

EXPRESS SETUP

PanelMate 1700 Series PanelMate Power Pro



Powered by  **ATS**

1 Installation

Unpacking

Carefully remove all equipment from the packing cartons and inspect all parts for damage in shipment. Check packing cartons for all items shown on the packing list. Keep the cartons and packing materials for future shipment.

If there is equipment damage due to shipment, report the damage to the carrier who delivered the equipment. Note: The Interstate Commerce Commission has a time limit on reporting concealed damage.

Parts Checklist

Your packing carton contains one parts kit containing:

- 1 Packet of mounting nuts and washers
- 2 Two-terminal connectors (audio output & security keyswitch)
- 1 Three-terminal connector (24VDC power)
- 1 Four-terminal connector (fault relay)

Mounting

Your PanelMate unit is designed for Type 4, 4X, and 12 installations when properly mounted in a correspondingly-rated enclosure.

Proper installation and enclosure sizing is essential to ensure long life and trouble-free operation. Your PanelMate unit should always be mounted in a vertical position. Flat or angled mounting positions will severely shorten the unit's life.

Refer to ATS's PanelMate Installation Guide for installation recommendations. The Guide is available on the ATS's web site:

www.buypanelmate.com

Panel cutout dimensions and stud torque limits are shown on the reverse side of this Express Setup sheet.

Note: Stud nuts must be tightened enough to obtain a proper seal, but not over-tightened to the point where the threads are stripped or the gasket is rendered useless. Always use a torque wrench when installing your PanelMate unit.

Safety Considerations

This equipment is suitable for Class I, Division 2, Groups (A,B,C,D) or non-hazardous locations only.



CAUTION

EXPLOSION HAZARD. SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.



ADVERTISSMENT

RISQUE D'EXPLOSION. LA SUBSTITUTION DE COMPOSANTS PEUT RENDRE CE MATERIEL INACCEPTABLE POUR LES EMBLEMES DE CLASSE I, DIVISION 2.



WARNING

EXPLOSION HAZARD. DO NOT REPLACE COMPONENTS UNLESS POWER HAS BEEN SWITCHED OFF OR AREA IS KNOWN TO BE NON-HAZARDOUS.



ADVERTISSMENT

RISQUE D'EXPLOSION. COUPER LE COURANT OU S'ASSURER QUE L'EMPLACEMENT ES DESIGNÉ NON DANGEREUX AVANT DE REPLACER LE COMPOSANTS.

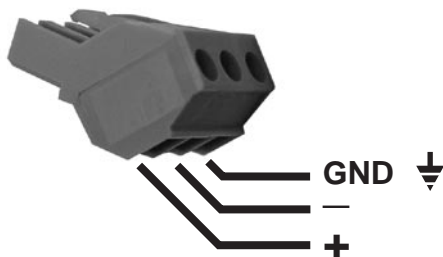
2 Connections

Connect DC Power

Your PanelMate unit is designed to operate at 24VDC -15%/+20%. A removable three-position DC power connector attaches to the unit's connector receptacle. The DC input common (-terminal) and the chassis GND terminal are both internally connected to the PanelMate chassis.

Note: Use #18 AWG (0.82mm²) copper wire for power and ground lead connections.

Note: Power conditioning may be required when the PanelMate unit is installed in areas of poor power quality.



CAUTION

Your PanelMate unit could be damaged if it is connected to voltages outside the range of 18 to 30VDC. Your PanelMate unit is fully protected against polarity reversal and will not operate if input polarity is reversed.



CAUTION

If you are replacing a PanelMate Power Series 1500 unit, check the rating of your existing 24VDC power supply. The PanelMate 1700 unit requires a power supply rated for 1.5A operation.

Connection to a Personal Computer

Executive firmware and PanelMate configurations are uploaded/downloaded to a personal computer using the PanelMate unit's serial port. A transfer serial cable is provided with your PanelMate Configuration software. Refer to your PanelMate Getting Started Manual for more information.

Connection to the Fault Relay

The fault relay may be wired in normally open or normally closed configuration. It is a Form C contact, rated for 2 amps at 120VAC, 2 amps at 230VAC, and 2 amps at 28VDC resistive load. During normal operation, the fault relay will energize after entering Run Mode. Whenever the PanelMate unit detects a communication error or system failure, the fault relay will be de-energized. It is also possible to de-energize the fault relay whenever an alarm condition occurs. You can set the fault relay to de-energize on alarms by using the System Parameters Table. Refer to the System Parameters topic in the Configuration Software Online Help and in the Configuration Editor User's Guide for more information.

Connection to the Audio Output

The Audio Feedback Kit is an optional accessory to your PanelMate unit. To connect the external 8 Ohm speaker to your PanelMate unit, connect the speaker to the audio connector.

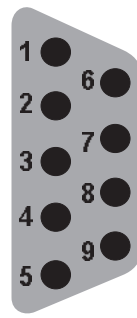
Connection to the Security Keyswitch

The Security Keyswitch connection is provided for external security/password applications.

Connection to Serial Ports

Serial Port 1 may be used for a printer, for PLC (or Host) communications, or for connection to a personal computer for upload or download. Serial Port 2 may be used for a printer or, for PLC (or Host) communications.

Selection of Port 1 for a Serial Printer must be done with the Configuration Software. Refer to the PLC Name and Port Table topic in the Configuration Software Online Help and in the PanelMate Configuration Editor User's Guide.



Pin	Description
1	RS422 Transmit Data (+) (Output)
2	RS232 Receive Data (Input)
3	RS232 Transmit Data (Output)
4	RS422 Receive Data (+) (Input)
5	Signal Ground
6	RS422 Transmit Data (-) (Output)
7	RS232 Request to Send (Output)
8	RS232 Clear to Send (Input)
9	RS422 Receive Data (-)

Serial Port Termination

Your PanelMate unit is sent without termination. For serial port termination switch locations, refer to Figure A. Recommended termination for RS232, DH485 and RS422 communication is shown in the table. For setting the termination on Serial Port 1, use the termination switch on the left of Serial Port 1. For setting the termination on Serial Port 2, use the termination switch to the right of Serial Port 2.

Communication	Position	Termination
RS232	1	None (factory Setting)
DH485	4	120 Ohm AC coupled
RS422/RS485	2 & 3	Refer to your PLC Communications Driver Manual for termination information

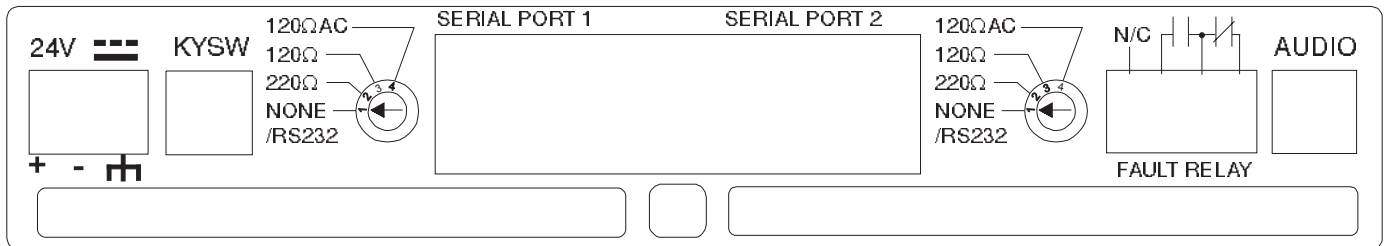


Figure A



CAUTION

Your PanelMate unit is equipped with isolated serial ports for improved communications reliability. If you are replacing a 120VAC Power Series unit or a Power Series 1500 unit, and are using an RS422 or RS485 cable for PLC communications, you may need to install a new cable equipped with a ground wire. Consult your PLC Communications Driver Manual or contact Cutler-Hammer Support Services for more information.

3 Tests & Adjustments

PanelMate Diagnostic Tests

When power is applied to your PanelMate unit, the unit will display a listing of internal diagnostic checks as they are executed. After completing its internal diagnostic checks, the unit will display the Offline Mode Menu. This menu displays five selections described below:



Execute Diagnostics

This template allows you to perform a series of tests:

- Set Date and Time
- Display test
- Keypad test
- Tone, relay and battery test
- System status

For information on performing these tests, refer to your PanelMate Getting Started Manual.

Enter Serial Transfer Mode

To download, upload or read system information over a serial port, your PanelMate unit must be in Serial Transfer Mode. For more information on downloading and uploading PanelMate configurations, refer to your PanelMate Getting Started Manual.

Enter Network Transfer Mode

Network transfer mode is used to read system information over a remote network or remotely place your PanelMate unit into Run Mode. For more information, refer to your PanelMate Transfer Utility User's Manual.

Display System Configuration Information

This selection displays your PanelMate unit's current configuration. Your PanelMate unit is shipped with a demonstration PanelMate configuration. Once you have downloaded a new configuration, this information will be updated to reflect the new configuration information.

Enter Run Mode

Run Mode allows you to display the configuration downloaded to the PanelMate unit and communicate to the PLC (or Host) of your choice. If a new configuration has not been downloaded, the unit will display the demonstration configuration. For more information on Run Mode, refer to your PanelMate Getting Started Manual.

4 TouchPanel Information

PanelMate Operation

The most basic job of a PanelMate unit is to replace the functions of traditional hard-wired operator station devices such as pushbuttons, lamps and message displays. To replace each category of hard-wired devices, the PanelMate unit supplies a specific visual tool or "template" which can be arranged onscreen with other templates.

During operation, you can select a template to "arm" control buttons or numeric entry. To select a template, touch the TouchPanel area with your finger. Moving your finger around the TouchPanel will cause templates to become outlined or "selected". As you move your finger you will see a correlation between the position of your finger on the TouchPanel and the position of the templates of the screen.

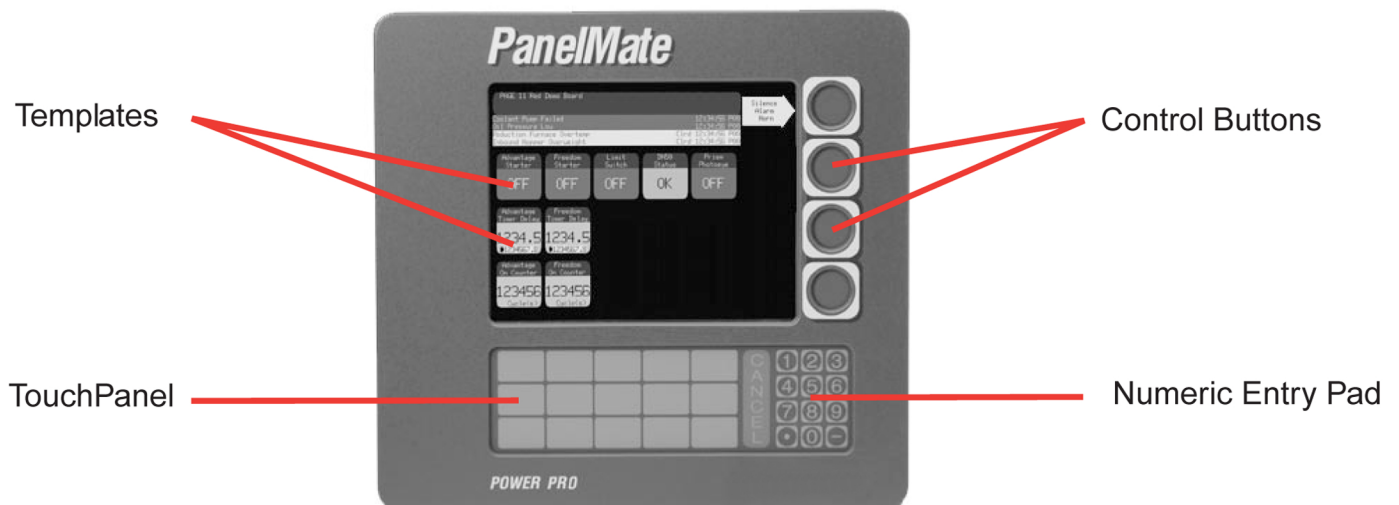
Once a template has been selected or "armed", you can press any desired control button to take action.

For more information on PanelMate online operation, refer to your PanelMate Getting Started User's Guide or Online Operation User's Guide.



CAUTION

Never use foreign objects (pens, screwdrivers or similar) to activate the TouchPanel, numeric keypad or control buttons. Foreign objects may damage the membrane surfaces, causing unreliable operation or failure.



Representative PanelMate TouchPanel Unit

Specifications

Temperature

Operating: 0 to 50 degree C (grayscale & TFT color)
0 to 40 degree C (dual-scan color)
Non-Operating: -20 to 60 degree C

Humidity (non-condensing)

Operating: 20% - 80% (grayscale)
20% - 90% (color)
Non-Operating: 20% - 90% (grayscale)
20% - 95% (color)

Installation Rating: Type 4, Type 4X, or Type 12, when properly mounted in a correspondingly-rated enclosure

Vibration

Operating: 1g at 10-500Hz
Non-Operating 1g at 10-500Hz

Shock

Operating: 30g
Non-Operating: 30g

Pollution: Pollution Degree 1 - Rated for exposure to dry or non-conductive pollutants only

Altitude

Operating: 10,000 feet above sea level
Non-Operating: 40,000 feet above sea level

ESD Immunity

Air: IEC 1000-4-2, Level 4 (+/- 15kV)
Contact: IEC 1000-4-2, Level 4 (+/- 8kV)

Radiated Immunity: IEC 1000-4-3 (10V/m) 27mHz to 1GHz 80% AM modulation

Conducted Immunity: IEC 1000-4-6 10V from 150kHz to 80mHZ, 80% AM modulation with 1kHz sine wave

Surge Immunity: IEC 1000 - 4-5 500V

Radiated/Conductive: CISPR 22, Class A Emission

Electrical Fast Transient: IEC 1000-4-4, Level 3 (2kV) on power lines (1kV) on I/O lines

Line Frequency Magnetic Field Immunity: IEC 1000-4-8 Level 3, 30A/m at 50Hz and 60Hz

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Specifications

Current: 1.3A (with high speed interface installed)
1.1A (without high speed interface installed)

Peak Inrush Current: 5A

Serial Port Rate: Selectable; 110 to 38,400 baud

Serial Port 1 Configuration: DB9S connection selectable for
RS232, RS422, or RS485-2
signal levels

Serial Port 2 Configuration: DB9S connection selectable for
RS232, RS422, or RS485-2
signal levels

Weight: 8 Lbs
9 Lbs with high speed interface attached

At ATS, our Legacy Products Division continues to support factories worldwide through partnerships with industry leading OEM's. This PanelMate product is our latest acquisition. It continues our tradition of assisting customers like you by allowing for capital investment decisions to be made within your timeframe. Through our support of end-of-life components, existing production lines stay running without the need for expensive upgrades.

ATS didn't earn its reputation for making factories run better by accident. We earned it by proving ourselves in some of the most advanced and demanding factories in the world. Our breadth of expertise stretches much farther than Legacy Products. With our award winning Industrial Parts Services we offer some of the world's top companies high quality repairs that look and perform like new. We also provide customers a variety of on-site Industrial Parts Services including Repair Parts Management, Reliability Engineering, Power Tool / Asset Management and Calibration Services. No one offers greater expertise in Repair Parts Services than ATS.

ATS' state-of-the-art repair centers are ISO 9001 registered assessed by the British Standards Institute (BSI). Our calibration labs are ISO 17025 accredited assessed by A2LA with standards traceable to the National Institute of Standards and Technology.

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