MONITECH INDUSTRIAL INC.

Allen-Bradley PanelView Touchscreen

Pre-Installation Test Guide

Test Before You Install — Verify Before You Mount

Covers: PanelView 550 / 600 / 900 / 1000 / 1400 (Classic) | PanelView Plus / Plus CE | PanelView Plus 6 | PanelView Plus 7 | PanelView 800

SECTION 1 — What You Need Before You Start

Required Equipment

Item	Specification / Notes
24 VDC Power Supply	Required for ALL modern PanelView models (Plus, Plus 6, Plus 7, PV800). Min 3A recommended.
85–264 VAC Power Source	Required for Classic PanelView AC models (550, 600, 900, 1000, 1400). Check your specific part number.
Power wiring / terminal block	Match wire gauge to model spec — typically 14–18 AWG
Ethernet cable (Cat5e or better)	For PanelView Plus, Plus 6, Plus 7, PV800 — standard RJ45 patch cable
Grounding wire	Required. Connect chassis ground to earth ground on all models.
Multimeter	To verify supply voltage at the terminal before connection
Safety glasses	Live voltage is involved in bench testing

IDENTIFY YOUR MODEL FIRST

Before wiring, locate the silver label on the back of the unit. It lists:

- Catalog number (e.g., 2711P-T10C4D8 or 2711-T10C8)
- Input voltage: 24VDC or 85-264VAC
- Current draw in Amps

Classic PanelView (2711-xxx): May be AC or DC depending on the suffix.
PanelView Plus / Plus 6 / Plus 7 (2711P-xxx): Always 24 VDC.
PanelView 800 (2711R-xxx): Always 24 VDC.

Using the WRONG voltage will permanently damage the unit — verify before applying power.

SECTION 2 — Power Reference by Model Family

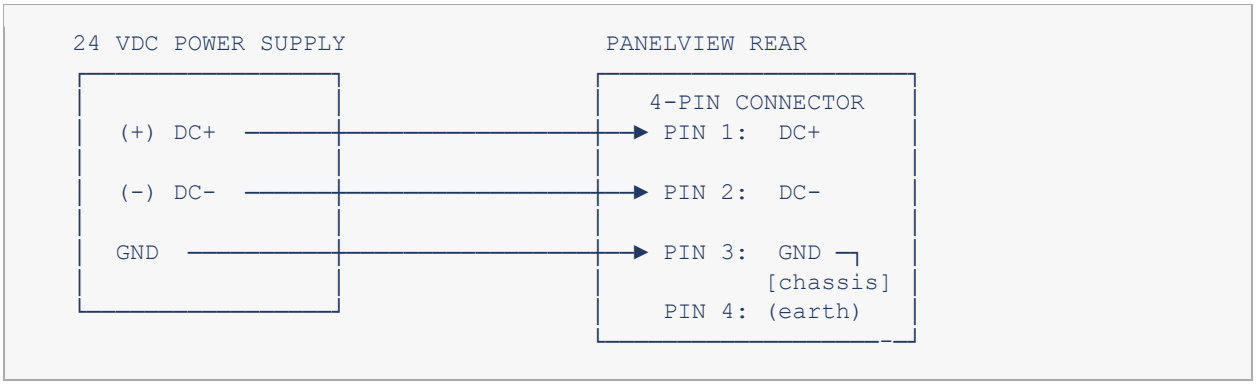
Use the table below to confirm the correct power supply for your unit BEFORE wiring.

Model Family	Catalog Prefix	Input Voltage	Connector Type
Classic PanelView (Touch / Keypad)	2711-Txx / 2711-Bxx / 2711-Kxx	AC: 85–264 VAC OR DC: 24VDC (check label)	Terminal block on rear
PanelView 550 (Touch-only)	2711-T5xx	24 VDC only	Terminal block on rear
PanelView 600	2711-T6 / 2711-B6 / 2711-K6	AC or DC — check label	Terminal block on rear
PanelView 900 / 1000 / 1400	2711-T9 / T10 / T14 etc.	AC or DC — check label	Terminal block on rear
PanelView Plus / Plus CE	2711P-T6 to 2711P-T15	24 VDC	4-pin power connector
PanelView Plus 6 Compact	2711PC-Txx	24 VDC	4-pin power connector
PanelView Plus 6 Standard	2711P-T6 / T7 / T9 / T10 / T12 / T15 (Series B/C)	24 VDC	4-pin power connector
PanelView Plus 7 Standard	2711PT-Txx (4" to 10")	24 VDC	4-pin removable connector
PanelView Plus 7 Performance	2711P-T7 / T9 / T10 / T12 / T15 (Series D+)	24 VDC	4-pin removable connector
PanelView 800	2711R-Txx	24 VDC, 9W typical	Terminal block on rear

SECTION 3 — Bench Wiring Diagrams

3A — PanelView Plus / Plus 6 / Plus 7 / PV800 (24 VDC)

These models all use a 24 VDC supply. The 4-pin power connector (removable plug) is located on the rear of the unit.



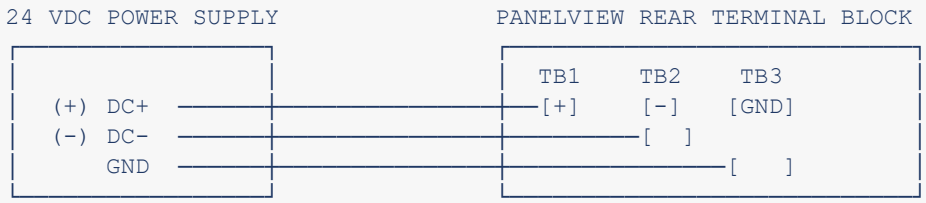
```
NOTE: Verify voltage at supply output with multimeter BEFORE connecting.
Expected: 24.0 VDC ±1V between DC+ and DC-
```

Pin	Signal	Wire Color (typical)	Connect To
1	DC+ (positive)	Red	+ terminal on 24VDC supply
2	DC- (negative)	Black	– terminal on 24VDC supply
3	Chassis Ground / Functional Earth	Green/Yellow	Earth ground bar
4	Not used on all models	—	Leave unconnected if not labelled

> ⚠ **CRITICAL — POLARITY**
> Reversing DC+ and DC- will permanently damage the unit.
> Double-check polarity with a multimeter BEFORE inserting the connector.

3B — Classic PanelView DC Models (24 VDC Terminal Block)

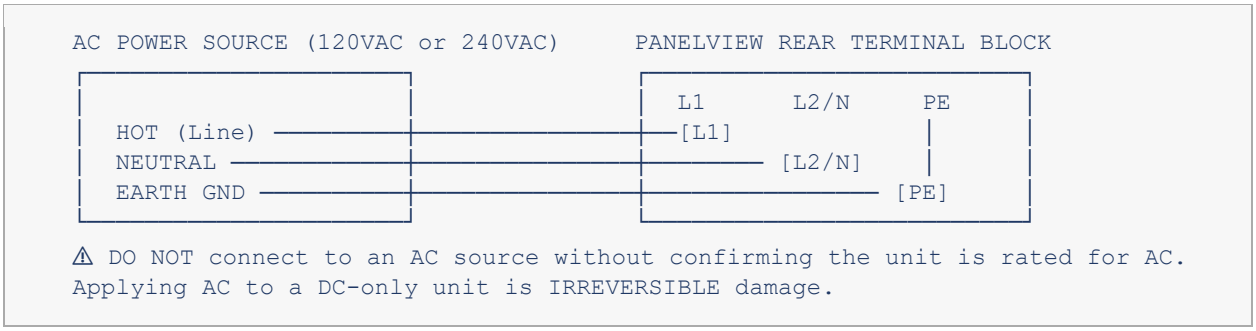
Classic PanelView (2711-Bxx DC variant) uses screw-terminal blocks on the rear. DC-only models are identified by '24VDC' on the rear label.




```
NOTE: Terminal labelling varies by model series.
Always cross-reference with the label printed on the rear housing.
```

3C — Classic PanelView AC Models (85–264 VAC Terminal Block)

Classic PanelView (2711-Kxx or 2711-T9C8 etc. with AC rating) use AC power via a terminal block. Verify this on your unit label before proceeding.



⚠ DO NOT connect to an AC source without confirming the unit is rated for AC. Applying AC to a DC-only unit is IRREVERSIBLE damage.

⚠ ELECTRICAL SAFETY — AC MODELS

AC testing involves live mains voltage (120V or 240V).

- Ensure all wiring is completed and insulated BEFORE applying power.
- Use a fused power strip or switched outlet. Never probe a live terminal block.
- If you are not qualified to work with mains AC voltage, stop and contact a licensed electrician.

SECTION 4 — Step-by-Step Test Procedure

Complete these steps IN ORDER before mounting the unit in the panel cutout.

STEP 1 — Unbox and Inspect

- Remove the unit from packaging and place on a clean, non-conductive surface.
- Inspect screen face: look for cracks, pressure marks, or delamination on the touchscreen overlay.
- Inspect connector area: check for bent pins, corrosion, or physical damage on all ports.
- Check for any visible physical damage to the housing or rear label.
- Locate and read the rear label: confirm catalog number, input voltage, and current draw.

STEP 2 — Verify Power Supply

- Set your multimeter to DC Volts (or AC Volts for AC models).
- Probe the power supply output BEFORE connecting to the PanelView.
- DC models: confirm reading is 24.0 VDC ± 1V.
- AC models: confirm reading is within the rated range (85–264 VAC).
- If the supply reads outside spec — DO NOT connect. Adjust or replace the supply first.

STEP 3 — Connect Power (Bench, Not Panel)

- Using the wiring diagrams in Section 3, connect power and ground to the unit.
- For 4-pin connector models (PV Plus / Plus 7): wire the plug fully, then insert into the unit.
- For terminal block models (Classic PanelView): connect wires to the terminal block — double-check polarity.
- Do NOT insert the unit into a panel cutout. This test is bench-only.
- Connect Ethernet cable if testing communication or waiting for boot screen (PV Plus / Plus 7 / PV800).

STEP 4 — Apply Power and Observe Boot

- Apply power to the supply. The unit should begin booting immediately.
- Observe the STATUS (STS) indicator LED on the front or side panel.

- → LED flashes during startup (this is normal).
- → LED stays solid ON = startup complete. ✓ PASS
- → LED does not light at all = check power connections and supply voltage.
- → LED flashes repeatedly and does not go solid = possible firmware or hardware issue.
- Classic PanelView: screen should display the configuration menu or loaded application.
- PanelView Plus / Plus 7 / PV800: Windows CE boot screen appears, then FactoryTalk View ME runtime loads.

STEP 5 — Test the Touchscreen

- Once booted, touch multiple points across the screen — corners, center, and edges.
- Watch for response: the cursor or highlighted button should follow your touch accurately.
- Test all four corners specifically — corner failures are the most common touchscreen defect.
- If the unit has navigation buttons or a keypad, press each one and verify response.
- For PanelView Plus / Plus 7: the Configuration screen is accessible at boot — navigate through it to confirm all touch zones work.

STEP 6 — Test Display Quality

- Inspect for dead pixels — look for single black or white dots that do not change.
- Check backlight uniformity — dark edges or dim patches indicate a failing backlight.
- Check for discoloration, burn-in, or image ghosting (common on older refurbished units).
- Adjust brightness if available in the configuration menu — verify the range responds.

STEP 7 — Document and Sign Off

- Complete the Pre-Installation Test Checklist on the next page.
- Sign and date the checklist — retain a copy with the unit or work order.
- Only proceed to physical installation after ALL checklist items pass.
- If ANY item fails — stop, do not install, and contact your supplier.

SECTION 4.5 — Touch Screen Calibration

[i] DO YOU NEED TO CALIBRATE?

Not all PanelView models require calibration. It depends on the touch technology:

- 4-wire resistive touch → NO calibration required
- 5-wire resistive touch → Calibration required
- 8-wire resistive touch → Calibration required
- Projected capacitive (PCAP) → NO calibration (self-calibrating hardware)

If you are unsure of your unit's touch type, check the rear label or product datasheet.
As a general rule: if the unit has a calibration option in its menu, run it.

Touch Technology by Model Family (Quick Reference)

Model Family	Touch Technology	Calibration Required?
PanelView Classic 550 / 600 / 900 / 1000 / 1400	Resistive (analog touch cells)	YES — via Configuration Mode on boot
PanelView Plus / Plus CE (400–600)	4-wire analog resistive	NO — 4-wire does not require calibration
PanelView Plus / Plus CE (700–1500)	8-wire analog resistive	YES — via Terminal Settings menu
PanelView Plus 6 Compact (400–600)	4-wire analog resistive	NO — 4-wire does not require calibration
PanelView Plus 6 (700–1500)	8-wire analog resistive	YES — via Terminal Settings menu
PanelView Plus 7 Standard & Performance	Resistive (stylus calibration supported)	YES — via Terminal Settings menu
PanelView 800	Projected capacitive (PCAP)	NO — capacitive, self-calibrating
PanelView 5500	Projected capacitive (PCAP)	NO — capacitive, self-calibrating

Calibration — Classic PanelView (550 / 600 / 900 / 1000 / 1400)

Classic PanelView terminals use resistive analog touch cells. Calibration is accessed through the terminal's Configuration Mode on startup.

How to Enter Configuration Mode:

1. Power on the terminal.
2. Watch for the startup screen — press and hold the screen (or press F1 on keypad models) during the boot sequence to enter Configuration Mode.
3. On some older Classic models, touch any corner of the screen during startup to enter Configuration Mode.
4. The Configuration Menu will appear on screen.

Calibration Steps:

5. From the Configuration Menu, select Screen Settings (or Terminal Settings on some models).
6. Select Touch Screen > Calibrate (exact wording varies slightly by firmware version).
7. A crosshair or target will appear on the screen.
8. Press and hold your finger or stylus firmly on the center of each target as it appears.
9. The target will move to several positions — typically corners and center. Follow each one.
10. When calibration is complete, the screen will confirm success and return to the menu.
11. Exit Configuration Mode and allow the terminal to return to normal operation.
12. Test touch accuracy immediately: tap known button positions and verify correct response.

> ⚠ **CALIBRATION FAILED?**
> If calibration fails repeatedly or touch accuracy does not improve after calibration:
> → The touch overlay may be damaged, worn, or have a failed layer.
> → Do NOT install the unit. Contact Monitech for replacement.

Calibration — PanelView Plus / Plus 6 (700 through 1500 only)

These models use 8-wire analog resistive touch. Calibration is done through the FactoryTalk View ME Configuration Screen.

How to Enter Configuration Mode:

13. Power on the terminal.
14. During startup, watch for a small white square in the bottom-left corner of the screen.
15. Press and HOLD the white square until the Configuration Screen appears.
16. If the white square does not appear, the terminal may need the boot option enabled — consult the unit's manual or contact Monitech.
17. Alternative method: press the recessed Default button on the back of the logic module with a thin non-conductive probe to enter Maintenance Mode, then select Safe Mode.

Calibration Steps:

18. From the Configuration Screen, select Terminal Settings.
19. Navigate to: Input Devices > Touch Screen > Calibration.
20. A target (crosshair or dot) will appear on the screen.
21. Using a plastic stylus (minimum 1.3mm tip radius), press and briefly hold the center of each target.
22. The target will move around the screen — typically 4 to 5 positions. Follow each one carefully.
23. If any touch is not satisfactory, the system will request additional touches automatically.
24. Calibration confirms success on screen. Return to normal operation.
25. Test immediately: tap known button positions across the full screen area to confirm accuracy.

> [i] **USE A STYLUS, NOT A FINGER**
> For 8-wire resistive models, using a fingertip during calibration is less precise.
> A plastic stylus produces a more accurate calibration point and protects the overlay from wear.
> Do not use metal styluses or sharp objects — they will damage the resistive overlay permanently.

Calibration — PanelView Plus 7 (Standard & Performance)

PanelView Plus 7 supports touch calibration through its Terminal Settings menu. The procedure is nearly identical to Plus 6, but note the startup access method below.

Calibration Steps:

26. Power on the terminal and wait for the boot sequence to complete.
27. From the home screen, press Terminal Settings.
28. Navigate to: Input Devices > Touch Screen > Calibration.
29. A red circular target appears on screen.
30. Press and hold the center of the target using a plastic stylus (min 1.3mm tip) until the circle animation completes.
31. The target moves — repeat for each position until calibration is complete.
32. The terminal confirms success. Test touch response across the full screen.

> **NO CALIBRATION NEEDED — PanelView 800 and PanelView 5500**
> These models use projected capacitive (PCAP) touch technology.
> PCAP screens do not have a user-accessible calibration routine and do not require one.
> If a PanelView 800 or 5500 unit has touch accuracy problems, the issue is hardware failure — not calibration drift. The unit should be rejected and returned.

SECTION 5 — Troubleshooting Common Issues

Symptom	Likely Cause	Action
Screen stays black, no LED	No power reaching unit	Re-check wiring polarity and supply voltage with multimeter
LED flashes but screen stays black	Firmware issue / failed display	Do not install — contact supplier for replacement
Unit restarts repeatedly	Inadequate power supply (low amperage) or reversed polarity	Verify supply is rated for the unit's current draw; check polarity
Touchscreen unresponsive in corners	Failed touch overlay (common defect)	Reject unit — do not install
Backlight flickering or dim patches	Failing backlight inverter or lamp	Reject unit — do not install
Display shows image but touch does not work	Touch controller or overlay failure	Reject unit — do not install
Unit boots to error screen	Missing application / firmware mismatch	Note error code; contact supplier — may not be a hardware defect
Intermittent restarts after a few minutes	Overheating or marginal power supply	Check ambient temp; ensure 2" clearance around unit; upgrade supply

SECTION 6 — Pre-Installation Test Checklist

Complete this checklist before every installation. Retain with your work order.

Field	Details
Unit Catalog Number	
Serial / Lot Number	
Technician Name	
Date of Test	
Work Order / Job #	

Check	Test Item	Result
☐	Rear label read — catalog number, input voltage, and current draw confirmed	*Pass / Fail*
☐	Physical inspection passed — no cracks, broken pins, or damage to screen or housing	*Pass / Fail*
☐	Power supply voltage verified with multimeter BEFORE connection (within spec)	*Pass / Fail*
☐	Wiring connected correctly — polarity verified (DC) or L1/N/PE identified (AC)	*Pass / Fail*
☐	Unit powered on — STATUS LED reached solid ON (startup complete)	*Pass / Fail*
☐	Boot sequence completed — configuration menu or runtime application displayed	*Pass / Fail*
☐	Touchscreen tested — all four corners and center respond correctly	*Pass / Fail*
☐	Keypad / function keys tested (if applicable) — all keys respond	*Pass / Fail*
☐	Display quality checked — no dead pixels, backlight uniform, no burn-in or ghosting	*Pass / Fail*
☐	No spontaneous restarts observed during 3-minute powered observation period	*Pass / Fail*
☐	Touch technology identified — confirm if calibration is required (5-wire / 8-wire = YES; 4-wire / PCAP = NO)	*Pass / Fail*
☐	If calibration required: calibration completed successfully — all target points accepted	*Pass / Fail*
☐	If calibration required: touch accuracy verified post-calibration across full screen area	*Pass / Fail*
☐	Unit powered down — connector or terminal wiring removed cleanly	*Pass / Fail*
☐	Unit approved for installation — all items above marked PASS	*Pass / Fail*

Outcome	Signature	Date
☐ PASS — Approved for installation		
☐ FAIL — Do not install. Reason:		

CONTACT MONITECH INDUSTRIAL INC.

If any test step fails, DO NOT install the unit.
Contact us before proceeding:

Web: www.monitech.com
Phone: (519) 748-5470
Email: sales@monitech.com

Have your catalog number, order number, and a description of the failure ready.
We will arrange a replacement or further technical support.