

# Stratix Ethernet Device Specifications

Stratix 5700 Catalog Numbers 1783-BMS4S2SGL, 783-BMS4S2SGA, 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-BMS10CGP, 1783-BMS10CGN, 1783-BMS12T4E2CGL, 1783-BMS12T4E2CGP, 1783-BMS12T4E2CGNK, 1783-BMS20CL, 1783-BMS20CA, 1783-BMS20CGL, 1783-BMS20CGP, 1783-BMS20CGN, 1783-BMS20CGPK

ArmorStratix 5700 Catalog Numbers 1783-ZMS8TA, 1783-ZMS16TA, 1783-ZMS24TA, 1783-ZMS4T4E2TGP, 1783-ZMS8T8E2TGP

Stratix 8000 and Stratix 8300 Catalog Numbers 1783-MS06T, 1783-MS10T, 1783-RMS06T, 1783-RMS10T, 1783-MX04E, 1783-MX04T04E, 1783-MX04S, 1783-MX08S, 1783-MX08T, 1783-MX08F

Stratix 6000 Catalog Numbers 1783-EMS08T, 1783-EMS04T

Embedded Switch Technology Catalog Numbers 1783-ETAP, 1783-ETAP1F, 1783-ETAP2F

Stratix 2000 Catalog Numbers 1783-US4T1F, 1783-US4T1H, 1783-US5T, 1784-US5TG, 1783-US6T2F, 1783-US6T2H, 1783-US6TG2CG, 1783-US7T1F, 1783-US7T1H, 1783-US8T, 1783-US14T2S, 1783-US16T

Stratix 5100 Catalog Numbers 1783-WAPAK9, 1783-WAPEK9, 1783-WAPZK9, 1783-WAPCK9

Stratix 5900 Catalog Number 1783-SR

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## Summary of Changes

This manual contains new and updated information. Changes throughout this revision are marked by change bars, as shown to the left of this paragraph.

Topic	Page
Addition of Stratix 2000™ switches (cat. nos. 1783-US4T1F, 1783-US4T1H, 1784-US5TG, 1783-US6T2F, 1783-US6T2H, 1783-US6TG2CG, 1783-US7T1F, 1783-US7T1H, 1783-US14T2S, 1783-US16T).	30
Certification for the Stratix 5100 Wireless Access Point/Workgroup Bridge (cat. no. 1783-WAPCK9 China)	36

## Stratix 5700 Ethernet Managed Switches

Cat. No.	Total Ports	RJ45 Ports <sup>(1)</sup>	Combo Ports	Power Over Ethernet Ports (PoE/PoE+)	SFP Slots	Software Type	CIP Sync (IEEE 1588)	NAT	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	4FE + 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	—	—
1783-BMS10CGN	10	8 FE	2 GE	—	—	Full	Yes	Yes	—
1783-BMS12T4E2CGL	18	12 FE	2 GE	4 FE	—	Lite	—	—	—
1783-BMS12T4E2CGP	18	12 FE	2 GE	4 FE	—	Full	Yes	—	—
1783-BMS12T4E2CGNK	18	12 FE	2 GE	4 FE	—	Full	Yes	Yes	Yes
1783-BMS20CL	20	16 FE	2 FE	—	2 FE	Lite	—	—	—
1783-BMS20CA	20	16 FE	2 FE	—	2 FE	Full	—	—	—
1783-BMS20CGL	20	16 FE	2 GE	—	2 FE	Lite	—	—	—
1783-BMS20CGP	20	16 FE	2 GE	—	2 FE	Full	Yes	—	—
1783-BMS20CGN	20	16 FE	2 GE	—	2 FE	Full	Yes	Yes	—
1783-BMS20CGPK	20	16 FE	2 GE	—	2 FE	Full	Yes	—	Yes

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

## 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 ratings	1 A @ 30V DC or 0.5 A @ 48V DC				
Power requirements	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
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	
Ethernet connection <sup>(1)</sup>	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				—
DC power connection	0.5...0.8 mm <sup>2</sup> (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				
Alarm connection	0.5...0.8 mm <sup>2</sup> (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				
Ground connection	4.0 mm <sup>2</sup> (12 AWG) min, stranded copper wire				
SFP modules <sup>(2)</sup>	<ul style="list-style-type: none"> <li>• 1783-SFP100FX</li> <li>• 1783-SFP1GSX</li> <li>• 1783-SFP100LX</li> <li>• 1783-SFP1GLX</li> </ul>				
Memory card	1784-SD1				
Torque	0.23 N•m (2.0 lb•in) on power and alarm connectors 0.96 N•m (8.5 lb•in) max on ground terminals			0.23 N•m (2.0 lb•in) on power and alarm connectors 0.4 N•m (3.5 lb•in) max on ground terminals	
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 <sup>(3)</sup>	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				

(1) See [page 41](#) for recommended products.

(2) SFP modules supported only on switches with combo ports or SFP slots.

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

## 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
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

**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
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 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

**Stratix 5700 Power over Ethernet Switches****Technical Specifications - Stratix 5700 Power over Ethernet Switches**

Attribute	1783-BMS12T4E2CGL, 1783-BMS12T4E2CGP, 1783-BMS12T4E2CGNK
Ethernet data rate	10/100 Mbps
Alarm relay ratings	30V DC, 1 A or 48V DC, 0.5 A
Power requirements	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	15 W @ 24V DC 40 °C (104 °F) 20 W max
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
Ethernet connections <sup>(1)</sup>	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
DC power connections	0.5...0.8 mm <sup>2</sup> (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
Alarm connections	0.5...0.8 mm <sup>2</sup> (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
Ground connection	4.0 mm <sup>2</sup> (12 AWG) min, stranded copper wire
SFP modules <sup>(2)</sup>	<ul style="list-style-type: none"> <li>• 1783-SFP100FX</li> <li>• 1783-SFP1GSX</li> <li>• 1783-SFP100LX</li> <li>• 1783-SFP1GLX</li> </ul>
Memory card	1784-SD1
Torque	0.23 N•m (2.0 lb•in) on power and alarm connectors 0.96 N•m (8.5 lb•in) max on ground terminals
Weight, approx	1.11 kg (2.45 lb)

**Technical Specifications - Stratix 5700 Power over Ethernet Switches (Continued)**

Attribute	1783-BMS12T4E2CGL, 1783-BMS12T4E2CGP, 1783-BMS12T4E2CGNK
Wiring category <sup>(3)</sup>	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

(1) See [page 41](#) for recommended products.

(2) SFP modules supported only on switches with combo ports or SFP slots.

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

**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)	55 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...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 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

**Environmental Specifications - Stratix 5700 Power over Ethernet Switches**

Attribute	1783-BMS12T4E2CGL, 1783-BMS12T4E2CGP, 1783-BMS12T4E2CGNK
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

**Certifications - Stratix 5700 Switches**

Certifications (when product is marked) <sup>(1)</sup>	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"> <li>EN 61326-1; Meas./Control/Lab., Industrial Requirements</li> <li>EN 61000-6-2; Industrial Immunity</li> <li>EN 61000-6-4; Industrial Emissions</li> <li>EN 61131-2; Programmable Controllers (Clause 8, Zone A &amp; B)</li> </ul> European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> <li>EN 50581; Technical Documentation</li> </ul>
C-Tick	Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> <li>AS/NZS CISPR 11; Industrial Emissions</li> </ul>
Ex	European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>EN 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>EN 60079-0; General Requirements II 3 G Ex nA nC IIC T4 Gc X</li> </ul>
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> <li>Article 58-2 of Radio Waves Act, Clause 3</li> </ul>
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

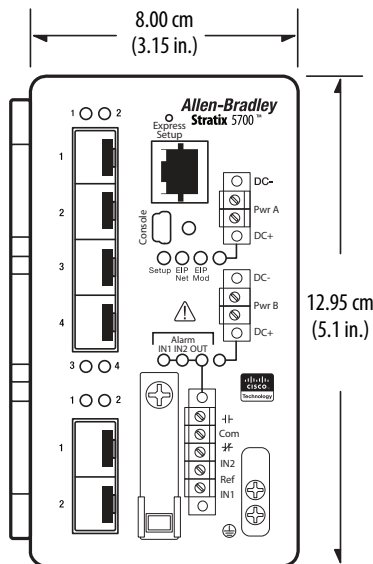
To prevent the switch from overheating, observe the following minimum clearances:

- 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.

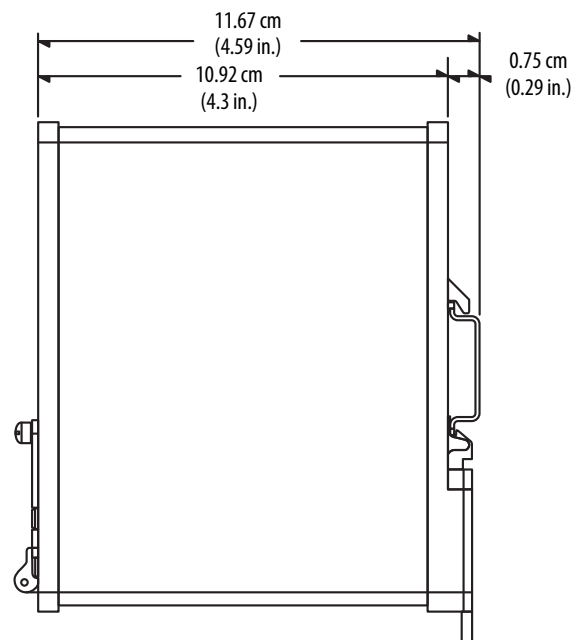
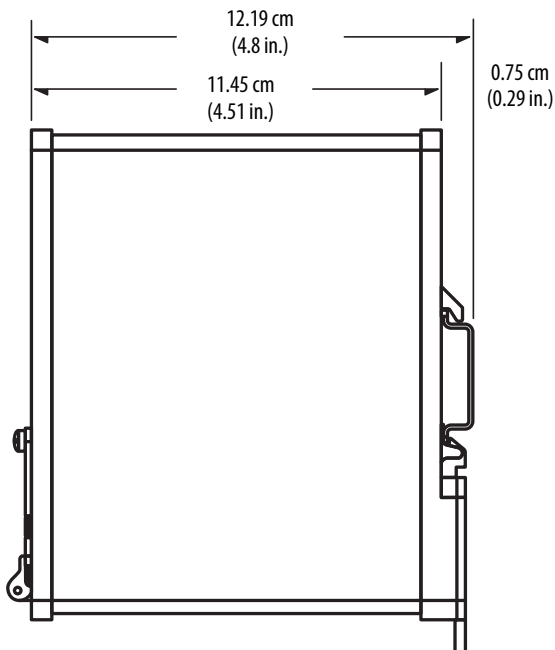
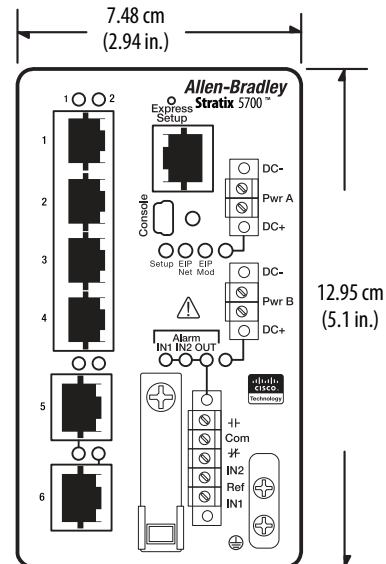
### 6 SFP-port Switches

1783-BMS4S2SGL, 1783-BMS4S2SGA



### 6-port Switches

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



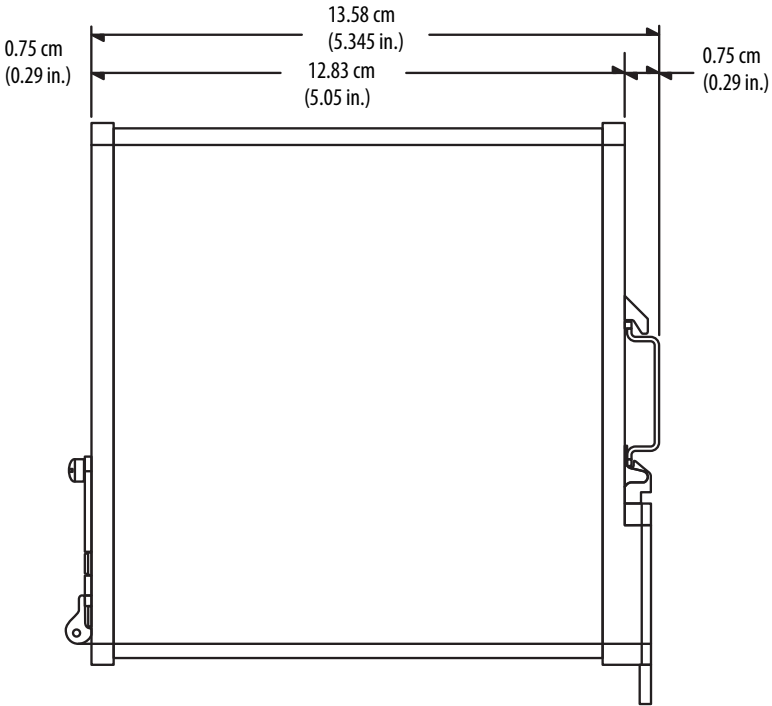
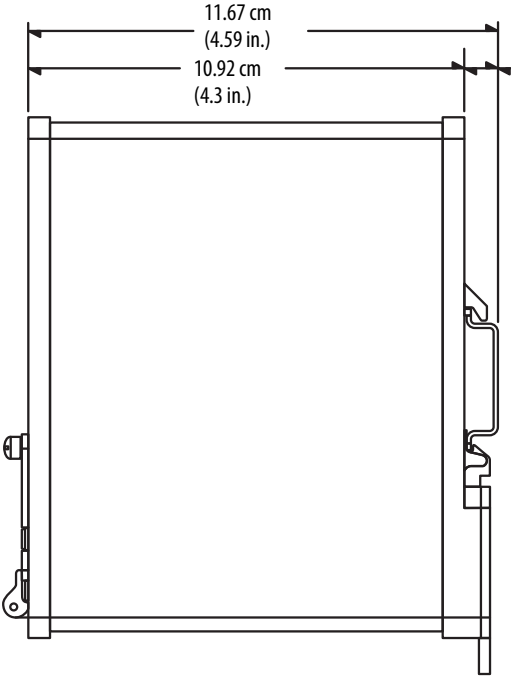
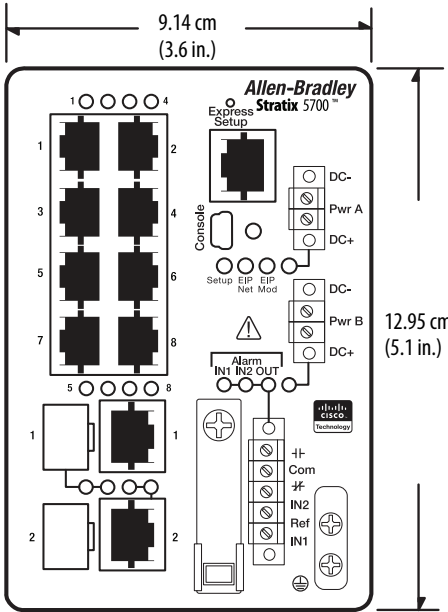
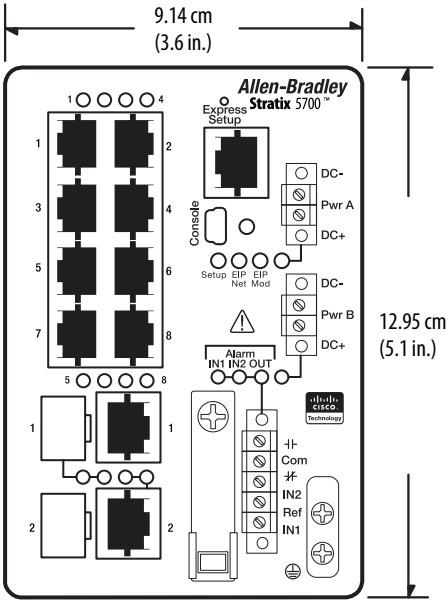


**10-port Switches**

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

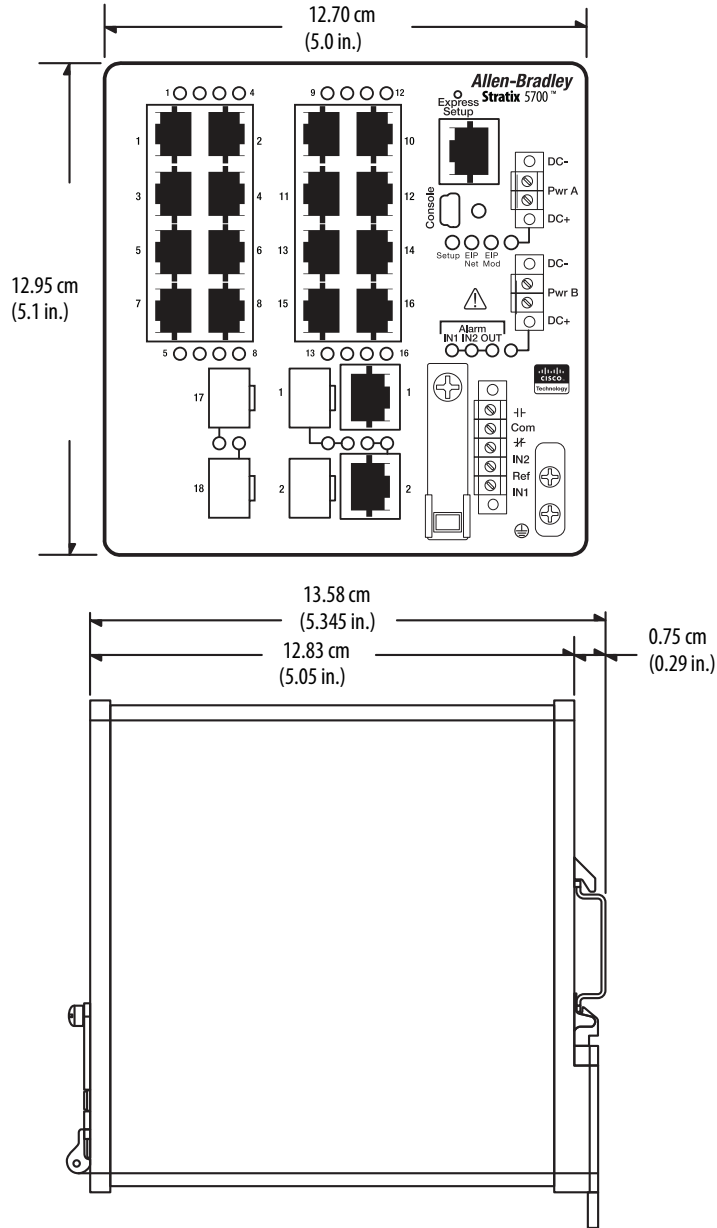
**10-port Switch**

1783-BMS10CGP, 1783-BMS10CGN



**18- 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	Power over Ethernet Ports (PoE/PoE+)	Software Type	CIP Sync (IEEE 1588)	NAT
1783-ZMS8TA	8	8 FE	—	—	Full	—	—
1783-ZMS16TA	16	16 FE	—	—	Full	—	—
1783-ZMS24TA	24	24 FE	—	—	Full	—	—
1783-ZMS4T4E2TGP	10	4 FE	2 GE	4 FE	Full	Yes	—
1783-ZMS8T8E2TGP	18	8 FE	2 GE	8 FE	Full	Yes	—

### Technical Specifications - ArmorStratix 5700 Switches

Attribute	1783-ZMS8TA	1783-ZMS16TA	1783-ZMS24TA	1783-ZMS4T4E2TGP	1783-ZMS8T8E2TGP
Power requirements	1.5 A max @ 12...48V DC Class 2/SELV	1.8 A max @ 12...48V DC Class 2/SELV	2.0 A max @ 12...48V DC Class 2/SELV	User supply (non PoE): 9.6...60V DC, 2.9 A max Alarm: 30V DC, 1 A or 48V DC, 0.5 A Class 2/SELV	User supply (non PoE): 9.6...60V DC, 3.3 A max Alarm: 30V DC, 1 A or 48V DC, 0.5 A Class 2/SELV
Power over Ethernet input power	—	—	—	44...57V DC (48V DC nom) for PoE 50...57V DC (54V DC nom) for PoE+ or a combination of PoE and PoE+	
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				
Ground connection	4.0 mm <sup>2</sup> (12 AWG) min, stranded copper wire				
Ethernet connection <sup>(1)</sup>	IP67-rated M12 D-code or X-code connectors according to ODVA EtherNet/IP specifications and ISO/IEC 24702/61918				
Torque	1.13 N•m (10.0 lb-in) max on ground terminals				
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 <sup>(2)</sup>	3 - on console 2 - on DC power ports and 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 IP67/Type 4				

(1) See [page 41](#) 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](#).

**Environmental Specifications - ArmorStratix 5700 Switches**

Attribute	1783-ZMS8TA, 1783-ZMS16TA, 1783-ZMS24TA	1783-ZMS4T4E2TGP, 1783-ZMS8T8E2TGP
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 1000A/m short duration at 50Hz 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

**Certifications—ArmorStratix 5700 Switches**

<b>Certifications (when product is marked)<sup>(1)</sup></b>	<b>1783-ZMS8TA, 1783-ZMS16TA, 1783-ZMS24TA</b>	<b>1783-ZMS4T4E2TGP, 1783-ZMS8T8E2TGP</b>
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"> <li>• EN 61326-1; Meas./Control/Lab., Industrial Requirements</li> <li>• EN 61000-6-2; Industrial Immunity</li> <li>• EN 61000-6-4; Industrial Emissions</li> <li>• EN 61131-2; Programmable Controllers (Clause 8, Zone A &amp; B)</li> </ul> European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> <li>• EN 50581; Technical Documentation</li> </ul>	
RCM	Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> <li>• EN 61000-6-4; Industrial Emissions</li> </ul>	
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> <li>• Article 58-2 of Radio Waves Act, Clause 3</li> </ul>	
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.

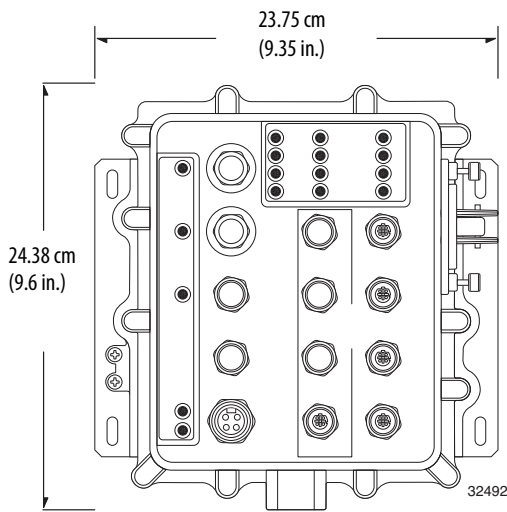
## Dimensions—ArmorStratix 5700 Switches

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

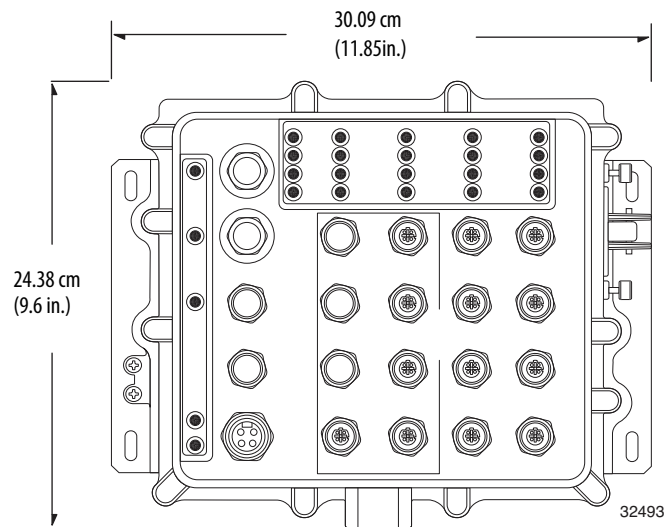
- Top and bottom: 50.8 mm (2.0 in.)
- Sides: 50.8 mm (2.0 in.)
- Front: 50.8 mm (2.0 in.)

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

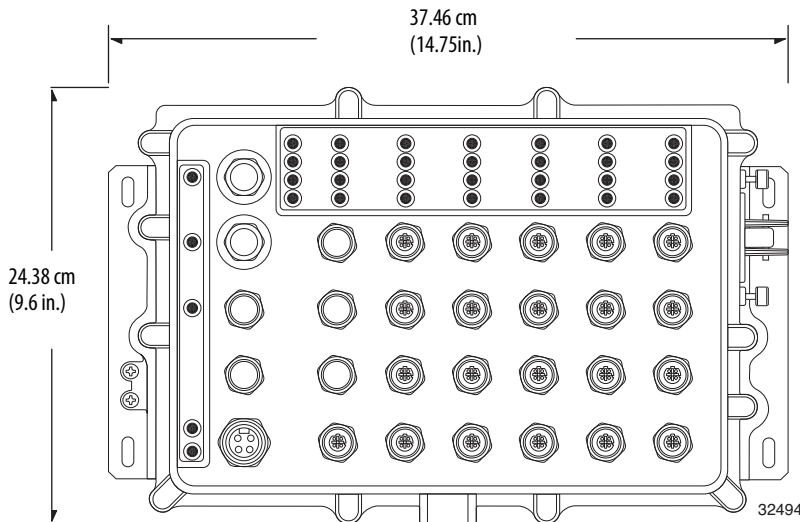
**8- and 10-port Switches**  
1783-ZMS8TA, 1783-ZMS4T4E2TGP



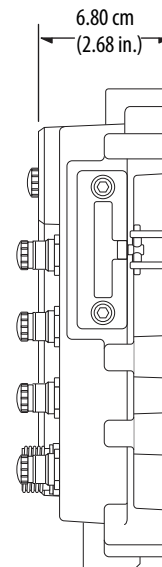
**16- and 18-port Switches**  
1783-ZMS16TA, 1783-ZMS8T8E2TGP



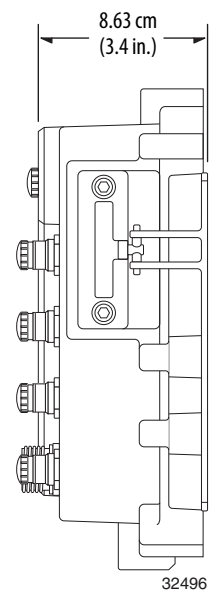
**24-port Switch**  
1783-ZMS24TA



**16- and 24-port Switches**  
1783-ZMS16TA, 1783-ZMS8T8E2TGP,  
1783-ZMS24TA



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



# Stratix 8000 and Stratix 8300 Ethernet Managed Switches

## 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			
Switch input rating, max	2 A max @ 18...60V DC, CL 2/SELV			
Alarm relay rating, max	1 A max @ 30V DC, CL 2/SELV			
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			
Ethernet connections <sup>(1)</sup>	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			
DC power and alarm connections	0.5...0.8 mm <sup>2</sup> (20...18 AWG) solid or stranded copper wire rated at 90 °C (194 °F) or greater, 1.2 mm (3/64 in.) insulation max			
Functional ground connection	3.3...5.3 mm <sup>2</sup> (12...10 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater			
SFP modules <sup>(2)</sup>	<ul style="list-style-type: none"> <li>• 1783-SFP100FX</li> <li>• 1783-SFP1GSX</li> <li>• 1783-SFP100LX</li> <li>• 1783-SFP1GLX</li> </ul>			
Memory card	1783-MCF		1783-RMCF	
Torque	0.23 N·m (2.0 lb·in) on power and alarm connectors			
Wiring category <sup>(3)</sup>	2 - on alarm ports 2 - on power ports 2 - on Ethernet ports			
Enclosure type rating	None (open-style)			
North American temp code	T4			
IEC temp code	T4			

(1) See [page 41](#) for recommended products.

(2) SFP modules supported only on switches with combo ports or SFP slots.

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

**Environmental Specifications - Stratix 8000 and Stratix 8300 Switches**

<b>Attribute</b>	<b>1783-MS06T, 1783-MS10T, 1783-RMS06T, 1783-RMS10T</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)	-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 and 60 Hz
Magnetic pulse immunity IEC 61000-4-9	—
Oscillatory surge withstand IEEE C37.90.1	2.5 kV
Voltage variation IEC 61000-4-29	10 ms interruption on DC supply ports



**Certifications - Stratix 8000 and Stratix 8300 Switches**

<b>Certifications (when product is marked)<sup>(1)</sup></b>	<b>1783-MS06T, 1783-MS10T, 1783-RMS06T, 1783-RMS10T</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 2004/108/EC EMC Directive, compliant with: <ul style="list-style-type: none"> <li>EN 61326-1; Meas./Control/Lab., Industrial Requirements</li> <li>EN 61000-6-2; Industrial Immunity</li> <li>EN 61000-6-4; Industrial Emissions</li> <li>EN 61131-2; Programmable Controllers (Clause 8, Zone A &amp; B)</li> </ul> European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> <li>EN 50581; Technical Documentation</li> </ul>
C-Tick	Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> <li>AS/NZS CISPR 11; Industrial Emissions</li> </ul>
Ex	European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>EN 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>EN 60079-0; General Requirements II 3 G Ex nA nC IIC T4 Gc</li> </ul>
KC	Korean Certification of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> <li>Framework Act on Telecommunications and Radio Waves Act</li> </ul>
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**

<b>Cat. No.</b>	<b>Description</b>
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 Power over Ethernet ports
1783-MX04T04E	Ethernet expansion module with 4 10/100 Base-T copper Ethernet ports and 4 Power over Ethernet ports

**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	5.6 W	11.8 W	8.25 W	13.2 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	—	—	—
Ethernet connections <sup>(1)</sup>	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	—	—	—
SFP modules	—	—	• 1783-SFP100FX • 1783-SFP100LX	—
Wiring category <sup>(2)</sup>	2 - on Ethernet ports	—	—	—
Enclosure type rating	None (open-style)			
North American temp code	T4			
IEC temp code	T4			

(1) See [page 41](#) 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](#).

**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 $\mu$ m multimode cable 4 db with 50/125 $\mu$ m multimode cable
Connector type	IEC 61754-20 LC connector

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

Attribute	1783-MX04E	1783-MX04T04E
Description	Expansion module <ul style="list-style-type: none"> <li>• 4 ports, Power over Ethernet</li> </ul>	Expansion module <ul style="list-style-type: none"> <li>• 4 ports, copper</li> <li>• 4 ports, Power over Ethernet</li> </ul>
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+ or a combination of PoE and PoE+ 2.5 A max	48V DC for PoE 54V DC for PoE+ or a combination of PoE and PoE+ 2.4 A max
Power dissipation	3.0 W	3.6 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	
Ethernet connections <sup>(1)</sup>	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	
SFP modules	—	
Wiring category <sup>(2)</sup>	2 - on Ethernet ports 2 - on power ports	
Enclosure type rating	None (open-style)	
North American temp code	T4	
IEC temp code	T4	

(1) See [page 41](#) 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](#).

**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			

**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)	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 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

**Certifications - Stratix 8000 and Stratix 8300 Expansion Modules**

Certifications (when product is marked) <sup>(1)</sup>	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. Ex nA IIC T4X Gc X / AEx nA IIC T4X Gc		
CE	European Union 2004/108/EC EMC Directive, compliant with: <ul style="list-style-type: none"> <li>EN 61326-1; Meas./Control/Lab., Industrial Requirements</li> <li>EN 61000-6-2; Industrial Immunity</li> <li>EN 61000-6-4; Industrial Emissions</li> <li>EN 61131-2; Programmable Controllers (Clause 8, Zone A &amp; B)</li> </ul> European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> <li>EN 50581; Technical Documentation</li> </ul>		
C-Tick	Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> <li>AS/NZS CISPR 11; Industrial Emissions</li> </ul>		
Ex	European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>EN 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>EN 60079-0; General Requirements II 3 G Ex nA IIC T4 Gc</li> </ul>		
KC	Korean Certification of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> <li>Framework Act on Telecommunications and Radio Waves Act</li> </ul>		
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.

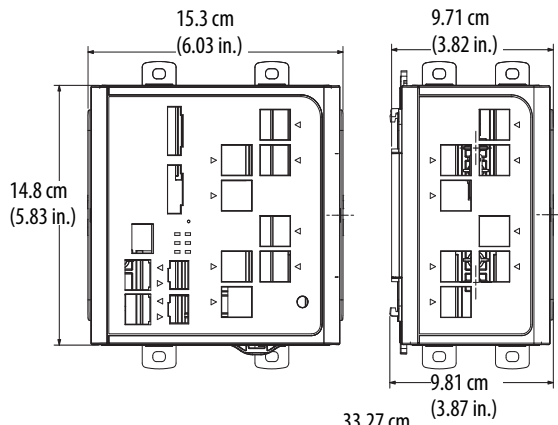
**Dimensions—Stratix 8000 and Stratix 8300 Switches**

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.

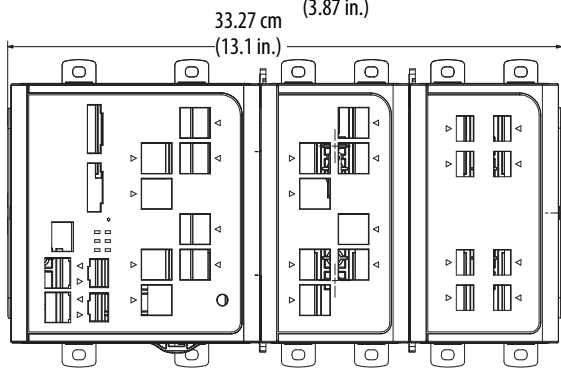
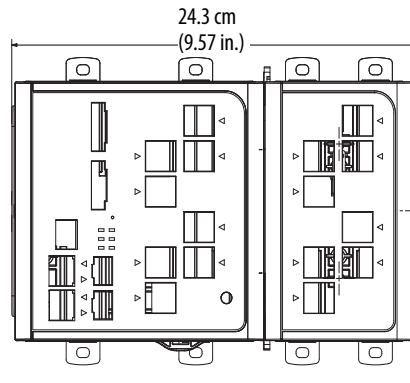
Airflow around the switch and through the vents is unrestricted. To prevent the switch from overheating, these minimum clearances must be met:

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

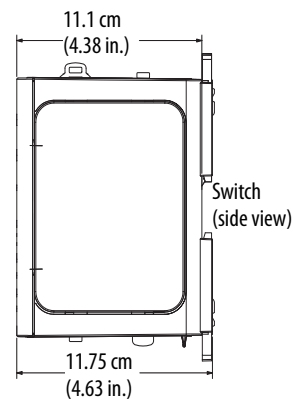
**Switch and Expansion Module**



**Switch and Expansion Module (mated)**



**Switch and Expansion Modules (mated)**



31801-M

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 6000 Ethernet Managed Switches

## Technical Specifications - Stratix 6000 Switches

Attribute	1783-EMS08T	1783-EMS04T
Description	Stratix 6000™ managed switch <ul style="list-style-type: none"> <li>• 8 ports</li> <li>• 1 fiber SFP slot</li> </ul>	Stratix 6000 managed switch <ul style="list-style-type: none"> <li>• 4 ports</li> </ul>
Power requirements	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	
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	
Ethernet connections <sup>(1)</sup>	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	
DC power connections	0.33...3.3 mm <sup>2</sup> (22...12 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max	
Functional ground connection	3.3 mm <sup>2</sup> (12 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater	
SFP modules <sup>(2)</sup>	<ul style="list-style-type: none"> <li>• 1783-SFP1GSX</li> <li>• 1783-SFP1GLX</li> </ul>	
Torque	1.36 N•m (12 lb•in) on DC power and functional ground	
Wiring category <sup>(3)</sup>	2 - on DC power ports 2 - on Ethernet ports	
Enclosure type rating	None (open-style)	
North American temp code	T4	
IEC temp code	T4	

(1) See [page 41](#) for recommended products.

(2) SFP modules supported only on switches with combo ports or SFP slots.

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

**Environmental Specifications - Stratix 6000 Switches**

<b>Attribute</b>	<b>1783-EMS04T, 1783-EMS08T</b>
Temperature, operating IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock)	0...60 °C (32...140 °F)
Temperature, surrounding air, max	60 °C (140 °F)
Temperature, nonoperating IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold), IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat), IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock)	-40...85 °C (-40...185 °F)
Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)	5...95% noncondensing
Vibration 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 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 2000...2700 MHz
EFT/B immunity IEC 61000-4-4	±2 kV at 5 kHz on power ports ±1 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 shielded Ethernet 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 300A/m short duration at 50 and 60 Hz
Voltage variation IEC 61000-4-29	10 ms interruption on DC supply ports



## Certifications - Stratix 6000 Switches

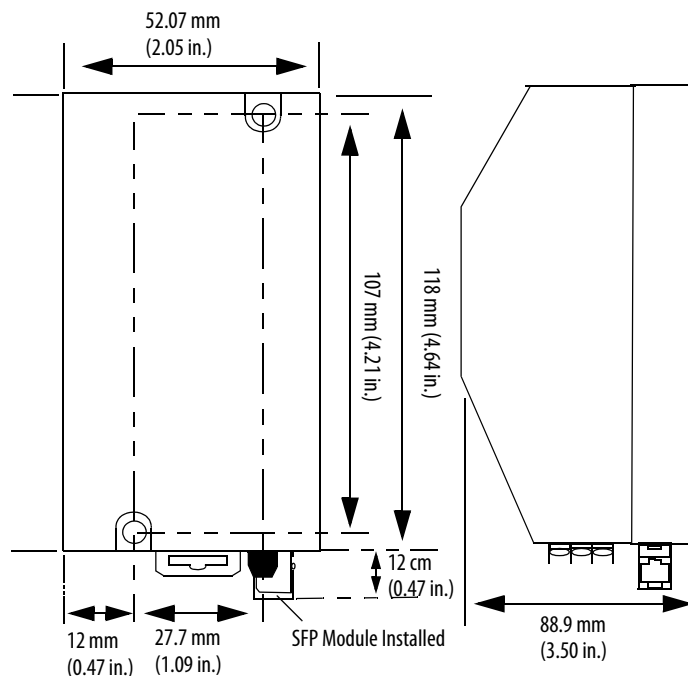
Certifications (when product is marked) <sup>(1)</sup>	1783-EMS04T, 1783-EMS08T
c-UL-us	UL Listed Information Technology Equipment, certified for US and Canada. See UL File E151729.
c-ETL-us	ETL Listed Industrial Control Equipment, certified for US and Canada. ETL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. and Canada
CE	European Union 2004/108/EC EMC Directive, compliant with: <ul style="list-style-type: none"> <li>EN 61326-1; Meas./Control/Lab., Industrial Requirements</li> <li>EN 61000-6-2; Industrial Immunity</li> <li>EN 61000-6-4; Industrial Emissions</li> <li>EN 61131-2; Programmable Controllers (Clause 8, Zone A &amp; B)</li> </ul> European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> <li>EN 50581; Technical Documentation</li> </ul>
C-Tick	Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> <li>AS/NZS CISPR 11; Industrial Emissions</li> </ul>
Ex	European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>EN 60079-15; Potentially Explosive Atmospheres, Protection "n"</li> <li>EN 60079-0; General Requirements II 3 G Ex nA nL IIC T4</li> </ul>
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> <li>Article 58-2 of Radio Waves Act, Clause 3</li> </ul>
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 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.



# Embedded Switch Technology

## 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
Ethernet connections <sup>(1)</sup>	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		
DC power connections	One 0.33...3.3 mm <sup>2</sup> (22...12 AWG) or two 0.33...1.3 mm <sup>2</sup> (22...16 AWG) solid or stranded copper wire rated at 75 °C (167 °F) or greater, 1.2 mm (3/64 in.) insulation max		
Torque	0.6...0.8 N·m (5...7 lb·in) on power connectors		
Wiring category <sup>(2)</sup>	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 41](#) 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](#).

## 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 connections	Glass 62.5/125 μm and 50/125 μm multimode fiber Simplex or duplex Jacket type and jacket diameter is dependent on connector selection Graded Index (GI) fiber 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) <sup>(1)</sup>

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

### 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	

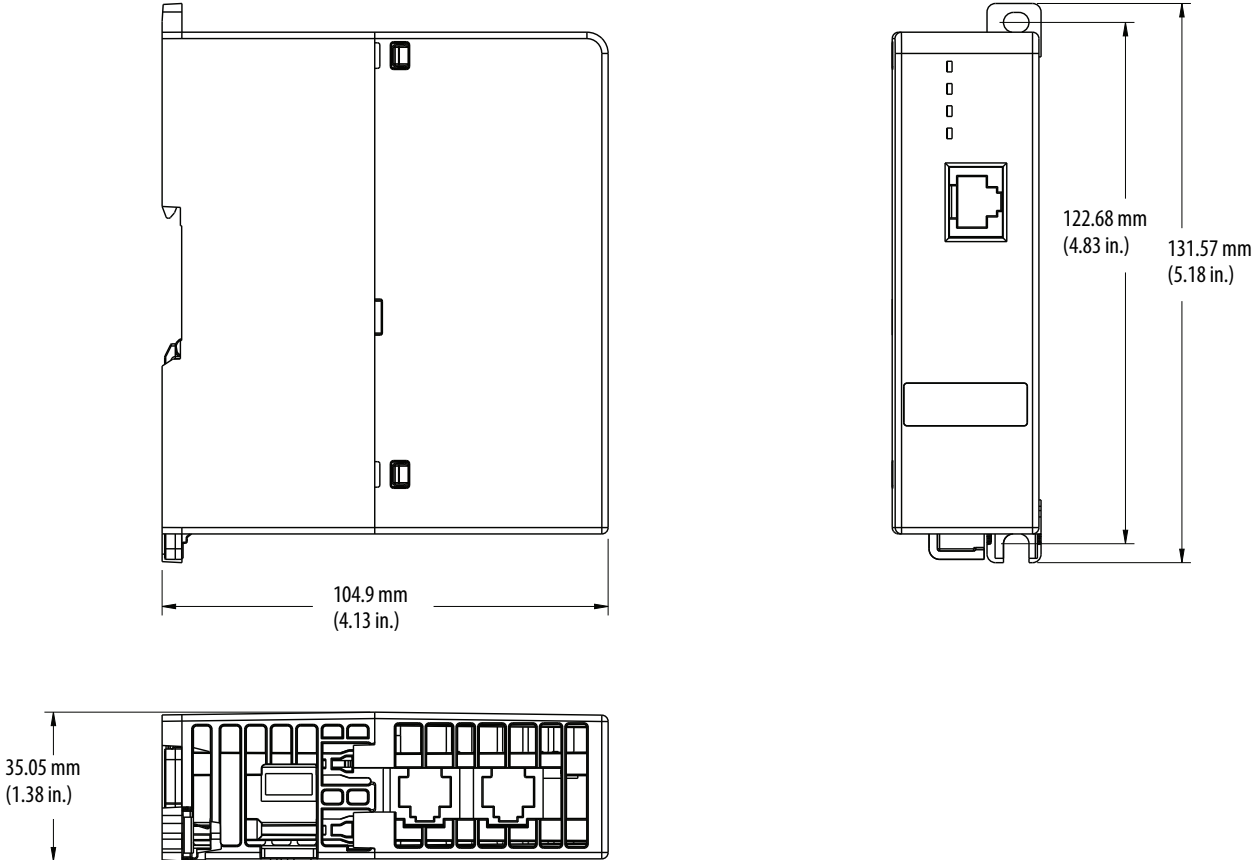
**Certifications - EtherNet/IP Taps**

Certification <sup>(1)</sup>	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"> <li>• EN 61326-1; Meas./Control/Lab., Industrial Requirements</li> <li>• EN 61000-6-2; Industrial Immunity</li> <li>• EN 61000-6-4; Industrial Emissions</li> <li>• EN 61131-2; Programmable Controllers (Clause 8, Zone A and B)</li> </ul> European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> <li>• EN 50581; Technical Documentation</li> </ul>	
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"> <li>• EN 60079-15; Potentially Explosive Atmospheres, Protection “n”</li> <li>• EN 60079-0; General Requirements</li> <li>• II 3 G Ex nA IIC T5 X</li> </ul>	European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>• EN 60079-15; Potentially Explosive Atmospheres, Protection “n”</li> <li>• EN 60079-0; General Requirements</li> <li>• II 3 G Ex nA IIC T4 X</li> </ul>
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> <li>• Article 58-2 of Radio Waves Act, Clause 3</li> </ul>	
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.



## Stratix 2000 Ethernet Unmanaged Switches

Cat. No.	Description	Total Ports	RJ45 Ports	Fiber Ports	SFP Slots
1783-US4T1F	4 ports RJ45 10/100 1 port fiber multi mode	5	4	1 multi mode	1
1783-US4T1H	4 ports RJ45 10/100 1 port fiber single mode	5	4	1 single mode	1
1783-US5T	5 ports RJ45 10/100	5	5	—	—
1783-US5TG	5 ports RJ45 10/100/1000	5	5	—	—
1783-US6T2F	6 ports RJ45 10/100 2 port fiber multi mode	8	6	2 multi mode	2
1783-US6T2H	6 ports RJ45 10/100 2 port fiber single mode	8	6	2 single mode	2
1783-US6TG2CG	6 ports RJ45 10/100/1000	8	6	2 GB combo	2
1783-US7T1F	7 ports RJ45 10/100 1 port fiber multi mode	8	7	1 multi mode	1
1783-US7T1H	7 ports RJ45 10/100 1 port fiber single mode	8	7	1 single mode	1
1783-US8T	8 ports RJ45 10/100	8	8	—	—
1783-US14T2S	14 ports RJ45 10/100	16	14	2	2
1783-US16T	16 ports RJ45 10/100	16	16	—	—

### Technical Specifications - Stratix 2000 Switches

Attribute	1783-US4T1F 1783-US4T1H	1783-US5TG	1783-US6T2F 1783-US6T2H 1783-US7T1F 1783-US7T1H	1783-US6TG2CG	1783-US14T2S	1783-US16T	1783-US5T	1783-US8T
Inrush current, max	—						2.2 A	
Power supply voltage	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							
Ethernet connections <sup>(1)</sup>	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	

### Technical Specifications - Stratix 2000 Switches

Attribute	1783-US4T1F 1783-US4T1H	1783-US5TG	1783-US6T2F 1783-US6T2H 1783-US7T1F 1783-US7T1H	1783-US6TG2CG	1783-US14T2S	1783-US16T	1783-US5T	1783-US8T	
DC power connections	0.82...2.5 mm <sup>2</sup> (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 <sup>2</sup> (18...14 AWG) twisted-pair copper wire suitable for 30 °C (86 °F) above surrounding ambient temperature outside the enclosure		
Functional earth connection	2.5 mm <sup>2</sup> (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 <sup>2</sup> (14 AWG) copper wire suitable for 30 °C (86 °F) above surrounding ambient temperature outside the enclosure, with a suitable ring terminal		
Torque, max recommended	1.82 N·m (16 lb·in) on power /functional earth connector								
Wiring category <sup>(2)</sup>	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		

(1) See [page 41](#) 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](#).

### Environmental Specifications - Stratix 2000 Switches

Attribute	1783-US4T1F, 1783-US4T1H, 1783-US5TG, 1783-US6T2F, 1783-US6T2H, 1783-US6TG2CG, 1783-US7T1F, 1783-US7T1H, 1783-US14T2S, 1783-US16T	1783-US5T	1783-US8T
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)	-40...85 °C (-40...185 °F)	
Relative humidity IEC 60068-2-30 (Test Db, Unpackaged Damp Heat)	5...95% noncondensing	5...95% noncondensing	
Vibration IEC 60068-2-6 (Test Fc, Operating)	2 g @ 10...150 Hz	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		

**Environmental Specifications - Stratix 2000 Switches (Continued)**

Attribute	1783-US4T1F, 1783-US4T1H, 1784-US5TG, 1783-US6T2F, 1783-US6T2H, 1783-US6TG2CG, 1783-US7T1F, 1783-US7T1H, 1783-US14T2S, 1783-US16T	1783-US5T	1783-US8T
Emissions CISPR11 (IEC 61000-6-4)	Class A		
ESD immunity IEC 61000-4-2	8 kV contact discharges 15 kV air discharges	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

**Certifications- Stratix 2000 Switches**

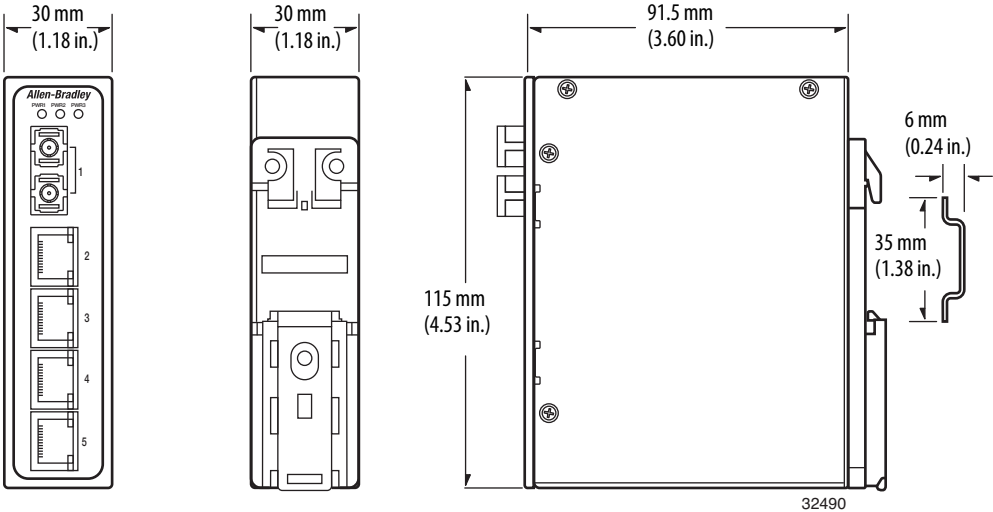
Certifications (when product is marked) <sup>(1)</sup>	1783-US4T1F, 1783-US4T1H, 1784-US5TG, 1783-US6T2F, 1783-US6T2H, 1783-US6TG2CG, 1783-US7T1F, 1783-US7T1H, 1783-US14T2S, 1783-US16T	1783-US5T, 1783-US8T
c-UL-us	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for U.S. 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: <ul style="list-style-type: none"> <li>EN 61326-1; Meas./Control/Lab., Industrial Requirements</li> <li>EN 61000-6-2; Industrial Immunity</li> <li>EN 61000-6-4; Industrial Emissions</li> <li>EN 61131-2; Programmable Controllers (Clause 8, Zone A &amp; B)</li> </ul> European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> <li>EN 50581; Technical Documentation</li> </ul>	
RCM	Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> <li>EN 61000-6.4; Industrial Emissions</li> </ul>	
Ex	European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>EN 60079-15; Potentially Explosive Atmospheres, Protection “n”</li> <li>EN 60079-0; General Requirements II 3 G Ex nA IIC T4 Gc X</li> </ul>	European Union 94/9/EC ATEX Directive, compliant with: <ul style="list-style-type: none"> <li>EN 60079-15; Potentially Explosive Atmospheres, Protection “n”</li> <li>EN 60079-0; General Requirements II 3 G Ex nA IIC T5 Gc</li> </ul>
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: <ul style="list-style-type: none"> <li>Article 58-2 of Radio Waves Act, Clause 3</li> </ul>	

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

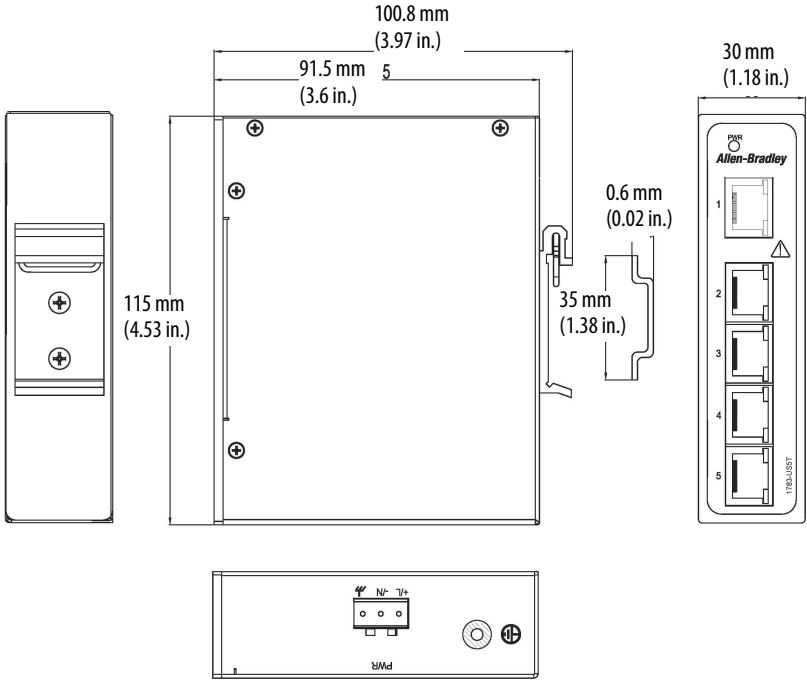


### Dimensions—Stratix 2000 Switches

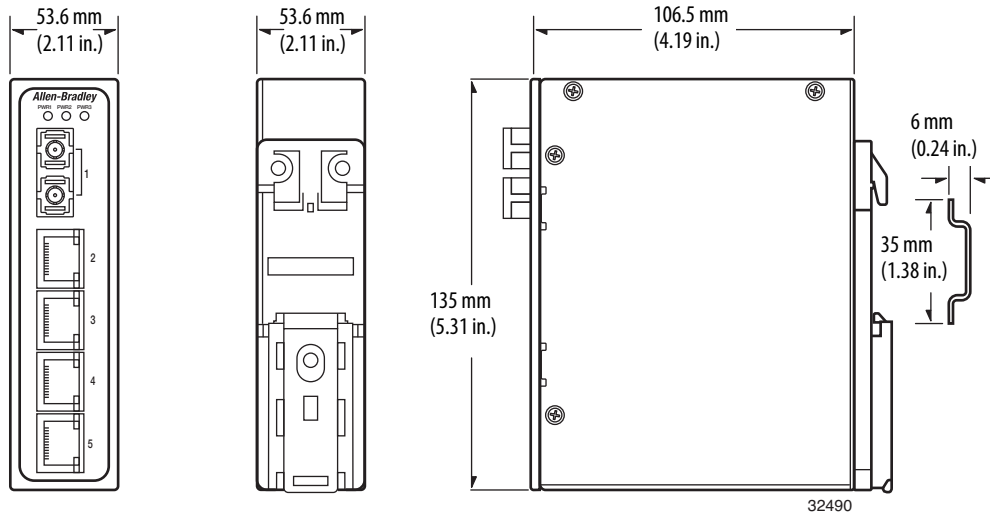
#### 1783-US4T1F, 1783-US4T1H, 1783-US5TG Switch Dimensions



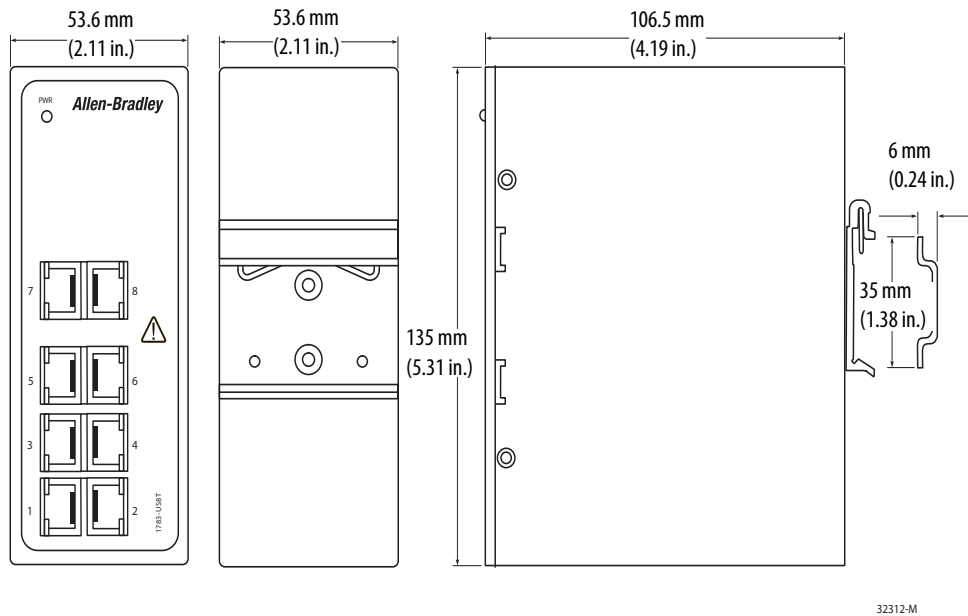
#### 1783-US5T Switch Dimensions



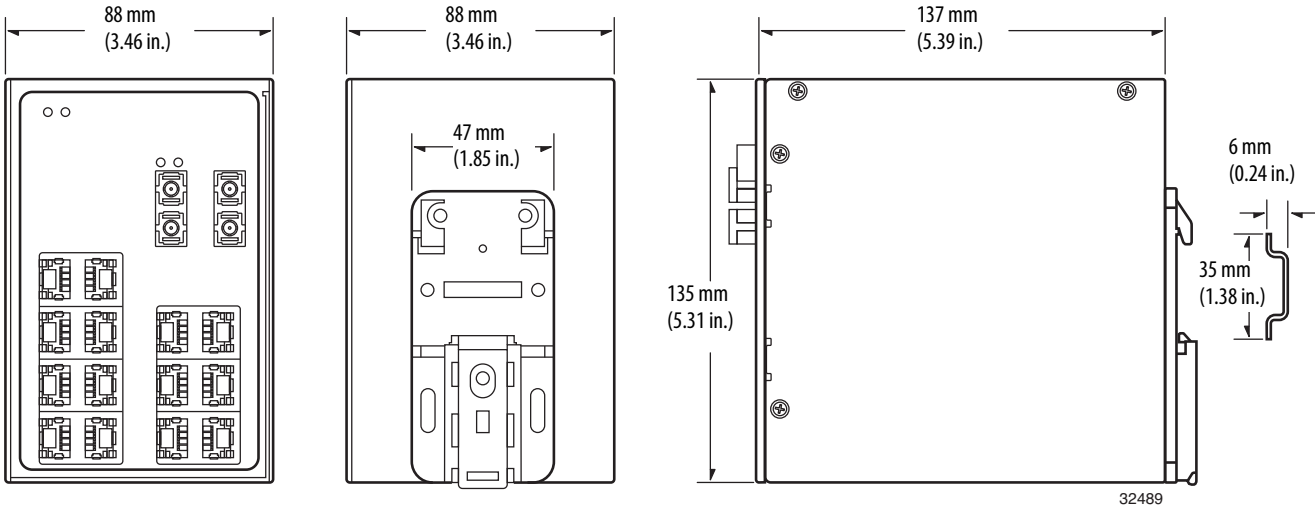
**1783-US6T2F, 1783-US6T2H, 1783-US7T1F, 1783-US7T1H Switch Dimensions**



**1783-US8T Switch Dimensions**



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



# Stratix 5100 Wireless Access Point/Workgroup Bridge


## Technical Specifications - Stratix 5100 Wireless Access Point/Workgroup Bridge

Attribute	1783-WAPAK9 North 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.)
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)
Power rating	Input: 48V DC, 350 mA	Input: 48V DC, 350 mA	Input: 48V DC, 350 mA	Input: 48V DC, 350 mA
Antennas	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

## Environmental Specifications - Stratix 5100 Wireless Access Point/Workgroup Bridge

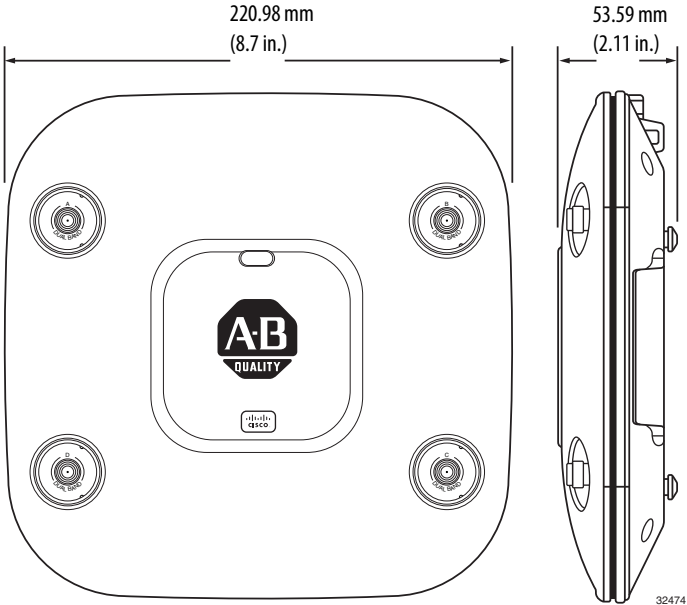
Attribute	1783-WAPAK9	1783-WAPEK9	1783-WAPZK9	1783-WAPCK9
Temperature, operating	-20...55 °C (-4...131 °F)	-20...55 °C (-4...131 °F)	-20...55 °C (-4...131 °F)	-20...55 °C (-4...131 °F)
Temperature, nonoperating/Storage	-30...85 °C (-22...185 °F)	-30...85 °C (-22...185 °F)	-30...85 °C (-22...185 °F)	-30...85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

## Certifications - Stratix 5100 Wireless Access Point/Workgroup Bridge

Catalog Number	Certifications (when product is marked) <sup>(1)</sup>	
1783-WAPAK9 North America	FCC ID: LDK102080 IC: 2461B-102080	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-WAPEK9 European Union	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 Australia/New Zealand	 E134	For use in Australia, New Zealand and all other Countries that recognize the Radiocommunications (Short Range Devices) Standard.
1783-WAPCK9 China	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

## Technical Specifications - Stratix 5900 Services Router

Attribute	1783-SR
Input voltages	5V, 4 A Class 2 Requires LITEON PA-1200-3SA4 power adapter (100...240V AC, 50/60Hz, 0.8A)
Power consumption, max	11 W
Isolation voltage	Not rated
Weight	1.5 kg (3.2 lb)
Wiring category <sup>(1)</sup>	3 - on power ports 2 - on Ethernet ports
Enclosure type rating	Meets IP41
<b>Router AC Power Adapter<sup>(2)</sup></b>	
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.

## 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

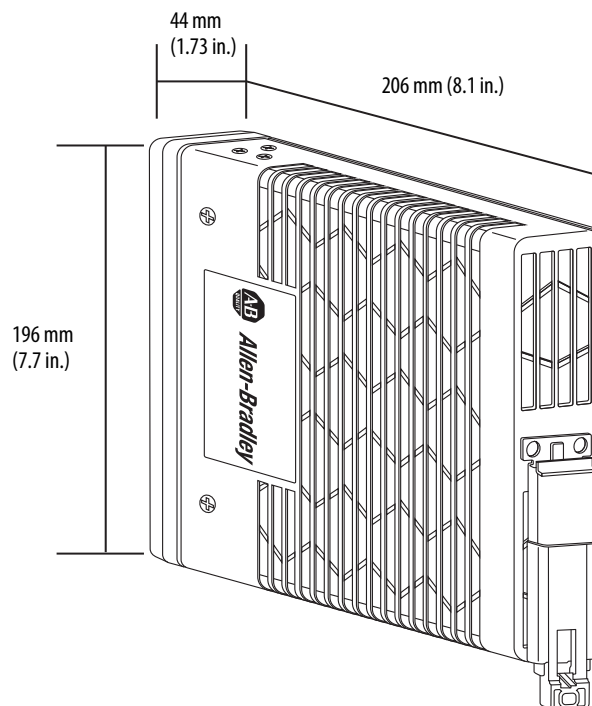
**Environmental Specifications - Stratix 5900 Services Router (Continued)**

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

**Certifications - Stratix 5900 Services Router**

Certifications (when product is marked) <sup>(1)</sup>	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"> <li>• EN 55022; ITE Emissions</li> <li>• EN 55024; ITE Immunity</li> <li>• EN 60950; ITE Safety</li> </ul> European Union 2011/65/EU RoHS, compliant with: <ul style="list-style-type: none"> <li>• EN 50581; Technical documentation</li> </ul>
C-Tick	Australian Radiocommunications Act, compliant with: <ul style="list-style-type: none"> <li>• ACMA EMC Std 08</li> </ul>
CCC	GB 4943. 1, GB 9254, YD/T993
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 5900 Services Router**

## Accessories

### SFP Transceivers

Cat. No.	Description	Wavelength	Core Size/ Cladding Size (micron)	Modal Bandwidth (MHz/km)	Cable Length	Compatibility
1783-SFP100FX	100 Base-FX multi-mode transceiver	1310 nm	50/125	500	2 km (6562 ft)	Stratix 5700 Stratix 8000 Stratix 8300
			62.5/125	500		
1783-SFP100LX	100 Base-LX single-mode transceiver	1310 nm	G.652	—	10 km (32,808 ft)	Stratix 5700 Stratix 8000 Stratix 8300
1783-SFP1GSX	1000 Base-SX multi-mode transceiver	850 nm	62.5/125	160	220 m (722 ft)	Stratix 6000 Stratix 5700 Stratix 8000 Stratix 8300
			62.5/125	200	275 m (902 ft)	
			50/125	400	500 m (1640 ft)	
			50/125	500	550 m (1804 ft)	
1783-SFP1GLX	1000 Base-LX/LH single-mode transceiver	1310 nm	G.652	—	10 km (32,808 ft)	Stratix 6000 Stratix 5700 Stratix 8000 Stratix 8300

### Memory Cards

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



## Ethernet Cables

Cat. No.	Category	Description
<b>Industrial Ethernet Patchcords<sup>(1)</sup></b>		
<b>RJ45 to RJ45</b>		
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
<b>M12 to M12, D-code</b>		
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
<b>M12 X-code to M12 X-code</b>		
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
<b>Industrial Ethernet Cable Spools<sup>(2)</sup></b>		
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)
<b>Accessories</b>		
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](#).

## Additional Resources

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

Resource	Description
EtherNet/IP Industrial Protocol White Paper, publication <a href="#">ENET-WP001</a>	Describes how to implement services and data objects on a TCP/UDP/IP based Ethernet network.
Stratix 5700 Ethernet Managed Switches User Manual, publication <a href="#">1783-UM004</a>	Describes how to install, configure, and troubleshoot the switches.
Stratix 8000 and 8300 Ethernet Managed Switches User Manual, publication <a href="#">1783-UM003</a>	Describes how to install, configure and troubleshoot the switches.
Stratix 6000 Ethernet Managed Switch User Manual, publication <a href="#">1783-UM001</a>	Describes how to configure and troubleshoot the switch.
Stratix 2000 Ethernet Unmanaged Switch Installation Instructions, publication <a href="#">1783-IN001</a>	Describes how to install and configure the switch.
Stratix 5900™ Services Router User Manual, publication <a href="#">1783-UM005</a>	Describes how to install, configure, and troubleshoot the router.
Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a>	Provides general guidelines for installing a Rockwell Automation® industrial system.
Product Certifications website, <a href="http://www.ab.com">http://www.ab.com</a>	Provides declarations of conformity, certificates, and other certification details.

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

**Notes:**

# Important User Information

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

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

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

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