

Specifications

Technical Specifications - 1786-RPA/B

Attribute	1786-RPA/B
Power consumption, max	16.8 W
Power dissipation, max	8.8 W
Input voltage rating, max	700 mA @ 24V DC, Class 2/SELV ⁽¹⁾
Input voltage range	18...36V DC
Backplane output current, max	1.6A @ 5V DC
Minimum enclosure size (HxWxD), approx	304.8 x 196.8 x 101.6 mm (12 x 7.75 x 4 in.)
Mounting orientation	Any mounting orientation
Isolation voltage	50V (continuous), Basic insulation type, Power to system Type tested at 710V DC for 60 s
Wire size	0.21...3.3 mm ² (24...12 AWG) solid or stranded copper wire rated at 75 °C (167 °F), or greater, 1.2 mm (3/64 in.) insulation max for power connections
Wiring category	2 - on power ports 2 - on communication ports ⁽²⁾
Enclosure type rating	None (open-style)
North American temp code	T5
IEC temp code	T4

- (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. Refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

Environmental Specifications - 1786-RPA/B

Attribute	1786-RPA/B
Temperature, operating IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock)	0...60 °C (32...140 °F)
Temperature, surrounding air, max	60 °C (140 °F)
Temperature, nonoperating IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold), IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat), IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock)	-40...85 °C (-40...185 °F)
Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)	5...95% noncondensing
Vibration IEC60068-2-6 (Test Fc, Operating)	5 g @ 10...500 Hz
Shock, operating IEC60068-2-27 (Test Ea, Unpackaged Shock)	30 g
Shock, nonoperating IEC60068-2-27 (Test Ea, Unpackaged Shock)	50 g
Emissions CISPR 11	Group 1, Class A
ESD immunity IEC 61000-4-2	6 kV contact discharges 8 kV air discharges

Environmental Specifications - 1786-RPA/B

Attribute	1786-RPA/B
Radiated RF immunity IEC 61000-4-3	10V/m with 1 kHz sine-wave 80% AM from 80...2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 900 and 1890 MHz 1V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz
EFT/B immunity IEC 61000-4-4	±4 kV at 5 kHz on power ports ±4 kV at 5 kHz on communication ports
Surge transient immunity IEC 61000-4-5	±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports ±2 kV line-earth (CM) on communication ports
Conducted RF Immunity IEC 61000-4-6	10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz

Certifications⁽¹⁾ - 1786-RPA/B

Certification⁽²⁾	1786-RPA/B
UL	UL Listed Industrial Control Equipment. See UL File E65584.
CSA	CSA Certified Process Control Equipment. See CSA File LR54689C. CSA Certified Process Control Equipment for Class I, Division 2 Group A, B, C, D Hazardous Locations. See CSA File LR69960C.
FM	FM Approved Equipment for use in Class I Division 2 Group A,B,C,D Hazardous Locations.

Certifications⁽¹⁾ - 1786-RPA/B

Certification ⁽²⁾	1786-RPA/B
CE	European Union 2004/108/EC EMC Directive, compliant with the following: <ul style="list-style-type: none"> • EN 61326-1; Meas./Control/Lab., Industrial Requirements • EN 61000-6-2; Industrial Immunity • EN 61000-6-4; Industrial Emissions • EN 61131-2; Programmable Controllers (Clause 8, Zone A & B)
C-Tick	Australian Radiocommunications Act, compliant with the following: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions
Ex	European Union 94/9/EC ATEX Directive, compliant with the following: <ul style="list-style-type: none"> • EN 60079-15; Potentially Explosive Atmospheres, Protection 'n' • EN 60079-0; General Requirements • II 3 G Ex nA IIC T4 X
CI	ControlNet Int'l conformance tested to ControlNet specifications.

(1) When product is marked.

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