

## Technical Specifications

| Attribute                                                                                                                                                             | 1786-RPA/B                                                                                                                                                                 | 1786-RPCD                                                                                    | 1786-RPFS                     | 1786-RPFM                     | 1786-RPFRL/B, 1786-RPFRXL/B                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature, operating<br>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) | 0...60 °C (32...140 °F)                                                                                                                                                    |                                                                                              |                               |                               |                                                                                                                                                                            |
| Temperature, surrounding air, max                                                                                                                                     | 60 °C (140 °F)                                                                                                                                                             |                                                                                              |                               |                               |                                                                                                                                                                            |
| Voltage and current ratings, max                                                                                                                                      | Input: 700 mA @ 24V DC max, SELV <sup>(1)</sup><br>Output: 1.6 A @ 5V DC                                                                                                   | Backplane: 400 mA @ 5V DC max                                                                | Backplane: 300 mA @ 5V DC max | Backplane: 400 mA @ 5V DC max | Input: 570 mA @ 5V DC max<br>Relay: 900 mA @ 30V DC, Class 2, resistive only                                                                                               |
| Power consumption, max                                                                                                                                                | 16.8 W                                                                                                                                                                     | 2 W                                                                                          | 1.5 W                         | 2 W                           | 2.8 W                                                                                                                                                                      |
| Power dissipation, max                                                                                                                                                | 8.8 W                                                                                                                                                                      | 2 W                                                                                          | 1.5 W                         | 2 W                           | 2.8 W                                                                                                                                                                      |
| Isolation voltage                                                                                                                                                     | N/A (SELV), functional insulation type, ControlNet to system                                                                                                               | N/A (SELV), functional insulation type, ControlNet to system and between ControlNet channels | —                             | —                             | 50V (continuous), basic insulation type, relay contacts to system                                                                                                          |
| Wire size                                                                                                                                                             | 0.21...3.3 mm <sup>2</sup> (24...12 AWG) solid or stranded copper wire that is rated at 105 °C (221 °F) or greater, 1.2 mm (3/64 in.) insulation max for power connections | NA                                                                                           | —                             | —                             | 0.25...2.5 mm <sup>2</sup> (22...14 AWG) solid or stranded copper wire that is rated at 105 °C (221 °F) or greater, 1.2 mm (3/64 in.) insulation max for power connections |
| Wiring category                                                                                                                                                       | 2 - on power ports<br>2 - on ControlNet ports <sup>(2)</sup>                                                                                                               | 2 - on ControlNet ports <sup>(2)</sup>                                                       | —                             | —                             | 2 - on relay ports <sup>(2)</sup>                                                                                                                                          |
| Enclosure type rating                                                                                                                                                 | None (open-style)                                                                                                                                                          |                                                                                              |                               |                               |                                                                                                                                                                            |
| North American temp code                                                                                                                                              | T5                                                                                                                                                                         | T5                                                                                           | T5                            | T5                            | T4A                                                                                                                                                                        |
| ATEX temp code                                                                                                                                                        | T5                                                                                                                                                                         | T5                                                                                           | T5                            | T5                            | —                                                                                                                                                                          |
| IECE x temp code                                                                                                                                                      | T5                                                                                                                                                                         | T5                                                                                           | T5                            | T5                            | —                                                                                                                                                                          |

(1) For applications within the U.S., use a power supply that is appropriately certified as Class 2 per the definition in the National Electrical Code, ANSI/NFPA 70, Article 725. For applications outside the U.S., use a power supply with safety extra low voltage (SELV) or protected extra low voltage (PELV) output. A power supply with SELV or PELV output is built with appropriate isolation to withstand single fault conditions. The output cannot exceed 30V rms, 42.4V peak, or 60V DC under fault conditions.

(2) Use this Conductor Category information for planning conductor routing. See Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

## Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

| Resource                                                                                                                                                        | Description                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| ControlNet Accessory Specifications Technical Data, publication <a href="#">1786-TD008A</a>                                                                     | Provides ControlNet Repeaters design consideration information and specifications. |
| ControlNet Fiber Media Planning and Installation Guide, publication <a href="#">CNET-IN001</a>                                                                  | Information about installing a ControlNet fiber media system.                      |
| ControlNet Coax Media Planning and Installation Guide, publication <a href="#">CNET-IN002</a>                                                                   | Information about installing a ControlNet coaxial media system.                    |
| Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a>                                                                     | General guidelines for installing a Rockwell Automation® industrial system.        |
| Product Certifications website, <a href="http://www.rockwellautomation.com/products/certification">http://www.rockwellautomation.com/products/certification</a> | 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.

Rockwell Automation maintains current product environmental information on its website at <http://www.rockwellautomation.com/rockwellautomation/about-us/sustainability-ethics/product-environmental-compliance.page>.

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