



SWITCHBOARDS

SB front connected switchboards

400 - 6,000 amperes

usa.siemens.com/switchboards

Switchboard construction

- Switchboard is modular type construction, constructed in accordance with the latest NEMA PB-2 and UL 891 standards, vertical sections bolt together to form one metal enclosed rigid switchboard.
- The sides, top and rear are covered with removable code gauge steel plates.
- Bus material sized in accordance with UL891 and NEMA PB2.
- Incoming line termination, main device connection and all bolts used to join current-carrying parts are installed to permit servicing from the front only so that no rear access is required.
- Utility compartments are front accessible through a sealable hinged, single or double door or removable cover. Barriers and non-captive screws are utilized to ensure no access to the utility section except through sealable doors or covers.

- In distribution sections, the branch devices are front removable, and panel mounded with line and load side connections front accessible.
- All groups of control wires leaving the switchboard shall be provided with terminal blocks with suitable numbering strips.
- The complete switchboard is finished with ANSI 61 light gray polyester powder paint.

Referenced standards

Switchboards are designed, manufactured, and tested according to the latest applicable version of the following standards:

- ANSI/NFPA – National Electrical Code (NEC)
- UL 891 – Deadfront switchboards
- CSA C22.2 No. 244 – Switchboards
- NEMA PB 2- Deadfront distribution switchboards
- ISO 9000, 9001 or 9002 Certified

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Torque information

Size	Machine thread bolts and nuts 1)		Thread forming screws Torque (lb-in) 2)						
	Torque		0.125		0.188		0.250		>0.25"
	lb-in	lb-ft	AL	CU	AL	CU	AL	CU	AL/CU
#8-32	—	—	20	25	30	35	30	35	—
#10-24	—	—	20	25	30	50	30	50	—
1/4"-20	72	6	30	50	30	72	50	72	—
5/16"-18	144	12	—	—	108	144	108	144	144
3/8"-16	240	20	—	—	—	—	—	—	240
1/2"-13	600	50	—	—	—	—	—	—	—

1) For use with all washer types. 2) Based on material thickness.

Breaker connecting machine screws

Screws	Torque lb-in
#10	20
1/4"	72

Branch load conductors-panel mounted devices

This switchboard is designed for the installation of conductors per NEC 312.6. Refer to branch circuit devices for cable size and torque.

As a minimum, wire bending space (as required per NEC tables 312.6(A)&(B) for this product is based on wire or cable sizes (per NEC Table 310.15 (B)(16), formerly Table 310.16). Circuits 110 amps and less are sized from the 60°C aluminum column. Above 110 amps circuits are sized from the 75°C aluminum column. 400 amp circuits are based on (2) 250 or (1) 500 kcmil cables per phase. 600 amp circuits and up are sized based on multiple 500 kcmil cables per phase.

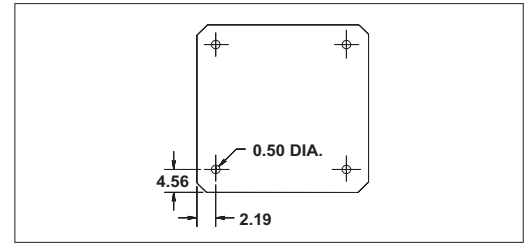
Field wired connectors – tightening torque

When not marked on the device or component, torque all connectors to the values indicated in the table below.

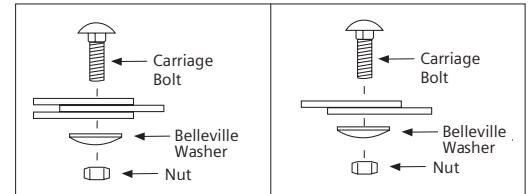
Hex socket head set screw		Slotted head screws		
Allen wrench size	Torque (lb-in)	AWG wire size	Small hole #6 max.	Large hole 1/0 max.
7/32"	150	#14-#10	20	35
1/4"	200	#8	25	40
5/16"	275	#6	35	45
3/8"	375	#4	—	45
1/2"	500	#3-1/0	—	50
9/16"	600			

Connectors used to terminate field made connections are suitable for use with CU or AL 60°C or 75°C rated conductors unless noted otherwise on the devices. Maximum continuous loads are not to exceed 80% of the rating of the over-current protective device, other than in motor circuits, except where the overcurrent protective device is specifically marked as suitable for continuous operation at 100% rating.

Typical bolt down hole provisions



Typical bolt alignment for tie plates



HARDWARE	GRADE	MAX. TORQUE
3/8-16	5	20 FT/LBS
1/2-13	5	50 FT/LBS
1/2-13	2 ¹⁾	22 FT/LBS

WHEN MORE THAN ONE SPLICE PLATE IS PROVIDED PER PHASE INSTALL ON EACH SIDE OF THE THRU BUS

11-A-1021-01 REV. 2

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