Allen-Bradley

# PanelView 800 Terminals

Catalog Numbers 2711R-T4T, 2711R-T7T, 2711R-T10T

# PanelView 800 Family

The PanelView™ 800 family consists of panel-mount display devices that offer keypad or touch-screen options for operator input. These graphic terminals are available in 4...10 in. display sizes. They include 800 MHz CPU processors, high-resolution displays with LED backlights, and high flash memory and dynamic memory. The built-in Ethernet and serial communication ports support a variety of networks.

PanelView 800 terminals are optimized for compatibility with Micro800® and MicroLogix™ controllers. Additional features include:

- High-resolution display with LED backlight with 65K colors
- Flexible application modes in landscape and portrait orientations
- High performance 800 MHz CPU processor with 256 MB memory
- Alarm messages that include embedded variables
- Upload/download capability for groups of data or parameter settings with recipe capability

Typical applications for PanelView terminals include:

- Adhesive labelers
- Air handling units
- Material handling machines
- Stretch wrap machines

# Environmental Specifications

**Table 1 - Environmental Specifications - PanelView 800 Terminals**

| Attribute | 2711R-T4T, 2711R-T7T, 2711R-T10T |
|---|---|
| Temperature, operating | IEC 60068-2-1 (Test Ad, Operating Cold),<br>IEC 60068-2-2 (Test Bd, Operating Dry Heat),<br>IEC 60068-2-14 (Test Nb, Operating Thermal Shock):<br>0…50 °C (32…122 °F) |
| Temperature, nonoperating | IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold),<br>IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat),<br>IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock):<br>-25…70 °C (-13…158 °F) |
| Temperature, surrounding air, max | 50 °C (122 °F) |
| Heat dissipation<br>2711R-T4T<br>2711R-T7T<br>2711R-T10T | <br>23 BTU/hr<br>34 BTU/hr<br>61 BTU/hr |
| Relative humidity | IEC 60068-2-30 (Test Db, Unpackaged Damp Heat):<br>5…95% noncondensing |
| Vibration | IEC 60068-2-6 (Test Fc, Operating):<br>2 g @ 10…500 Hz |
| Shock, operating | IEC 60068-2-27 (Test Ea, Unpackaged Shock):<br>15 g |
| Shock, nonoperating | IEC 60068-2-27 (Test Ea, Unpackaged Shock):<br>30 g |
| Emissions | IEC 61000-6-4 |
| ESD immunity | IEC 61000-4-2:<br>4 kV contact discharges<br>8 kV air discharges |
| Radiated RF immunity | IEC 61000-4-3:<br>10V/m with 1 kHz sine-wave 80% AM from 80…2000 MHz<br>10V/m with 200 Hz 50% Pulse 100% AM @ 900 MHz<br>10V/m with 200 Hz 50% Pulse 100% AM @ 1890 MHz<br>10V/m with 1 kHz sine-wave 80% AM from 2000…2700 MHz |
| EFT/B immunity | IEC 61000-4-4:<br>±2 kV @ 5 kHz on power ports<br>±1 kV @ 5 kHz on communication ports |
| Surge transient immunity | IEC 61000-4-5:<br>±500V line-line(DM) and ±500V line-earth(CM) on DC power ports<br>±1 kV line-earth(CM) on communication ports |
| Conducted RF immunity | IEC 61000-4-6:<br>10V rms with 1 kHz sine-wave 80% AM from 150 kHz…80 MHz |

# General Specifications

**Table 2 - General Specifications - PanelView 800 Terminals**

| Attribute | 2711R-T4T, 2711R-T7T, 2711R-T10T |
|---|---|
| Wire size | Input Power Terminal Block<br>Stranded or solid, Cu 90 °C (194 °F)<br>Single-Wire Gauge: 0.33…2.08 mm2 (22…14 AWG)<br>Dual-wire Gauge: 0.33…1.31 mm2 (22…16 AWG) |
| Wire type | Copper |
| Wiring category(1) | 3 – on power ports<br>2 – on communication ports |
| Enclosure type ratings | Meets NEMA/UL Type 4X (indoor) 12, 13, and IP65 |
| North American temperature code | T4A |

(1) Use this conductor category information to plan for conductor routing. See Industrial Automation Wiring and Ground Guidelines, publication 1770-4.1.

# Certifications

**Table 3 - Certifications - PanelView 800 Terminals**

| Certification(1) | 2711R-T4T, 2711R-T7T, 2711R-T10T |
|---|---|
| CE | European Union 2004/108/EC EMC Directive, compliant with:<br>EN 61000-6-2; Industrial Immunity<br>EN 61000-6-4; Industrial Emissions |
| China RoHS | SJ/T 11364-2014, GB/T 26572-2011, SJ/Z 11388-2009 |
| cULus | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E322657.<br>UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E334470. |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with:<br>Article 58-2 of Radio Waves Act, Clause 3 |
| RCM | Australian Radiocommunications Act, compliant with:<br>AS/NZS CISPR 11; Industrial Emissions |

(1) See the Product Certification link at http://www.ab.com for Declarations of Conformity, Certificates, and other certification details.

# Technical Specifications

Table 4 provides technical specifications for the PanelView 800 terminals.


**Table 4 - Technical Specifications - PanelView 800 Terminals**

| Attribute | 2711R-T4T | 2711R-T7T | 2711R-T10T |
|---|---|---|---|
| **Display type** | Color transmissive TFT active matrix LCD, widescreen format | | |
| **Display size** | 4 in. | 7 in. | 10 in. |
| **Display area (WxH)** | 95 x 53.9 mm (3.74 x 2.12 in.) | 153.6 x 86.6 mm (6.05 x 3.41 in.) | 211.2 x 158.4 mm (8.31 x 6.24 in.) |
| **Resolution (pixels)** | 480 x 272 | 800 x 480 | 800 x 600 |
| **Backlight** | LED | | |
| **Backlight lifespan, min** | 40,000 hours | | |
| **Colors** | 65K colors | | |
| **Operator input** | Analog touch and function keys | Analog touch | |
| **Memory card** | USB port and micro-SD (Secure Digital) card – Industrial grade micro-SD cards recommended. Supports SDSC and Class 6 & Class 10 SDHC micro-SD cards, FAT32/16 formats, up to 32 GB maximum size. | | |
| **Real-time clock with battery** | Yes | | |
| **Battery lifespan, min** | 5 years @ 25 °C (77 °F) | | |
| **Programming port** | Ethernet port | | |
| **Recipe** | 50 recipe files | | |
| **Software** | Connected Components Workbench software, release 8.0 and later | | |
| **Preferred controller** | Micro800, MicroLogix | | |
| **Power Supply** | 24V DC | | |
| **Processor, CPU speed** | 800 MHz CPU | | |
| **Flash Memory (ROM) min** | 256 MB | | |
| **SDRAM (RAM) min** | 256 MB DDR | | |
| **Operating System** | WINCE 6.0 | | |
| **Power Consumption (max)** | 9 W (0.39 A @ 24V DC) | 11 W (0.40 A @ 24V DC) | 14 W (0.48 A @ 24V DC) |
| **RS232/RS422/485 (isolated)** | Separate RS-232 and RS422/RS485 connectors | | |
| **Ethernet 10/100 Mbps** | 1 | | |
| **USB Host (USDB 2.0)** | Yes | | |
| **MicroSD slot** | Yes | | |
| **Input voltage range** | 18…32V DC (24V DC nom) | | |
| **Weight, approx** | 0.333 kg (0.73 lb) | 0.651 kg (1.44 lb) | 1.64 kg (3.62 lb) |
| **Dimensions (HxWxD), approx** | 116 x 138 x 43 mm<br>4.6 x 5.4 x 1.7 in. | 144 x 197 x 54 mm<br>5.7 x 7.8 x 2.1 in. | 225 x 287 x 55 mm<br>8.9 x 11.3 x 2.2 in. |
| **Panel Cutout dimensions (HxW)** | 99 x 119 mm<br>3.9 x 4.7 in. | 125 x 179 mm<br>4.9 x 7.1 in. | 206 x 269 mm<br>8.1 x 10.6 in. |
| **Front Bezel Protection** | IP65, NEMA 4X, 12, 13 | | |

# Product Dimensions

Figure 1...Figure 3 (along with Table 5) illustrate the dimensions of the PanelView 800 Terminals.

**Figure 1 - PanelView 800 4-inch Terminals**

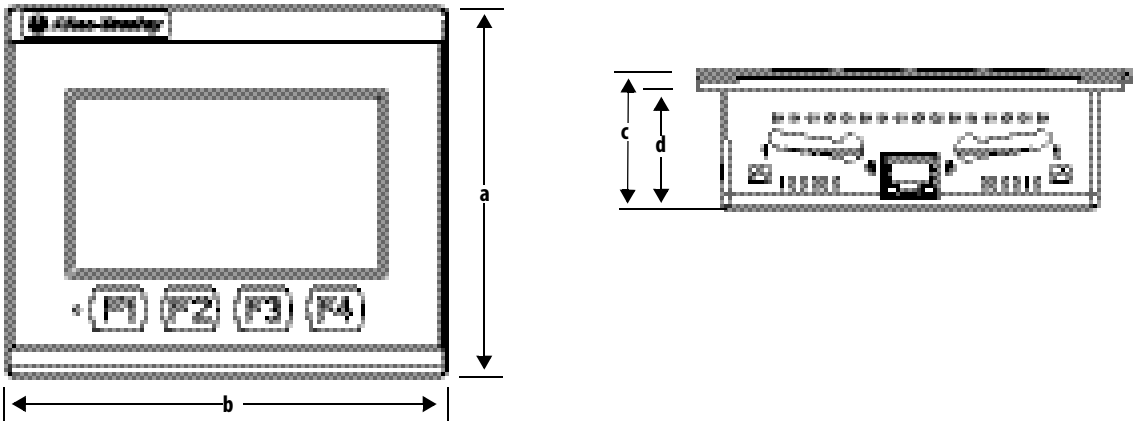


**Figure 2 - PanelView 800 7-inch Terminals**

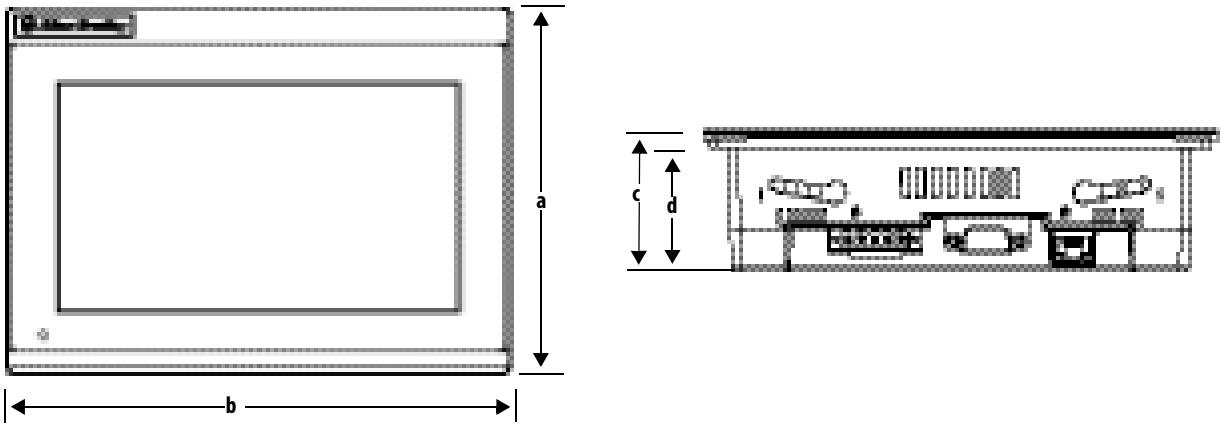

**Figure 3 - PanelView 800 10-inch Terminals**

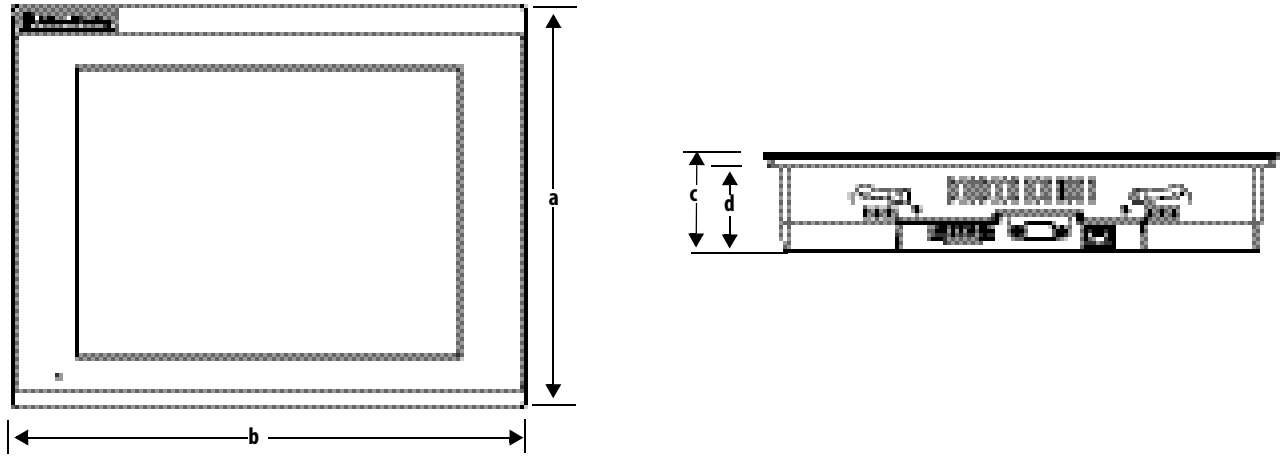


**Table 5 - Product Dimensions - PanelView 800 Terminals**

| PanelView 800 Terminal | Operator Input | Height (a) mm (in.) | Width (b) mm (in.) | Depth Overall (c) mm (in.) | Mounted Depth (d) mm (in.) | Cutout Height, approx | Cutout Width approx |
|---|---|---|---|---|---|---|---|
| 4 in. | Touch screen and function keys | 116 (4.6) | 138 (5.4) | 43 (1.7) | 39 (1.5) | 99 (3.9) | 119 (4.7) |
| 7 in. | Touch screen | 144 (5.7) | 197 (7.8) | 54 (2.1) | 50 (1.9) | 125 (4.9) | 179 (7.1) |
| 10 in. | Touch screen | 225 (8.9) | 287 (11.3) | 55 (2.2) | 51 (2.0) | 206 (8.1) | 269 (10.6) |

# Accessories

Table 6...Table 8 list the accessories for the PanelView 800 terminals.

**Table 6 - Adapter Plate Kit**

| Cat. No. | Description | Quantity |
|---|---|---|
| 2711R-APK7 | PanelView 800 Adapter Plate Kit for 7-Inch Terminal | 1 |
| 2711R-APK10 | PanelView 800 Adapter Plate Kit for 10-Inch Terminal | 1 |

**Table 7 - Terminal Blocks**

| Cat. No. | Description | Quantity |
|---|---|---|
| 2711C-RJ422 | 5-pin connector for RS-422/485 | 10 |
| 2711R-TBDC | DC power terminal block | 10 |

**Table 8 - Power Supply**

| Cat. No. | Description | Quantity |
|---|---|---|
| 2711P-RSACDIN | DIN-rail mount AC-to-DC power supply, 85...265V AC, 47...63 Hz | 1 |

# Software

PanelView 800 terminals are part of the Connected Components solution where the entire component family uses a single software–Connected Components Workbench™ software–for controller programming, device configuration, and data sharing. To use the Connected Components Workbench software effectively, your computer must meet the hardware requirements shown in Table 9.

**Table 9 - System Requirements- PanelView 800 Terminals**

| Component | Minimum System Requirements | Recommended System Requirements |
|---|---|---|
| Processor | Intel Pentium 4 2.8 GHz or equivalent | Intel Core i5 2.4 GHz or equivalent |
| RAM Memory | 2 GB | 8 GB or more |
| Hard Disk Space | 10 GB free | 10 GB free or more |
| Optical Drive | DVD-ROM | DVD-ROM |
| Pointing Device | Any Microsoft Windows-compatible pointing device | Any Microsoft Windows-compatible pointing device |

Connected Components Workbench is supported on the following operating systems:

- Microsoft Windows® 7 (32-bit and 64-bit)
- Microsoft Windows® 8 and 8.1 (32 bit and 64 bit)

  **Note:** Not recommended for use with the Micro810 due to USB Adapter driver. The driver will be updated in Relese 8.
- Microsoft Windows 2008® (R2)

Additionally, Internet Explorer, which is installed with the operating system, is required to view the Connected Components Workbench help.

# Cables

Use these cables for connecting PanelView 800 terminals.

**Table 10 - Cables for PanelView 800 Terminals**

| Cat. No. | Description |
|---|---|
| 2711P-CBL-EX04 | Ethernet crossover CAT5 cable 4.3 m (14 ft) |
| 1747-CP3 | Serial 9-pin D-shell to 9-pin D-shell null modem cable, 3 m (10 ft) |
| 1761-CBL-PM02 | Serial 9-pin D-shell to 8-pin mini DIN cable, 2 m (6.5 ft) |
| 2711C-CBL-AB03 | RS-485 5-pin to RJ45 cable |
| 1763-NC01 series A | 8-pin Mini DIN to 6-pin RS-485 terminal block |

This table provides a summary of connections to Micro800 controllers.

**Table 11 - Protocol**

| Protocol | PanelView 800 Port | Micro820 | Micro830 | Micro850 | Micro800 Plug-in Module (2080-SERIALISOL) |
|---|---|---|---|---|---|
| Modbus (RTU) (HD) | RS-232 | –[2] | 1761-CBL-PM02 | 1761-CBL-PM02 | –[2] |
| | RS-485[1] | –[2] | –[2] | –[2] | –[2] |
| Modbus unsolicited (HD) | RS-232 | –[2] | 1761-CBL-PM02 | 1761-CBL-PM02 | –[2] |
| | RS-485[1] | –[2] | –[2] | –[2] | –[2] |
| Ethernet (AB CIP) | Ethernet | 2711P-CBL-EX04 (CAT5 Ethernet) | N/A[3] | 2711P-CBL-EX04 (CAT5 Ethernet) | N/A[3] |
| Modbus TCP | Ethernet | 2711P-CBL-EX04 (CAT5 Ethernet) | N/A[3] | 2711P-CBL-EX04 (CAT5 Ethernet) | N/A[3] |
| Serial (AB CIP) | RS-232 | –[2] | 1761-CBL-PM02 | 1761-CBL-PM02 | –[2] |

(1) RS-485 is isolated and is recommended for connecting to only one device with an isolated port.

(2) This controller includes a terminal block and requires wiring.

(3) This connectivity is not available for this controller.

This table provides a summary of connections to MicroLogix controllers.

**Table 12 - Protocol**

| Protocol | PanelView 800 Port | MicroLogix (8-pin Mini DIN) 1000, 1100, 1400, 1200LSP, 1500LSP (Ch 0) | MicroLogix (9-pin D shell) 1500LRP (Ch 1) | MicroLogix 1100/1400 RS-485 (1763-NC01) | MicroLogix 1100, 1400 Ethernet |
|---|---|---|---|---|---|
| DF1 | RS-232 | 1761-CBL-PM02 | 1747-CP3 | – | – |
| DH-485 | RS-232 | 1761-CBL-PM02 | 1747-CP3 | Use AIC+ module (1761-NET-AIC) connect to port 3 | – |
| | RS-485[1] | – | – | Belden 3106A or #9842 or equivalent | – |
| Modbus | RS-232 | 1761-CBL-PM02 | 1747-CP3 | Use AIC+ module (1761-NET-AIC) connect to port 3 | – |
| Ethernet (MicroLogix/ENI)2 | Ethernet | – | – | – | 2711P-CBL-EX04 (CAT 5 Ethernet) |

(1) RS-485 is isolated and is recommended for connecting to only one device with an isolated port.

# More Information

These documents contain more information about related products from Rockwell Automation.

| Resource | Description |
|---|---|
| PanelView 800 HMI Terminals Installation Instructions, publication 2711R-IN001 | Provides information on how to install and configure PanelView 800 terminals. |
| PanelView 800 Product Profile, publication 2711R-PP001 | Provides a product description and information about product features and benefits. |
| PanelView 800 HMI Terminals User Manual, publication 2711R-UM001 | Provides information on how to install, operate, configure, and troubleshoot PanelView 800 terminals. |
| Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1 | Provides general guidelines on how to install a Rockwell Automation industrial system. |
| Product Certifications website, http://www.ab.com | Provides declarations of conformity, certificates, and other certification details. |

You can view or download publications at http://www.rockwellautomation.com/literature/. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.

## Notes:

# Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

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