMate 500 Configuration Software

Using this software allows program functions such as:

- Data pages featuring text messages, numeric data fields, bar graphs and setup of function keys
- Menu pages for operator selection from a list of items
- Maintenance pages for online access to any data point in the PLC
- Password protection of operator entry functions
- Operator station setup to permit on-line mode changes and other adjustments
- Alarm annunciation setup
- Assignment of eight fixed-function buttons, which are custom labelable
- Assignment of four or eight tri-color LED indicators

### PLC Communication Interfaces

- Allen-Bradley for PLC-2, PLC-3, PLC-5 and SLC-500
- Cutler-Hammer D50, D300
- GE Fanuc Series 5, 6/6+ and 90 ①
- Modicon Modbus ASCII/RTU and Modbus Plus ① (4 x 20 display unit)
- Mitsubishi "A" Series and "FX" Series
- OMRON "C" Series plus CV500, CV1000
- Siemens S5 Series, 3964R Protocol
- Simatic TI 305/405 and 500/505 Series
- DeviceNet Communication Interface (4 x 20 display unit)
- Square D SyMax

① Requires online unit communication option to be installed in the target PanelMate Series 500 model.

The software is available in two forms:

- (1) with **all** of the PLC communication interfaces option #0830 or
- (2) with Cutler-Hammer PLC and DeviceNet communication interfaces option #08CH and the ability to select additional individual PLC communication interfaces option #09XX if needed for configuration software.

### Software Options

Description	Catalog Number
Windows Configuration Software & Manuals with All PLC Communication Interfaces	<b>0830</b>
Cutler-Hammer D50, D300, DeviceNet	<b>08CH</b>

### #09XX Additional PLC Communication Interfaces with Manual

Includes one (1) PLC communication interface disk and manual specified by model number below. Provides additional communication interfaces to be loaded on the personal computer. The PanelMate Power Series 500 models can run *only* one PLC communication interface at a time. But, additional interfaces are added to the software by ordering the #09XX communication interfaces. This is not needed with configuration software option #0830 which includes all PLC communication interfaces.

Description	Catalog Number
Licensed Allen-Bradley for PLC-2, PLC-3, PLC-5 and SLC-500: Serial Communications via KF-type module or Channel 0 DH485 Communications to SLC-500 ① Direct Connect to Data Highway ① (4 x 20 display unit) Direct Connect to Data Highway Plus ① (4 x 20 display unit) Direct Connect to Remote I/O ① (4 x 20 display unit)	<b>09AB</b>
Cutler-Hammer D50, D300	<b>09CH</b>
GE Fanuc Series 5, 6, 90 ①	<b>09GE</b>
Modicon Modbus ASCII/RTU and Modbus Plus ① (4 x 20 display unit)	<b>09MB</b>
Mitsubishi "A" Series and "FX" Series	<b>09MI</b>
OMRON "C" Series plus CV500, CV1000	<b>09OM</b>
PLC-Direct DL 405 Family, DirectNet Protocol	<b>09PD</b>
Siemens S5 Series, 3964R Protocol	<b>09SI</b>
Simatic TI 305/405 and 500/505 Series	<b>09TI</b>
Square D SyMax	<b>09SD</b>
Additional DeviceNet Communication Interface with Manual	<b>09DN</b>

**PanelMate 1000 Configuration Software**

- PC-based configuration editor
- Password protection
- International character set support
- Page selection by operator and/or PLC
- System diagnostics
- User-definable online system prompts to permit non-English or customized text
- Alarm summary page

When installed on a DOS-based PC, this software permits "WYSIWYG" (What You See Is What You Get) page creation on your PC. The easy fill-in-the-blank approach permits linking pages to the PLC and downloading a PLC driver, options and completed pages to the PanelMate 1000 online unit.

Description	Catalog Number
PanelMate Series 1000 Configuration Software	1220

**Standard Fixed Size Templates**

- Indicator Templates
- Readout Templates
- Bar Templates
- Display Templates
- Table Templates
- Maintenance Templates

**PLC Communication Interfaces**

Communication interfaces for the following programmable controllers:

- Allen-Bradley PLC-2, PLC-3, PLC-5 and SLC-500
- Cutler-Hammer D200, D500
- GE Fanuc Series 5, Series 6, Series 6+ and Series 90
- Mitsubishi "A" Series and "FX" Series
- Modicon Modbus ASCII/RTU
- Omron "C" Series plus CV500, CV1000
- Reliance AutoMate
- Siemens S5 Series, 3964R Protocol
- Simatic TI 305/405 and 500/505 Series
- Square D SyMax
- Westinghouse NumaLogic

**Accelerati/On High-Speed Direct Connectivity Available:**

- Allen-Bradley Data Highway and Data Highway Plus
- Allen-Bradley Remote I/O Link

## PanelMate Power Series and PanelMate PC

## PanelMate Power Series and PanelMate PC Configuration Software

## Application Flexibility

Windows-based configuration software is used to create PanelMate Series configurations off-line on a PC. It also permits the editing of character-based configurations from earlier-version PanelMate Series products. The following items can be configured:

- One-touch control (for touch-screen models)
- PowerGraphics
- PowerAnimation
- 8-state PowerBlink (for 256-level/color models)
- 3-level Password protection
- International character set support
- Page change by operators and/or PLC
- User-definable online system prompts to permit non-English or customized text that can be toggled with standard online prompts by operators
- Alarm window with a 100-alarm capacity

## Standard Features

- Indicator Templates
- Readout Templates
- Bar Templates
- Display Templates
- Trend Templates
- Table Templates
- Variable-Size Control Button Templates
- Pop-Up Maintenance Window
- Alarm Window
- Advanced Trend Templates

## PLC Communication Interfaces

Communication interfaces are available for the following programmable controllers and are downloaded from the configuration software.

*Multiple interfaces may be run simultaneously on Series 1700, 2000, 3000, 4000 and 5000 units. Series 2000, 3000, 4000 and 5000 require the Memory Expansion Kit option #0721.*

- Allen-Bradley PLC-2, PLC-3, PLC-5 and SLC-500
- Cutler-Hammer D50, D300, D320
- GE Fanuc Series 5, 6, 90
- Mitsubishi "A" Series and "FX" Series
- Modicon Modbus ASCII/RTU
- OMRON "C" Series plus CV500, CV1000
- PLC-Direct DL 405 Family
- Square D SyMax
- Siemens S5 Series, 3964R Protocol, AS511
- Simatic TI 305/405 and 500/505 Series
- Reliance Automate
- Toshiba T2

## High Speed Direct Connectivity available:

- Allen-Bradley Data Highway and Data Highway Plus
- Allen-Bradley Remote I/O Link
- GE Fanuc GENius I/O Network
- DeviceNet
- Modicon Modbus Plus
- PROFIBUS

## Transfer Cables

PanelMate configuration software package #06ALL includes a Series 1700, 2000, 3000, 4000, 5000 (#0518) Transfer Serial Cable and a Series 1500 (#0820) Converter Cable.

## For All PanelMate Power Series 1500, 1700, 2000, 3000, 4000, 5000 and PanelMate PC

## PanelMate Power Series and PanelMate PC

Description	Catalog Number
<b>Windows Configuration Software and Manuals with All Communications Software Drivers on CD-ROM.</b> Includes AB, CH, GE, MI, MB, OM, SI, SD, PD, TI, RE, TB, PROFIBUS, DeviceNet. #06ALL includes transfer serial cable for PM1500 and PM1700, 2000, 3000, 4000, 5000 (#0820, #0518). #06ALL includes electronic copies of manuals in .PDF format and hard copy of Getting Started Manual.	<b>06ALL</b>

## PanelMate Power Series and PanelMate PC (Continued)

Description	Catalog Number
<b>Windows Configuration Software and Manuals with All Communications Software Drivers, on 3-1/2" floppy disk.</b> Includes AB, CH, GE, MI, MB, OM, SI, SD, PD, TI, RE, TB, PROFIBUS, DeviceNet. #06ALL-F includes transfer serial cable for PM1500 and PM1700, 2000, 3000, 4000, 5000 (#0820, #0518). #06ALL-F includes a hard copy of the Getting Started Manual only.	<b>06ALL-F</b>
<b>Upgrade from previous PanelMate Power Series Software to #06ALLUP, on CD-ROM.</b> #06ALLUP includes electronic copies of manuals in .PDF format and does not include hard copy documentation.	<b>06ALLUP</b>
<b>Upgrade from previous PanelMate Power Series Software to #06ALLUP-F, on 3-1/2" floppy disk.</b> Does not include documentation.	<b>06ALLUP-F</b>
<b>Hardcopy documentation set.</b> Electronic copies of these manuals are included in #06ALL.	<b>06MANUAL</b>
<b>Upgrade existing PanelMate Power Series units to High Capacity, with Dynamic Graphics, Advanced Trending and Modbus enabler (these options are now standard on all currently shipping units).</b>	<b>PMUPGRADE</b>

## Automation Update Service Membership

All new or upgrade purchases of PanelMate Power Series software qualify you for one year of free active membership in the Automation Update Service when you register using the forms included in the software package. Active membership entitles you to free Power Series software upgrades during the year following your purchase. Inactive members are entitled to reduced prices for the Power Series upgrade #06ALLUP catalog item and they have the opportunity to restore their active membership status by purchasing a Power Series upgrade. All software purchases are handled by the local distributor.



## Communication Utilities

### Transfer Serial Cable

One 6-foot, RS-232 cable with DB9 connectors on each end, for upload/download between standard serial PC communication port and PanelMate serial port. Adapter for converting DB9 connector to a DB25 connector is also included.

Description	Catalog Number
For Micro PanelMate ①	<b>D800CBLXFR</b>
Series 1700, 2000, 3000, 4000 and 5000 Models ② For PanelMate 1000	<b>0518</b>
For all Series 500, 1500	<b>0818</b>

① Included in #D800CCSCH and #D800CCSSET.

② Included in configuration software package #06ALL.

### Driver Download Adapter for Micro PanelMate

Required when enabling D830, D840 and D850 units to accept drivers (using #D800ENABLE) and used when downloading drivers. Included in #D800CCSSET.

Description	Catalog Number
Micro PanelMate	<b>D800DWNLD</b>

### Transfer Utility

Windows utility allowing configuration, options and communication interfaces to be uploaded and downloaded between a PC and a unit, but does not permit configuration. Users can transfer configurations while the originator maintains central control and protection against alterations.

**NOTE:** All PanelMate Configuration Software packages include a transfer utility as an integral part of the software. This is a separate utility for OEMs and others that do not want to give configuration or change capability to the person using this utility.

Description	Catalog Number
Micro PanelMate	<b>D800XFR</b>
PanelMate Power Series PanelMate 500	<b>0621</b>
PanelMate 1000 (DOS utility)	<b>1221</b>

### Online Printing for PanelMate 500

"One-time use" diskette. Enables RS-232 serial port #2 of the PanelMate Series 500 to transmit online alarm messages to a printer creating hard copy documentation of alarms. For Series 500 Models #542L, #542V, #542LM and #542VM.

Description	Catalog Number
PanelMate 500	<b>0811</b>

### Converter Cables for Series 500 and Series 1500

Cable that allows the conversion from a 9-pin D-Shell connector to a RJ11 or RJ45 phone jack-style connector.

Description	Catalog Number
RS-485/422 from DB9 to RJ45 (1 foot)	<b>0819</b>
RS-232 from DB9 to RJ11 (1 foot) ③	<b>0820</b>

③ Included in configuration software package #06ALL.

### Converter Connector for Series 1700

Connector that allows conversion from an RS11 connector to a 9-pin D-shell connector.

Description	Catalog Number
RS-232 from RS11 to DB9	<b>0821</b>

### Cable Making Kit for PanelMate 500

Kit includes 10 RJ11 and 10 RJ45 connectors, 5 Phoenix plugs and 100 ft. of cable for making as many as 10 PLC communications cables. Also includes a crimping tool for attaching RJ11/RJ45 connectors to the cable.

Description	Catalog Number
PanelMate 500 PanelMate Power Series 1500	<b>1512</b>

### Driver Memory Expansion Kit

Includes option memory module, installation disk and electrostatic protection. The kit enables more than one PLC communication interface to run simultaneously in the target Power Series online unit. Not required for Series 1700 units.

Description	Catalog Number
For Series 2000, 3000, 4000, 5000	<b>0721</b>

### Communication Hardware for PanelMate PC

Description	Catalog Number
ISA 2 Port RS-422/485 Adapter	<b>D712-RS422-ISA</b>
ISA 10 Mbps Ethernet Combo Adapter	<b>D712-ENET-ISA</b>

## Allen-Bradley Connectivity

### Remote I/O, Data Highway, Data Highway Plus

#### Accelerat/On Interface

Licensed under A-B patented technology, the interface provides a communication port for connecting directly to the user's choice of Allen-Bradley PLC networks: Remote I/O Link, Data Highway or Data Highway Plus. Can be used simultaneously with Series 1700, 2000, 3000, 4000 and 5000 serial ports.

Description	Catalog Number
For Models #24XX, #26XX	2441
For Models #36XX, #37XX, #39XX, #42XX, #45XX, #52XX, #55XX	0741
For all Series 1500 and 1700 Models, PanelMate 500 (4 x 20 units only) and PanelMate 1000 <i>Requires Configuration Software option #0830, #08AB or #09AB for Series 500.</i>	1241

### Allen-Bradley PLC Network Upload/Download

"One-time use" diskette enables the PanelMate unit to upload and download PanelMate configurations to PCs via Allen-Bradley PLC networks. This Upload/Download feature can be used to conduct the following operations without having to disconnect the PanelMate Unit from the PLC, or open the enclosure to access the serial ports:

- Download configurations from a PC in a central location to PanelMate units on a network.
- Upload PanelMate configurations (while units are monitoring and controlling) to a PC for backup.
- Download new PanelMate software enhancements to units.  
*Requires Accelerat/On Interface (#XX41), Configuration Software or Transfer Utility option #0621.*
- Requires A-B RSLinx-OEM version 2.0 or higher or A-B Interchange software.

Description	Catalog Number
For all PanelMate Units	0524

### PanelMate PC Data Highway Plus

Description	Catalog Number
ISA 1 Port DH/DH+ Adapter	D712-DHP-ISA

### Allen-Bradley Remote I/O Link

Licensed under A-B patented technology, this interface provides a port for connecting directly to the Remote I/O Link. Interface mounts to the back of the online unit.

Description	Catalog Number
For Series 1500, 1700 and Series 500 <i>Requires Configuration Software option #0830 or #09AB for Series 500.</i>	1242

### PanelMate PC Remote I/O Link

Description	Catalog Number
ISA 1 Port R10 Adapter	D712-R10-ISA

### PanelMate PC Allen-Bradley ControlNet

Licensed under A-B patented technology, this interface provides a port for connecting directly to the ControlNet network.

Description	Catalog Number
ISA 1 Port ControlNet Adapter	D712-CNET-ISA

### Allen-Bradley DH-485 (SLC-500) Communications

"One-time use" diskette. Licensed under A-B patented technology, this option enables communications to Allen-Bradley SLC-500 PLCs through the DH-485 network in a single target Power Series online unit. A-B 1747-AIC Module is only required when simultaneous interface to PanelMate and PLC programming equipment is desired.

Description	Catalog Number
For Models #24XX, #26XX	2425
For Models #36XX, #37XX, #39XX, #42XX, #45XX	0725
For all Series 1500 and 1700 Models	1525
For all Series 500 <i>Requires Configuration Software option #0830 or #09AB.</i>	0825
For PanelMate 1000	1225

### Micro PanelMate

Description	Catalog Number
Communications Enable Utility with DH-485 D800ENABLEDH required for each D830, D840 or D850 that will use Allen-Bradley SLC500 DH-485 PLC Communications Interface.	D800ENABLEDH

### Communication Enable Utility for Micro PanelMate

Description	Catalog Number
Micro PanelMate Required for each individual D830, D840 or D850 that will use any non-Cutler-Hammer PLC communications interface other than DH-485.	D800ENABLE

### Allen-Bradley Communication Cables PLC Interface Cables for Micro PanelMate

Description	Catalog Number
Allen-Bradley SLC-500 DH-485 PLC Cable	D800CBLAB1
Allen-Bradley SLC-500 DF1 PLC Cable	D800DBLAB6
Allen-Bradley PLC-5 DF1 PLC Cable	D800CBLAB7

### PLC Interface Cables for Series 1500 and 500

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1500 unit or 500 unit serial port and the PLC communications port using RJ11 and RJ46 connectors.

Description	Catalog Number
For Allen-Bradley Communications 1747-AIC for SLC-500, CPU Connector (J1) 1785-KE, 1771-KC, KD, KE, KF, KG 1770-KF2A, KF2B, 1775-KA 1747-AIC for SLC-500 (DH-485 INTFC) AB SLC-500 direct (6 feet) AB SLC503/504 (RS-232) Channel 0 DF1 AB PLC5 (RS-232) Channel 0 DF1 AB PLC5 (RS-422) Channel 0 DF1	AB28 AB31 AB32 AB33 AB34 AB36 AB37 AB38

### PLC Interface Cables for Series 1700, 2000, 3000, 4000 and 5000

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1700, 2000, 3000, 4000 or 5000 unit serial port and the PLC communications port using D-Shell connectors.

Description	Catalog Number
For Allen-Bradley Communications 1785-KE, 1771-KC, KD, KE, KF, KG 1770-KF2A, KF2B, 1775-KA AB 1747-AIC for SLC-500 (DH-485 INTFC) AB SLC-500 direct (6 feet) AB SLC503/504 (RS-232) Channel 0 AB PLC5 (RS-232) Channel 0 DF1 AB PLC5 (RS-422) Channel 0 DF1 1747-AIC for SLC 500, CPU Connector (J1)	AB21 AB22 AB23A AB24A AB25 AB26 AB27A AB28A

## Cutler-Hammer Connectivity

### Cutler-Hammer Communication Cables

#### PLC Interface Cables for Micro PanelMate

Description	Catalog Number
C-H D50/D300 PLC Cable	D800CBLCH1

#### PLC Interface Cables for Series 1500 and 500

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1500 unit or 500 unit serial port and the PLC communications port using RJ11 and RJ45 connectors.

Description	Catalog Number
For Cutler-Hammer Communications D200, D50, D150, D300	CH31 CH32

#### PLC Interface Cables for Series 1700, 2000, 3000, 4000 and 5000

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1700, 2000, 3000, 4000 or 5000 unit serial port and the PLC communications port using D-Shell connectors.

Description	Catalog Number
For Cutler-Hammer Communications D200 and D500 D50/D300 (RS-485)	CH21A CH22A

## DeviceNet Connectivity

The PanelMate DeviceNet implementation features the ability to "monitor" status from other slave devices without the need for active involvement from the master device. When installed on DeviceNet, PanelMate can update its screens with data from the slave devices or from the PC. It can also input control (pushbutton) operations or numeric information to the PC. These capabilities permit PanelMate units to function as complete control and monitoring stations on DeviceNet. Interface mounts on the back of the online unit.

*DeviceNet Interface for PanelMate PC is via the Cutler-Hammer Net-Solver Software package.*

Description	Catalog Number
DeviceNet Interface for Series 1500, 1700 and Series 500 (4 x 20 units only) Requires Configuration Software option #08CH or additional communication interface 09DN for Series 500.	1245DN
DeviceNet Interface for Series 2000, 3000, 4000, 5000	0745DN

## General Electric Connectivity

### GE Fanuc GENius I/O Interface to GE PLCs

This interface provides a communication port for connection to GE Series 6 and Series 90 PLCs over the GENius I/O Network. Interface mounts to the back of the online unit.

Description	Catalog Number
For all Series 2000, 3000, 4000, 5000 Models	0543
For all Series 1500, 1700	1243

### Communication Enable Utility for Micro PanelMate

Description	Catalog Number
Micro PanelMate Required for each individual D830, D840 or D850 that will use any non-Cutler-Hammer PLC communications interface other than DH-485. See Allen-Bradley Connectivity.	D800ENABLE

### General Electric Communication Cables

#### PLC Interface Cables for Micro PanelMate

Description	Catalog Number
General Electric Series 90 PLC Cable	D800CBLGE2

#### PLC Interface Cables for Series 1500 and 500

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1500 unit or 500 unit serial port and the PLC communications port using RJ11 and RJ45 connectors.

Description	Catalog Number
For GE Fanuc Communications Series 90 Programming Port	GE31
Series 90 (RS-422) CMM 311/711 Module	GE32
Series 90 (RS-232) CMM 311/711 Module	GE33
Series 6/6+ (RS-422) COM 2-J1 Port	GE34
Series 6/6+ (RS-232) COM 2-J2 Port	GE35

#### PLC Interface Cables for Series 1700, 2000, 3000, 4000 and 5000

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1700, 2000, 3000, 4000 or 5000 unit serial port and the PLC communications port using D-Shell connectors.

Description	Catalog Number
For GE Fanuc Communications Series 90 Programming Port	GE21A
Series 90 (RS-422) CMM 311/711 Module	GE22
Series 90 (RS-232) CMM 311/711 Module	GE23
Series 6/6+ (RS-422) COM 2-J1 Port	GE24
Series 6/6+ (RS-232) COM 2-J2 Port	GE25

## Mitsubishi Connectivity

### Communication Enable Utility for Micro PanelMate

Description	Catalog Number
<b>Micro PanelMate</b> Required for each individual D830, D840 or D850 that will use any non-Cutler-Hammer PLC communications interface other than DH-485. See Allen-Bradley Connectivity.	<b>D800ENABLE</b>

### Mitsubishi Communication Cables PLC Interface Cables for Micro PanelMate

Description	Catalog Number
Mitsubishi Series PLC Cable	<b>D800CBLMI1</b>

### PLC Interface Cables for Series 1500 and 500

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1500 unit or 500 unit serial port and the PLC communications port using RJ11 and RJ45 connectors.

Description	Catalog Number
<b>For Mitsubishi Communications</b> A Series — AJ71C24 Module (RS-232) A Series — AJ71C24 Module (RS-422) FX/FXo Series (RS-232/RS-422) Converter	<b>MI31</b> <b>MI32</b> <b>MI33</b>

### PLC Interface Cables for Series 1700, 2000, 3000, 4000 and 5000

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1700, 2000, 3000, 4000 or 5000 unit serial port and the PLC communications port using D-Shell connectors.

Description	Catalog Number
<b>For Mitsubishi Communications</b> A Series — AJ71C24 Module (RS-232) A Series — AJ71C24 Module (RS-422) FX/FXo Series (RS-232/RS-422) Converter	<b>MI21</b> <b>MI22A</b> <b>MI23</b>

## Modicon Connectivity

### Modicon Modbus Plus PLC Network Upload/Download

"One-time use" diskette enables the PanelMate unit to upload and download PanelMate configurations to PCs via Modicon Modbus Plus PLC networks. This Upload/Download feature can be used to conduct the following operations without having to disconnect the PanelMate Unit from the PLC, or open the enclosure to access the serial ports:

- Download configurations from a PC in a central location to PanelMate units on a network.
- Upload PanelMate configurations (while units are monitoring and controlling) to a PC for backup.
- Download new PanelMate software enhancements to units.  
*Requires Modbus Plus Interface, Configuration Software or Transfer Utility option #0621.*

Description	Catalog Number
<b>For all PanelMate Units</b>	<b>0548</b>

### Modbus Plus Communications and PanelMate 500

This interface provides a communication port for connection to Modicon PLCs over the Modbus Plus network. Interface mounts to the back of the online unit and can be mounted in a 4-inch deep enclosure.

Description	Catalog Number
<b>Modbus Plus Communications for PanelMate 500</b> (4 x 20 units only) <i>Requires Configuration Software option #0830 or #09MB for Series 500.</i>	<b>1244</b>
<b>Modbus Plus Communications for Series 1500, 1700</b> (single-channel)	<b>1248</b>
<b>Modbus Plus Communications for Series 2000, 3000, 4000, 5000</b> (single-channel)	<b>0748-1</b>
<b>Modbus Plus Communications for Series 2000, 3000, 4000, 5000</b> (dual-channel)	<b>0748-2</b>

### Communication Enable Utility for Micro PanelMate

Description	Catalog Number
<b>Micro PanelMate</b> Required for each individual D830, D840 or D850 that will use any non-Cutler-Hammer PLC communications interface other than DH-485. See Allen-Bradley Connectivity.	<b>D800ENABLE</b>

### Modicon Communication Cables PLC Interface Cables for Micro PanelMate

Description	Catalog Number
Modicon 9-Pin Modbus PLC Cable	<b>D800CBLMB1</b>
Modicon Micro PLC Cable	<b>D800CBLMB2</b>

### PLC Interface Cables for Series 1500 and 500

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1500 unit or 500 unit serial port and the PLC communications port using RJ11 and RJ45 connectors.

Description	Catalog Number
<b>For Modbus Communications</b> 9-Pin Modbus	<b>MB31</b>

### PLC Interface Cables for Series 1700, 2000, 3000, 4000 and 5000

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1700, 2000, 3000, 4000 or 5000 unit serial port and the PLC communications port using D-Shell connectors.

Description	Catalog Number
<b>For Modbus Communications</b> 9-Pin Modbus	<b>MB21</b>

**Omron Connectivity****Communication Enable Utility  
for Micro PanelMate**

Description	Catalog Number
<b>Micro PanelMate</b> Required for each individual D830, D840 or D850 that will use any non-Cutler-Hammer PLC communications interface other than DH-485. See Allen-Bradley Connectivity.	<b>D800ENABLE</b>

**Omron Communication Cables  
PLC Interface Cables for Micro PanelMate**

Description	Catalog Number
Omron Host Link PLC Cable	<b>D800CBL0M1</b>

**PLC Interface Cables for Series 1500  
and 500**

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1500 unit or 500 unit serial port and the PLC communications port using RJ11 and RJ45 connectors.

Description	Catalog Number
<b>For Omron Communications</b> C Series (RS-232) CV Series (RS-232) C Series (RS-422) CV Series (RS-422)	<b>OM31</b> <b>OM32</b> <b>OM33</b> <b>OM34</b>

**PLC Interface Cables for Series 1700,  
2000, 3000, 4000 and 5000**

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1700, 2000, 3000, 4000 or 5000 unit serial port and the PLC communications port using D-Shell connectors.

Description	Catalog Number
<b>For Omron Communications</b> C Series (RS-232) CV Series (RS-232) C Series (RS-422) CV Series (RS-422)	<b>OM21</b> <b>OM22</b> <b>OM23A</b> <b>OM24A</b>

**PROFIBUS Connectivity****PROFIBUS I/O Interface**

This interface provides a communication port for connection to a PROFIBUS network via the PROFIBUS DP slave protocol.

Description	Catalog Number
For all 1500, 1700	<b>1247</b>
For all 2000, 3000, 4000, 5000	<b>0544</b>

**Siemens Connectivity****Communication Enable Utility  
for Micro PanelMate**

Description	Catalog Number
<b>Micro PanelMate</b> Required for each individual D830, D840 or D850 that will use any non-Cutler-Hammer PLC communications interface other than DH-485. See Allen-Bradley Connectivity.	<b>D800ENABLE</b>

**Siemens Communication Cables  
PLC Interface Cables for Micro PanelMate**

Description	Catalog Number
Siemens Semantic S5 Series PLC Cable	<b>D800CBL511</b>

**PLC Interface Cables for Series 1500  
and 500**

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1500 unit or 500 unit serial port and the PLC communications port using RJ11 and RJ45 connectors.

Description	Catalog Number
<b>For Siemens Communications</b> Siemens S5 Series, CP524/525 Module (RS-232)	<b>SI31</b>

**PLC Interface Cables for Series 1700,  
2000, 3000, 4000 and 5000**

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1700, 2000, 3000, 4000 or 5000 unit serial port and the PLC communications port using D-Shell connectors.

Description	Catalog Number
<b>For Siemens Communications</b> Siemens S5 Series, CP524/525 Module (RS-232)	<b>SI21</b>

## Simatic TI Connectivity

### Simatic TI Communication Cables

#### PLC Interface Cables for Series 1500 and 500

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1500 unit or 500 unit serial port and the PLC communications port using RJ11 and RJ45 connectors.

Description	Catalog Number
<b>For Simatic TI Communications</b>	
TI 500, 305 (RS-232)	TI31
TI 405 (RS-232)	TI32
TI 545 (RS-232)	TI33
TI 435 (RS-422)	TI34
TI 305-02DM, TI 405 DCM (RS-422)	TI35
TI 545-1101, RS-444	TI36
TI 545-1102, 1104, 1105	TI37

#### PLC Interface Cables for Series 1700, 2000, 3000, 4000 and 5000

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1700, 2000, 3000, 4000 or 5000 unit serial port and the PLC communications port using D-Shell connectors.

Description	Catalog Number
<b>For Simatic TI Communications</b>	
TI 500, 305 (RS-232)	TI21
TI 405 (RS-232)	TI22
TI 545 (RS-232)	TI23
TI 435 (RS-422)	TI24A
TI 305-02DM, TI 405 DCM (RS-422)	TI25A
TI 545-1101, RS-422	TI26A
TI 545-1102, 1104, 1105	TI27A

## Square D Connectivity

### Square D Communication Cables

#### PLC Interface Cables for Series 1500 and 500

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1500 unit or 500 unit serial port and the PLC communications port using RJ11 and RJ45 connectors.

Description	Catalog Number
<b>For Square D Communications</b>	
PLC Processor	SD31
PanelMate to NIM (Network Interface Module)	SD32

#### PLC Interface Cables for Series 1700, 2000, 3000, 4000 and 5000

One 15-foot cable, unless otherwise stated, for communications between a PanelMate Power Series 1700, 2000, 3000, 4000 or 5000 unit serial port and the PLC communications port using D-Shell connectors.

Description	Catalog Number
<b>For Square D Communications</b>	
PLC Processor	SD21A
PanelMate to NIM (Network Interface Module)	SD22A

## Accessories

### Micro PanelMate 820

#### Power Supplies

Description	Catalog Number
115V AC to 5V DC Power Supply for use with D820 model only	D820PWR

### Micro PanelMate 830, 840, 850 PanelMate 500, PanelMate 1000 PanelMate Power Series 1500, 1700

#### Power Supplies

Description	Catalog Number
<b>115V AC to 24V DC Conversion Module</b> This converter accepts 115V AC input and converts it to 24V DC. Input and output wiring is done by user via screw terminal connections provided. Not to be used with PM1700.	1216
<b>115/230V AC to 24V DC Conversion Module</b> This converter accepts 115 or 230V AC input and converts it to 24V DC. Input and output wiring is done by user via screw terminal connections provided.	1219A

### PanelMate 500

Description	Catalog Number
<b>Customization Kit</b> Customization kit allows the user to print labels with choice of indications for the eight fixed-function tri-color LED indicators. Labels are then placed under the TouchPanel overlay pad on the front of the unit. Includes Avery LabelPro for Windows software, five sheets of blank labels, custom label designs and complete instructions on how to use the kit.	K201
<b>TouchPanel Overlays</b> A replacement TouchPanel overlay for PanelMate 500 models made of die-cut polyester with windows for text display, OEM logo and LED/button labels. Provides the built-in screen navigation and numeric entry keys. 2 x 20 LCD Overlay 2 x 20 VFD Overlay 4 x 20 LCD Overlay 4 x 20 VFD Overlay	T22L T22V T42L T42V
<b>Configuration BackPac Cartridge</b> This small, portable, nonvolatile memory unit attaches to a connection on the PanelMate Series 500 for uploading or downloading a configuration. For Models #542L, #542V, #542LM and #542VM.	5BP1

**PanelMate 500****PanelMate Power Series 1500**

Description	Catalog Number
<b>Multi-Drop Adapter</b> External stand-alone device that can mount to a PanelMate 500/1500 unit which allows easy daisy-chaining and termination of the PanelMate unit on DH-485/RS-485/RS-422 networks. The device supports both RJ45 and Phoenix-type connectors. Includes 9-inch cable to connect.	<b>1511</b>

**PanelMate 1000**

Description	Catalog Number
<b>PanelMate Series 1000 Support Kit</b> 1 option #1221 Transfer Utility diskette set 1 Panel cutout dimensional drawing 1 Spare Hardware Kit – nuts, washers, connector	<b>1212</b>

**PanelMate Power Series 1700, 2000, 3000, 4000, 5000**

Description	Catalog Number
<b>Configuration Storage Module</b> This small, portable, nonvolatile memory unit attaches to serial port 1 of PanelMate Power Series 1700, 2000, 3000, 4000, 5000 units. Allows transfer of one configuration to or from the target PanelMate unit. Configuration transferring required power from one 9V battery (provided). Battery power is not required for the retention of a configuration within the module.	<b>0614</b>
<b>Audio Feedback Kit for Series 1700, 2000, 3000, 4000, 5000</b> Industrialized horn with attached 24-foot cable attaches to audio connection on the back of the PanelMate and annunciates control button actuation and alarm conditions.	<b>0807</b>

**Mounting Adapter Collars**

Allows the installation of PanelMates in shallower enclosures or in place of other models.

Description	Catalog Number
PanelMate Mounting Collar, 24XX to 1500, 1700 TouchPanel	<b>1524TP</b>
PanelMate Mounting Collar, 26XX/27XX to 1500, 1700 TouchPanel	<b>1527TP</b>
PanelMate Mounting Collar, 26XX/27XX to 1500, 1700 Touchscreen <i>All of the above require hole enlargement and new mounting holes.</i>	<b>1527TS</b>
10-inch deep enclosure mounting for Models #24XX and #26XX. ( <i>Mounting collar is not needed for mounting in 12-inch or deeper enclosure.</i> )	
<b>For Models TouchPanel #24XX</b> Painted Steel Stainless Steel	<b>2402</b> <b>2403</b>
<b>For Models TouchPanel #26XX</b> Painted Steel Stainless Steel	<b>2602</b> <b>2603</b>
12-inch deep enclosure mounting for Models #45XX and #42XX. ( <i>Mounting collar is not needed for mounting in 16-inch or deeper enclosure.</i> )	
<b>For Models TouchPanel #45XX</b> Painted Steel Stainless Steel	<b>4502</b> <b>4503</b>
<b>For Models #42XX</b> Mounting collar for the display unit and keyboard shelf to provide a more comfortable angle for operator input. Painted Steel Stainless Steel	<b>2802</b> <b>2803</b>
<b>Model #42XX and #41XX Keyboard Shelf only</b> Painted Steel Stainless Steel	<b>2804</b> <b>2805</b>

