

Stratix Ethernet Device Specifications

Stratix® 2000 Switches (1783-US), Stratix 2500 Switches (1783-LMS), Stratix 6000 Switches (1783-EMS)
 Stratix 5400 Switches (1783-HMS), Stratix 5410 Switches (1783-IMS), Stratix 5700 Switches (1783-BMS)
 ArmorStratix™ 5700 Switches (1783-ZMS), Stratix 8000 and 8300 Switches (1783-MS, 1783-RMS, 1783-MX)
 Stratix 5100 Wireless Access Point/Workgroup Bridge (1783-WAP), Stratix 5900 Services Router (1783-SR)
 Stratix 5950 Security Appliance (1783-SAD), Embedded Switch Technology (1783-ETAP), Configurable NAT Router (1783-NATR)

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Summary of Changes

This publication contains new and updated information as indicated in the following table.

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| Added footnotes about using an attenuator to 1783-SFP1GZX and 1783-SFP1GEXE SFP modules | 69 |

Additional Resources

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

| Resource | Description |
|---|---|
| Configurable NAT Router User Manual, publication 1783-UM008 | Describes how to install, configure, and troubleshoot the NAT router. |
| EtherNet/IP Industrial Protocol White Paper, publication ENET-WP001 | Describes how to implement services and data objects on a TCP/UDP/IP based Ethernet network. |
| Stratix Managed Switches User Manual, publication 1783-UM007 | Describes how to configure and troubleshoot Stratix 5400, 5410, 5700, 8000, 8300, and ArmorStratix 5700 switches. |
| Stratix 2000 Ethernet Unmanaged Switches Installation Instructions, publication 1783-IN003 | Describes how to install Stratix 2000 switches. |
| Stratix 2000 Ethernet Unmanaged Switches User Manual, publication 1783-UM011 | Describes how to use DIP switches and status indicators on Stratix 2000 switches. |
| Stratix 2500 Lightly Managed Switches Installation Instructions, 1783-IN011 | Describes how to install Stratix 2500 switches. |
| Stratix 2500 Lightly Managed Switches User Manual, 1783-UM009 | Describes how to configure and troubleshoot Stratix 2500 switches. |
| Stratix 6000 Ethernet Managed Switch User Manual, publication 1783-UM001 | Describes how to configure and troubleshoot Stratix 6000 switches. |
| Stratix 5100 Wireless Access Point/Workgroup Bridge User Manual, publication 1783-UM006 | Describes how to install, configure, and troubleshoot the wireless access point. |
| Stratix 5900 Services Router User Manual, publication 1783-UM005 | Describes how to install, configure, and troubleshoot the router. |
| Stratix 5950 Security Appliance User Manual, publication 1783-UM010 | Describes how to install, configure, and troubleshoot the security appliance. |
| Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1 | Provides general guidelines for installing a Rockwell Automation industrial system. |
| Product Certifications website, http://www.rockwellautomation.com/global/certification/overview.page | 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.

Stratix 2000 Ethernet Unmanaged Switches—Series B

| Cat. No. | Total Ports | RJ45 Ports ⁽¹⁾ | SFP Ports ⁽¹⁾ |
|------------------|-------------|---------------------------|--|
| 1783-US5T/B | 5 | 5 FE | — |
| 1783-US5TG/B | 5 | 5 GE | — |
| 1783-US4T1F/B | 5 | 4 FE | 1 FE multimode preinstalled fiber SFP module |
| 1783-US4T1H/B | 5 | 4 FE | 1 FE singlemode preinstalled fiber SFP module |
| 1783-US8T/B | 8 | 8 FE | — |
| 1783-US6T2F/B | 8 | 6 FE | 2 FE multimode preinstalled fiber SFP modules |
| 1783-US6T2H/B | 8 | 6 FE | 2 FE singlemode preinstalled fiber SFP modules |
| 1783-US7T1F/B | 8 | 7 FE | 1 FE multimode preinstalled fiber SFP module |
| 1783-US7T1H/B | 8 | 7 FE | 1 FE singlemode preinstalled fiber SFP module |
| 1783-US6T2TG2F/B | 10 | 6 FE + 2 GE | 2 FE multimode preinstalled fiber SFP modules |
| 1783-US6T2TG2H/B | 10 | 6 FE + 2 GE | 2 FE singlemode preinstalled fiber SFP modules |
| 1783-US8TG2GX/B | 10 | 8 GE | 2 GE slots ⁽²⁾ |
| 1783-US16T/B | 16 | 16 FE | — |
| 1783-US16T2S/B | 18 | 16 FE | 2 FE slots ⁽²⁾ |

(1) FE = Fast Ethernet; GE = Gigabit Ethernet.

(2) SFP modules must be ordered separately.

Table 1 - Technical Specifications - Stratix 2000 Switches, Series B

| Attribute | 1783-US5T/B | 1783-US5TG/B | 1783-US4T1F/B, 1783-US4T1H/B | 1783-US8T/B | 1783-US6T2F/B, 1783-US6T2H/B, 1783-US7T1F/B, 1783-US7T1H/B | 1783-US6T2TG2F/B, 1783-US6T2TG2H/B | 1783-US8TG2GX/B | 1783-US16T/B | 1783-US16T2S/B |
|------------------------------------|---|-------------------------|---------------------------------|-------------------------|---|---------------------------------------|--------------------------|-------------------------|-------------------------|
| Inrush current, max | 1.85 A | 0.33 A | 1.69 A | 1.31 A | 0.41 A | 1.83 A | 0.55 A | 0.47 A | 1.63 A |
| Power input | 24V (12...48V DC, 18...30V AC, 50/60 Hz), SELV | | | | | | | | |
| Power consumption, max | 3.4 W | 4.5 W | 3.4 W | 4.6 W | 4.6 W | 7.5 W | 10 W | 8.0 W | 8.0 W |
| Current, nom | DC 180 mA AC 360 mA | DC 250 mA AC 500 mA | DC 180 mA AC 360 mA | DC 250 mA AC 500 mA | DC 250 mA AC 500 mA | DC 450 mA AC 900 mA | DC 550 mA AC 1100 mA | DC 430 mA AC 860 mA | DC 430 mA AC 860 mA |
| Current, max | DC 380 mA AC 750 mA | DC 510 mA AC 1020 mA | DC 380 mA AC 750 mA | DC 510 mA AC 1100 mA | DC 510 mA AC 1100 mA | DC 850 mA AC 1700 mA | DC 1100 mA AC 2200 mA | DC 900 mA AC 1800 mA | DC 900 mA AC 1800 mA |
| Wire size, ground connection | 2.5 mm ² (14 AWG) copper wire suitable for 86 °C (187 °F) above surrounding ambient temperature outside the enclosure, with a suitable ring terminal | | | | | | | | |
| Wire size, DC power connection | 4...0.25 mm ² (12...24 AWG) twisted-pair copper wire suitable for 86 °C (187 °F) above surrounding ambient temperature outside the enclosure | | | | | | | | |
| Screw torque, ground terminal, max | 0.91 N·m (8.05 in·lb) | | | | | | | | |
| Screw torque, power terminals | 0.50...0.56 N·m (4.5...5.0 in·lb) | | | | | | | | |
| Enclosure type rating | None (open-style) | | | | | | | | |

Table 1 - Technical Specifications - Stratix 2000 Switches, Series B (continued)

| Attribute | 1783-US5T/B | 1783-US5TG/B | 1783-US4T1F/B, 1783-US4T1H/B | 1783-US8T/B | 1783-US6T2F/B, 1783-US6T2H/B, 1783-US7T1F/B, 1783-US7T1H/B | 1783-US6T2TG2F/B, 1783-US6T2TG2H/B | 1783-US8TG2GX/B | 1783-US16T/B | 1783-US16T2S/B |
|------------------------------|--------------|--------------|---------------------------------|--------------|---|---------------------------------------|--|--------------|---|
| North American temp code | T4 | T4A | T5 | T4 | T4 | T4 | T4 | T5 | |
| ATEX temp code | T4 | T4 | T4 | T4 | T4 | T4 | T4 | T4 | |
| IECEX temp code | T4 | T4 | T4 | T4 | T4 | T4 | T4 | T4 | |
| MAC addresses, max supported | 2 K | 8 K | 2 K | 2 k | 2 K | 8 K | 8 K | 8 K | |
| SFP modules ⁽¹⁾ | No SFP slots | No SFP slots | Preinstalled | No SFP slots | Preinstalled | Preinstalled | Ordered separately: 1783-SFP100FX 1783-SFP100LX 1783-SFP100EXC 1783-SFP100ZXC 1783-SFP1GSX 1783-SFP1GLX 1783-SFP1GEXE 1783-SFP1GZX | No SFP slots | Ordered separately: 1783-SFP100FX 1783-SFP100LX 1783-SFP100EXC 1783-SFP100ZXC |

(1) For specifications of preinstalled SFP modules, see [Table 2](#). For specifications of SFP modules ordered separately, see [Table 54](#).

Table 2 - Preinstalled SFP Module Specifications - Stratix 2000 Switches

| Attribute | Multimode (100Base-FX) | Singlemode (100Base-LX) |
|-----------------------------|------------------------|-------------------------|
| Central wavelength (nm) | 1310 | 1310 |
| Transmission distance (km) | 2 | 20 |
| Applicable distance (km) | 0...2 | 0...20 |
| Luminous power, min (db) | -19 | -10 |
| Luminous power, max (db) | -10 | -5 |
| Receiving sensitivity (dBm) | -31 | -34 |
| Overload luminous power | -3 | -3 |

Table 3 - Environmental Specifications - Stratix 2000 Switches, Series B

| Attribute | 1783-US5T/B, 1783-US8T/B | 1783-US5TG/B, 1783-US4T1F/B, 1783-US4T1H/B, 1783-US6T2F/B, 1783-US6T2H/B, 1783-US7T1F/B, 1783-US7T1H/B, 1783-US6T2TG2F/B, 1783-US6T2TG2H/B, 1783-US8TG2GX/B, 1783-US16T/B, 1783-US16T2S/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) | -10 °C < Ta < +60 °C (14 °F < Ta < +140 °F) | -40 °C < Ta < +75 °C (-40 °F < Ta < +167 °F) |
| Temperature, ambient, max | 60 °C (140 °F) | 75 °C (167 °F) |
| Temperature, surrounding air, max | 60 °C (140 °F) | 75 °C (167 °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 IEC 60068-2-6 (Test Fc, Operating) | 2 g @ 10...500 Hz | |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 15 g | |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g | |

Table 3 - Environmental Specifications - Stratix 2000 Switches, Series B (continued)

| Attribute | 1783-US5T/B, 1783-US8T/B | 1783-US5TG/B, 1783-US4T1F/B, 1783-US4T1H/B, 1783-US6T2F/B, 1783-US6T2H/B, 1783-US7T1F/B, 1783-US7T1H/B, 1783-US6T2TG2F/B, 1783-US6T2TG2H/B, 1783-US8TG2GX/B, 1783-US16T/B, 1783-US16T2S/B |
|---|--|---|
| Emissions CISPR11 (IEC 61000-6-4) | IEC 61000-6-4 | |
| ESD immunity IEC 61000-4-2 | 6 kV contact discharges 8 kV air discharges | |
| Radiated RF immunity IEC 61000-4-3 | 10V/m with 1 kHz sine-wave 80% AM from 80...2000 MHz 20V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 3V/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 ±2 kV at 5 kHz on communication ports | |
| Surge transient immunity IEC 61000-4-5 | ±2 kV line-line (DM) and ±4 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 | |
| Environmental rating | IP30 | |

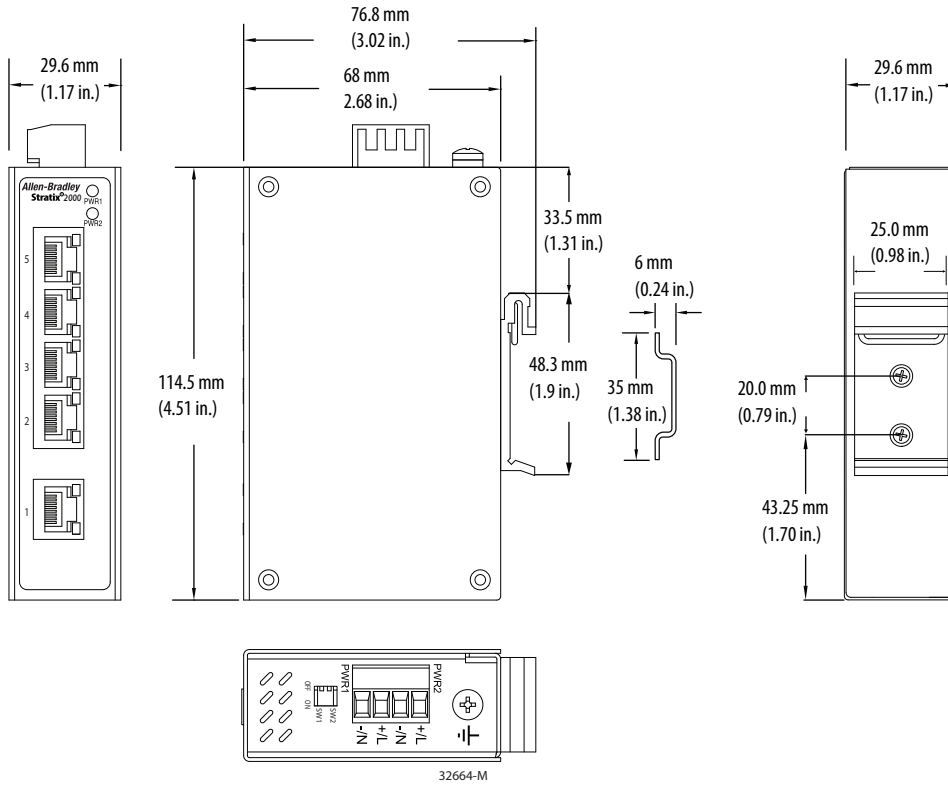
Table 4 - Certifications - Stratix 2000 Switches, Series B

| Certifications (when product is marked) ⁽¹⁾ | 1783-US5T/B, 1783-US5TG/B, 1783-US4T1F/B, 1783-US4T1H/B, 1783-US8T/B, 1783-US6T2F/B, 1783-US6T2H/B, 1783-US7T1F/B, 1783-US7T1H/B, 1783-US6T2TG2F/B, 1783-US6T2TG2H/B, 1783-US8TG2GX/B, 1783-US16T/B, 1783-US16T2S/B |
|---|---|
| c-UL-us | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. |
| CE | European Union 2014/30/EU EMC Directive, compliant with: 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) European Union 2011/65/EU RoHS, compliant with: EN 50581; Technical documentation |
| RCM | Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions |
| Ex | European Union 2014/34/EU ATEX Directive, compliant with: • EN 60079-0; General Requirements • EN 60079-15; Potentially Explosive Atmospheres, Protection "n" • II 3 G Ex nA IICT4 Gc • DEMKO 16 ATEX 1816X |
| IECEX | IECEX System, compliant with: • IEC 60079-0; General Requirements • IEC 60079-15; Potentially Explosive Atmospheres, Protection "n" • II 3 G Ex nA IICT4 Gc • IECEX UL 16.0169X |
| KC | Korean Certification of Broadcasting and Communications Equipment, compliant with: • Framework Act on Telecommunications and Radio Waves Act |
| EAC | Russian Customs Union TR CU 020/2011 EMC Technical Regulation |

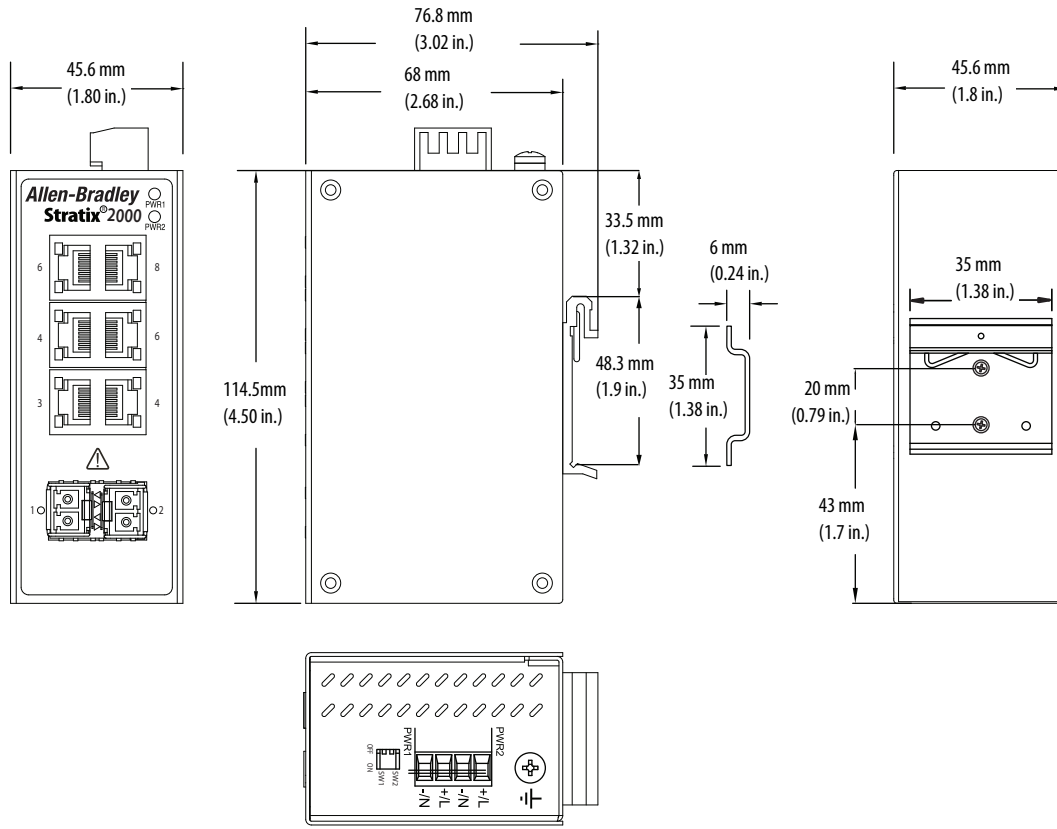
(1) See the Product Certification link at <http://www.ab.com> for Declarations of Conformity, Certificates, and other certification details.

Dimensions—Stratix 2000 Switches, Series B

1783-US5T/B, 1783-US5TG/B, 1783-US4T1F/B, 1783-US4T1H/B

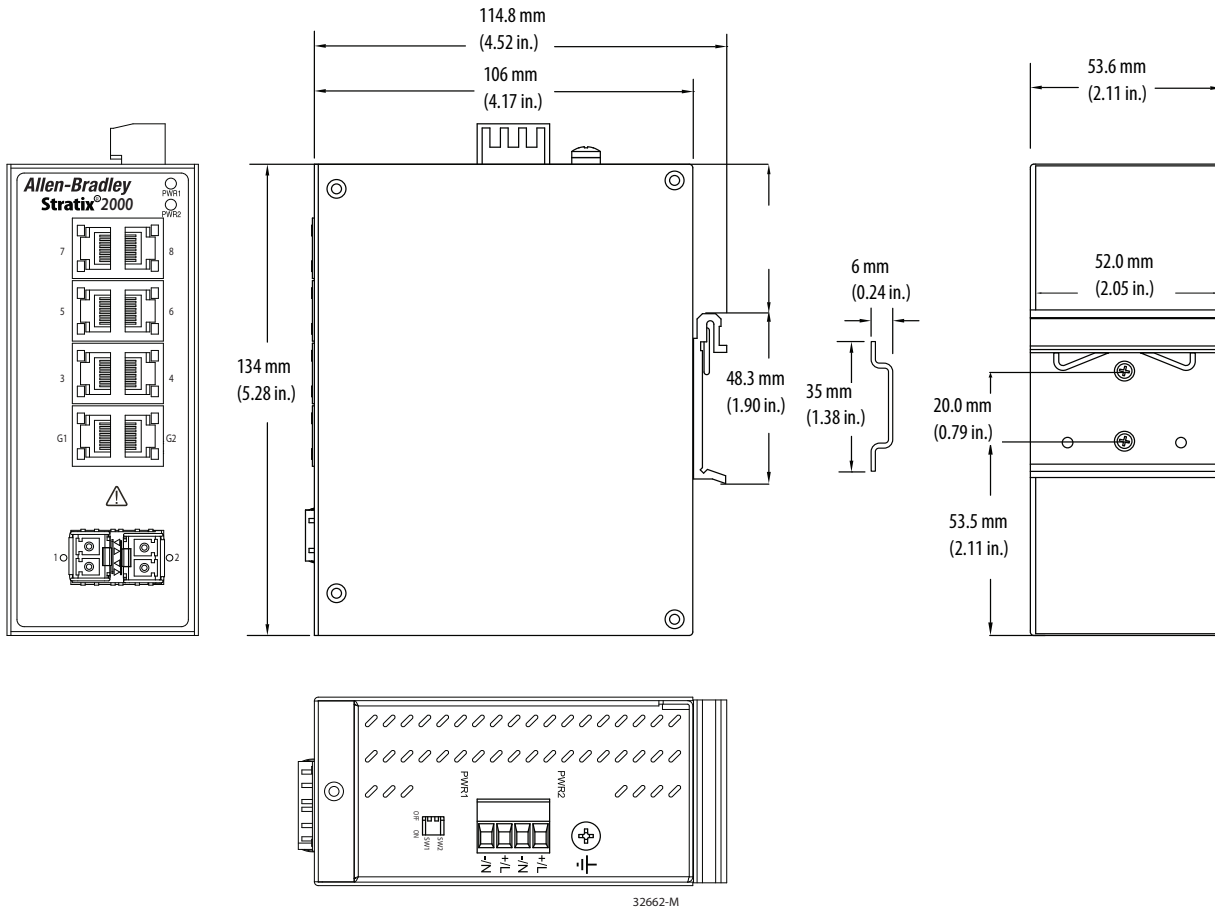


1783-US8T/B, 1783-US6T2F/B, 1783-US6T2H/B, 1783-US7T1F/B, 1783-US7T1H/B

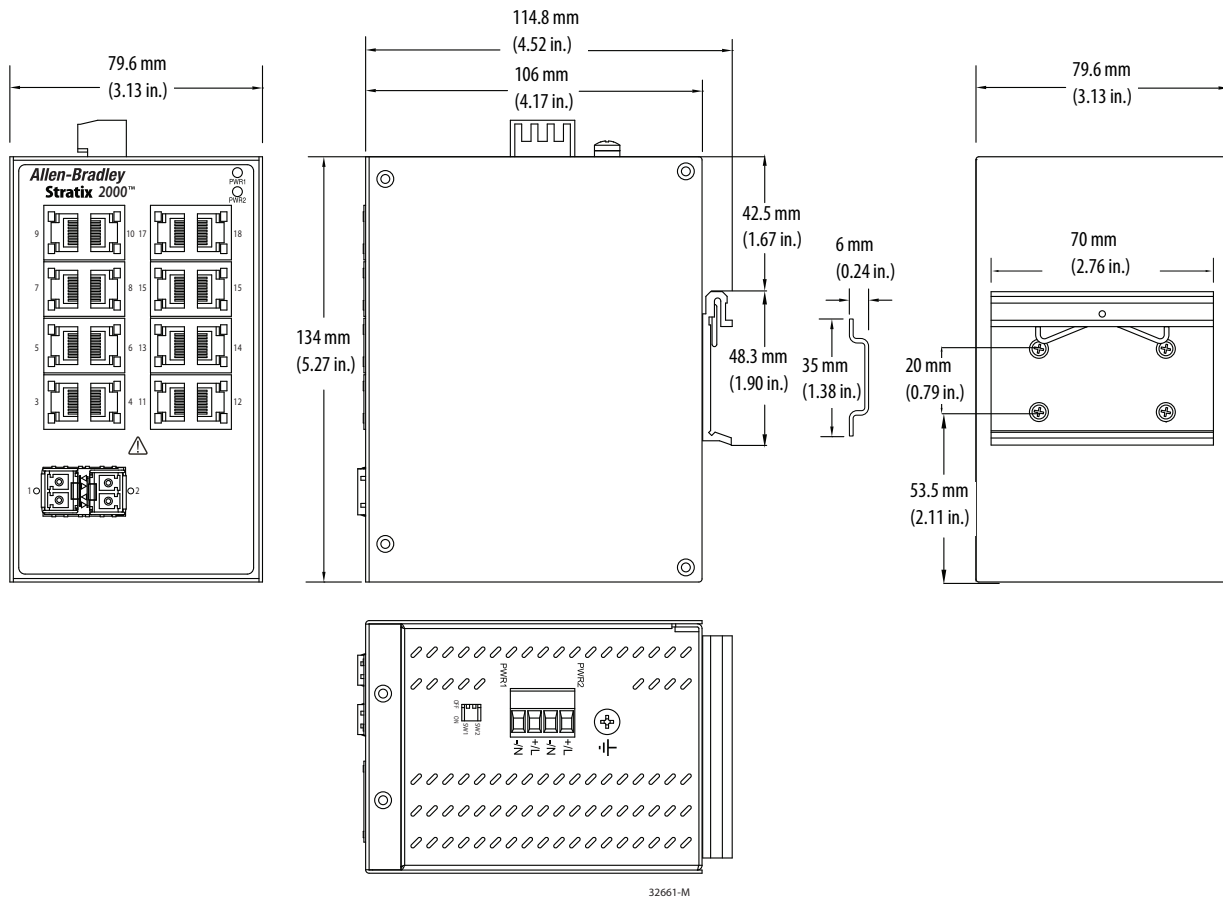


32663-M

1783-US6T2TG2F/B, 1783-US6T2TG2H/B, 1783-US8TG2GX/B



1783-US16T/B, 1783-US16T2S/B



Stratix 2000 Ethernet Unmanaged Switches—Series A

| Cat. No. | Total Ports | RJ45 Ports ⁽¹⁾ | Combo Ports ⁽¹⁾ | SFP Ports ⁽¹⁾ |
|-----------------|-------------|---------------------------|----------------------------|--|
| 1783-US4T1F/A | 5 | 4 FE | — | 1 FE multimode preinstalled fiber SFP module |
| 1783-US4T1H/A | 5 | 4 FE | — | 1 FE singlemode preinstalled fiber SFP module |
| 1783-US5T/A | 5 | 5 FE | — | — |
| 1783-US5TG/A | 5 | 5 GE | — | — |
| 1783-US6T2F/A | 8 | 6 FE | — | 2 FE multimode preinstalled fiber SFP modules |
| 1783-US6T2H/A | 8 | 6 FE | — | 2 FE singlemode preinstalled fiber SFP modules |
| 1783-US6TG2CG/A | 8 | 6 GE | 2 GE ⁽²⁾ | — |
| 1783-US7T1F/A | 8 | 7 FE | — | 1 FE multimode preinstalled fiber SFP module |
| 1783-US7T1H/A | 8 | 7 FE | — | 1 FE singlemode preinstalled fiber SFP module |
| 1783-US8T/A | 8 | 8 FE | — | — |
| 1783-US14T2S/A | 16 | 14 FE | — | 2 FE ⁽²⁾ |
| 1783-US16T/A | 16 | 16 FE | — | — |

(1) FE = Fast Ethernet; GE = Gigabit Ethernet.

(2) SFP modules must be ordered separately.

The following table lists Stratix 2000 series A switches and their series B replacements. For specifications of series B switches, see [page 3](#).

Table 5 - Stratix 2000 Series Change

| Series A Cat. No. | Series B Replacement Cat. No. | Change ⁽¹⁾ |
|-------------------|-------------------------------|--|
| 1783-US4T1F/A | 1783-US4T1F/B | Same catalog number and configuration |
| 1783-US4T1H/A | 1783-US4T1H/B | Same catalog number and configuration |
| 1783-US5T/A | 1783-US5T/B | Same catalog number and configuration |
| 1783-US5TG/A | 1783-US5TG/B | Same catalog number and configuration |
| 1783-US6T2F/A | 1783-US6T2F/B | Same catalog number and configuration |
| 1783-US6T2H/A | 1783-US6T2H/B | Same catalog number and configuration |
| 1783-US7T1F/A | 1783-US7T1F/B | Same catalog number and configuration |
| 1783-US7T1H/A | 1783-US7T1H/B | Same catalog number and configuration |
| 1783-US8T/A | 1783-US8T/B | Same catalog number and configuration |
| 1783-US16T/A | 1783-US16T/B | Same catalog number and configuration |
| 1783-US14T2S/A | 1783-US16T2S/B | New catalog number Replaced 2 GE combo ports with 2 GE copper ports on series B replacement Added 2 GE SFP slots to series B replacement |
| 1783-US6TG2CG/A | 1783-US8TG2GX/B | New catalog number Added 2 FE copper ports to series B replacement |

(1) FE = Fast Ethernet; GE = Gigabit Ethernet.

Table 6 - Technical Specifications - Stratix 2000 Switches, Series A

| Attribute | 1783-US4T1F/A 1783-US4T1H/A | 1783-US5TG/A | 1783-US6T2F/A 1783-US6T2H/A | 1783-US7T1F/A 1783-US7T1H/A | 1783-US6TG2CG/A | 1783-US14T2S/A | 1783-US16T/A | 1783-US5T/A | 1783-US8T/A |
|---|--|--------------|--------------------------------|--------------------------------|--|---|--|-----------------|--------------------|
| Inrush current, max | 0.11 A | 0.25 A | 0.86 A | 1.06 A | 0.66 A | 4.34 A | 4.72 A | 0.11 A | 1.47 A |
| Power input | 24V (18...60V DC, 18...30V AC 50/60 Hz), Class 2/SELV | | | | | | | | |
| Current rating | 230.5 mA | 432.1 mA | 442.3 mA | | 1242.7 mA | 663.2 mA | 555.5 mA | 250 mA | 361 mA |
| Power dissipation, max | 2.841 W | 5.491 W | 5.927 W | | 13.643 W | 7.991 W | 6.72 W | 2 W @ 24V AC/DC | 4.04 W @ 24V AC/DC |
| Isolation voltage | 30V (continuous), basic insulation type, power to network channels No isolation between individual network channels Type tested at 500V AC for 60 s | | | | | | | | |
| Wire size, Ethernet connection ⁽¹⁾ | RJ45 connector according to IEC 60603-7, 2-pair or 4-pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 rated 82 °C (180 °F) min | | | | | | RJ45 connector according to IEC 60603-7, 2-pair or 4-pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 | | |
| Wire size, DC power connection | 0.82...2.5 mm ² (18...14 AWG) twisted-pair copper wire suitable for 82 °C (180 °F) above surrounding ambient temperature outside the enclosure | | | | | | 0.75...2.5 mm ² (18...14 AWG) twisted-pair copper wire suitable for 30 °C (86 °F) above surrounding ambient temperature outside the enclosure | | |
| Wire size, ground connection | 2.5 mm ² (14 AWG) copper wire suitable for 82 °C (180 °F) above surrounding ambient temperature outside the enclosure, with a suitable ring terminal | | | | | | 2.5 mm ² (14 AWG) copper wire suitable for 30 °C (86 °F) above surrounding ambient temperature outside the enclosure, with a suitable ring terminal | | |
| Screw torque, ground terminal, max | 1.82 N·m (16 in·lb) | | | | | | | | |
| Screw torque, power terminals | 0.4...0.5 N·m (3.5...4.4 in·lb) | | | | | | | | |
| Wiring category ⁽²⁾ | 1 - on power ports 2 - on communication ports | | | | | | | | |
| Enclosure type rating | None (open-style) | | | | | | | | |
| North American temp code | T4 | | | | | | | T5 | |
| IEC temp code | T4 | | | | | | | T5 | |
| MAC addresses, max supported | 1 K | 1K | 8 K | | 8 K | 8 K | 8 K | 1K | 8 K |
| SFP modules ⁽³⁾ | Preinstalled | No SFP slots | Preinstalled | Preinstalled | Ordered separately: 1783-SFP1GSX 1783-SFP1GLX 1783-SFP1GEXE 1783-SFP1GZX | Ordered separately: 1783-SFP100FX 1783-SFP100LX 1783-SFP100EXC 1783-SFP100ZXC | No SFP slots | No SFP slots | No SFP slots |

(1) See [page 71](#) for recommended products.

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

(3) For specifications of preinstalled SFP modules, see [Table 7](#). For specifications of SFP modules ordered separately, see [Table 54](#).

Table 7 - Preinstalled SFP Module Specifications - Stratix 2000 Switches

| Attribute | Multimode (100Base-FX) | Singlemode (100Base-LX) |
|----------------------------|------------------------|-------------------------|
| Central wavelength (nm) | 1310 | 1310 |
| Transmission distance (km) | 2 | 20 |
| Applicable distance (km) | 0...2 | 0...20 |

Table 7 - Preinstalled SFP Module Specifications - Stratix 2000 Switches

| Attribute | Multimode (100Base-FX) | Singlemode (100Base-LX) |
|-----------------------------|------------------------|-------------------------|
| Luminous power, min (db) | -19 | -10 |
| Luminous power, max (db) | -10 | -5 |
| Receiving sensitivity (dBm) | -31 | -34 |
| Overload luminous power | -3 | -3 |

Table 8 - Environmental Specifications - Stratix 2000 Switches, Series A

| Attribute | 1783-US4T1F/A, 1783-US4T1H/A, 1784-US5TG/A, 1783-US6T2F/A, 1783-US6T2H/A, 1783-US6TG2CG/A, 1783-US7T1F/A, 1783-US7T1H/A, 1783-US14T2S/A, 1783-US16T/A | 1783-US5T/A | 1783-US8T/A |
|--|---|--|-------------|
| 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) | -40...+70 °C (-40...+158 °F) | 0...+60 °C (32...+140 °F) | |
| Temperature, surrounding air, max | 70 °C (158 °F) | 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 IEC 60068-2-6 (Test Fc, Operating) | 2 g @ 10...150 Hz | 2 g @ 10...500 Hz | |
| Operating shock IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 15 g | | |
| Nonoperating shock IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g | | |
| Emissions CISPR11 (IEC 61000-6-4) | Class A | | |
| ESD immunity IEC 61000-4-2 | 8 kV contact discharges 15 kV air discharges | 6 kV contact discharges 8 kV air discharges | |
| Radiated RF immunity IEC 61000-4-3 | 10V/m with 1 kHz sine-wave 80% AM from 80...2000 MHz 3V/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 ±3 kV at 5 kHz on communication ports | | |
| Surge transient immunity IEC 61000-4-5 | ±2 kV line-line (DM) and ±4 kV line-earth (CM) on DC power ports ±2 kV line-earth (CM) on communication port | | |
| Conducted RF immunity IEC 61000-4-6 | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz | | |
| Magnetic field immunity IEC 61000-4-8 | 30 A/m long duration and 300 A/m short duration at 50 Hz | | |
| Magnetic pulse immunity IEC 61000-4-9 | — | 30 A/m pulse | |
| Environmental rating | IP20 | | |

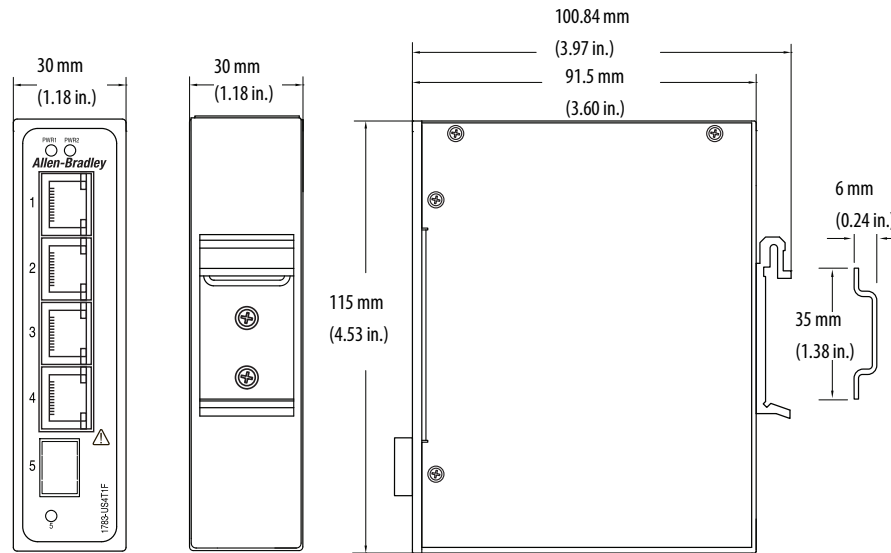
Table 9 - Certifications- Stratix 2000 Switches, Series A

| Certifications (when product is marked) ⁽¹⁾ | 1783-US4T1F/A, 1783-US4T1H/A, 1784-US5TG/A, 1783-US6T2F/A, 1783-US6T2H/A, 1783-US6TG2CG/A, 1783-US7T1F/A, 1783-US7T1H/A, 1783-US14T2S/A, 1783-US16T/A | | 1783-US5T/A, 1783-US8T/A |
|---|--|---|--|
| c-UL-us | UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. | | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. |
| CE | European Union 2004/108/EC EMC Directive, compliant with: 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) European Union 2011/65/EU RoHS, compliant with: EN 50581; Technical Documentation | | |
| RCM | Australian Radiocommunications Act, compliant with: EN 61000-6.4; Industrial Emissions | | |
| Ex | European Union 94/9/EC ATEX Directive, compliant with: EN 60079-15; Potentially Explosive Atmospheres, Protection "n" EN 60079-0; General Requirements II 3 G Ex nA IIC T4 Gc X | European Union 94/9/EC ATEX Directive, compliant with: EN 60079-15; Potentially Explosive Atmospheres, Protection "n" EN 60079-0; General Requirements II 3 G Ex nA IIC T5 Gc | |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3 | | |

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

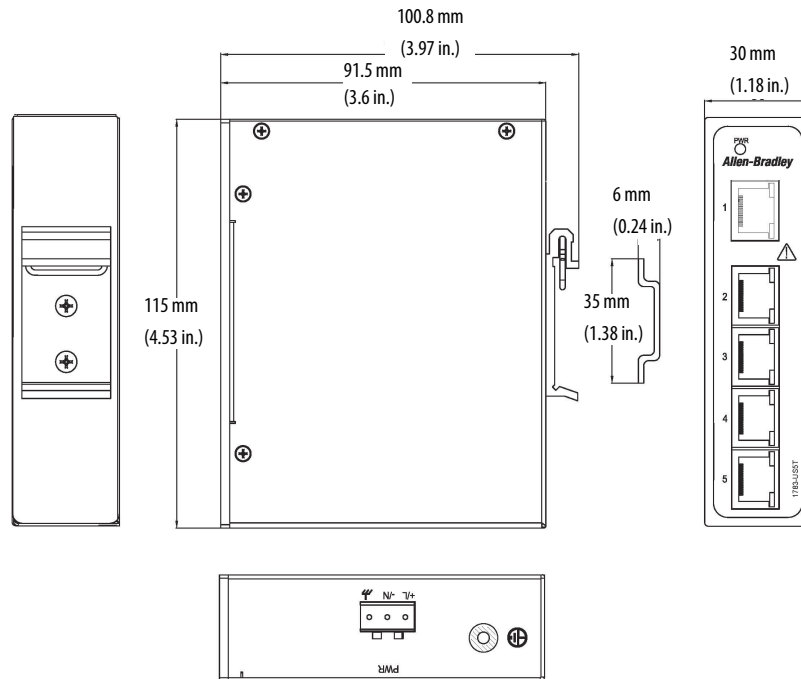
Dimensions—Stratix 2000 Switches, Series A

1783-US4T1F/A, 1783-US4T1H/A, 1783-US5TG/A Switch Dimensions

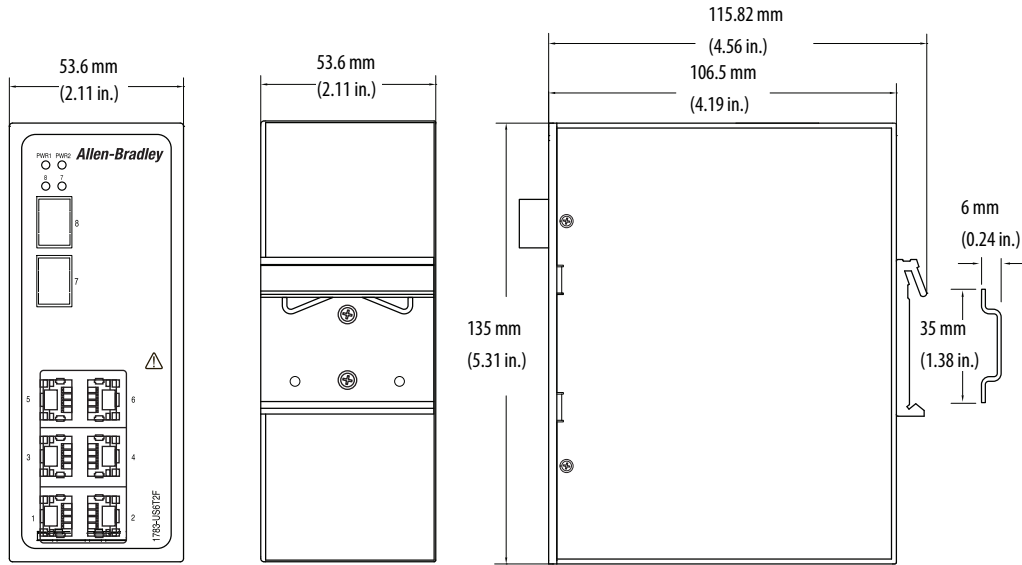


32502-M

1783-US5T/A Switch Dimensions

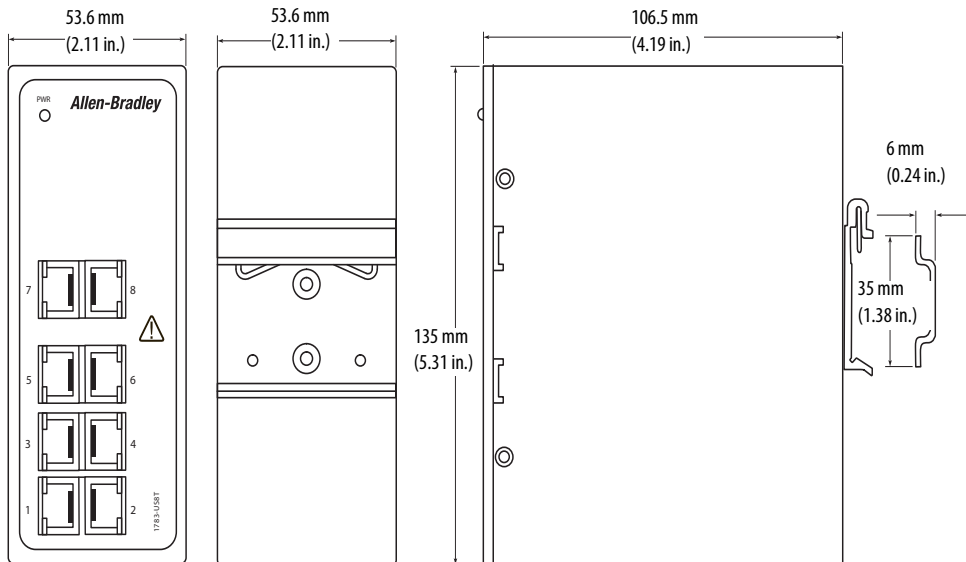


1783-US6T2F/A, 1783-US6T2H/A, 1783-US7T1F/A, 1783-US7T1H/A Switch Dimensions



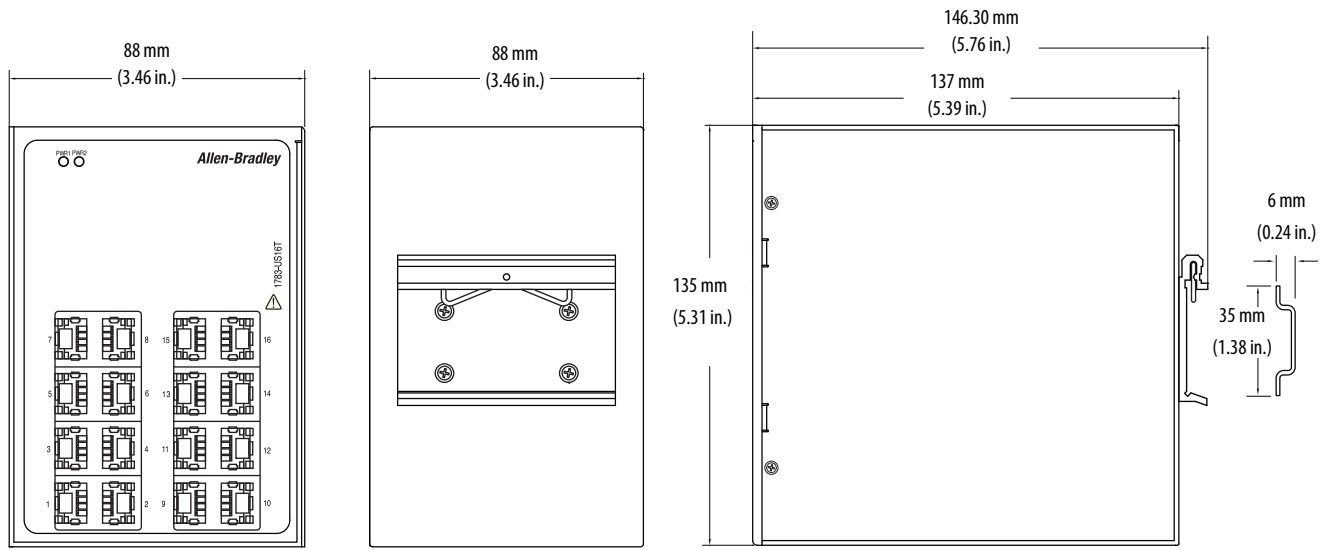
32503-M

1783-US8T/A Switch Dimensions



32312-M

1783-US16T/A, 1783-US14T2S/A, 1783-US6TG2CG/A Switch Dimensions



32505-M

Stratix 2500 Ethernet Lightly Managed Switches

| Cat. No. | Description | Total Ports |
|-----------|-----------------------|-------------|
| 1783-LMS5 | 5 ports copper 10/100 | 5 |
| 1783-LMS8 | 8 ports copper 10/100 | 8 |

Table 10 - Technical Specifications - Stratix 2500 Switches

| Attribute | 1783-LMS5 | 1783-LMS8 |
|---|--|---------------------------------|
| Power input | 12...24V DC, 0.3...0.2 A (SELV) | 12...24V DC, 0.4...0.2 A (SELV) |
| Power consumption | 4.2 W | 5.3 W |
| Power dissipation | 4.2 W | 5.3 W |
| Wire size, Ethernet connection ⁽¹⁾ | RJ45 connector according to IEC 60603-7, 2 or 4 pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 | |
| Wire size, DC power connection | 1.3...0.82 mm ² (16...18 AWG) solid or stranded copper wire rated at 30 °C (86 °F), or greater, above the surrounding air temperature | |
| Wire size, ground connection | 5.2...3.3 mm ² (10...12 AWG) solid or stranded copper wire | |
| Torque, power terminal screw | 0.19 N·m (1.7 in·lb) | |
| Torque, functional ground lug screw | 0.51 N·m (4.5 in·lb) | |
| Wiring category ⁽²⁾⁽³⁾ | 2 - on power ports 2 - on communication ports | |
| Enclosure type rating | None (open-style) | |
| North American temp code | T4 | |
| ATEX temp code | T4 | |

(1) See [page 71](#) for recommended products.

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

(3) Use this Conductor Category information for planning conductor routing as described in the Stratix 2500 Managed Switches Installation Instructions, publication [1783-IN011](#).

Table 11 - Environmental Specifications - Stratix 2500 Switches

| Attribute | 1783-LMS5, 1783-LMS8 |
|--|---|
| 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) | -20 °C < Ta < +60 °C (-4 °F < Ta < +140 °F) |
| Temperature, ambient, max | 60 °C (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 |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g |

Table 11 - Environmental Specifications - Stratix 2500 Switches (continued)

| Attribute | 1783-LMS5, 1783-LMS8 |
|---|--|
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g |
| Emissions CISPR11 (IEC 61000-6-4) | IEC 61000-6-4 |
| ESD immunity IEC 61000-4-2 | 6 kV contact discharges 8 kV air discharges |
| 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 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 3V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz |
| EFT/B immunity IEC 61000-4-4 | ±3 kV at 5 @ 100 kHz on DC power ports ±3 kV at 5 @ 100 kHz on Ethernet ports |
| Surge transient immunity IEC 61000-4-5 | ±1 kV line-line(DM) and ±2 kV line-earth(CM) on DC 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 |
| Environmental rating | IP30 |

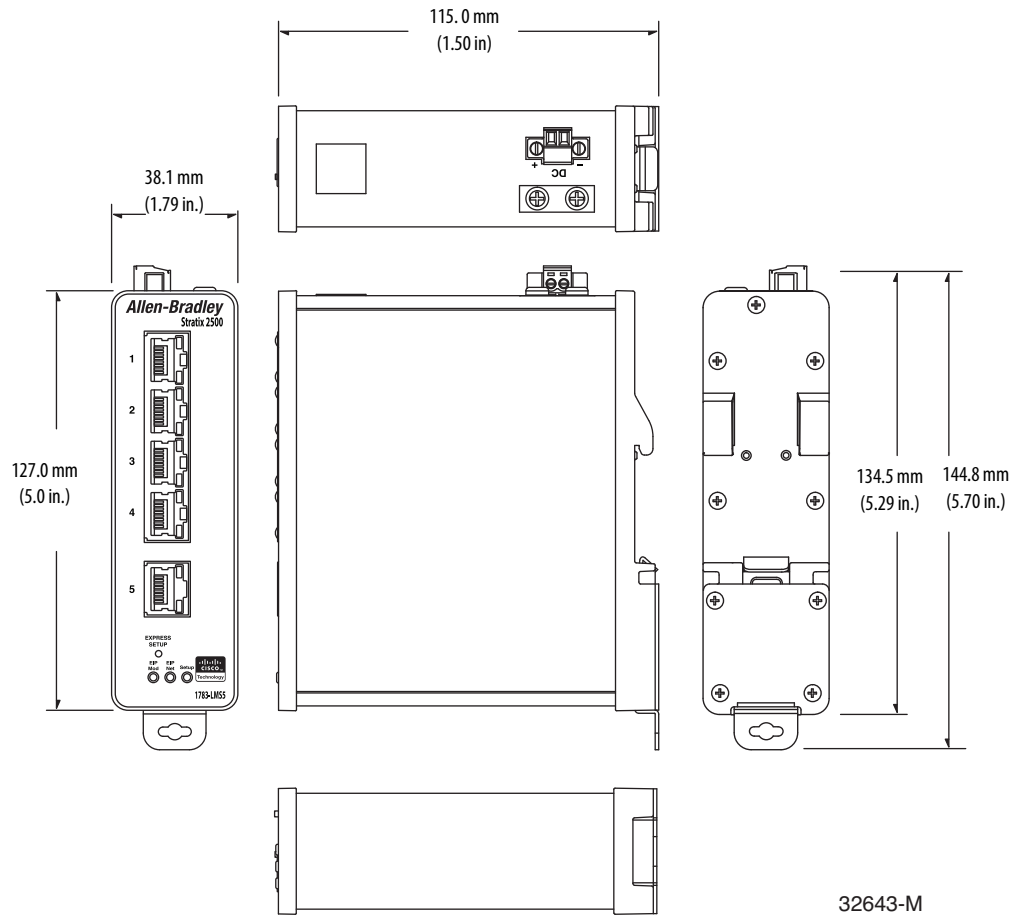
Table 12 - Certifications - Stratix 2500 Switches

| Certifications (when product is marked) ⁽¹⁾ | 1783-LMS5, 1783-LMS8 |
|---|--|
| c-UL-us | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. UL Listed for Class I, Zone 2 Hazardous Locations, certified for U.S. and Canada. See UL File E194810. <ul style="list-style-type: none"> • Ex nA IIC T4 Gc X • AEx nA IIC T4 Gc |
| CE | European Union 2014/30/EU EMC Directive, compliant with: <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) European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> • EN 50581; Technical documentation |
| RCM | Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions |
| Ex | European Union 2014/34/EU ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN 60079-0; General Requirements • EN 60079-15; Potentially Explosive Atmospheres, Protection "n" • II 3 G Ex nA IIC T4 Gc • DEMKO 16 ATEX 1731 |
| EAC | Russian Customs Union TR CU 020/2011 EMC Technical Regulation |
| EtherNet/IP | ODVA conformance tested to EtherNet/IP specifications |

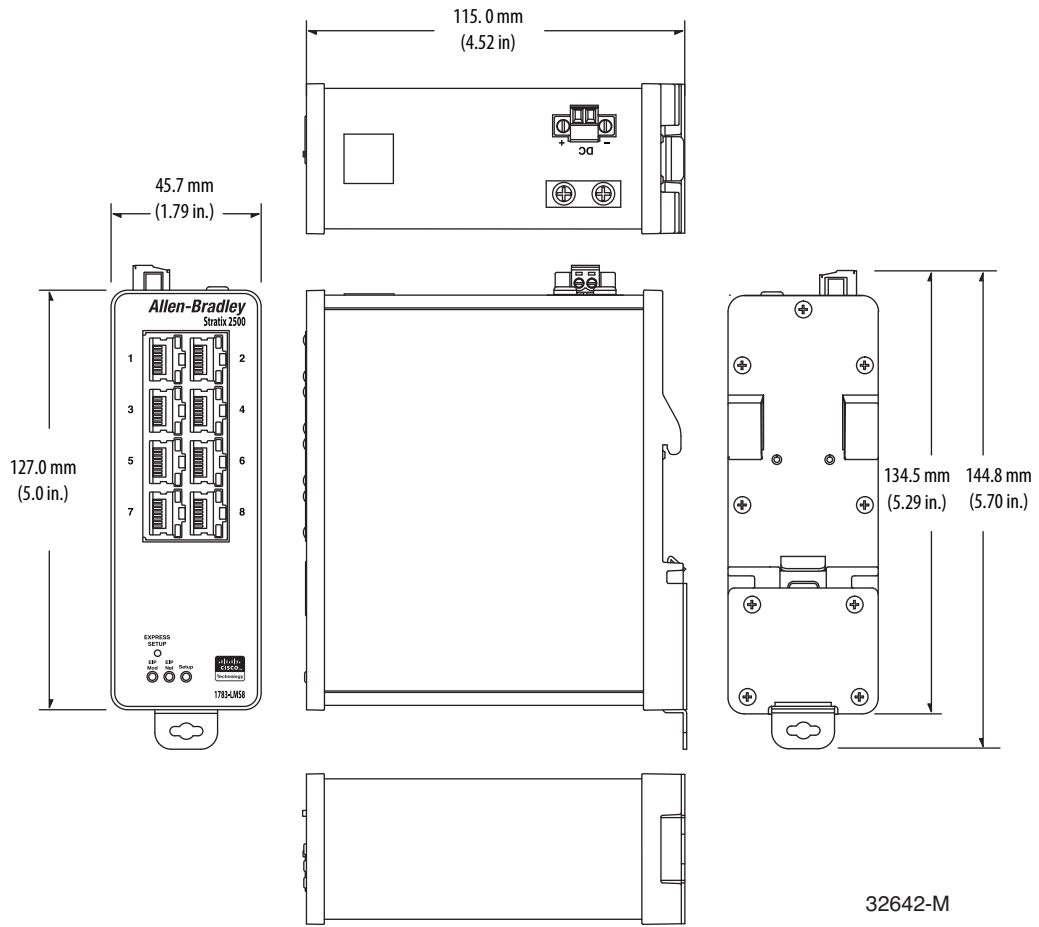
(1) See the Product Certification link at <http://www.ab.com> for Declarations of Conformity, Certificates, and other certification details.

Dimensions—Stratix 2500 Switches

1783-LMS5 Switch Dimensions



1783-LMS8 Switch Dimensions



Stratix 5400 Ethernet Managed Switches

| Cat. No. | Total Ports | RJ45 Ports ⁽¹⁾ | Combo Ports | (PoE/PoE+) | SFP Slots | Firmware Type | CIP Sync (IEEE 1588) | NAT | DLR |
|--------------------|-------------|---------------------------|-------------|------------|-----------|---------------|----------------------|-----|-----|
| 1783-HMS4C4CGN | 8 | — | 4 FE + 4 GE | — | — | Layer 2 | Yes | Yes | Yes |
| 1783-HMS8T4CGN | 12 | 8 FE | 4 GE | — | — | Layer 2 | Yes | Yes | Yes |
| 1783-HMS8S4CGN | 12 | — | 4 GE | — | 8 FE | Layer 2 | Yes | Yes | Yes |
| 1783-HMS4T4E4CGN | 12 | 4 FE | 4 GE | 4 FE | — | Layer 2 | Yes | Yes | Yes |
| 1783-HMS4S8E4CGN | 16 | — | 4 GE | 8 FE | 4 FE | Layer 2 | Yes | Yes | Yes |
| 1783-HMS16T4CGN | 20 | 16 FE | 4 GE | — | — | Layer 2 | Yes | Yes | Yes |
| 1783-HMS8TG4CGN | 12 | 8 GE | 4 GE | — | — | Layer 2 | Yes | Yes | Yes |
| 1783-HMS8SG4CGN | 12 | — | 4 GE | — | 8 GE | Layer 2 | Yes | Yes | Yes |
| 1783-HMS4EG8CGN | 12 | — | 8 GE | 4 GE | — | Layer 2 | Yes | Yes | Yes |
| 1783-HMS4SG8EG4CGN | 16 | — | 4 GE | 8 GE | 4 GE | Layer 2 | Yes | Yes | Yes |
| 1783-HMS16TG4CGN | 20 | 16 GE | 4 GE | — | — | Layer 2 | Yes | Yes | Yes |
| 1783-HMS8TG8EG4CGN | 20 | 8 GE | 4 GE | 8 GE | — | Layer 2 | Yes | Yes | Yes |
| 1783-HMS8TG4CGR | 12 | 8 GE | 4 GE | — | — | Layer 3 | Yes | Yes | Yes |
| 1783-HMS8SG4CGR | 12 | — | 4 GE | — | 8 GE | Layer 3 | Yes | Yes | Yes |
| 1783-HMS4EG8CGR | 12 | — | 8 GE | 4 GE | — | Layer 3 | Yes | Yes | Yes |
| 1783-HMS4SG8EG4CGR | 16 | — | 4 GE | 8 GE | 4 GE | Layer 3 | Yes | Yes | Yes |
| 1783-HMS16TG4CGR | 20 | 16 GE | 4 GE | — | — | Layer 3 | Yes | Yes | Yes |
| 1783-HMS8TG8EG4CGR | 20 | 8 GE | 4 GE | 8 GE | — | Layer 3 | Yes | Yes | Yes |

(1) FE = Fast Ethernet; GE = Gigabit Ethernet.

Table 13 - Technical Specifications - Stratix 5400 Switches

| Attribute | 1783-HMS8T4CGN, 1783-HMS16T4CGN, 1783-HMS8TG4CGN, 1783-HMS8TG4CGR | 1783-HMS4C4CGN, 1783-HMS16TG4CGN, 1783-HMS16TG4CGR | 1783-HMS8S4CGN, 1783-HMS8SG4CGN, 1783-HMS8SG4CGR | 1783-HMS4T4E4CGN | 1783-HMS4S8E4CGN, 1783-HMS8TG8EG4CGN, 1783-HMS4SG8EG4CGN, 1783-HMS4EG8CGN, 1783-HMS4SG8EG4CGR, 1783-HMS8TG8EG4CGR, 1783-HMS4EG8CGR |
|---------------------------------------|--|--|--|--|--|
| Alarm relay | 1 A @ 30V DC or 0.5 A @ 48V DC | | | | |
| Power input | 3.7 A max @ 12...54V DC | 4.3 A max @ 12...54V DC | 5.0 A max @ 12...54V DC | 3.7 A max @ 12...54V DC | 4.3 A max @ 12...54V DC |
| Power over Ethernet (PoE) input power | — | | | 44...54V DC for PoE 50...54V DC for PoE+ or a combination of PoE and PoE+ | |
| Power consumption ⁽¹⁾ | 35 W @ 24V DC @ 40 °C (104 °F) | 40 W @ 24V DC @ 40 °C (104 °F) | 42 W @ 24V DC @ 40 °C (104 °F) | 35 W @ 24V DC @ 40 °C (104 °F) PoE power at 50V: 120 W | 40 W @ 24V DC @ 40 °C (104 °F) PoE power at 50V: 124 W |
| Power dissipation | 35 W | 40 W | 42 W | 35 W | 42 W |
| Isolation voltage | 60V (continuous), basic insulation type, all ports to ground No isolation between individual ports Type tested at 500V AC for 60 s | | | | |
| Wire size, ground connection | 4 mm ² (10 AWG) solid or stranded copper wire | | | | |

Table 13 - Technical Specifications - Stratix 5400 Switches (continued)

| Attribute | 1783-HMS8T4CGN, 1783-HMS16T4CGN, 1783-HMS8TG4CGN, 1783-HMS8TG4CGR | 1783-HMS4C4CGN, 1783-HMS16TG4CGN, 1783-HMS16TG4CGR | 1783-HMS8S4CGN, 1783-HMS8SG4CGN, 1783-HMS8SG4CGR | 1783-HMS4T4E4CGN | 1783-HMS4S8E4CGN, 1783-HMS8TG8EG4CGN, 1783-HMS4SG8EG4CGN, 1783-HMS4EG8CGN, 1783-HMS4SG8EG4CGR, 1783-HMS8TG8EG4CGR, 1783-HMS4EG8CGR |
|--------------------------------|---|--|--|------------------|--|
| Wire size, DC power connection | 0.82...0.52 mm ² (18...20 AWG) solid or stranded copper wire rated at 30 °C (86 °F), or greater, above the surrounding air temperature 6.3 mm (0.25 in.) ± 0.5 mm (0.02 in.) strip length | | | | |
| Wire size, alarm connection | 0.5...0.8 mm ² (20...18 AWG) solid or stranded, UL/CSA-rated style 1007 or 1569 twisted-pair copper appliance wiring material (AWM) wire, 6.3 mm(0.25 in.) ± 0.5 mm (0.02 in.) strip length | | | | |
| Screw torque,ground terminal | 0.51 N·m (4.5 in·lb) | | | | |
| Screw torque, power terminal | 0.56 N·m (5.0 in·lb) | | | | |
| Screw torque, alarm terminal | 0.23 N·m (2.0 in·lb) | | | | |
| Weight, approx | 2.88 kg (6.35 lb) | | | | |
| Wiring category ⁽²⁾ | 3 - on console ports 2 - on DC power and alarm ports 2 - on Ethernet ports | | | | |
| Enclosure type rating | None (open-style) | | | | |
| Pilot duty rating | Alarm not rated | | | | |
| North American temp code | T3 | | | | |
| ATEX temp code | T3 | | | | |
| SFP modules ⁽³⁾ | 1783-SFP100FX 1783-SFP100LX 1783-SFP100EXC 1783-SFP100ZXC 1783-SFP100T ⁽⁴⁾ 1783-SFP1GSX ⁽⁵⁾ 1783-SFP1GLX ⁽⁵⁾ 1783-SFP1GEXE ⁽⁵⁾ 1783-SFP1GZX ⁽⁵⁾ 1783-SFP1GTE ⁽⁵⁾ | | | | |
| Memory card replacement | 1784-SD1 | | | | |

(1) For PoE configurations, the power consumption values listed represent the highest values that can be configured using all ports. A general guideline is 0.5 W per 30 W PoE+ port used.
 (2) Use this conductor category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).
 (3) For SFP specifications, see [page 69](#).
 (4) The 1783-SFP100T module requires Stratix 5400 firmware revision 3.001 or later.
 (5) Gigabit Ethernet (GE) SFP modules work only in GE SFP slots. For a list of Stratix 5400 catalog numbers with GE SFP slots, see [page 21](#).

Table 14 - Environmental Specifications - Stratix 5400 Switches

| Attribute | Stratix 5400 Switches |
|--|---|
| 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) | -40...+70 °C (-40...+158 °F) |
| Temperature, surrounding air, max | 70 °C (158 °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...90% noncondensing |
| Vibration IEC 60068-2-6 (Test Fc, Operating) | 1 g @ 5...150 Hz |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 15 g |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g |
| Emissions IEC 61000-6-4 | IEC 61000-6-4 |
| ESD immunity IEC 61000-4-2 | 6 kV contact discharges 8 kV air discharges |
| Radiated RF immunity IEC 61000-4-3 | 20V/m with 1 kHz sine-wave 80% AM from 80...2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 20V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz |
| EFT/B immunity IEC 61000-4-4 | ±3 kV at 5 @ 100 kHz on DC power ports ±3 kV at 5 @ 100 kHz on alarm ports ±3 kV at 5 @ 100 kHz on Ethernet ports |
| Surge transient immunity IEC 61000-4-5 | ±1 kV line-line (DM) and ±2 kV line-earth (CM) on DC power ports ±1 kV line-line (DM) and ±2 kV line-earth (CM) on alarm ports ±2 kV line-earth(CM) on Ethernet ports |
| Conducted RF immunity IEC 61000-4-6 | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz |
| Magnetic field immunity IEC 61000-4-8 | 300 A/m long duration and 1000 A/m short duration at 50 @ 60 Hz |
| Magnetic pulse immunity IEC 61000-4-9 | 300 A/m pulse |
| Voltage variation IEC 61000-4-29 | 10 ms interruption on DC power ports |
| Damped oscillatory wave immunity IEC 61000-4-18 | ±1 kV line-line (DM) and ±2.5 kV line-earth (CM) on power and alarm ports ±2.5 kV line-earth (CM) on Ethernet ports |

Table 15 - Certifications - Stratix 5400 Switches

| Certifications (when product is marked) ⁽¹⁾ | Stratix 5400 Switches |
|--|---|
| c-UL-us | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. UL Listed for Class I, Zone 2 Hazardous Locations, certified for U.S. and Canada. See UL File E194810. Ex nA nC IIC T3 Gc X AEx nA nC IIC T3 Gc |
| CE | European Union 2004/108/EC EMC Directive, compliant with: • 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) European Union 2011/65/EU RoHS, compliant with: • EN 50581; Technical Documentation |
| RCM | Australian Radiocommunications Act, compliant with: ACMA EMC Std 08 |
| Ex | European Union 94/9/EC ATEX Directive, compliant with: • EN 60079-0; General Requirements • EN 60079-15; Potentially Explosive Atmospheres, Protection "n" • II 3 G Ex nA nC IIC T3 Gc • DEMKO14ATEX1423X |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with: • Article 58-2 of Radio Waves Act, Clause 3 |
| EtherNet/IP | ODVA conformance tested to EtherNet/IP specifications |

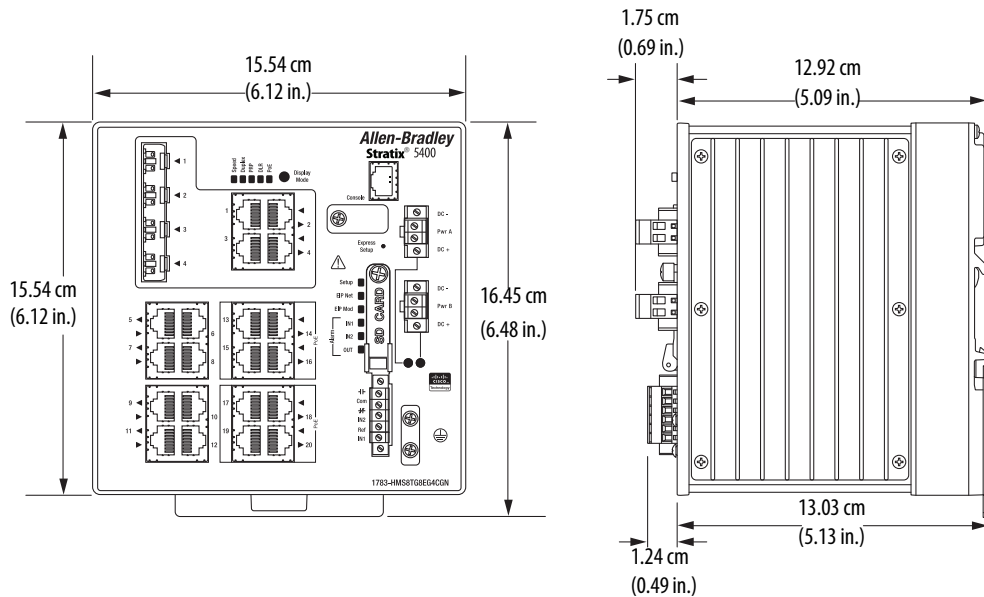
(1) See the Product Certification link at <http://www.ab.com> for declarations of conformity, certificates, and other certification details.

Dimensions—Stratix 5400 Switches

To prevent the switch from overheating, observe the following minimum clearances:

- Top and bottom: 50.8 mm (2.0 in.)
- Sides: 50.8 mm (2.0 in.)
- Front: 50.8 mm (2.0 in.)

These diagrams are representative of the Stratix 5400 switches. Actual faceplates vary depending on the catalog number.



Stratix 5410 Ethernet Managed Switches

| Cat. No. | Total Ports | (PoE/PoE+) | SFP Slots ⁽²⁾ | Firmware Type | CIP Sync (IEEE 1588) | NAT | Power supply ⁽³⁾ | Conformal Coating |
|--|-------------|------------|--------------------------|---------------|----------------------|---------------|-----------------------------|-------------------|
| 1783-IMS28GNDC | 28 | 12 GE | 12 GE + 4 GE only | Layer 2 | Yes | Yes | Low DC | — |
| 1783-IMS28GNAC | 28 | 12 GE | 12 GE + 4 GE only | Layer 2 | Yes | Yes | AC/High DC | — |
| 1783-IMS28NDC | 28 | 12 GE | 12 GE + 4 TEN | Layer 2 | Yes | Yes | Low DC | Yes |
| 1783-IMS28NAC | 28 | 12 GE | 12 GE + 4 TEN | Layer 2 | Yes | Yes | AC/High DC | Yes |
| 1783-IMS28GRDC | 28 | 12 GE | 12 GE + 4 GE only | Layer 3 | Yes | Yes | Low DC | — |
| 1783-IMS28GRAC | 28 | 12 GE | 12 GE + 4 GE only | Layer 3 | Yes | Yes | AC/High DC | — |
| 1783-IMS28RDC | 28 | 12 GE | 12 GE + 4 TEN | Layer 3 | Yes | Yes (Layer 2) | Low DC | Yes |
| 1783-IMS28RAC | 28 | 12 GE | 12 GE + 4 TEN | Layer 3 | Yes | Yes (Layer 2) | AC/High DC | Yes |
| Optional Power Supplies⁽¹⁾ | | | | | | | | |
| 1783-IMXDC | Low DC | | | | | | | |
| 1783-IMXAC | AC/High DC | | | | | | | |

(1) The switch supports an optional second power supply of any voltage type to provide redundancy and additional power for PoE devices. One power supply provides 60 W for PoE/PoE+. Two power supplies provide 185 W for PoE/PoE+.

(2) GE = 100 Megabit/1 Gigabit Ethernet; GE only = 1 Gigabit Ethernet; TEN = 1/10 Gigabit Ethernet

(3) One power supply ships pre-installed in each Stratix 5410 switch.

Table 16 - Technical Specifications - Stratix 5410 Switches

| Attribute | 1783-IMS28NDC, 1783-IMS28RDC, 1783-IMS28GNDC, 1783-IMS28GRDC | 1783-IMS28NAC, 1783-IMS28RAC, 1783-IMS28GNAC, 1783-IMS28GRAC |
|----------------------------------|--|---|
| Alarm relay | 30V DC, 1 A or 48V DC, 0.5 A | |
| Power input | 24...60V DC, 10 A | 100...240V AC, 2 A, 50...60 Hz (per slot) or 100...250V DC, 2 A (per slot) |
| PoE output | 54V DC, 15.4 W max | |
| PoE+ output ⁽¹⁾ | 54V DC, 30 W max | |
| Power consumption ⁽²⁾ | <p>One power supply installed:</p> <p>No PoE ports on: 74 W @ 24V DC @ 40°C (104°F), 76 W max</p> <p>4 PoE ports on, 148 W max: 145 W @ 24V DC @ 40°C (104°F)</p> <p>Two power supplies installed:</p> <p>PoE power consumption alone (12 ports PoE): 210 W @ 24V DC @ 40°C (104°F); 215 W max</p> <p>Complete system power, including 12 ports PoE: 291 W max</p> | <p>One power supply installed:</p> <p>No PoE ports on: 74 W @ 120V,60Hz / 230V, 50Hz AC @ 40°C (104°F), 76W max</p> <p>4 PoE ports on, 148 W max: 145W @ 120V,60Hz / 230V, 50Hz AC @ 40°C (104°F)</p> <p>Two power supplies installed:</p> <p>PoE power consumption alone (12 ports PoE): 210 W@120V, 60Hz/230V, 50 Hz AC @ 40°C (104°F); 215 W max</p> <p>Complete system power, including 12 ports PoE: 291 W max</p> |
| Power dissipation | 100 W | |
| Isolation voltage | <p>60V (continuous), basic insulation type</p> <p>Type tested at 3000 V DC for 60 s</p> <p>AC input power to alarm output</p> <p>AC input power to Ethernet ports</p> <p>AC input power to console port</p> <p>AC input power to ground</p> | |

Table 16 - Technical Specifications - Stratix 5410 Switches (continued)

| Attribute | 1783-IMS28NDC, 1783-IMS28RDC, 1783-IMS28GNDC, 1783-IMS28GRDC | 1783-IMS28NAC, 1783-IMS28RAC, 1783-IMS28GNAC, 1783-IMS28GRAC |
|---|--|---|
| Wire size, Ethernet connection | RJ45 connector according to IEC 60603-7, 2 or 4 pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 | |
| Wire size, ground connection | 13.3 mm ² (6 AWG) solid or stranded copper wire | |
| Wire size, alarm connection | Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 | |
| Wire size, power supply | 3.3mm ² (12 AWG) twisted-pair copper wire | 1.3mm ² (16 AWG) twisted-pair copper wire |
| Wiring category ⁽³⁾ | 3 - on console ports 2 - on power and alarm ports 2 - on Ethernet ports | |
| Wire type | Copper | |
| Pilot duty rating | Alarm not rated | |
| North American temp code | T4 | |
| ATEX temp code | T4 | |
| Screw torque, power supply mount | 0.904... 1.13 N•m (8... 10 in•lb) | |
| Screw torque, power terminal | 0.96 N•m (± 0.06 N•m) or 8.5 in•lb (± 0.5 in•lb) | |
| Screw torque, ground terminal | 3.39 N•m (± 0.23 N•m) or 30 in•lb (± 2 in•lb) | |
| Weight, approx, switch with power supply, power supply blank, and SD card | 7.30 kg (16.1 lb) | |
| Weight, approx, power supply only | 1.179 kg (2.6 lb) | |
| Weight, approx, accessory kit | 0.18 kg (0.4 lb) | |
| Enclosure type rating | None (open-style) | |
| SFP modules ⁽⁴⁾ | 1783-SFP100FX 1783-SFP100LX 1783-SFP100EXC 1783-SFP100ZXC 1783-SFP100T ⁽⁵⁾ 1783-SFP1GSX 1783-SFP1GLX 1783-SFP1GEXE 1783-SFP1GZX 1783-SFP10GSRE 1783-SFP10GLRE 1783-SFP1GTE | |
| Memory card replacement | 1784-SD1 | |

(1) A second power supply is required to support PoE+.

(2) For PoE configurations, the power consumption values listed represent the highest values that can be configured using all ports. A general guideline is 0.5 W per 30 W PoE+ port used.

(3) Use this conductor category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).(4) SFP modules are supported only on switches with combo ports or SFP slots. For SFP specifications, see [page 69](#).

(5) The 1783-SFP100T module requires Stratix 5410 firmware revision 3.001 or later.

Table 17 - Environmental Specifications - Stratix 5410 Switches

| Attribute | Stratix 5410 Switches |
|--|--|
| 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) | -40...+60 °C (-40...+140 °F) |
| Temperature, ambient, max | 60 °C (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 IEC 60068-2-6 (Test Fc, Operating) | 1 g @ 5...150 Hz |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 15 g |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g |
| Emissions IEC 61000-6-4 | IEC 61000-6-4 |
| ESD immunity IEC 61000-4-2 | 6 kV contact discharges 8 kV air discharges |
| Magnetic field immunity IEC 61000-4-8 | 30 A/m long duration and 300 A/m short duration at 50 Hz and 60 Hz |
| 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 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 1V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz |
| EFT/B immunity IEC 61000-4-4 | ±2 kV at 5 kHz on power ports ±2 kV at 5 kHz on signal ports ±2 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 ±500V line-line(DM) and ±1 kV line-earth(CM) on signal 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 |
| Voltage variation IEC 61000-4-11 | 30% dips for 10 ms and 500 ms on AC supply ports 60% dips for 100 ms, 200 ms, and 1 s on AC supply ports 100% dips for 10 ms and 5 s on AC supply ports |
| Damped oscillatory wave immunity IEC 61000-4-18 | ±500V line-line(DM) and ±1 kV line-earth (CM) on signal ports ±1 kV line-line(DM) and ±2.5 kV line-earth (CM) on power ports ±500V line-earth(CM) on communication ports |
| Environmental rating | IP30 |

Table 18 - Certifications - Stratix 5410 Switches

| Certifications (when product is marked) ⁽¹⁾ | Stratix 5410 Switches |
|---|---|
| c-UL-us | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. UL Listed for Class I, Zone 2 Hazardous Locations, certified for U.S. and Canada. See UL File E194810. <ul style="list-style-type: none"> • Class 1, Zone 2, Ex nA nC IIC T4 Gc X • Class 1, Zone 2, AEx nA nC IIC T4 Gc |
| CE | European Union 1999/5/EC R&TTE Directive, compliant with: <ul style="list-style-type: none"> • EN 61000-6-2; Industrial Immunity • EN 61000-6-4; Industrial Emissions • EN 300 440-2 V1.4.1; ERM, SRD • EN 301 489-1 V1.9.2; ERM, EMC • EN 301 489-3 V1.6.1; ERM, EMC, SRD • EN 60950-1; Information Technology Equipment European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> • EN 50581; Technical Documentation |
| RCM | Australian Radiocommunications Act, compliant with: EN 61000-6-4; Industrial Emissions |
| Ex | European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN 60079-0; General Requirements • EN 60079-15; Potentially Explosive Atmospheres, Protection "n" • Ex nA nC IIC T4 Gc • DEMKO15ATEX1492X |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3 |
| EtherNet/IP | ODVA conformance tested to EtherNet/IP specifications |
| RED | Hereby, Rockwell Automation declares that the radio equipment type Stratix 5410 is in compliance with Directive 2014/53/EU. The full text of the EU Declaration of Conformity is available at the following internet address: www.rockwellautomation.com |

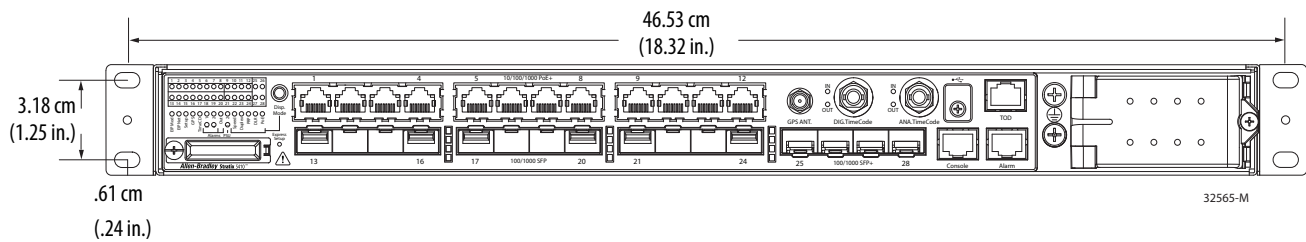
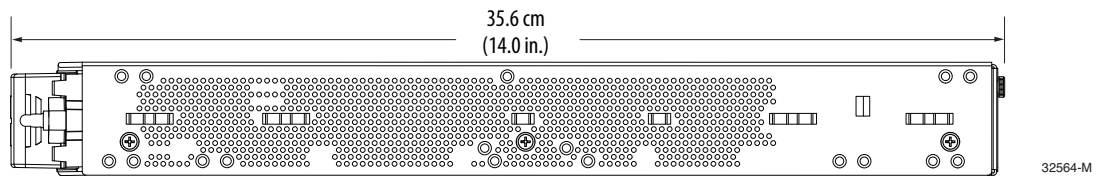
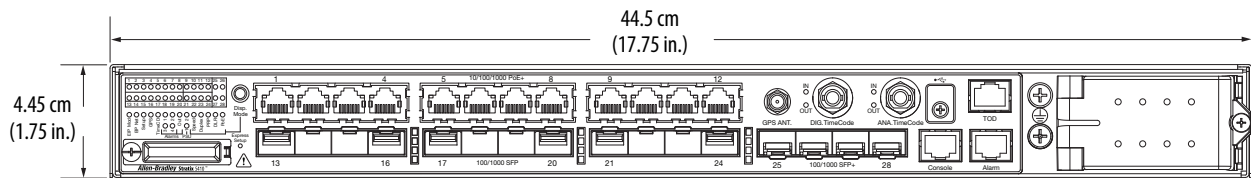
(1) See the Product Certification link at <http://www.ab.com> for declarations of conformity, certificates, and other certification details.

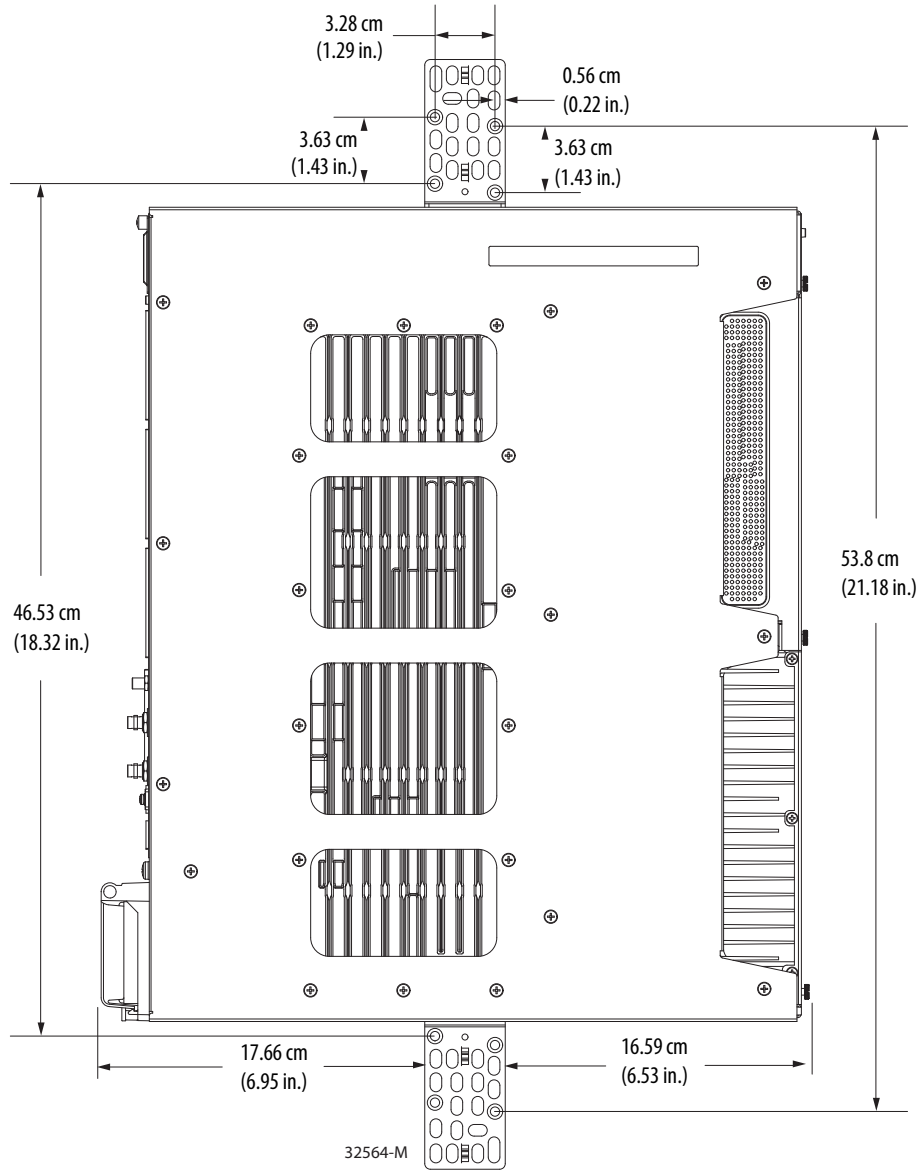
Dimensions—Stratix 5410 Switches

To prevent the switch from overheating, observe the following minimum clearances:

- Top and bottom: 44.45 mm (1.75 in.)
- Sides: 50.8 mm (2.0 in.)
- Front: 50.8 mm (2.0 in.)

These diagrams are representative of the Stratix 5410 switches. Actual faceplates vary depending on the catalog number.





Stratix 5700 Ethernet Managed Switches

| Cat. No. | Total Ports | RJ45 Ports ⁽¹⁾ | Combo Ports | (PoE/PoE+) | SFP Slots | Firmware Type | CIP Sync (IEEE 1588) | NAT | DLR | Conformal Coating |
|--------------------|-------------|---------------------------|-------------|------------|-------------|---------------|----------------------|-----|-----|-------------------|
| 1783-BMS4S2SGL | 6 | — | — | — | 4 FE + 2 GE | Lite | — | — | — | — |
| 1783-BMS4S2SGA | 6 | — | — | — | 4 FE + 2 GE | Full | — | — | — | — |
| 1783-BMS06SL | 6 | 4 FE | — | — | 2 FE | Lite | — | — | — | — |
| 1783-BMS06SA | 6 | 4 FE | — | — | 2 FE | Full | — | — | — | — |
| 1783-BMS06TL | 6 | 6 FE | — | — | — | Lite | — | — | — | — |
| 1783-BMS06TA | 6 | 6 FE | — | — | — | Full | — | — | — | — |
| 1783-BMS06SGL | 6 | 4 FE | — | — | 2 GE | Lite | — | — | — | — |
| 1783-BMS06SGA | 6 | 4 FE | — | — | 2 GE | Full | — | — | — | — |
| 1783-BMS06TGL | 6 | 4 FE + 2 GE | — | — | — | Lite | — | — | — | — |
| 1783-BMS06TGA | 6 | 4 FE + 2 GE | — | — | — | Full | — | — | — | — |
| 1783-BMS10CL | 10 | 8 FE | 2 FE | — | — | Lite | — | — | — | — |
| 1783-BMS10CA | 10 | 8 FE | 2 FE | — | — | Full | — | — | — | — |
| 1783-BMS10CGL | 10 | 8 FE | 2 GE | — | — | Lite | — | — | — | — |
| 1783-BMS10CGA | 10 | 8 FE | 2 GE | — | — | Full | — | — | — | — |
| 1783-BMS10CGP | 10 | 8 FE | 2 GE | — | — | Full | Yes | — | Yes | — |
| 1783-BMS10CGN | 10 | 8 FE | 2 GE | — | — | Full | Yes | Yes | Yes | — |
| 1783-BMS12T4E2CGL | 18 | 12 FE | 2 GE | 4 FE | — | Lite | — | — | Yes | — |
| 1783-BMS12T4E2CGP | 18 | 12 FE | 2 GE | 4 FE | — | Full | Yes | — | Yes | — |
| 1783-BMS12T4E2CGNK | 18 | 12 FE | 2 GE | 4 FE | — | Full | Yes | Yes | Yes | Yes |
| 1783-BMS20CL | 20 | 16 FE | 2 FE | — | 2 FE | Lite | — | — | Yes | — |
| 1783-BMS20CA | 20 | 16 FE | 2 FE | — | 2 FE | Full | — | — | Yes | — |
| 1783-BMS20CGL | 20 | 16 FE | 2 GE | — | 2 FE | Lite | — | — | Yes | — |
| 1783-BMS20CGP | 20 | 16 FE | 2 GE | — | 2 FE | Full | Yes | — | Yes | — |
| 1783-BMS20CGN | 20 | 16 FE | 2 GE | — | 2 FE | Full | Yes | Yes | Yes | — |
| 1783-BMS20CGPK | 20 | 16 FE | 2 GE | — | 2 FE | Full | Yes | — | Yes | Yes |

(1) FE = Fast Ethernet; GE = Gigabit Ethernet.

Table 19 - Technical Specifications - Stratix 5700 Switches

| Attribute | 1783-BMS06SL, 1783-BMS06SA, 1783-BMS06TL, 1783-BMS06TA, 1783-BMS06SGL, 1783-BMS06SGA, 1783-BMS06TGL, 1783-BMS06TGA | 1783-BMS10CL, 1783-BMS10CA, 1783-BMS10CGL, 1783-BMS10CGA | 1783-BMS10CGN, 1783-BMS10CGP | 1783-BMS20CL, 1783-BMS20CA, 1783-BMS20CGL, 1783-BMS20CGP, 1783-BMS20CGN, 1783-BMS20CGPK | 1783-BMS4S2SGL, 1783-BMS4S2SGA |
|---|---|---|--|--|--|
| Alarm relay | 1 A @ 30V DC or 0.5 A @ 48V DC | | | | |
| Power input | 0.5...2.0 A max @ 12...48V DC Class 2/SELV | | | 0.5...3.0 A max @ 12...48V DC Class 2/SELV | 0.5...2.0 A max @ 12...48V DC Class 2/SELV |
| Power consumption | 9.5 W @ 24V DC @ 40 °C (104 °F) 15 W max | 12.5 W @ 24V DC/ 40 °C (104 °F) 17 W max | 15 W @ 24V DC/ 40 °C (104 °F) 20 W max | 21 W @ 24V DC/40 °C (104 °F) 30 W max | 12.5 W @ 24V DC/40 °C (104 °F) 14 W max |
| Power dissipation | 15 W | 17 W | 20 W | 30 W | 14 W |
| Isolation voltage | 50V (continuous), basic insulation type, DC power ports to ground, DC power ports to Ethernet ports, and DC power ports to alarm ports No isolation between individual Ethernet ports No isolation between console port and system Type tested at 850V DC for 60 s | | | | 60V (continuous), basic insulation type, DC power ports to ground, alarm ports to ground, and DC power ports to alarm ports No isolation between console port and system Type tested at 707V DC for 60 s |
| Wire size, Ethernet connection ⁽¹⁾ | RJ45 connector according to IEC 60603-7, 2- or 4-pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 | | | | — |
| Wire size, DC power connection | 0.5...0.8 mm ² (20...18 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max, 6.3 mm (0.25 in.) ±0.5 mm (0.02 in.) strip length | | | | |
| Wire size, alarm connection | 0.5...0.8 mm ² (20...18 AWG) solid or stranded, UL/CSA-rated style 1007 or 1569 twisted-pair copper appliance wiring material (AWM) wire, 6.3 mm (0.25 in.) ±0.5 mm (0.02 in.) strip length | | | | |
| Wire size, ground connection | 4.0 mm ² (12 AWG) min, stranded copper wire | | | | |
| Screw torque, power and alarm terminals | 0.23 N•m (2.0 in•lb) | | | | 0.23 N•m (2.0 in•lb) |
| Screw torque, ground terminal, max | 0.96 N•m (8.5 in•lb) | | | | 0.4 N•m (3.5 in•lb) |
| Weight, approx | 1.11 kg (2.45 lb) | 1.25 kg (2.75 lb) | 1.38 kg (3.05 lb) | 2.04 kg (4.50 lb) | 1.22 kg (2.69 lb) |
| Wiring category ⁽²⁾ | 3 - on console and alarm ports 2 - on DC power ports 2 - on Ethernet ports | | | | 3 - on console ports 2 - on DC power and alarm ports |
| Enclosure type rating | None (open-style) | | | | |
| Pilot duty rating | Alarm not rated | | | | |
| North American temp code | T4 | | | | |
| IEC temp code | T4 | | | | |

Table 19 - Technical Specifications - Stratix 5700 Switches (continued)

| Attribute | 1783-BMS06SL, 1783-BMS06SA, 1783-BMS06TL, 1783-BMS06TA, 1783-BMS06SGL, 1783-BMS06SGA, 1783-BMS06TGL, 1783-BMS06TGA | 1783-BMS10CL, 1783-BMS10CA, 1783-BMS10CGL, 1783-BMS10CGA | 1783-BMS10CGN, 1783-BMS10CGP | 1783-BMS20CL, 1783-BMS20CA, 1783-BMS20CGL, 1783-BMS20CGP, 1783-BMS20CGN, 1783-BMS20CGPK | 1783-BMS4S2SGL, 1783-BMS4S2SGA |
|----------------------------|---|---|---------------------------------|--|--------------------------------|
| SFP modules ⁽³⁾ | 1783-SFP100FX 1783-SFP100LX 1783-SFP100EXC 1783-SFP100ZXC 1783-SFP100T ⁽⁴⁾ 1783-SFP1GSX ⁽⁵⁾ 1783-SFP1GLX ⁽⁵⁾ 1783-SFP1GEXE ⁽⁵⁾ 1783-SFP1GZX ⁽⁵⁾ 1783-SFP1GTE ⁽⁵⁾ | | | | |
| Memory card | 1784-SD1 | | | | |
| Industry standards | Substation KEMA (IEEE 1613, IEC 61850 - 3) IEEE 1613 Electric Power Stations Communications Networking IEC 61850-3 Electric Substations Communications Networking | | | | |

(1) See [page 71](#) for recommended products.(2) Use this conductor category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).(3) SFP modules are supported only on switches with combo ports or SFP slots. For SFP specifications, see [page 69](#).

(4) The 1783-SFP100T module requires Stratix 5700 firmware revision 8.001 or later.

(5) Gigabit Ethernet (GE) SFP modules work only in GE SFP slots. For a list of Stratix 5700 catalog numbers with GE SFP slots, see [page 31](#).**Table 20 - Environmental Specifications - Stratix 5700 Switches**

| Attribute | 1783-BMS06SL, 1783-BMS06SA, 1783-BMS06TL, 1783-BMS06TA, 1783-BMS06SGL, 1783-BMS06SGA, 1783-BMS06TGL, 1783-BMS06TGA, 1783-BMS10CL, 1783-BMS10CA, 1783-BMS10CGL, 1783-BMS10CGA, 1783-BMS10CGN, 1783-BMS10CGP, 1783-BMS20CL, 1783-BMS20CA, 1783-BMS20CGL, 1783-BMS20CGP, 1783-BMS20CGN, 1783-BMS20CGPK | 1783-BMS4S2SGL, 1783-BMS4S2SGA |
|--|---|--------------------------------|
| 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) | -40...+60 °C (-40...+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 IEC 60068-2-6 (Test Fc, Operating) | 2 g @ 10...500 Hz | |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g | |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 55 g | 50 g |

Table 20 - Environmental Specifications - Stratix 5700 Switches (continued)

| | | |
|--|--|---|
| Attribute | 1783-BMS06SL, 1783-BMS06SA, 1783-BMS06TL, 1783-BMS06TA, 1783-BMS06SGL, 1783-BMS06SGA, 1783-BMS06TGL, 1783-BMS06TGA, 1783-BMS10CL, 1783-BMS10CA, 1783-BMS10CGL, 1783-BMS10CGA, 1783-BMS10CGN, 1783-BMS10CGP, 1783-BMS20CL, 1783-BMS20CA, 1783-BMS20CGL, 1783-BMS20CGP, 1783-BMS20CGN, 1783-BMS20CGPK | 1783-BMS4S2SGL, 1783-BMS4S2SGA |
| Emissions CISPR11 (IEC 61000-6-4) | Class A | |
| ESD immunity IEC 61000-4-2 | 8 kV contact discharges 15 kV air discharges | 6 kV contact discharges 8 kV air discharges |
| Radiated RF immunity IEC 61000-4-3 | 20V/m with 1 kHz sine-wave 80% AM from 80...1000 MHz 20V/m with 200 Hz 50% pulse 100% AM at 900 MHz 10V/m with 1 kHz sine-wave 80% AM from 1000...2700 MHz | 20V/m with 1 kHz sine-wave 80% AM from 80...2000 MHz 10V/m with 200 Hz 50% pulse 100% AM at 900 MHz 10V/m with 200 Hz 50% pulse 100% AM at 1890 MHz 20V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz |
| EFT/B immunity IEC 61000-4-4 | ±4 kV at 5 kHz and ±2 kV at 100 kHz on DC power ports ±4 kV at 2.5 kHz, ±2 kV at 5 kHz, and ±1 kV at 100 kHz on alarm ports ±4 kV at 2.5 kHz, ±2 kV at 5 kHz, and ±1 kV at 100 kHz on Ethernet ports | ±4 kV at 2.5, 5, and 100 kHz on DC power ports ±4 kV at 2.5, 5, and 100 kHz on alarm ports |
| Surge transient immunity IEC 61000-4-5 | ±1 kV line-line (DM) and ±2 kV line-earth (CM) on DC power ports ±2 kV line-earth (CM) on Ethernet ports | ±1 kV line-line (DM) and ±2 kV line-earth (CM) on DC power ports ±1 kV line-line (DM) and ±2 kV line-earth (CM) on alarm ports |
| Conducted RF immunity IEC 61000-4-6 | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz | |
| Magnetic field immunity IEC 61000-4-8 | — | 300A/m long duration at 50 and 60 Hz 1000A/m short duration at 50 and 60 Hz |
| Magnetic pulse immunity IEC 61000-4-9 | — | 300A/m pulse |
| Voltage variation IEC 61000-4-29 | 10 ms interruption on DC power ports | |
| Damped oscillatory wave immunity IEC 61000-4-18 | ±1 kV line-line (DM) and ±2.5 kV line-earth (CM) on power ports | ±1 kV line-line (DM) and ±2.5 kV line-earth (CM) on DC power ports at 1 MHz and 100 kHz ±1 kV line-line (DM) and ±2.5 kV line-earth (CM) on alarm ports at 1 MHz and 100 kHz |
| Environmental rating | IP30 | |

Stratix 5700 Power over Ethernet Switches

Table 21 - Technical Specifications - Stratix 5700 Power over Ethernet Switches

| Attribute | 1783-BMS12T4E2CGL, 1783-BMS12T4E2CGP, 1783-BMS12T4E2CGNK |
|---|---|
| Ethernet data rate | 10/100 Mbps |
| Alarm relay | 30V DC, 1 A or 48V DC, 0.5 A |
| Power input | 12...48V DC, 0.5...3.0 A max, Class 2/SELV |
| Power over Ethernet input power | 48V DC for PoE; 54V DC for PoE+ or a combination of PoE and PoE+ |
| Power consumption ⁽¹⁾ | 15 W @ 24V DC 40 °C (104 °F), 30 W max |
| Power dissipation | 30 W |
| Isolation voltage | 60V (continuous), basic insulation type, DC power ports to ground, and PoE power ports to ground No isolation between individual Ethernet ports No isolation between PoE power and Ethernet ports No isolation between console port and system Type tested at 1585V DC for 60 s |
| Wire size, Ethernet connection ⁽²⁾ | RJ45 connector according to IEC 60603-7, 2- or 4-pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 |
| Wire size, DC power connection | 0.5...0.8 mm ² (20...18 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max, 6.3 mm (0.25 in.) ±0.5 mm (0.02 in.) strip length |
| Wire size, alarm connection | 0.5...0.8 mm ² (20...18 AWG) solid or stranded, UL/CSA-rated style 1007 or 1569 twisted-pair copper appliance wiring material (AWM) wire, 6.3 mm (0.25 in.) ±0.5 mm (0.02 in.) strip length |
| Wire size, ground connection | 4.0 mm ² (12 AWG) min, stranded copper wire |
| Screw torque, power and alarm terminals | 0.23 N·m (2.0 in·lb) |
| Screw torque, ground terminals, max | 0.96 N·m (8.5 in·lb) |
| Weight, approx | 1.11 kg (2.45 lb) |
| Wiring category ⁽³⁾ | 3 - on console and alarm ports 2 - on DC power ports 2 - on Ethernet ports |
| Pilot duty rating | Alarm not rated |
| Enclosure type rating | None (open-style) |
| North American temp code | T4 |
| IEC temp code | T4 |
| SFP modules ⁽⁴⁾ | 1783-SFP100FX 1783-SFP100LX 1783-SFP100EXC 1783-SFP100ZXC 1783-SFP100T ⁽⁵⁾ 1783-SFP1GSX ⁽⁶⁾ 1783-SFP1GLX ⁽⁶⁾ 1783-SFP1GEXE ⁽⁶⁾ 1783-SFP1GZX ⁽⁶⁾ 1783-SFP1GTE ⁽⁶⁾ |
| Memory card | 1784-SD1 |
| Industry standards | Substation KEMA (IEEE 1613, IEC 61850 - 3) IEEE 1613 Electric Power Stations Communications Networking IEC 61850-3 Electric Substations Communications Networking |

(1) For PoE configurations, the power consumption values listed represent the highest values that can be configured using all ports. A general guideline is 0.5 W per 30 W PoE+ port used.

(2) See [page 71](#) for recommended products.

(3) Use this conductor category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

(4) SFP modules are supported only on switches with combo ports or SFP slots. For SFP specifications, see [page 69](#).

(5) The 1783-SFP100T module requires Stratix 5700 firmware revision 8.001 or later.

(6) Gigabit Ethernet (GE) SFP modules work only in GE SFP slots. For a list of Stratix 5700 catalog numbers with GE SFP slots, see [page 31](#).

Table 22 - Environmental Specifications - Stratix 5700 Power over Ethernet Switches

| Attribute | 1783-BMS12T4E2CGL, 1783-BMS12T4E2CGP, 1783-BMS12T4E2CGNK |
|--|--|
| 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) | -40...+60 °C (-40...+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 IEC 60068-2-6 (Test Fc, Operating) | 2 g @ 10...500 Hz |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 50 g |
| Emissions CISPR11 (IEC 61000-6-4) | Class A |
| ESD immunity IEC 61000-4-2 | 6 kV contact discharges 8 kV air discharges |
| 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 MHz 10V/m with 200 Hz 50% pulse 100% AM at 1890 MHz 1V/m with 1 kHz sine-wave 80% AM from 1000...2700 MHz |
| EFT/B immunity IEC 61000-4-4 | ±4 kV at 5 kHz on DC power ports ±4 kV at 5 kHz on alarm ports ±4 kV at 5 kHz on Ethernet ports |
| Surge transient immunity IEC 61000-4-5 | ±1 kV line-line (DM) and ±2 kV line-earth (CM) on DC power ports ±2 kV line-earth (CM) on Ethernet ports |
| Conducted RF immunity IEC 61000-4-6 | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz |
| Damped oscillatory wave immunity IEC 61000-4-18 | ±1 kV line-line (DM) and ±2.5 kV line-earth (CM) on power ports |

Table 23 - Certifications - Stratix 5700 Switches

| Certifications (when product is marked)⁽¹⁾ | Stratix 5700 Switches |
|--|---|
| c-UL-us | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. UL Listed for Class I, Zone 2 Hazardous Locations, certified for U.S. and Canada. See UL File E194810. AEx/Ex nA nC IIC T4 Gc X |
| CE | European Union 2004/108/EC EMC Directive, compliant with: <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) European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> • EN 50581; Technical Documentation |
| C-Tick | Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions |
| Ex | European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN 60079-15; Potentially Explosive Atmospheres, Protection "n" • EN 60079-0; General Requirements • II 3 G Ex nA nC IIC T4 Gc X |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3 |
| EtherNet/IP | ODVA conformance tested to EtherNet/IP specifications |

(1) See the Product Certification link at <http://www.ab.com> for declarations of conformity, certificates, and other certification details.

Dimensions—Stratix 5700 Switches

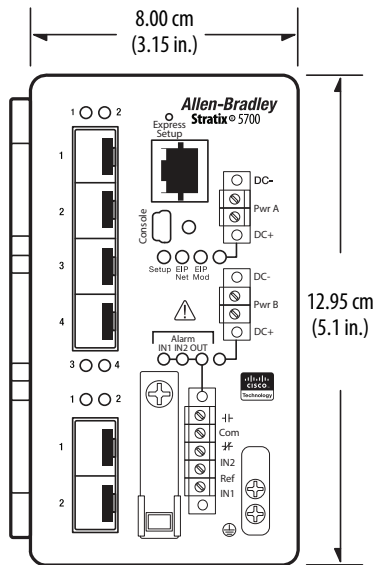
To prevent the switch from overheating, observe the following minimum clearances:

- Top and bottom: 50.8 mm (2.0 in.)
- Sides: 50.8 mm (2.0 in.)
- Front: 50.8 mm (2.0 in.)

These diagrams are representative of the Stratix 5700 switches. Actual faceplates vary depending on the catalog number.

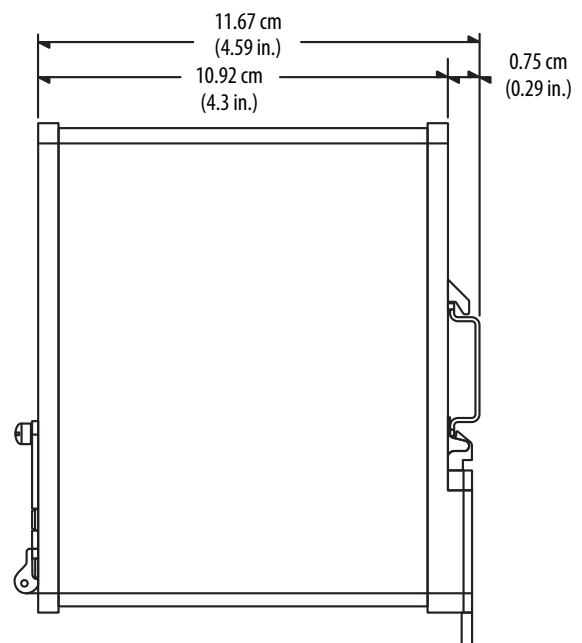
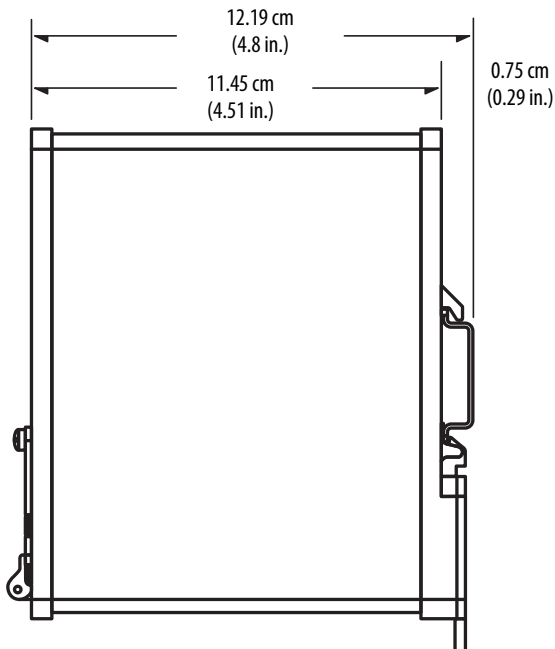
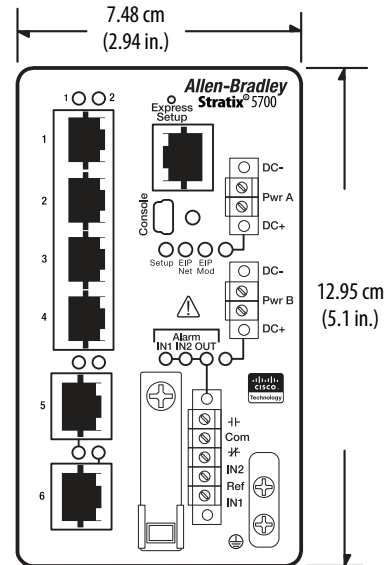
6 SFP-port Switches

1783-BMS4S2SGL, 1783-BMS4S2SGA



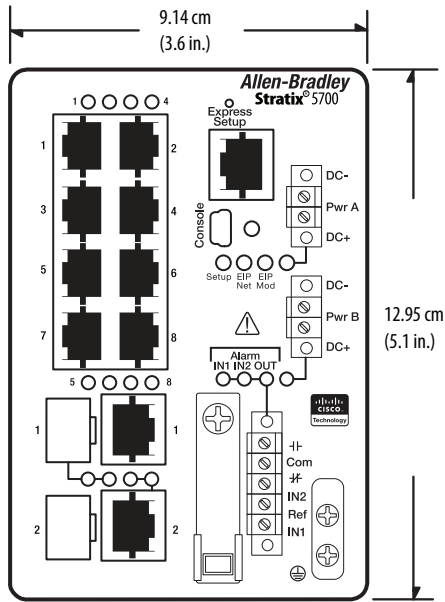
6-port Switches

1783-BMS06SL, 1783-BMS06SA, 1783-BMS06TL, 1783-BMS06TA,
1783-BMS06SGL, 1783-BMS06SGA, 1783-BMS06TGL, 1783-BMS06TGA



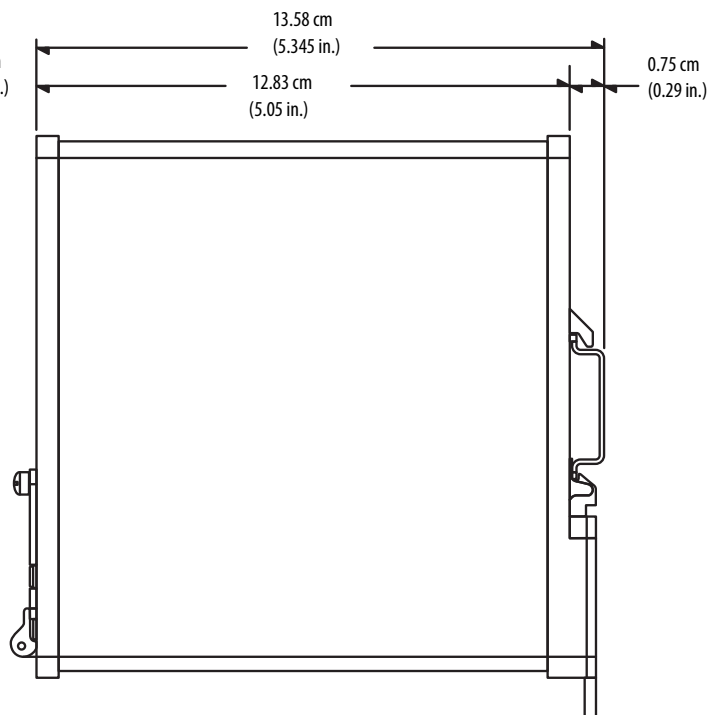
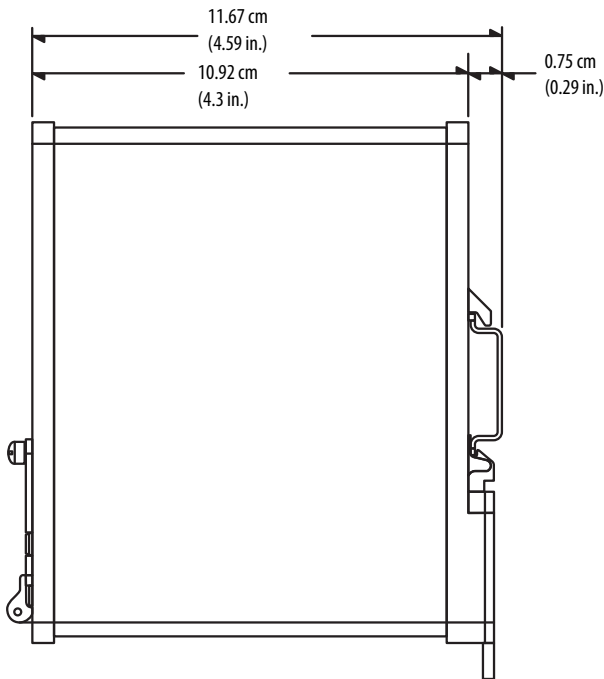
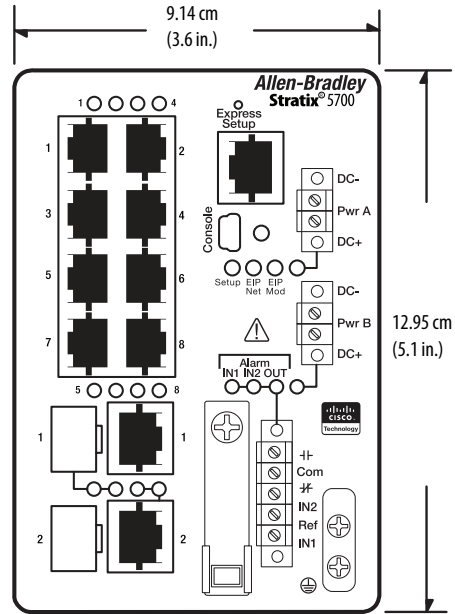
10-port Switches

1783-BMS10CL, 1783-BMS10CA,
1783-BMS10CGL, 1783-BMS10CGA



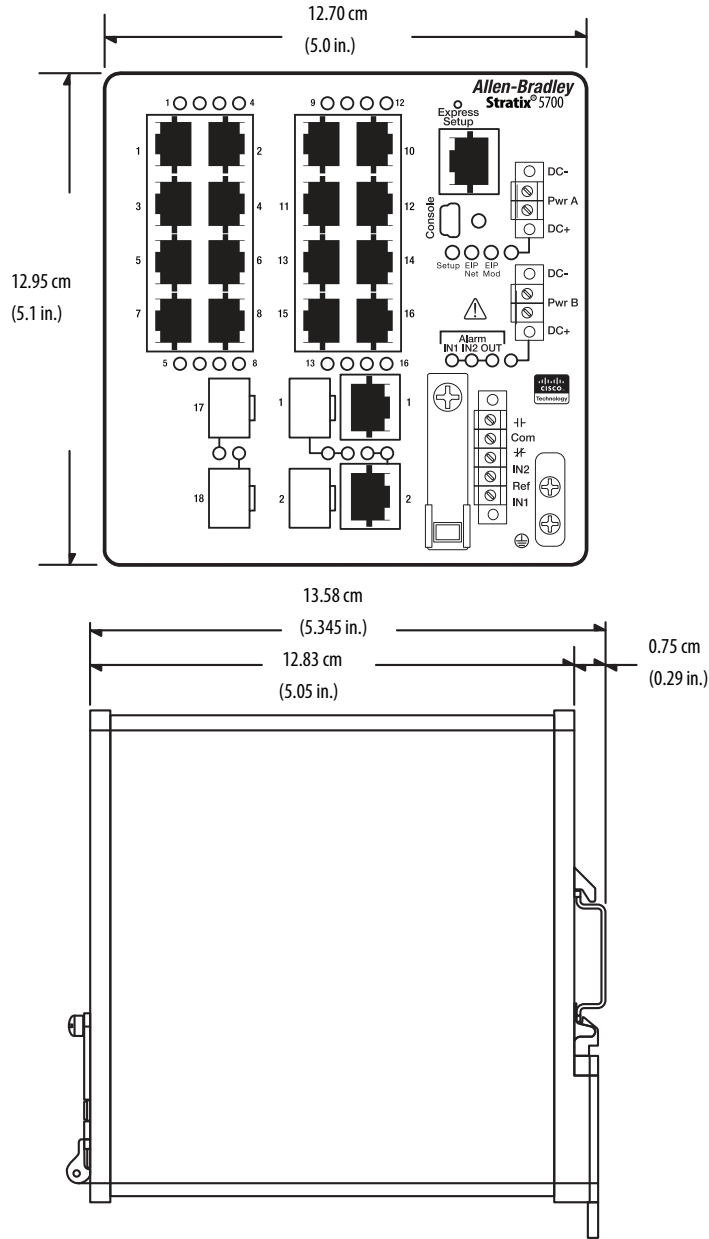
10-port Switch

1783-BMS10CGP, 1783-BMS10CGN



18-port and 20-port Switches

1783-BMS12T4E2CGNK, 1783-BMS12T4E2CGP, 1783-BMS12T4E2CGL, 1783-BMS20CL,
 1783-BMS20CA, 1783-BMS20CGL, 1783-BMS20CGP, 1783-BMS20CGN, 1783-BMS20CGPK



ArmorStratix 5700 Ethernet Managed Switches

| Cat. No. | Total Ports | M12 D-code Ports | M12 X-code Ports | PoE/PoE+ Ports | Firmware Type | CIP Sync (IEEE 1588) | NAT | DLR |
|------------------|-------------|------------------|------------------|----------------|---------------|----------------------|-----|-----|
| 1783-ZMS8TA | 8 | 8 FE | — | — | Full | — | — | — |
| 1783-ZMS4T4E2TGP | 10 | 4 FE | 2 GE | 4 FE | Full | Yes | — | Yes |
| 1783-ZMS4T4E2TGN | 10 | 4 FE | 2 GE | 4 FE | Full | Yes | Yes | Yes |
| 1783-ZMS16TA | 16 | 16 FE | — | — | Full | — | — | — |
| 1783-ZMS8T8E2TGP | 18 | 8 FE | 2 GE | 8 FE | Full | Yes | — | Yes |
| 1783-ZMS8T8E2TGN | 18 | 8 FE | 2 GE | 8 FE | Full | Yes | Yes | Yes |
| 1783-ZMS24TA | 24 | 24 FE | — | — | Full | — | — | — |

Table 24 - Technical Specifications - ArmorStratix 5700 Switches

| Attribute | 1783-ZMS8TA | 1783-ZMS16TA | 1783-ZMS24TA | 1783-ZMS4T4E2TGP, 1783-ZMS4T4E2TGN | 1783-ZMS8T8E2TGP, 1783-ZMS8T8E2TGN |
|---|---|---------------------------------------|---------------------------------------|--|---|
| Power input | 1.5 A max @ 12...48V DC | 1.8 A max @ 12...48V DC | 2.0 A max @ 12...48V DC | User supply (non PoE): 9.6...60V DC, 2.9 A max Alarm: 30V DC, 1 A or 48V DC, 0.5 A | User supply (non PoE): 9.6...60V DC, 3.3 A max Alarm: 30V DC, 1 A or 48V DC, 0.5 A |
| Power over Ethernet (PoE) input power | — | — | — | 44...57V DC (48V DC nom) for PoE 50...57V DC (54V DC nom) for PoE+ or a combination of PoE/PoE+ | |
| Power consumption ⁽¹⁾ | 7 W @ 24V DC @ 40°C (104°F) 17 W max | 10 W @ 24V DC @ 40°C (104°F) 20 W max | 12 W @ 24V DC @ 40°C (104°F) 22 W max | 11.5 W @ 24V DC @ 40°C (104°F) 22 W max Max PoE power @ 50V: 62 W | 17 W @ 24V DC @ 40°C (104°F) 30 W max Max PoE power @ 50V: 120 W |
| Power dissipation | 17 W | 20 W | 22 W | 21 W | 24 W |
| Isolation voltage | 60V (continuous), basic insulation type, DC power ports to ground, and PoE power ports to ground No isolation between individual Ethernet ports No isolation between PoE power and Ethernet ports No isolation between console port and system Type tested at 1570V DC for 60 s | | | | |
| Wire size, ground connection | 4.0 mm ² (12 AWG) min, stranded copper wire | | | | |
| Wire size, Ethernet connection ⁽²⁾ | IP67-rated M12 D-code or X-code connectors according to ODVA EtherNet/IP specifications and ISO/IEC 24702/61918 | | | | |
| Screw torque, ground terminal, max | 1.13 N•m (10.0 in•lb) | | | | |
| Weight, approx | 3 kg (7.19 lb) | 3 kg (7.28 lb) | 4 kg (8.86 lb) | 3 kg (7.19 lb) | 3 kg (7.28 lb) |
| Wiring category ⁽³⁾ | 3 - on console 2 - on DC power ports 2 - on Ethernet ports | | | 3 - on console 2 - on DC power and alarm ports 2 - on Ethernet ports | |
| Pilot duty rating | — | — | — | Alarm not rated | |
| Enclosure type rating | Meets IP66, IP67, and Type 4 | | | | |
| Industry standards | Substation KEMA (IEEE 1613, IEC 61850 - 3) IEEE 1613 Electric Power Stations Communications Networking IEC 61850-3 Electric Substations Communications Networking | | | | |

(1) For PoE configurations, the power consumption values listed represent the highest values that can be configured using all ports. A general guideline is 0.5 W per 30 W PoE+ port used.

(2) See [page 71](#) for recommended products.

(3) Use this conductor category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

Table 25 - Environmental Specifications - ArmorStratix 5700 Switches

| Attribute | 1783-ZMS8TA, 1783-ZMS16TA, 1783-ZMS24TA | 1783-ZMS4T4E2TGP, 1783-ZMS8T8E2TGP, 1783-ZMS4T4E2TGN, 1783-ZMS8T8E2TGN |
|--|---|--|
| 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) | -40...+60 °C (-40...+140 °F) | |
| Temperature, ambient, 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 IEC 60068-2-6 (Test Fc, Operating) | 2 g @ 10...500 Hz | |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 15 g | |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g | |
| Emissions CISPR11 (IEC 61000-6-4) | Class A | |
| ESD immunity IEC 61000-4-2 | 8 kV contact discharges 15 kV air discharges | |
| Radiated RF immunity IEC 61000-4-3 | 20V/m with 1 kHz sine-wave 80% AM from 80...2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 20V/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 DC power ports ±4 kV at 5 kHz on Ethernet ports | ±4 kV at 5 kHz on DC power ports ±4 kV at 5 kHz on Ethernet ports ±4 kV at 5 kHz on alarm ports |
| Surge transient immunity IEC 61000-4-5 | ±1 kV line-line (DM) and ±2 kV line-earth (CM) on DC power ports ±4 kV line-earth (CM) on Ethernet ports | ±1 kV line-line (DM) and ±2 kV line-earth (CM) on DC power ports ±4 kV line-earth (CM) on Ethernet ports ±1 kV line-line (DM) and ±2 kV line-earth (CM) on alarm ports |
| Conducted RF immunity IEC 61000-4-6 | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz | |
| Magnetic field immunity IEC 6100-4-8 | 300 A/m long duration and 1000 A/m short duration at 50 Hz and 60 Hz | |
| Magnetic pulse immunity IEC 6100-4-9 | 300 A/m pulse | |
| Damped oscillatory wave immunity IEC 61000-4-18 | ±1 kV line-line (DM) and ±2.5 kV line-earth (CM) on DC power ports ±2.5 kV line-earth (CM) on Ethernet ports | ±1 kV line-line (DM) and ±2.5 kV line-earth (CM) on DC power and alarm ports ±2.5 kV line-earth (CM) on Ethernet ports |
| Environmental rating | IP66, IP67 | |

Table 26 - Certifications—ArmorStratix 5700 Switches

| Certifications (when product is marked)⁽¹⁾ | 1783-ZMS8TA, 1783-ZMS16TA, 1783-ZMS24TA | 1783-ZMS4T4E2TGP, 1783-ZMS8T8E2TGP, 1783-ZMS4T4E2TGN, 1783-ZMS8T8E2TGN |
|--|---|---|
| c-UL-us | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. | |
| CE | European Union 2004/108/EC EMC Directive, compliant with: <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) European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> • EN 50581; Technical Documentation | |
| RCM | Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> • EN 61000-6-4; Industrial Emissions | |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3 | |
| EtherNet/IP | ODVA conformance tested to EtherNet/IP specifications | |

(1) See the Product Certification link at <http://www.ab.com> for declarations of conformity, certificates, and other certification details.

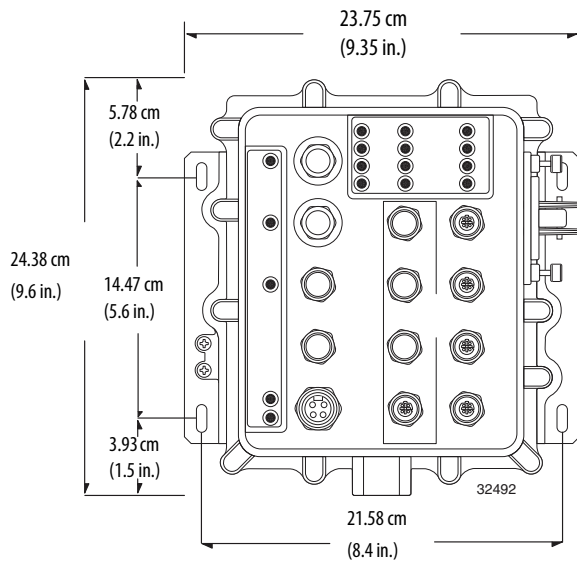
Dimensions—ArmorStratix 5700 Switches

To prevent the switch from overheating, observe the following minimum clearances:

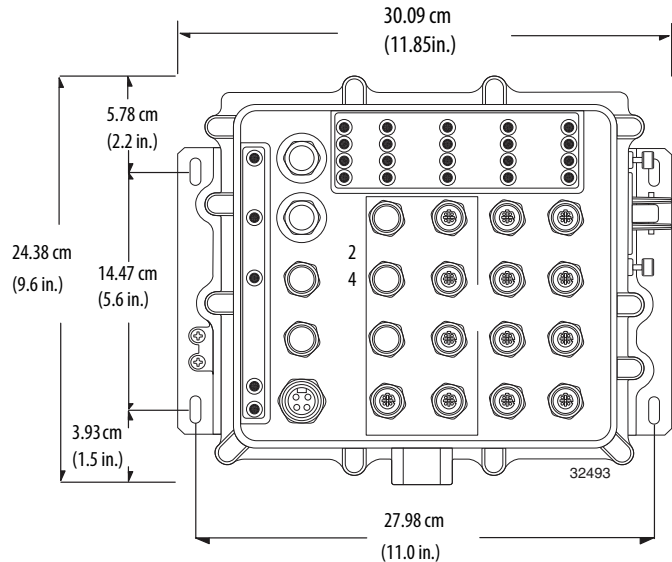
- Top and bottom: 50.8 mm (2.0 in.)
- Sides: 50.8 mm (2.0 in.)
- Front: 50.8 mm (2.0 in.)

These diagrams are representative of the ArmorStratix 5700 switches. Actual faceplates vary depending on the catalog number.

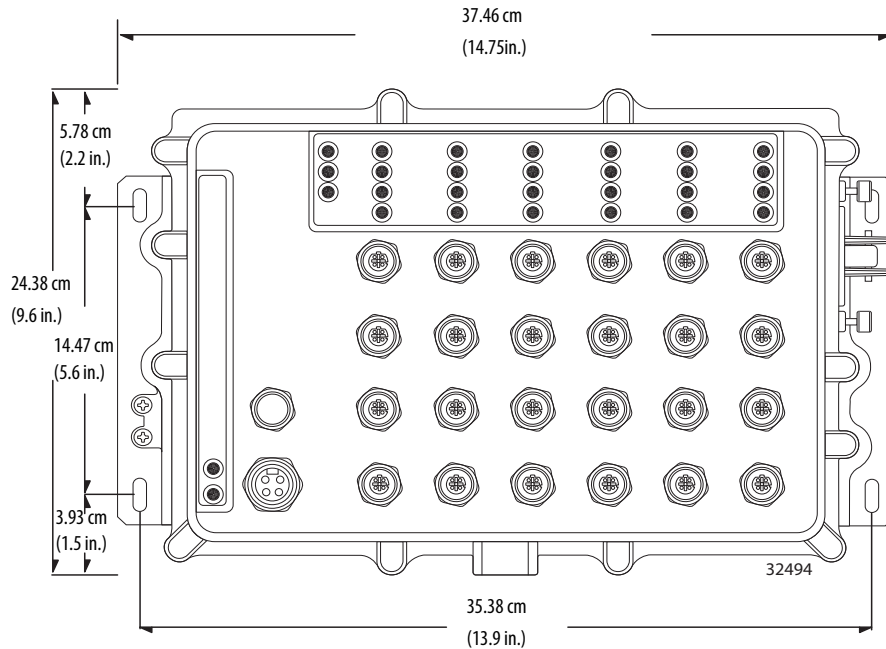
8-port and 10-port Switches
1783-ZMS8TA, 1783-ZMS4T4E2TGP, 1783-ZMS4T4E2TGN



16-port and 18-port Switches
1783-ZMS16TA, 1783-ZMS8T8E2TGP, 1783-ZMS8T8E2TGN

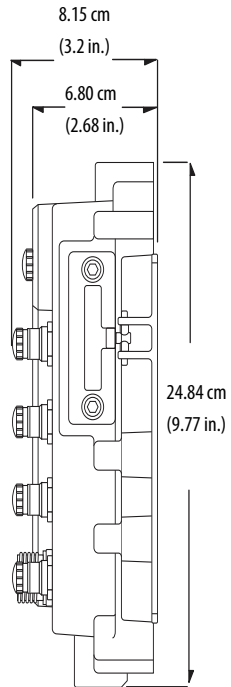


24-port Switch
1783-ZMS24TA



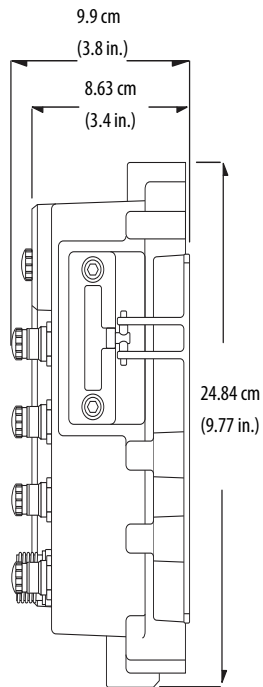
16-port and 24-port Switches

1783-ZMS16TA, 1783-ZMS24TA,
1783-ZMS8T8E2TGP, 1783-ZMS8T8E2TGN



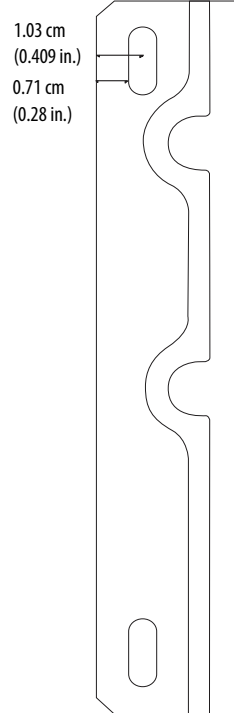
8-port and 10-port Switches

1783-ZMS8TA, 1783-ZMS4T4E2TGP,
1783-ZMS4T4E2TGN



32496

All Switches



Stratix 6000 Ethernet Managed Switches

Table 27 - Technical Specifications - Stratix 6000 Switches

| Attribute | 1783-EMS08T | 1783-EMS04T |
|---|---|---|
| Description | Stratix 6000 managed switch <ul style="list-style-type: none"> • 8 ports • 1 fiber SFP slot | Stratix 6000 managed switch 4 ports |
| Power input | 250 mA @ 24V DC (12...48V DC) CL 2/SELV | 100 mA @ 24V DC (12...48V DC) CL 2/SELV |
| Power dissipation, max | 5.8 W | 2.6 W |
| Thermal dissipation, max | 24.6 BTU/hr @ 60 °C (140 °F) | |
| Network ports | 8 RJ45 10/100 full/half duplex ports, optional SFP transceiver port | 4 RJ45 10/100 full/half duplex ports |
| Protocols | TCP/IP, EtherNet/IP, Telnet, Http, DHCP, BOOTP, FTP, IGMP, SMTP | |
| Indicators | 16 port indicators 3 status indicators | 8 port indicators 2 status indicators |
| EtherNet/IP features | MAC ID management, bandwidth alarming, port control, link status, scaled bandwidth information, and connections active | |
| Switch features | VLAN, IGMP snooping, IGMP query V1 and V2, DHCP server, BOOTP server, QoS, port mirroring | IGMP snooping, IGMP query V1 and V2, DHCP server, BOOTP server, QoS, port mirroring |
| Options | 1 GB fiber-optic transceiver | — |
| Inrush current, max | 2.2 A | |
| Isolation voltage | 50V (continuous), basic insulation type, power to ground and power to network channels No isolation between individual network channels Routine tested at 707V AC for 1 s | |
| Wire size, Ethernet connection ⁽¹⁾ | RJ45 connector according to IEC 60603-7, 2- or 4-pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 | |
| Wire size, DC power connection | 0.33...3.3 mm ² (22...12 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max | |
| Wire size, ground connection | 3.3 mm ² (12 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater | |
| Screw torque, power and ground terminals | 1.36 N•m (12 in•lb) | |
| Wiring category ⁽²⁾ | 2 - on DC power ports 2 - on communication ports | |
| Enclosure type rating | None (open-style) | |
| North American temp code | T4 | |
| ATEX temp code | T4 | |
| SFP modules ⁽³⁾ | 1783-SFP1GSX 1783-SFP1GLX | |

(1) See [page 71](#) for recommended products.

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

(3) SFP modules are supported only on switches with combo ports or SFP slots. For SFP specifications, see [page 69](#).

Table 28 - Environmental Specifications - Stratix 6000 Switches

| Attribute | 1783-EMS04T, 1783-EMS08T |
|--|--|
| 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 °C < Ta < +60 °C (+32 °F < Ta < +140 °F) |
| Temperature, ambient, max | 60 °C (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 IEC 60068-2-6 (Test Fc, Operating) | 2 g @ 10...500 Hz |
| Operating shock IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 15 g |
| Nonoperating shock IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g |
| Emissions IEC 61000-6-4 | IEC 61000-6-4 |
| ESD immunity IEC 61000-4-2 | 6 kV contact discharges 8 kV air discharges |
| 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 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 1V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz |
| EFT/B immunity IEC 61000-4-4 | ±2 kV at 5 kHz on power ports ±1 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 AC 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 |
| Magnetic field immunity IEC 61000-4-8 | 30 A/m long duration and 300 A/m short duration at 50 Hz and 60 Hz |
| Voltage variation IEC 61000-4-29 | 10 ms interruption on DC supply ports |
| Environmental rating | IP20 |

Table 29 - Certifications - Stratix 6000 Switches

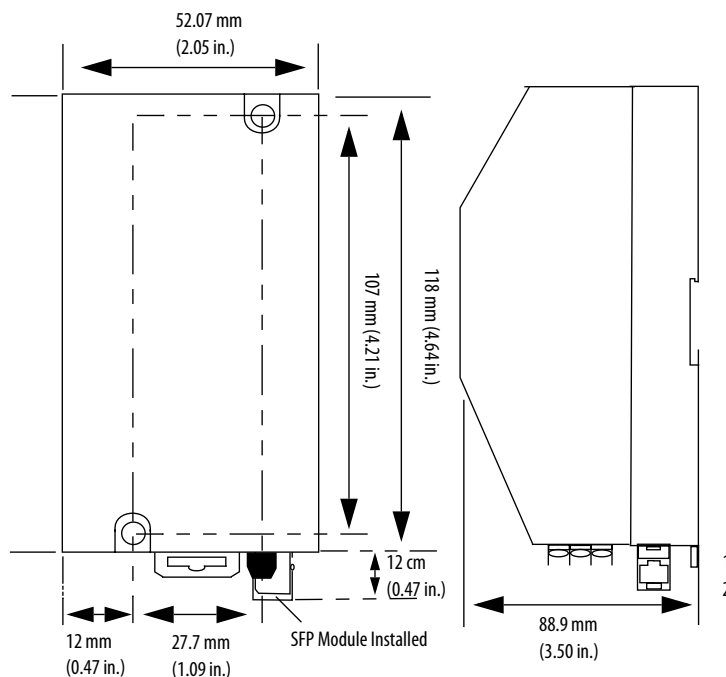
| Certifications (when product is marked) ⁽¹⁾ | 1783-EMS08T, 1783-EMS04T |
|--|--|
| c-UL-us | UL Listed Information Technology Equipment, certified for US and Canada. See UL File E151729. |
| c-ETL-us | ETL Listed Industrial Control Equipment, certified for US and Canada. |
| c-ETL-us | ETL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada |
| CE | European Union 2004/108/EC EMC Directive, compliant with: 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) European Union 2011/65/EU RoHS, compliant with: EN 50581; Technical documentation |
| RCM | Australian Radiocommunications Act, compliant with: EN 61000-6-4; Industrial Emissions |
| Ex | EN 60079-0; General Requirements EN 60079-11; Explosive Atmospheres, Protection "I" EN 60079-15; Potentially Explosive Atmospheres, Protection "n" II 3 Ex ic nA IIC T4 Gc |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3 |
| EtherNet/IP | ODVA conformance tested to EtherNet/IP specifications |

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

Dimensions—Stratix 6000 Switches

Mount the switches, as shown, in the vertical position only. We do not recommend horizontal mounting due to thermal considerations. Follow these guidelines:

- Provide 50 mm (2 in.) of space on all sides for adequate heat dissipation.
- Leave 100 mm (4 in.) for installation and removal if using the fiber-optic port on the bottom of the 1783-EMS08T switch.



Stratix 8000 and Stratix 8300 Ethernet Managed Switches

Table 30 - Technical Specifications - Stratix 8000 and Stratix 8300 Switches

| Attribute | 1783-MS06T | 1783-MS10T | 1783-RMS06T | 1783-RMS10T |
|---|---|--|---|--|
| Description | Stratix 8000 managed switch, Layer 2, 6 ports | Stratix 8000 managed switch, Layer 2, 10 ports | Stratix 8300 managed switch, Layer 3, 6 ports | Stratix 8300 managed switch, Layer 3, 10 ports |
| Inrush current, max | 2.0 A | | | |
| Power input, max | 2 A max @ 18...60V DC, CL 2/SELV | | | |
| Alarm relay, max | 1 A max @ 30V DC, CL 2/SELV | | | |
| Power consumption, max (Expansion module power not included) | 15.1 W | 15.7 W | 15.1 W | 15.7 W |
| Power dissipation | 15.1 W | 15.7 W | 15.1 W | 15.7 W |
| Isolation voltage | 75V (continuous), basic insulation type, power to ground, power to network channels, and power to alarm No isolation between individual Ethernet ports No isolation between console port and system Type tested at 1000V AC for 60 s | | | |
| Wire size, Ethernet connection ⁽¹⁾ | RJ45 connector according to IEC 60603-7, 2- or 4-pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 | | | |
| Wire size, DC power and alarm connections | 0.5...0.8 mm ² (20...18 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater, 1.2 mm (3/64 in.) insulation max | | | |
| Wire size, ground connection | 3.3...5.3 mm ² (12...10 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater | | | |
| Screw torque, power and alarm terminals | 0.23 N·m (2.0 in·lb) | | | |
| Wiring category ⁽²⁾ | 2 - on alarm ports 2 - on power ports 2 - on Ethernet ports | | | |
| Enclosure type rating | None (open-style) | | | |
| Pilot duty rating | Not rated | | | |
| North American temp code | T4 | | | |
| IEC temp code | T4 | | | |
| SFP modules ⁽³⁾ | 1783-SFP100FX 1783-SFP100LX 1783-SFP100EXC 1783-SFP100ZXC 1783-SFP100T ⁽⁴⁾ 1783-SFP1GSX 1783-SFP1GLX 1783-SFP1GEXE 1783-SFP1GZX 1783-SFP1GTE | | 1783-SFP100FX 1783-SFP100LX 1783-SFP100EXC 1783-SFP100ZXC 1783-SFP1GSX 1783-SFP1GLX 1783-SFP1GEXE 1783-SFP1GZX 1783-SFP1GTE | |
| Memory card | 1783-MCF | | 1783-RMCF | |

(1) See [page 71](#) for recommended products.

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

(3) SFP modules are supported only on switches with combo ports or SFP slots. For SFP specifications, see [page 69](#).

(4) The 1783-SFP100T module requires Stratix 8000 firmware revision 12.001 or later.

Table 31 - Environmental Specifications - Stratix 8000 and Stratix 8300 Switches

| Attribute | 1783-MS06T, 1783-MS10T, 1783-RMS06T, 1783-RMS10T |
|--|---|
| 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) | -40...+60 °C (-40...+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 IEC 60068-2-6 (Test Fc, Operating) | 2 g @ 10...500 Hz |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 20 g |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g |
| Emissions CISPR11 (IEC 61000-6-4) | Class A |
| ESD immunity IEC 61000-4-2 | 8 kV contact discharges 15 kV air discharges |
| Radiated RF immunity IEC 61000-4-3 | 20V/m with 1 kHz sine-wave 80% AM from 80...1000 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 10V/m with 1 kHz sine-wave 80% AM from 1000...2700 MHz |
| EFT/B immunity IEC 61000-4-4 | ±4 kV at 2.5 kHz and ±2 kV at 5 kHz on power ports ±4 kV at 2.5 kHz and ±2 kV at 5 kHz on alarm ports ±4 kV at 2.5 kHz and ±2 kV at 5 kHz on Ethernet ports |
| Surge transient immunity IEC 61000-4-5 | ±1 kV line-line (DM) and ±2 kV line-earth (CM) on power ports ±1 kV line-line (DM) and ±2 kV line-earth (CM) on alarm ports ±2 kV line-earth (CM) on Ethernet ports |
| Conducted RF immunity IEC 61000-4-6 | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz |
| Magnetic field immunity IEC 61000-4-8 | 30 A/m long duration and 300 A/m short duration at 50 Hz and 60 Hz |
| Oscillatory surge withstand IEEE C37.90.1 | 2.5 kV |
| Voltage variation IEC 61000-4-29 | 10 ms interruption on DC supply ports |
| Environmental rating | IP20 |

Table 32 - Certifications - Stratix 8000 and Stratix 8300 Switches

| Certifications (when product is marked)⁽¹⁾ | 1783-MS06T, 1783-MS10T, 1783-RMS06T, 1783-RMS10T |
|--|---|
| c-UL-us | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. |
| CE | European Union 2004/108/EC EMC Directive, compliant with: <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) European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> • EN 50581; Technical Documentation |
| C-Tick | Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> • AS/NZS CISPR 11; Industrial Emissions |
| Ex | European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN 60079-15; Potentially Explosive Atmospheres, Protection "n" • EN 60079-0; General Requirements • II 3 G Ex nA nC IIC T4 Gc X |
| KC | Korean Certification of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Framework Act on Telecommunications and Radio Waves Act |
| EtherNet/IP | ODVA conformance tested to EtherNet/IP specifications |

(1) See the Product Certification link at <http://www.ab.com> for declarations of conformity, certificates, and other certification details.

Optional Expansion Modules—Stratix 8000 and Stratix 8300 Switches

| Cat. No. | Description |
|-----------------|--|
| 1783-MX08T | Expansion module with 8 10/100 Base-T copper Ethernet ports |
| 1783-MX08F | Expansion module with 8 100 Base-F fiber-optic Ethernet ports |
| 1783-MX04S | Expansion module with 4 100 FX fiber-optic SFP slots |
| 1783-MX08S | Expansion module with 8 100 FX fiber-optic SFP slots |
| 1783-MX04E | Expansion module with 4 PoE ports |
| 1783-MX04T04E | Ethernet expansion module with 4 10/100 Base-T copper Ethernet ports and 4 PoE ports |

Table 33 - Technical Specifications - Stratix 8000 and Stratix 8300 Expansion Modules

| Attribute | 1783-MX08T | 1783-MX08F | 1783-MX04S | 1783-MX08S |
|---|--|------------------------------------|---|--|
| Description | Expansion module 8 ports, copper | Expansion module 8 ports, fiber | Expansion module 4 SFP ports, fiber | Expansion module 8 SFP ports, fiber |
| Backplane power | 3.3V DC, 1.7 A max | 3.3V DC, 3.6 A max | 3.3V DC, 2.5 A max | 3.3V DC, 4.0 A max |
| Power consumption, max | 2.8 W | 10.1 W | 7.6 W | 12.2 W |
| Power dissipation | 2.8 W | 10.1 W | 7.6 W | 12.2 W |
| Isolation voltage | 75V (continuous), basic insulation type, expansion backplane to network channels No isolation between individual Ethernet ports Type tested at 1000V AC for 60 s | — | | |
| Wire size, Ethernet connection ⁽¹⁾ | RJ45 connector according to IEC 60603-7, 2- or 4-pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 | — | | |
| Wiring category ⁽²⁾ | 2 - on Ethernet ports | — | | |
| Enclosure type rating | None (open-style) | | | |
| North American temp code | T4 | | | |
| IEC temp code | T4 | | | |
| SFP modules ⁽³⁾ | — | | 1783-SFP100FX 1783-SFP100LX 1783-SFP100EXC 1783-SFP100ZXC 1783-SFP100T ⁽⁴⁾ | |

(1) See [page 71](#) for recommended products.

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

(3) For SFP specifications, see [page 69](#).

(4) The 1783-SFP100T module requires Stratix 8000 firmware revision 12.001 or later.

Table 34 - Technical Specifications - Stratix 8000 and Stratix 8300 Fiber Expansion Module

| Attribute | 1783-MX08F |
|---------------------------|--|
| Ethernet data rate | 100 Mbps |
| Connecting mode | Full-duplex |
| Optical wavelength | 1310 nm |
| Optical cable length, max | Graded index multimode fiber; 2000 m |
| Optical link budget | 8 dB with 62.5/125 µm multimode cable 4 dB with 50/125 µm multimode cable |
| Connector type | IEC 61754-20 LC connector |

Table 35 - Technical Specifications - Stratix 8000 and Stratix 8300 Power over Ethernet Expansion Modules

| Attribute | 1783-MX04E | 1783-MX04T04E |
|---|--|--|
| Description | Expansion module 4 ports, Power over Ethernet | Expansion module • 4 ports, copper • 4 ports, Power over Ethernet |
| Backplane power | 3.3V DC, 0.94 A max | 3.34V DC, 1.08 A max |
| Power over Ethernet input power | 48V DC for PoE 54V DC for PoE+ for a combination of PoE and PoE+ 2.5 A max | 48V DC for PoE 54V DC for PoE+ for a combination of PoE and PoE+ 2.4 A max |
| Power consumption ⁽¹⁾ | 3 W @ 24V DC @ 40°C (104°F), 7.3 W max PoE power at 44V: 62 W max | 3.5 W @ 24V DC @ 40°C (104°F), 7.9 W max PoE power at 44V: 62 W max |
| Power dissipation | 7.3 W | 7.9 W |
| Isolation voltage | 60V (continuous), basic insulation type, expansion backplane to network ports, expansion backplane to power ports, and power ports to network ports No isolation between individual network ports Type tested at 1570V DC for 60 s | |
| Wire size, Ethernet connection ⁽²⁾ | RJ45 connector according to IEC 60603-7, 2 or 4 pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 | |
| Wiring category ⁽³⁾ | 2 - on Ethernet ports 2 - on power ports | |
| Enclosure type rating | None (open-style) | |
| North American temp code | T4 | |
| IEC temp code | T4 | |
| SFP modules | — | |

(1) For PoE configurations, the power consumption values listed represent the highest values that can be configured using all ports. A general guideline is 0.5 W per 30 W PoE+ port used.

(2) See [page 71](#) for recommended products.

(3) Use this conductor category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

Table 36 - Environmental Specifications - Stratix 8000 and Stratix 8300 Expansion Modules

| Attribute | 1783-MX08T | 1783-MX08F | 1783-MX04S, 1783-MX08S | 1783-MX04E, 1783-MX04T04E |
|--|------------------------------|------------|---------------------------|---------------------------|
| 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) | -40...+60 °C (-40...+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 IEC 60068-2-6 (Test Fc, Operating) | 2 g @ 10...500 Hz | | | |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 20 g | | 15 g | |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g | | | |

Table 36 - Environmental Specifications - Stratix 8000 and Stratix 8300 Expansion Modules (continued)

| Attribute | 1783-MX08T | 1783-MX08F | 1783-MX04S, 1783-MX08S | 1783-MX04E, 1783-MX04T04E |
|--|---|------------|--|--|
| Emissions CISPR11 (IEC 61000-6-4) | Group 1, Class A | | | |
| ESD immunity IEC 61000-4-2 | 8 kV contact discharges 15 kV air discharges | | 6 kV contact discharges 8 kV air discharges | |
| Radiated RF immunity IEC 61000-4-3 | 20V/m with 1 kHz sine-wave 80% AM from 80...1000 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 10V/m with 1 kHz sine-wave 80% AM from 1000...2700 MHz | | 10V/m with 1 kHz sine-wave 80% AM from 80...2000 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 900 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 3V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz | |
| EFT/B immunity IEC 61000-4-4 | ±4 kV at 2.5 kHz and ±2 kV at 5 kHz on Ethernet ports | — | | ±2 kV at 5 kHz on power ports and ±2 kV at 5 kHz on Ethernet ports |
| Surge transient immunity IEC 61000-4-5 | ±2 kV line-earth (CM) on Ethernet ports | — | | ±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 | — | | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz |
| Magnetic field immunity IEC 61000-4-8 | 30 A/m long duration and 300 A/m short duration at 50 Hz and 60 Hz | | 30 A/m long duration and 300 A/m short duration at 50 Hz | |
| Magnetic pulse immunity IEC 61000-4-9 | — | | 300 A/m pulse | |
| Oscillatory surge withstand IEEE C37.90.1 | 2.5 kV | — | | |
| Damped oscillatory wave immunity IEC 61000-4-18 | — | | | ±1 kV line-line(DM) and ±2.5 kV line-earth(CM) on power ports |

Table 37 - Certifications - Stratix 8000 and Stratix 8300 Expansion Modules

| Certifications (when product is marked) ⁽¹⁾ | 1783-MX08T, 1783-MX08F, 1783-MX04S, 1783-MX08S, 1783-MX04E, 1783-MX04T04E |
|--|---|
| c-UL-us | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. UL Listed for Class I, Zone 2 Hazardous Locations, certified for U.S. and Canada. See UL File E194810. AEx/Ex nA IIC T4 Gc X |
| CE | European Union 2004/108/EC EMC Directive, compliant with: <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) European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> EN 50581; Technical Documentation |
| C-Tick | Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> AS/NZS CISPR 11; Industrial Emissions |
| Ex | European Union 94/9/EC ATEX Directive, compliant with: <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 Gc X |
| KC | Korean Certification of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> Framework Act on Telecommunications and Radio Waves Act |
| EtherNet/IP | ODVA conformance tested to EtherNet/IP specifications |

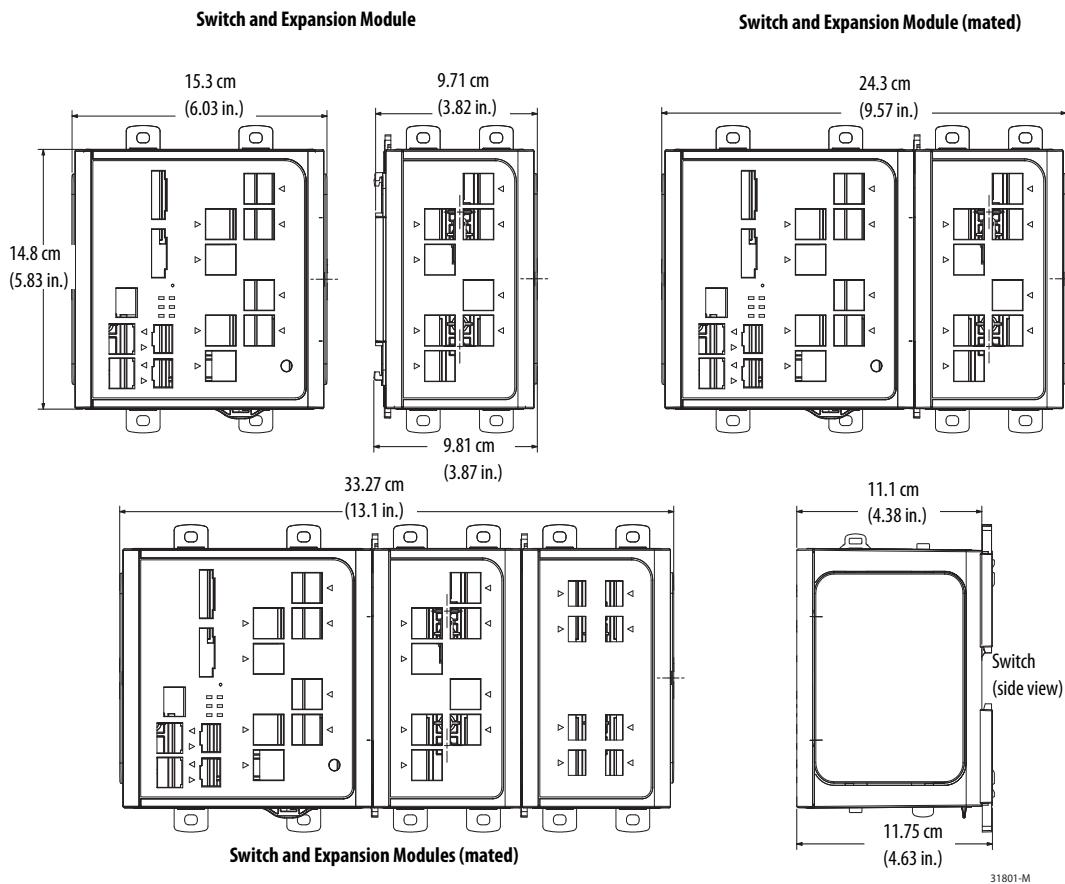
(1) See the Product Certification link at <http://www.ab.com> for declarations of conformity, certificates, and other certification details.

Dimensions—Stratix 8000 and Stratix 8300 Switches

This illustration shows dimensions for the 1783-MS10T switch and the 1783-MX08T expansion module. Dimensions for the other switches are the same as the 1783-MS10T switch. Dimensions for the other expansion modules are the same as the 1783-MX08T expansion module.

Airflow around the switch and through the vents is unrestricted. To prevent the switch from overheating, these minimum clearances must be met:

- Top and bottom: 105 mm (4.13 in.)
- Left and right: 90 mm (3.54 in.)
- Front: 65 mm (2.56 in.)



For panel-mounting, the height of the center of the mounting holes on both the top and bottom latches measures 8.73 mm (0.34 in.) above the top surface (or below the bottom surface) of the switch.

On the switch base unit, the tab hole center-to-center spacing is 6.83 cm (2.69 in.).

For expansion modules, the tab hole center-to-center spacing is 4.36 cm (1.72 in.).

Stratix 5100 Wireless Access Point/Workgroup Bridge


Table 38 - Technical Specifications - Stratix 5100 Wireless Access Point/Workgroup Bridge

| Attribute | 1783-WAPBK9 United States | 1783-WAPAK9 Canada/Latin America | 1783-WAPEK9 European Union | 1783-WAPZK9 Australia/New Zealand | 1783-WAPCK9 China |
|--------------------|--|--|--|--|--|
| Dimensions (LxWxD) | 22.04 x 22.04 x 4.67 cm (8.68 x 8.68 x 1.84 in.) | 22.04 x 22.04 x 4.67 cm (8.68 x 8.68 x 1.84 in.) | 22.04 x 22.04 x 4.67 cm (8.68 x 8.68 x 1.84 in.) | 22.04 x 22.04 x 4.67 cm (8.68 x 8.68 x 1.84 in.) | 22.04 x 22.04 x 4.67 cm (8.68 x 8.68 x 1.84 in.) |
| Weight | 1.22 kg (2.7 lb) | 1.22 kg (2.7 lb) | 1.22 kg (2.7 lb) | 1.22 kg (2.7 lb) | 1.22 kg (2.7 lb) |
| Power input | 48V DC, 350 mA | 48V DC, 350 mA | 48V DC, 350 mA | 48V DC, 350 mA | 48V DC, 350 mA |
| Power consumption | 12.95 W | 12.95 W | 12.95 W | 12.95 W | 12.95 W |
| Power dissipation | 12.95 W | 12.95 W | 12.95 W | 12.95 W | 12.95 W |
| Antennas | External | External | External | External | External |
| Power adapter | AIR-PWR-B Input: 100...240 50/60 Hz VAC Output: 48V DC, 380 mA | AIR-PWR-B Input: 100...240 50/60 Hz VAC Output: 48V DC, 380 mA | AIR-PWR-B Input: 100...240 50/60 Hz VAC Output: 48V DC, 380 mA | AIR-PWR-B Input: 100...240 50/60 Hz VAC Output: 48V DC, 380 mA | AIR-PWR-B Input: 100...240 50/60 Hz VAC Output: 48V DC, 380 mA |

Table 39 - Environmental Specifications - Stratix 5100 Wireless Access Point/Workgroup Bridge

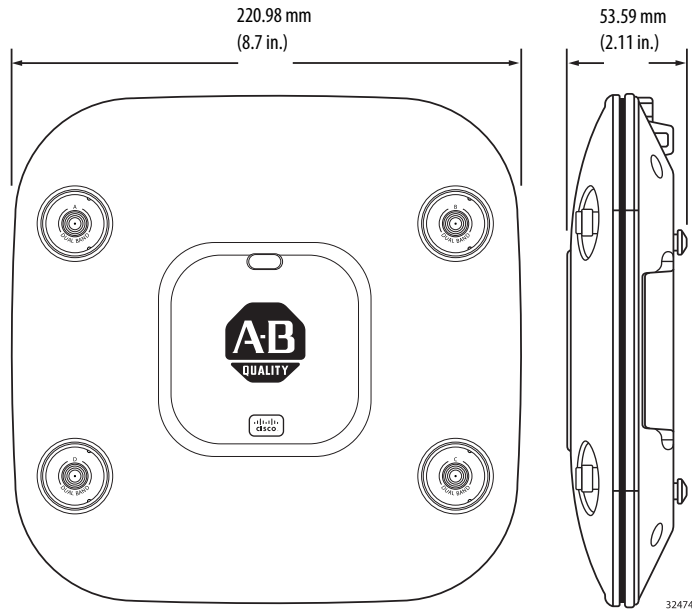
| Attribute | 1783-WAPBK9 | 1783-WAPAK9 | 1783-WAPEK9 | 1783-WAPZK9 | 1783-WAPCK9 |
|-----------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Temperature, operating | -20...+55 °C (-4...+131 °F) | -20...+55 °C (-4...+131 °F) | -20...+55 °C (-4...+131 °F) | -20...+55 °C (-4...+131 °F) | -20...+55 °C (-4...+131 °F) |
| Temperature, nonoperating/storage | -30...+85 °C (-22...+185 °F) | -30...+85 °C (-22...+185 °F) | -30...+85 °C (-22...+185 °F) | -30...+85 °C (-22...+185 °F) | -30...+85 °C (-22...+185 °F) |
| Relative humidity | 10...90% noncondensing | 10...90% noncondensing | 10...90% noncondensing | 10...90% noncondensing | 10...90% noncondensing |

Table 40 - Certifications - Stratix 5100 Wireless Access Point/Workgroup Bridge

| Catalog Number | Certifications (when product is marked) ⁽¹⁾ | |
|--------------------------------------|---|--|
| 1783-WAPBK9 Regulatory Domain `B` | FCC ID: LDK102080 | This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operations. |
| 1783-WAPAK9 Regulatory Domain `A` | Industry Canada: 2461B-102080 | RSS-210 - License Exempt Radio Apparatus: Category I Equipment |
| 1783-WAPEK9 Regulatory Domain `E` | CE | For use in the EU, Iceland, Liechtenstein, Norway, Switzerland, Turkey and all other Countries that recognize the EU Directive 1999/5/EC. |
| 1783-WAPZK9 Regulatory Domain `Z` |  E134 | For use in Australia, New Zealand and all other Countries that recognize the Radiocommunications (Short Range Devices) Standard. |
| 1783-WAPCK9 Regulatory Domain `C` | CMIIT ID: 2014AJ2894 | For use in China and all other Countries that recognize The Bureau of Radio Administration of MIIT (Fixed Radio Devices). |

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

Dimensions—Stratix 5100 Wireless Access Point/Workgroup Bridge



Stratix 5900 Services Router

Table 41 - Technical Specifications - Stratix 5900 Services Router

| Attribute | 1783-SR |
|--|--|
| Input voltages | 5V, 4 A Class 2 Requires LITEON PA-1220-1SA2 power adapter (100...240V AC, 50/60Hz, 0.8A) |
| Power consumption, max | 11 W |
| Power dissipation | 11 W |
| Isolation voltage | Not rated |
| Weight | 1.5 kg (3.2 lb) |
| Wiring category ⁽¹⁾ | 3 - on power ports 2 - on Ethernet ports |
| Enclosure type rating | Meets IP41 |
| Router AC Power Adapter⁽²⁾ | |
| Input voltage | 85 . . .264V AC 100 . . .240V AC nom |
| Power consumption, max | 25 W |
| Output power, max | 20 W (5V DC, 4 A) |

(1) Use this conductor category information for planning conductor routing. Refer to Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

(2) AC power adapter is not IP41 rated. Installation must include protection of the adapter and power plug from water.

Table 42 - Environmental Specifications - Stratix 5900 Services Router

| Attribute | 1783-SR |
|--|--|
| 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) | -25 . . . +60 °C (-13 . . . +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 IEC 60068-2-64 (Test Fh, Operating) | 1.12 Grms random |
| Operating shock IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 15 g |
| Nonoperating shock IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 15 g |
| Emissions CISPR22 (IEC 61000-6-4) | Class B |
| ESD immunity IEC 61000-4-2 | 8 kV contact discharges 15 kV air discharges |
| Radiated RF immunity IEC 61000-4-3 | 10V/m with 1 kHz sine-wave 80% AM from 80 . . . 2000 MHz 10V/m with 1 kHz sine-wave 80% AM from 2000 . . . 2700 MHz |

Table 42 - Environmental Specifications - Stratix 5900 Services Router (continued)

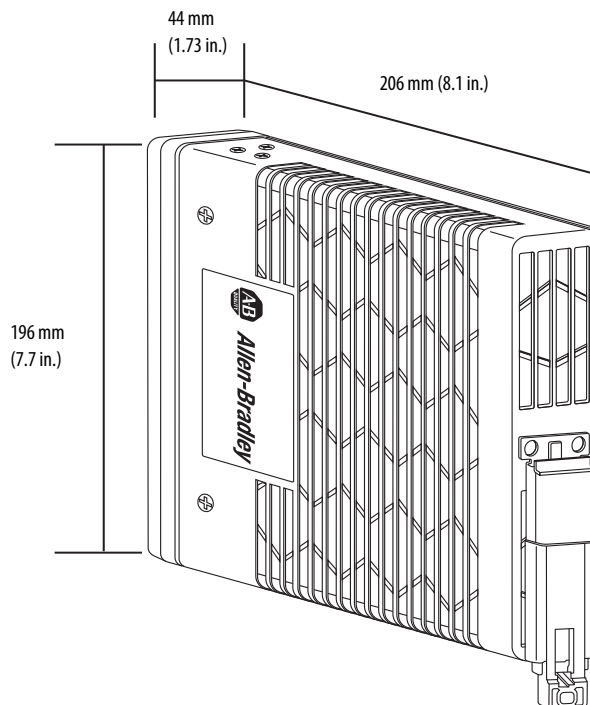
| Attribute | 1783-SR |
|---|---|
| EFT/B immunity IEC 61000-4-4 | ±500 kV at 5 kHz on Ethernet ports |
| Surge transient immunity IEC 61000-4-5 | ±1 kV line-earth (CM) on shielded Ethernet port |
| Conducted RF immunity IEC 61000-4-6 | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz . . . 80 MHz |
| Environmental rating | IP30 |

Table 43 - Certifications - Stratix 5900 Services Router

| Certifications (when product is marked) ⁽¹⁾ | 1783-SR |
|--|---|
| c-UL-us | UL Listed Information Technology Equipment, certified for US and Canada. See UL File E136709. |
| CE | European Union 1999/5/EC R&TTE Directive, compliant with: <ul style="list-style-type: none"> • EN 55022; ITE Emissions • EN 55024; ITE Immunity • EN 60950; ITE Safety European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> • EN 50581; Technical documentation |
| C-Tick | Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> • ACMA EMC Std 08 |
| CCC | GB 4943. 1, GB 9254, YD/T993 |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3 |

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

Dimensions - Stratix 5900 Services Router



Stratix 5950 Security Appliance

Table 44 - Technical Specifications - Stratix 5950 Security Appliance

| Attribute | 1783-SAD4T0SBK9, 1783-SAD4T0SPK9, 1783-SAD2T2SBK9, 1783-SAD2T2SPK9 |
|-------------------------------------|---|
| Power consumption | 24 W |
| Power dissipation | 24 W |
| Enclosure type rating | None (open-style) |
| Voltage and current ratings | 12...48V DC, 2.0 A Max – User Supply Alarm relay: 30V DC, 1 A or 48V DC, 0.5 A |
| Isolation voltage | 60V (continuous), Basic Insulation Type, all ports to Ground. No isolation between individual ports. |
| Wire size, Ethernet connection | RJ45 connector according to IEC 60603-7, 2 or 4 pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 |
| Wire size, ground connection | 4 mm ² (12...10 AWG) solid or stranded copper wire |
| Wire size, alarm connection | 0.8...1.0 mm ² (18...16 AWG) solid or stranded, UL/CSA-rated style 1007 or 1569 twisted-pair copper appliance wiring material (AWM) wire (such as Belden part number 9318), 6.3 mm (0.25 in.) ± 0.5 mm (0.02 in.) strip length |
| Wire size, DC power connection | 0.8...1.0 mm ² (18...16 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max, 6.3 mm (0.25 in.) ± 0.5 mm (0.02 in.) strip length |
| Insulation stripping length | 6.3 mm (0.25 in.) ± 0.5 mm (0.02 in.) |
| Wire type | Copper |
| Pilot duty rating | Alarm: Not rated |
| Wiring category ⁽¹⁾ | 3 - on Console ports 2 - on Power and Alarm ports 2 - on Ethernet ports |
| Voltage variation IEC 61000-4-29 | 30 % dip for 10 ms on DC supply ports 60 % dips for 100 ms and 1 s on DC supply ports 100 % dips for 10 ms and 5 s on DC supply ports |
| Alarm relay | 30V DC, 1 A, or 48V DC, 0.5 A |
| Screw torque, ground terminal | 0.4 N•m (3.5 lb•in) |
| Screw torque, power terminal | 0.56 N•m (5 lb•in) |
| Screw torque, alarm terminal | 0.56 N•m (5 lb•in) |
| North American temp code | T4 |
| ATEX temp code | T4 |
| SFP modules ⁽²⁾ | 1783-SFP100FX 1783-SFP100LX 1783-SFP1GSX 1783-SFP1GLX |
| Memory card replacement | 1784-SD1 |

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

(2) For SFP specifications, see [page 69](#).

Table 45 - Environmental Specifications - Stratix 5950 Security Appliance

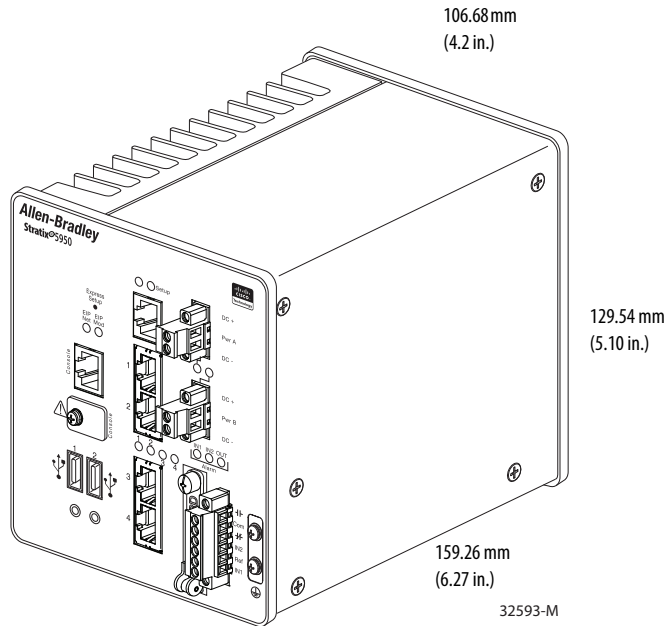
| Attribute | 1783-SAD4T0SBK9, 1783-SAD4T0SPK9, 1783-SAD2T2SBK9, 1783-SAD2T2SPK9 |
|---|--|
| Temperature, operating IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock): | -40...+60 °C (-40...+140 °F) |
| Temperature, ambient, max | For UL certified enclosed equipment: 60 °C (140 °F) |
| Temperature, surrounding air, max | For UL certified enclosed equipment: 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 IEC 60068-2-6 (Test Fc, Operating) | 1 g @ 5...150 Hz |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 15 g |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g |
| Emissions | IEC 61000-6-4 |
| ESD Immunity IEC 61000-4-2 | 6 kV contact discharges 8 kV air discharges |
| 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 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 1V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz |
| EFT/B Immunity IEC 61000-4-4 | ±2 kV at 5 kHz on power ports ±2 kV at 5 kHz on signal ports ±2 kV at 5 kHz on communications ports |
| Surge Transient Immunity IEC 61000-4-5 | ±1 kV line-line(DM) and ±2 kV line-earth(CM) on power ports ±500V line-line(DM) and ±1 kV line-earth(CM) on signal ports ±2 kV line-earth(CM) on communications ports |
| Conducted RF Immunity IEC 61000-4-6 | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz...80 MHz |
| Damped Oscillatory Wave Immunity IEC 61000-4-18 | ±500V line-line(DM) and ±1 kV line-earth(CM) on signal ports ±1 kV line-line(DM) and ±2.5 kV line-earth(CM) on power ports ±500V line-earth(CM) on communication ports |

Table 46 - Certifications - Stratix 5950 Security Appliance

| Certifications (when product is marked) ⁽¹⁾ | 1783-SAD4T0SBK9, 1783-SAD4T0SPK9, 1783-SAD2T2SBK9, 1783-SAD2T2SPK9 |
|--|---|
| c-UL-us | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584 UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. UL Listed for Class I, Zone 2 Hazardous Locations, certified for U.S. and Canada. See UL File E194810. <ul style="list-style-type: none"> • Class 1, Zone 2, Ex nA nC IIC T4 Gc X • Class 1, Zone 2, AEx nA nC IIC T4 Gc |
| CE | European Union 1999/5/EC R&TTE Directive, compliant with: <ul style="list-style-type: none"> • EN 61000-6-2; Industrial Immunity • EN 61000-6-4; Industrial Emissions European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> • EN 50581; Technical documentation |
| RCM | EN 61000-6-4; Industrial Emissions |
| Ex | EN 60079-0; General Requirements EN 60079-15; Potentially Explosive Atmospheres, Protection "n" Ex nA nC IIC T4 Gc DEMKO 15 ATEX 1595X |

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

Dimensions - Stratix 5950 Security Appliance



Embedded Switch Technology

Table 47 - Technical Specifications - EtherNet/IP Taps

| Attribute | 1783-ETAP | 1783-ETAP1F | 1783-ETAP2F |
|---|---|---|---|
| Description | EtherNet/IP tap 3 copper ports | EtherNet/IP tap • 2 copper ports • 1 fiber port | EtherNet/IP tap • 1 copper port • 2 fiber ports |
| Tap type | Copper | Fiber, single-port | Fiber, dual-port |
| Current consumption, max | 125 mA @ 24V DC | 200 mA @ 24V DC | 260 mA @ 24V DC |
| DC power supply voltage rating | 24V DC (20.4...27.6V DC) CL 2/SELV | | |
| Isolation voltage | 30V (continuous), basic insulation type, network channels to power and network channels to network channels | | |
| | Type tested at 1250V DC for 60 s | Type tested at 853V AC for 60 s | |
| Power consumption, max | 3 W | 4.8 W | 6.24 W |
| Power dissipation | 3 W | 4.8 W | 6.24 W |
| Wire size, Ethernet connection ⁽¹⁾ | RJ45 connector according to IEC 60603-7, 2- or 4-pair Category 5e minimum cable according to TIA 568-B.1 or Category 5 cable according to ISO/IEC 24702 | | |
| Wire size, DC power connection | One 0.33...3.3 mm ² (22...12 AWG) or two 0.33...1.3 mm ² (22...16 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max | | |
| Screw torque, power terminal | 0.6...0.8 N·m (5...7 in·lb) | | |
| Wiring category ⁽²⁾ | 1 - on power ports 2 - on communication ports | | |
| Enclosure type rating | None (open-style) | | |
| North American temp code | T5 | T4A | T4 |
| IEC temp code | T5 | T4 | T4 |

(1) See [page 71](#) for recommended products.

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

Table 48 - Technical Specifications - EtherNet/IP Tap Fiber Connections

| Attribute | 1783-ETAP1F, 1783-ETAP2F |
|--|---|
| Fiber transceiver type | 100Base-FX IEEE802.3u |
| Optical wavelength | 1310 nm no cap |
| Transmitter launch power at Beginning of Life (BOL), min Allow -1 dB at End of Life (EOL) | -19 dBm into 62.5/125 μm fiber, N/A = 0.275 -22.5 dBm into 50/125 μm fiber, N/A = 0.20 |
| Receiver sensitivity, min | -31.8 dBm |
| Receiver sensitivity, max | -14 dBm |
| Fiber channel power budget at rated BER (2 connected taps, either 1783-ETAP1F or 1783-ETAP2F) | 12.8 dB for 62.5/125 μm multimode fiber 9.3 dB for 50/125 μm multimode fiber |
| Fiber connection, glass | 62.5/125 μm and 50/125 μm multimode fiber |
| Fiber connection, simplex or duplex | Jacket type and jacket diameter is dependent on connector selection |
| Fiber connection, graded index (GI) | Per IEC 60794-1-1, IEC 60793-2-10 category A1 fibers |
| Connector type | IEC 61754-20 LC connector, maximum insertion loss 0.75 dB per connection |
| Channel length, max | 2 km (1.24 mi) ⁽¹⁾ |

(1) The channel (connectors and cable) must not exceed the allowable power budget.

Table 49 - Environmental Specifications - EtherNet/IP Taps

| Attribute | 1783-ETAP | 1783-ETAP1F, 1783-ETAP2F |
|--|--|------------------------------|
| 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) | -25...+70 °C (-13...+158 °F) | -25...+60 °C (-13...+140 °F) |
| Temperature, surrounding air, max | 70° C (158 °F) | 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 IEC 60068-2-6 (Test Fc, Operating) | 5 g @ 10...500 Hz | |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g | |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 50 g | |
| Emissions CISPR11 (IEC 61000-6-4) | Class A | |
| ESD immunity IEC 61000-4-2 | 6 kV contact discharges 8 kV air discharges | |
| 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 MHz 10V/m with 200 Hz 50% Pulse 100% AM at 1890 MHz 3V/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 ±3 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 | |
| Voltage variation IEC 61000-4-29 | 10 ms interruption on DC supply ports | |

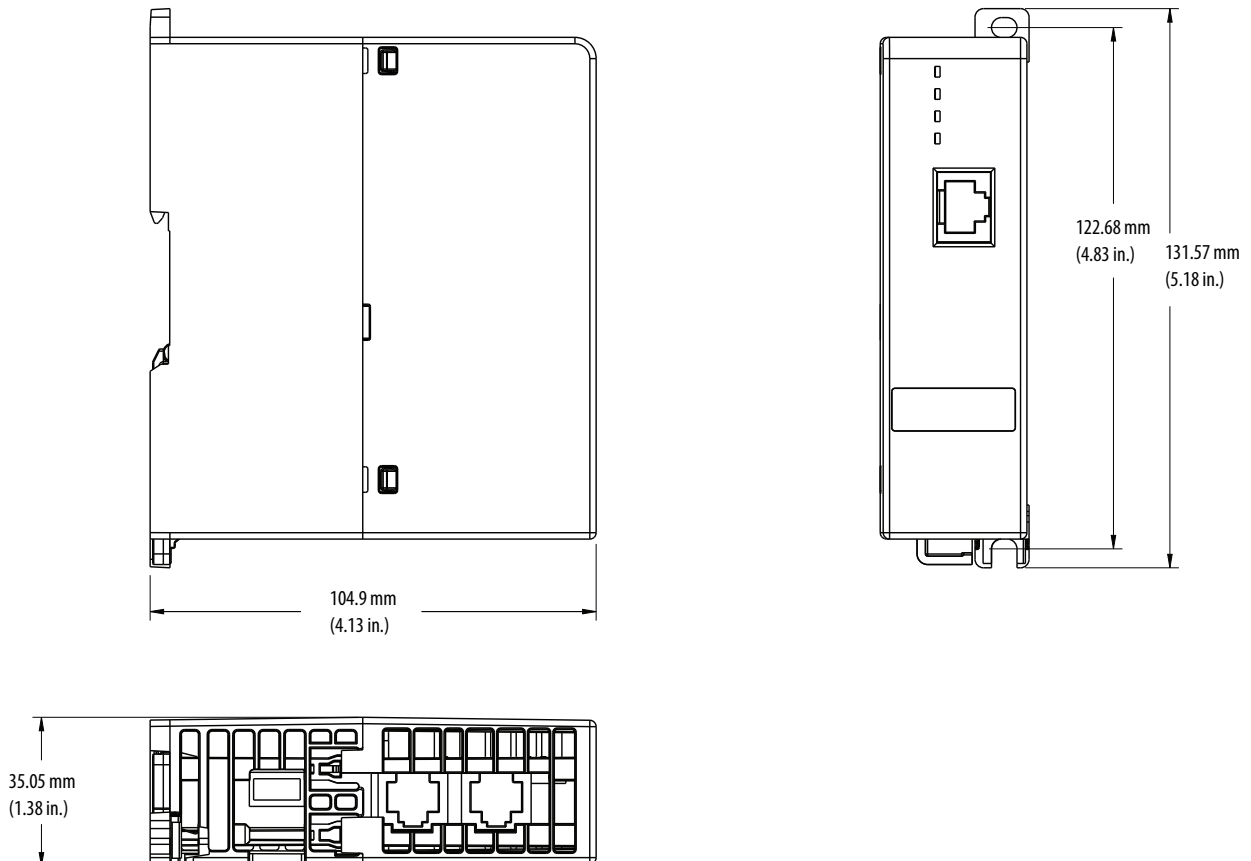
Table 50 - Certifications - EtherNet/IP Taps

| Certification ⁽¹⁾ | 1783-ETAP | 1783-ETAP1F, 1783-ETAP2F |
|------------------------------|---|--|
| c-UL-us | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. | |
| CE | European Union 2004/108/EC EMC Directive, compliant with: <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 and B) European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> • EN 50581; Technical Documentation | |
| C-Tick | Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions | |
| Ex | European Union 94/9/EC ATEX Directive, compliant with: <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 T5 X | European Union 94/9/EC ATEX Directive, compliant with: <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 |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> • Article 58-2 of Radio Waves Act, Clause 3 | |
| EtherNet/IP | ODVA conformance tested to EtherNet/IP specifications | |

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

Dimensions — EtherNet/IP Taps

This illustration shows dimensions for the 1783-ETAP tap. The dimensions for the 1783-ETAP1F and 1783-ETAP2F taps are the same.



Configurable NAT Router

Table 51 - Technical Specifications - Configurable NAT Router

| Attribute | 1783-NATR |
|--------------------------------|---|
| Enclosure type rating | None (open-style) |
| Voltage and current ratings | DC power supply input: 20.4...27.6V DC/limited voltage Current rating: 150 mA |
| Power consumption, max | 3 W |
| Isolation voltage | Functional insulation type (IEC-61010-2-201), Ethernet Ports to Power ports |
| Wire size, power connection | Single wire: 0.33...3.3 mm ² (22...12 AWG) stranded copper wire rated at 75 °C (167 °F), or greater, 1.2 mm (3/64 in.) insulation max Double wire: 0.33...1.3 mm ² (22...16 AWG) solid copper wire rated at 75 °C (167 °F), or greater, 1.2 mm (3/64 in.) insulation max |
| Wiring category ⁽¹⁾ | 2 - on power ports 2 - on Ethernet ports |
| North American temp code | T4 |
| ATEX temp code | T4 |
| IECEx temp code | T4 |

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

Table 52 - Environmental Specifications - Configurable NAT Router

| Attribute | 1783-NATR |
|--|--|
| 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) | -25...+70 °C (-13...+158 °F) |
| Temperature, surrounding air, max | 70 °C (158 °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 IEC 60068-2-6 (Test Fc, Operating) | 5 g @ 10...500 Hz |
| Shock, operating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 30 g |
| Shock, nonoperating IEC 60068-2-27 (Test Ea, Unpackaged Shock) | 50 g |
| Emissions | IEC 61000-6-4 |
| ESD immunity IEC 61000-4-2 | 6 kV contact discharges 8 kV air discharges |
| 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 MHz 10V/m with 200 Hz 50% pulse 100% AM at 1890 MHz 3V/m with 1 kHz sine-wave 80% AM from 2000...2700 MHz |

Table 52 - Environmental Specifications - Configurable NAT Router (continued)

| Attribute | 1783-NATR |
|---|--|
| EFT/B immunity IEC 61000-4-4 | ±2 kV at 5 kHz on power ports ±2 kV at 5 kHz on Ethernet 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 Ethernet ports |
| Conducted RF immunity IEC 61000-4-6 | 10V rms with 1 kHz sine-wave 80% AM from 150 kHz . . . 80 MHz |

Table 53 - Certifications - Configurable NAT Router

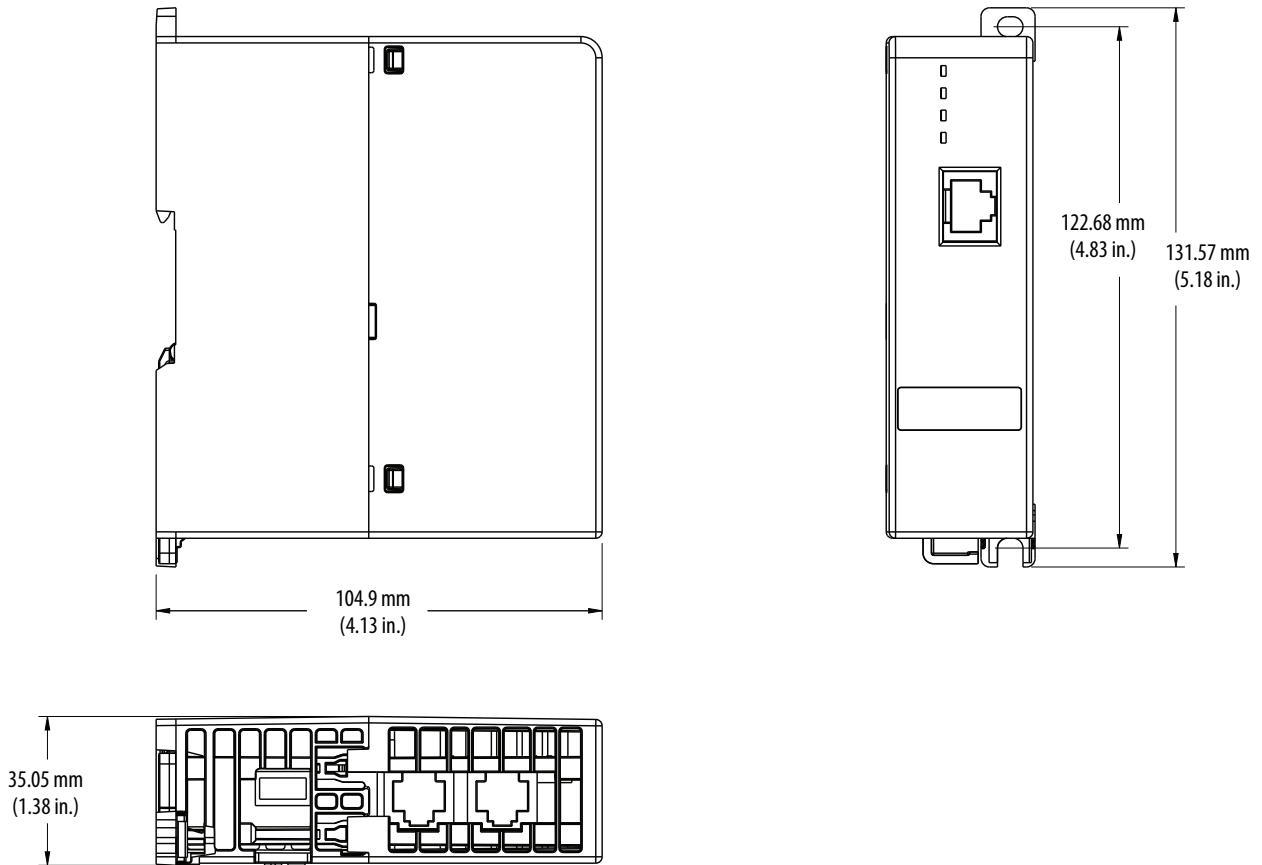
| Certification ⁽¹⁾ | 1783-NATR |
|------------------------------|---|
| c-UL-us | UL Listed Industrial Control Equipment, certified for US and Canada. See UL File E65584. UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada. See UL File E194810. |
| CE | European Union 2004/108/EC EMC Directive, compliant with: <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) |
| RCM | Australian Radiocommunications Act, compliant with: EN 61000-6-4; Industrial Emissions |
| Ex | European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> • EN 60079-0; General Requirements • EN 60079-15; Potentially Explosive Atmospheres, Protection "n" • II 3 G Ex nA IIC T4 Gc • DEMKO 15 ATEX 1459X |
| IECEx | IECEx System, compliant with: <ul style="list-style-type: none"> • IEC 60079-0; General Requirements • IEC 60079-15; Potentially Explosive Atmospheres, Protection "n" • II 3 G Ex nA IIC T4 Gc • IECEx UL 15.0026X |
| KC | Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3 |
| EtherNet/IP | ODVA conformance tested to EtherNet/IP specifications |

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

Dimensions - Configurable NAT Router

This illustration shows dimensions for the 1783-NATR device.

When mounting the 1783-NATR device, allow a minimum clearance between the device and adjacent equipment of 2.54 cm (1 in.) on all sides.



Accessories

Small Form-factor Pluggable (SFP) Modules

Table 54 - SFP Modules

| Cat. No. | Description | Interface Connector | Wavelength (nm) | Core Size/ Cladding Size (micron) | Modal Bandwidth (MHz/km) | Cable Length | Commercial ⁽⁵⁾ 0 ... +70 °C (+32 ... +158 °F) | Extended ⁽⁵⁾ -5 ... +85 °C (+23 ... +185 °F) | Industrial ⁽⁵⁾ -40 ... +85 °C (-40 ... +185 °F) | DOM ⁽⁶⁾ |
|------------------------------|---------------------------------|---------------------|-----------------|-----------------------------------|--------------------------|-----------------------|--|---|--|--------------------|
| 1783-SFP100FX | 100BASE-FX multimode fiber | Dual LC | 1310 | 50/125 | 500 | 2 km (6562 ft) | — | — | Yes | Yes |
| | | | | 62.5/125 | 500 | | | | | |
| 1783-SFP100LX | 100BASE-LX singlemode fiber | Dual LC | 1310 | G.652 | — | 10 km (32,808 ft) | — | — | Yes | Yes |
| 1783-SFP100EXC | 100BASE-EX singlemode fiber | Dual LC | 1310 | G.652 ⁽⁴⁾ | — | 40 km (131,234 ft) | Yes | — | — | — |
| 1783-SFP100ZXC | 100BASE-ZX singlemode fiber | Dual LC | 1550 | G.652 ⁽⁴⁾ | — | 80 km (262,467 ft) | Yes | — | — | — |
| 1783-SFP100T ⁽¹⁾ | 100BASE-T copper | RJ-45 | — | — | — | 100 m (328 ft) | — | — | Yes | — |
| 1783-SFP1GSX | 1000BASE-SX multimode fiber | Dual LC | 850 | 62.5/125 | 160 | 220 m (722 ft) | — | — | Yes | Yes |
| | | | | 62.5/125 | 200 | 275 m (902 ft) | | | | |
| | | | | 50/125 | 400 | 500 m (1640 ft) | | | | |
| | | | | 50/125 | 500 | 550 m (1804 ft) | | | | |
| 1783-SFP1GLX | 1000BASE-LX/LH singlemode fiber | Dual LC | 1310 | G.652 | — | 10 km (32,808 ft) | — | — | Yes | Yes |
| 1783-SFP1GEXE ⁽²⁾ | 1000BASE-EX singlemode fiber | Dual LC | 1310 | G.652 ⁽⁴⁾ | — | 40 km (131,234 ft) | — | Yes | — | Yes |
| 1783-SFP1GZX ⁽³⁾ | 1000BASE-ZX singlemode fiber | Dual LC | 1550 | G.652 ⁽⁴⁾ | — | 70 km (229,659 ft) | — | — | Yes | Yes |
| 1783-SFP1GTE | 1000BASE-T copper | RJ-45 | — | — | — | 100 m (328 ft) | — | Yes | — | — |
| 1783-SFP10GSRE | 10GBASE-SR multimode fiber | Dual LC | 850 | 62.5/125 | 160 (FDDI) | 26 m (85 ft) | — | Yes | — | Yes |
| | | | | 62.5/125 | 200 (OM1) | 33 m (108 ft) | | | | |
| | | | | 50/125 | 400 | 66 m (216 ft) | | | | |
| | | | | 50/125 | 500 (OM2) | 82 m (269 ft) | | | | |
| | | | | 50/125 | 2000 | 300 m (984 ft) | | | | |
| | | | | 50/125 | 4700 | 400 m (1312 ft) | | | | |
| 1783-SFP10GLRE | 10GBASE-LR singlemode fiber | Dual LC | 1310 | G.652 ⁽⁴⁾ | — | 10 km (32,808 ft) | — | Yes | — | Yes |

(1) The 1783-SFP100T module requires Stratix 5400 or 5410 firmware revision 3.001 or later, Stratix 5700 firmware revision 8.001 or later, or Stratix 8000 firmware revision 12.001 or later.

(2) The 1783-SFP1GEXE module operates on standard single-mode fiber-optic link spans of up to 40 km in length. For back-to-back connectivity, insert a 5-dB inline optical attenuator between the fiber-optic cable and the receiving port on the SFP module at each end of the link.

(3) When shorter distances of single-mode fiber (SMF) are used, you can avoid overloading the receiver by inserting an inline optical attenuator in the link. If the fiber-optic cable span loss is less than 8 dB, insert a 10-dB inline optical attenuator between the fiber-optic cable plant and the receiving port on the SFP module at each end of the link.

(4) ITU-T G.652 SMF as specified by the IEEE 802.3z standard.

(5) Once you install SFP modules in the switch, the overall temperature rating of the combined modules (switch and SFP modules) is limited to the lowest maximum temperature rating and the highest minimum temperature rating.

(6) Digital Optical Monitoring (DOM) is supported on the switches via the command-line interface (CLI).

Table 55 - SFP and Switch Compatibility

| Cat. No. | Stratix 2000 ^{(3) (4)} | Stratix 5400 | Stratix 5410 | Stratix 5700 | Stratix 5950 | Stratix 6000 | Stratix 8000 | Stratix 8300 |
|------------------------------|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1783-SFP100FX | X | X | X | X | X | | X | X |
| 1783-SFP100LX | X | X | X | X | X | | X | X |
| 1783-SFP100EXC | X | X | X | X | | | X | X |
| 1783-SFP100ZXC | X | X | X | X | | | X | X |
| 1783-SFP100T ⁽¹⁾ | | X | X | X | | | X | |
| 1783-SFP1GSX ⁽²⁾ | X | X | X | X | X | X | X | X |
| 1783-SFP1GLX ⁽²⁾ | X | X | X | X | X | X | X | X |
| 1783-SFP1GEXE ⁽²⁾ | X | X | X | X | | | X | X |
| 1783-SFP1GZX ⁽²⁾ | X | X | X | X | | | X | X |
| 1783-SFP1GTE ⁽²⁾ | | X | X | X | | | X | X |
| 1783-SFP10GSRE | | | X | | | | | |
| 1783-SFP10GLRE | | | X | | | | | |

(1) The 1783-SFP100T module requires Stratix 5400 or 5410 firmware revision 3.001 or later, Stratix 5700 firmware revision 8.001 or later, or Stratix 8000 firmware revision 12.001 or later.

(2) Gigabit Ethernet (GE) SFP modules work only in GE SFP slots.

(3) The SFP modules shown in this table for Stratix 2000 switches must be ordered separately and are not the same as the preinstalled SFP modules that ship with the switches.

(4) Stratix 2000 catalog number 1783-US6TG2CG/A supports only Gigabit Ethernet (GE) SFP modules 1783-SFP1GSX, 1783-SFP1GLX, 1783-SFP1GEXE, and 1783-SFP1GZX.

Memory Cards

| Cat. No. | Description | Compatibility |
|-----------|--|------------------------------|
| 1784-SD1 | 1 GB industrial SD card | Stratix 5700 Stratix 5950 |
| 1783-MCF | Stratix 8000 CompactFlash card (spare) | Stratix 8000 |
| 1783-RMCF | Stratix 8300 CompactFlash card (spare) | Stratix 8300 |

Ethernet Cables

| Cat. No. | Category | Description |
|---|-------------|---|
| Industrial Ethernet Patchcords⁽¹⁾ | | |
| RJ45 to RJ45 | | |
| 1585J-M8TBJM-2 | Category 5 | Male RJ45 to male RJ45, unshielded twisted pair, teal, high-flex TPE, 8-conductor (4-pair), 2 m (6.56 ft) cable |
| 1585J-M4TBJM-2 | | Male RJ45 to male RJ45, unshielded twisted pair, teal, high-flex TPE, 4-conductor (2-pair), 2 m (6.56 ft) cable |
| 1585J-M8UBJM-2 | | Male RJ45 to male RJ45, foil and braided shield, teal, high-flex PUR, 8-conductor (4-pair), 2 m (6.56 ft) cable |
| 1585J-M4UBJM-2 | | Male RJ45 to male RJ45, foil and braided shield, teal, high-flex PUR, 4-conductor (2-pair), 2 m (6.56 ft) cable |
| 1585J-M8PBJM-2 | | Male RJ45 to male RJ45, unshielded twisted pair, teal, riser PVC, 8-conductor (4-pair), 2 m (6.56 ft) cable |
| 1585J-M4PBJM-2 | | Male RJ45 to male RJ45, unshielded twisted pair, teal, riser PVC, 4-conductor (2-pair), 2 m (6.56 ft) cable |
| 1585J-M8HBJM-2 | | Male RJ45 to male RJ45, foil shield, teal, 600V PVC, 8-conductor (4-pair), 2 m (6.56 ft) cable |
| 1585J-M4HBJM-2 | | Male RJ45 to male RJ45, foil shield, teal, 600V PVC, 4-conductor (2-pair), 2 m (6.56 ft) cable |
| 1585J-M8TGJM-2 | Category 6 | Male RJ45 to male RJ45, foil shield, teal, high-flex TPE, 8-conductor (4-pair), 2 m (6.56 ft) cable |
| M12 to M12, D-code | | |
| 1585D-M4TBDM-2 | Category 5e | M12 D-code to M12 D-code, unshielded twisted pair, teal, high-flex TPE, 4-conductor (2-pair), 2 m (6.56 ft) cable |
| 1585D-M4UBDM-2 | | M12 D-code to M12 D-code, foil and braided shield, teal, high-flex PUR, 4-conductor (2-pair), 2 m (6.56 ft) cable |
| 1585D-M4PBDM-2 | | M12 D-code to M12 D-code, foil and braided shield, teal, riser PVC, 4-conductor (2-pair), 2 m (6.56 ft) cable |
| M12 X-code to M12 X-code | | |
| 1585D-M8TGDM-2 | Category 6 | M12 X-code to M12 X-code, foil and braided shield, teal, high-flex TPE, 8-conductor (4-pair), 2 m (6.56 ft) cable |
| Industrial Ethernet Cable Spools⁽²⁾ | | |
| 1585-C8TB-S100 | Category 5e | Cable spool, unshielded twisted pair, teal, high-flex TPE, 8-conductor (4-pair), 100 m (328.08 ft) |
| 1585-C8UB-S100 | | Cable spool, foil and braided shield, teal, high-flex PUR, 8-conductor (4-pair), 100 m (328.08 ft) |
| 1585-C8PB-S100 | | Cable spool, unshielded twisted pair, teal, riser PVC, 8-conductor (4-pair), 100 m (328.08 ft) |
| 1585-C8HB-S100 | | Cable spool, foil shield, teal, 600V PVC, 8-conductor (4-pair), 100 m (328.08 ft) |
| Accessories | | |
| 1585J-M8CC-H | Category 5e | RJ45 IDC connector |
| 1585D-M4DC-H | | M12 D-code IDC connector |
| 1585D-M4DC-SH | | M12 D-code IDC connector compatible with 600V cable spools |

(1) Patchcords are available in lengths of up to 80 m (262.46 ft) in 0.1 m (0.328 ft) increments. Refer to <http://www.ab.com/catalogs> for full product offering.

(2) Cable spools are available in 100,300 m (328.08 ft) and 600 m (1968.5 ft) lengths.

For additional Ethernet media choices, see On-Machine™ Connectivity Catalog, publication [M117-CA001](#).

Rockwell Automation Support

Use the following resources to access support information.

| | | |
|---|---|--|
| Technical Support Center | Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates. | www.rockwellautomation.com/knowledgebase |
| Local Technical Support Phone Numbers | Locate the phone number for your country. | www.rockwellautomation.com/global/support/get-support-now.page |
| Direct Dial Codes | Find the Direct Dial Code for your product. Use the code to route your call directly to a technical support engineer. | www.rockwellautomation.com/global/support/direct-dial.page |
| Literature Library | Installation Instructions, Manuals, Brochures, and Technical Data. | www.rockwellautomation.com/literature |
| Product Compatibility and Download Center (PCDC) | Get help determining how products interact, check features and capabilities, and find associated firmware. | www.rockwellautomation.com/global/support/pcdc.page |

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