

## Table A

**PRE-ENERGIZATION** 

CHECKLIST

Preparation	
Confirm that switchboard is not energized.	
Move any discarded packing materials from switchboard and dispose of them appropriately.	
Cleaning and Inspection	
Visually inspect switchboard for tools, dirt, or debris and properly remove them from switchboard. If any loose components or hardware are found, contact MCS at 844-MCS-1020.	
Use a vacuum cleaner or lint-free cloth to remove any dust and dirt from switchboard.	
Confirm that no debris is blocking ventilation of switchboard.	
Verification Checklist	
Check switchboard insulation, busbar, and conductors for damage. If damage is found, do not energize switchboard. Contact MCS.	
Ensure that busbars and wires are properly connected and that torque matches instructions.	
Check at least 10% of factory connections to ensure tightness was not compromised by transportation and handling. In the event of a loose connection, check all factory connections, including busbar hardware, switch terminals, circuit breakers, contractors, metering, and other connections.	
If switchboard contains Bolted Pressure Switches (BPS), ensure that switches are properly fused (fuses are typically purchased separately).	

## **PROCEED WITH PRE-ENERGIZATION IN ACCORDANCE WITH** SWITCHBOARD INSTRUCTION MANUAL

Technician Signature:	Date:
Customer Signature:	Date:
<b>o</b>	

NOTE: Technician notes are provided in Table E.



**INSULATION TESTING** 

Notes

(1, 2, 3, etc.)

# Table D

LV Switchboard

### **RECORDING FORM**

NOTE: Ensure preliminary procedures are completed prior to conducting any electrical insulation resistance tests.

P = Pass

F = Fail

NA

Phase-to-phase Phase-to-ground Phase-to-neutral Neutral-to-ground

#### Procedures

Ensure all control power fusing devices, SPDs, and connections to products are removed.

Ensure neutral is isolated from ground.

Ensure all switches and/or circuit breakers are open.

Conduct appropriate electrical insulation resistance tests.

### **Insulation Resistance Test No. 1**

Test Equipment:

Calibration Date:

Resistance (R) [MO]				
R≥1MO				
Notes:				
Insulation Resista	ince Test No. 2	2		
Test Equipment:		Calibration Date:		
	Phase-to-phas	se Phase-to-ground	Phase-to-neutr	al Neutral-to-ground
Resistance (R) [MO]				
R≥1MO				
Notes:				
Insulation Resista	ince Test No. 3	3		
Test Equipment:		Calibration Date:		
Phase-to-phase Phase-to-ground Phase-to-neutral Neutral-to-ground				
Resistance (R) [MO]				
R ≥ 1MO				
Notes:				

LV Switchboard



**INSULATION TESTING** 

**RECORDING FORM** 

Insulation Resistance Test No. 4				
Test Equipment:		Calibration Date:		
	Phase-to-phase	Phase-to-ground	Phase-to-neutra	l Neutral-to-ground
Resistance (R) [Me]				
R≥1Me				
Notes:				
Insulation Resista	ince Test No. 5			
Test Equipment:		Calibration Date:		
	Phase-to-phase	Phase-to-ground	l Phase-to-neutra	I Neutral-to-ground
Resistance (R) [Me]				
R≥1Me				
Notes:				
Insulation Resistance Test No. 6				
Test Equipment:		Calibration Date:		
Phase-to-phase Phase-to-ground Phase-to-neutral Neutral-to-ground				
Resistance (R) [Me]				
R ≥ 1Me				
Notes:				
Insulation Resistance Test No. 7				
Test Equipment:		Calibration Date:		
Phase-to-phase Phase-to-ground Phase-to-neutral Neutral-to-ground				
Resistance (R) [Me]	•			
R≥1Me				
Notes:				

Table D

LV Switchboard



Table C

**RECORD FORM** 

Note: Ensure personnel in charge of building's electrical installation retains records as available reference.

Test Date	Circuit Breaker Number	Results	Tested by



LV Switchboard

Table E

## **TECHNICIAN NOTES**

**Technician Notes** 

Technician Signature:	Date:

Bolt Size (in)	Wrench Size	Coarse Threads/ Inch	Silicon Stainless/C Ste (Ib-in.)	Bronze Galvanized eel <i>(lb-ft.)</i>
1/4	7/16	20	80	7
5/16	1/2	18	180	15
3/8	9/16	16	240	20
M10	17mm	1.5mm	40 Newton Meters	
1/2	3/4	13	480	40
5/8	15/16	11	660	55
3/4	1-1/8	10	960	87

INSULATORS: 3/8" - 20 lbf-ft

\*APPLY TORQUE MARK AFTER FINAL TORQUE IS PERFORMED

TABLE B