

PanelView 600 Terminals

Catalog Numbers 2711-K6Cxx, 2711-B6Cxx

Topic	Page
Hazardous Location Considerations	3
European Union Directive Compliance	4
Wiring and Safety Guidelines	5
Enclosures	5
Required Tools	5
Mounting Dimensions	6
Cutout Dimensions	6
Clearances	7
Install the Terminal in a Panel	8
Install the Memory Card	10
Connect AC Power	11
Connect DC Power	12
EtherNet/IP Protocol	14
ControlNet Protocol	14
Battery Removal and Disposal	14
For More Information	15

Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (Publication [SGL-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.

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

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

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

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

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

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 600 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.

The PanelView 600 terminals have an operating temperature code of T4 (maximum operating temperature of 135 °C or 275 °F). Do not install the terminals in environments where atmospheric gases have ignition temperatures less than 135 °C (275 °F).

WARNING



When you connect or disconnect the battery an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding. Replace the battery only with the indicated catalog number.

For Safety information on the handling of lithium batteries, including handling and disposal of leaking batteries, see Guidelines for Handling Lithium Batteries, publication [AG 5-4](#).

Do not dispose of battery in a fire or incinerator. Dispose of used batteries in accordance with local regulations.

Store batteries in a cool, dry environment. We recommend 25 °C (77 °F) with 40...60% relative humidity. You may store batteries for up to 30 days between -45...85 °C (-49...185 °F), such as during transportation. To avoid possible leakage, do not store batteries above 60 °C (140 °F) for more than 30 days.

European Union Directive Compliance

If a PanelView 600 Operator Terminal is installed within the European Union or EFTA regions and has a CE mark, the following regulations apply.

EMC and Low Voltage Directives

This apparatus is tested to meet Council Directive 89/336/EEC Electromagnetic Compatibility (EMC), and amending directives 91/263/EEC, 92/31/EEC, 93/68/EEC; 72/23/EEC Low Voltage Directive, and amending directive 93/68/EEC using the following standards, in whole or in part:

- EN 50081-2:1993 EMC - Generic Emission Standard, Part 2 - Industrial Environment
- EN 61000-6-2:1999 EMC - Generic Immunity Standard, Part 2 - Industrial Environment
- EN 61131-2:1995 Programmable Controllers Part 2: Equipment Requirements and Tests
- Low Voltage Directive (Safety Sections of EN 61131-2)

The product described is intended for use in an industrial environment.

Intended Use of Product

According to these Standards, the factor which determines, for EMC purposes, whether an apparatus is deemed to be 'Industrial' or 'Residential, commercial and light industrial', is given in Clause 1 of EN50081-2 as follows:

Apparatus covered by this standard is not intended for connection to a public mains network but is intended to be connected to a power network supplied from a high- or medium-voltage transformer dedicated for the supply of an installation feeding a manufacturing or similar plant.

The PanelView 600 terminals are intended for use solely in an industrial environment as defined above. When installed in Europe, any other application is in contravention of European Union Directives, and a breach of these laws.

Wiring and Safety Guidelines

Install the PanelView 600 terminal using publication 70E, Electrical Safety Requirements for Employee Workplaces. In addition to the NFPA general guidelines, follow these recommendations:

- Connect the PanelView terminal to its own branch circuit.

The input power source should be protected by a fuse or circuit breaker rated at no more than 15 amps.

- Route incoming power to the PanelView 600 terminal by a separate path from the communications cable.
- Where power and communication lines must cross, they should cross at right angles. Communications lines can be installed in the same conduit as low level DC I/O lines (less than 10 Volts).
- Grounding minimizes noise from Electromagnetic Interference (EMI) and is a safety measure in electrical installations. To avoid EMI, shield and ground cables appropriately.
- A source for grounding recommendations is the National Electrical Code published by the National Fire Protection Association of Boston.

Enclosures

The PanelView 600 terminal must be mounted in an environment that provides IEC-1131-2 Pollution degree 2 protection.

Mount the PanelView 600 terminal in a panel or enclosure to protect the internal circuitry. The terminal meets NEMA Type 12/13 and 4X (indoor use) ratings only when mounted in a panel or enclosure with the equivalent rating.

Allow enough space within the enclosure for adequate ventilation. Consider the heat produced by other devices in the enclosure. The ambient temperature around the PV600 terminal must be between 0... 55 °C (32...131 °F).

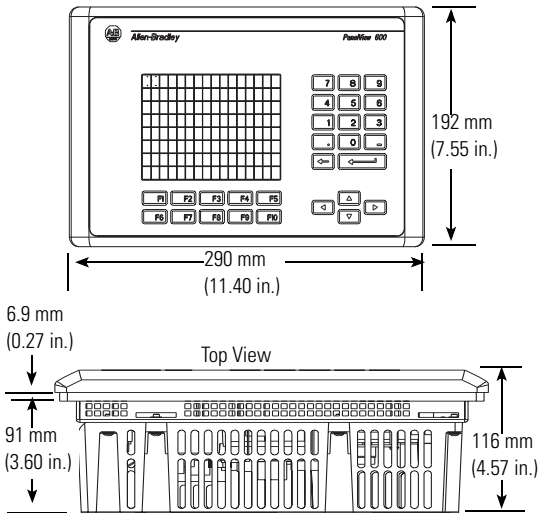
Make provisions for accessing the back panel of the terminal for wiring, maintenance, installing a memory card, and troubleshooting.

Required Tools

Other than the tools required to make the panel cutout, the tools required for installation are:

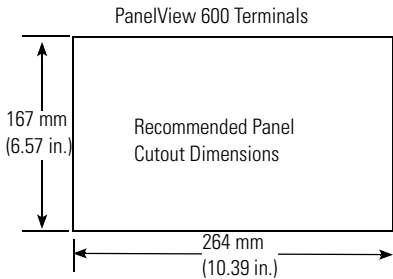
- small slotted screwdriver.
- torque wrench (N•m, lb•in). with slotted or phillips head driver.

Mounting Dimensions



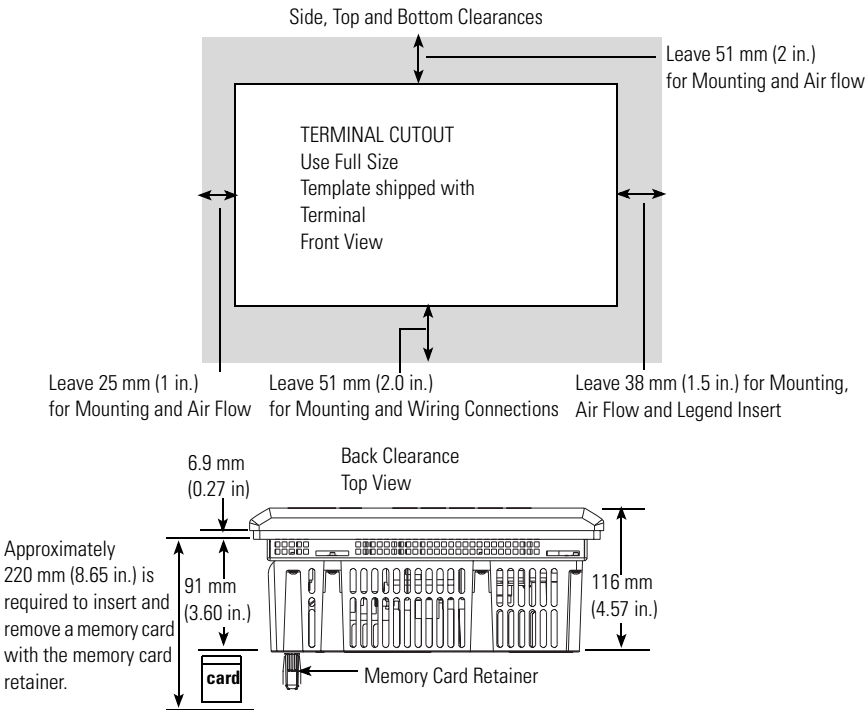
Cutout Dimensions

Use the full size template shipped with the terminal to mark the cutout dimensions. The figure below shows a reduced size cutout.



Clearances

Allow adequate space for mounting, air flow, maintenance, and for installing a memory card, and legend inserts.



Install the Terminal in a Panel

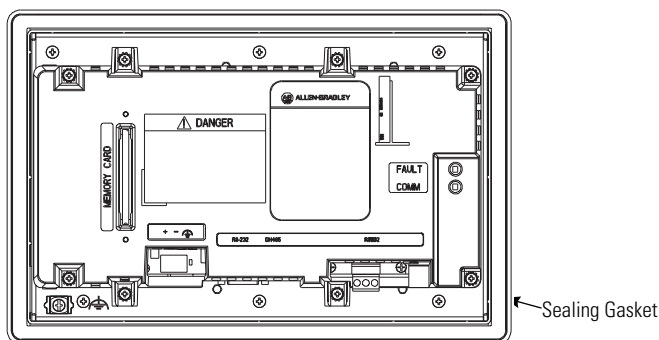
To install the PV600 terminal in a panel:

ATTENTION



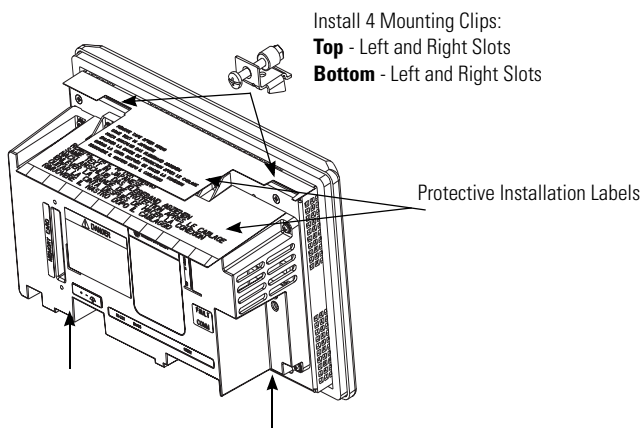
- Disconnect all electrical power from the panel before making the cutout.
- Make sure the area around the panel cutout is clear.
- Take precautions so that metal cuttings do not enter any components that may already be installed in panel.
- Failure to follow this warning may result in personal injury or damage to the panel components.

1. Cut an opening in the panel using the panel cutout provided with the terminal. Remove any sharp edges or burrs.
2. Make sure the terminal sealing gasket is properly positioned on the terminal as shown below. This gasket forms a compression type seal. Do not use sealing compounds.



3. Although the keypad legend strip can be installed at any time, we recommend that you install it after the terminal is installed.
4. Place the terminal in the panel cutout.

5. Install the 4 mounting clips (2 on top, 2 on bottom); the ends of the clips slide into the slots on the terminal. Tighten the clip mounting screws by hand until the gasket seal contacts the mounting surface uniformly.



6. Alternately tighten the mounting clip screws to a torque of $1.13 \text{ N}\cdot\text{m}$ ($10 \text{ lb}\cdot\text{in}$). Do not over-tighten.

ATTENTION

Tighten mounting clips to a torque of $1.13 \text{ N}\cdot\text{m}$ ($10 \text{ lb}\cdot\text{in}$) to provide a proper seal and to prevent potential damage to the terminal. Allen-Bradley assumes no responsibility for water or chemical damage to the terminal or other equipment within the enclosure because of improper installation.

7. Remove the 2 protective labels covering the top vents of the terminal.

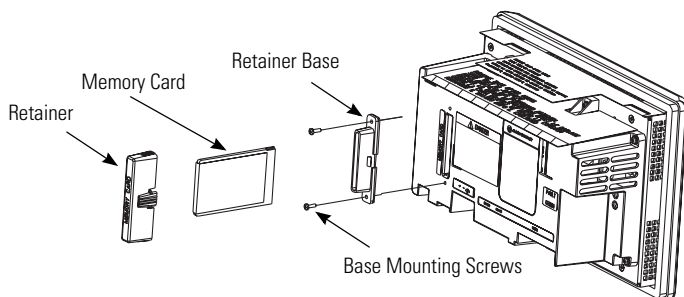
ATTENTION

Remove the protective installation labels covering the top vents to prevent overheating and damage to the terminal.

Install the Memory Card

The memory card retainer is required for UL508 installations where a memory card is inserted in the card slot. The retainer protects against Electrostatic Discharge (ESD) up to 15 KV and prevents accidental removal of a memory card in high vibration environments.

To attach the memory card retainer:



1. Secure the base of the retainer over the existing memory card slot using the two screws provided. Tighten screws to a torque of $0.7 \dots 0.9 \text{ N}\cdot\text{m}$ ($6 \dots 8 \text{ lb}\cdot\text{in}$).
2. Insert the memory card and install the retainer until it is properly seated.
3. To remove the retainer, press the tabs on each side and pull.

Connect AC Power

The electrical rating for the PanelView 600 terminal is shown below.

Terminal Type	Supply Voltage	Power Consumption
PV600	85...240V AC, 47...63 Hz	60 VA maximum

The PanelView 600 terminal is an IEC 1131-2 Equipment Class I device and requires you to connect the Ⓢ (Protective Earth) terminal to an earth conductor.

ATTENTION



- The PanelView 600 terminal is designed for safe use when installed in a suitably rated NEMA Type 12, 13, 4X (indoor use only), IP54 or IP65 enclosure.
- Do not apply power to the terminal until all wiring connections have been made. Failure to do so may result in electrical shock.

WARNING



Explosion Hazard - Do not connect or disconnect equipment while circuit is live unless area is known to be non-hazardous.

To connect AC power to the PanelView 600 terminals:

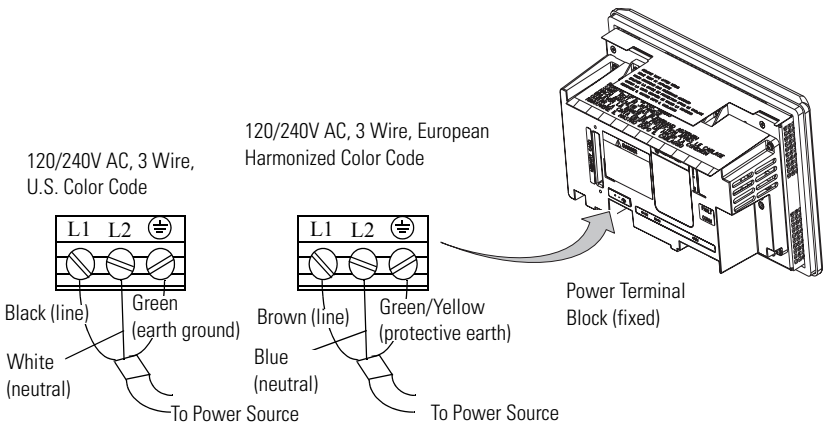
1. Secure the AC power wires to the L1 and L2N screws on the terminal block.
2. Secure the Earth Ground/Protective Earth wire to the Ⓢ screw on the terminal block.

ATTENTION



Improper wiring of the power terminals may result in voltage at the communication connector shells. Refer to the following figure when wiring.

3. Apply power to the terminal.



Connect DC Power

The L1 versions of the PanelView 600 terminal (catalog number 2711-K6C1L1, 2711-B6C1L1) connect to a 24V DC power source.

The electrical ratings for the PanelView 600 are shown below. Electronic circuitry and an internal fuse protect the terminal from reverse polarity and over-voltage conditions.

Terminal Type	Supply Voltage	Power Consumption
PV600	18...32V DC, (24V DC nominal)	24 Watts maximum (1.0 Amps @ 24V DC)

ATTENTION



For DC powered units, use a Class 2/SELV (Safety Extra-Low Voltage), isolated and ungrounded power supply as input power to the terminals. This power source provides protection so that under nominal and single fault conditions, the voltage between conductors and between conductors and Functional Earth/Protective Earth does not exceed a safe value.

ATTENTION

- Do not connect the PanelView terminal to an AC power source. Connecting to an AC power source may damage the terminal.
- The PanelView 600 terminal is designed for safe use when installed in a suitably rated NEMA Type 12, 13, 4X (indoor use only), IP54 or IP65 enclosure.

To connect DC power to the PV600 terminal:

1. Secure the DC power wires to the DC Negative and DC Positive screws on the terminal block.
2. Secure the Earth Ground wire to the  screw on the terminal block.

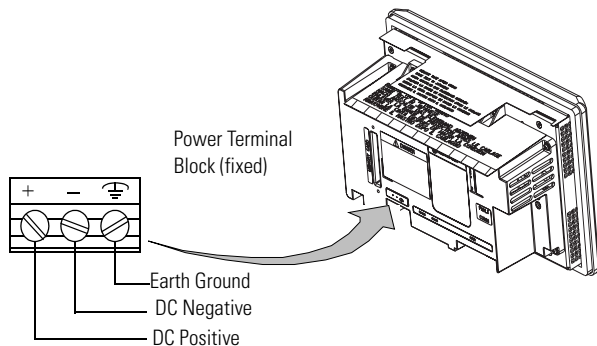
WARNING

Explosion Hazard - Do not connect or disconnect equipment while circuit is live unless area is known to be non-hazardous.

ATTENTION

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

3. Apply 24V DC power to the terminal.



EtherNet/IP Protocol

The PanelView terminal is initially set to DHCP with BootP support (Dynamic Host Configuration Protocol) enabled. If your network has a DHCP/BootP server, you can connect the PanelView terminal to the EtherNet/IP network and the DHCP/BootP server will automatically establish an IP address. If your network does not have a DHCP/BootP server, you need to program an IP address. This is done by accessing Configuration Mode on the PanelView terminal and selecting Communication Setup. For details, refer to the PanelView Standard Operator Terminals Manual.

IMPORTANT

If a PanelView is connected to an EtherNet/IP network and has the same IP address as another device on the network, both devices will drop off the network.

ControlNet Protocol

IMPORTANT

When making ControlNet connections, only use the PanelView Channel B for redundant communications. Connecting Channel B to a Channel A only ControlNet network will result in:

- the PanelView not being able to communicate over the network.
 - a PanelView communications fault after several minutes.
-

Battery Removal and Disposal

The terminal contains a lithium battery, which is intended to be replaced during the life of the product.

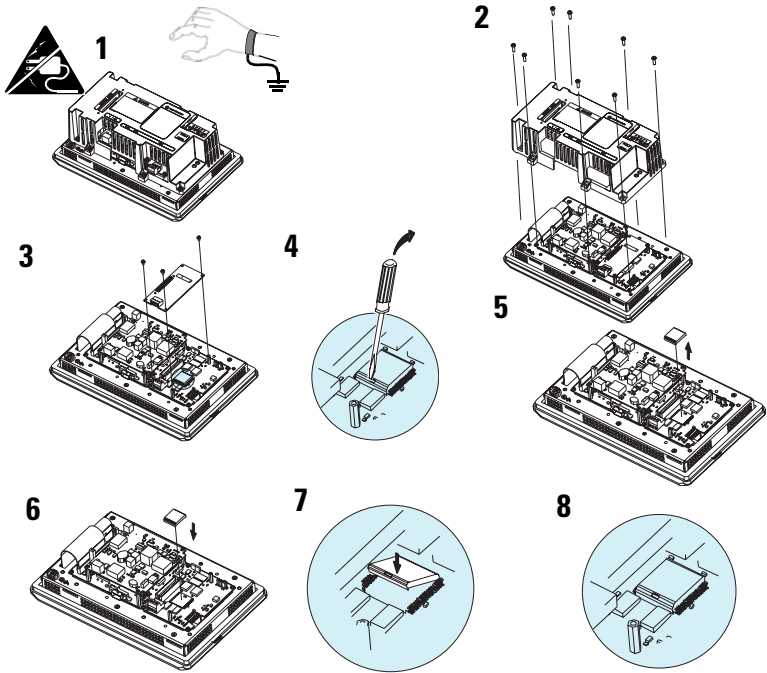
ATTENTION

The clock module contains lithium. Do not dispose of the battery in a fire or incinerator, or the clock module may explode. Follow disposal regulations in your area for lithium battery disposal.



At the end of its life, the battery contained in this product should be collected separately from any unsorted municipal waste.

Follow these steps to remove or replace the battery.



For More Information

For	Refer to	Refer to
More detailed information on the PV600 and the other Standard PanelView terminals.	Standard PanelView Terminals User Manual	2711-UM014

If you would like a publication, you can download a free electronic version from the internet: <http://www.literature.rockwellautomation.com>

To purchase a publication, contact your local distributor or Rockwell Automation Representative.

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At <http://support.rockwellautomation.com>, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration and troubleshooting, we offer TechConnect support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit <http://support.rockwellautomation.com>.

Installation Assistance

If you experience a problem within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your product up and running.

United States	1.440.646.3434 Monday – Friday, 8 a.m. – 5 p.m. EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (call the phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

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