

Solar inverter installation and DC wiring - JSA - A

en-SG · Basic task controls · v1.0 · 2026-10-14 · Sources: article section 9

Site: | Item ID: | Work area:

Approval	Work supervisor	Technical reviewer	Release / handover authority

1. Job details and team signatures

Date / time	Location / area		Assessor		Supervisor	
Team signatures						

2. Conditions and hold points

Stage	Time	Location / area	Environment / readings	Item / condition	Controls	Plant / tools	Approval / signature
HP-0 Start							
HP-1 Mount and isolate							
HP-2 Prepare connectors							
HP-3 Test and restore							
HP-4 Handoff operation							

Complete after actual checks. Recheck after changes, defects or shift handover.

3. JSA risk assessment

Job stage	Hazards and effects	Failure factors	Technical and procedural controls	Site verification	P	S	R	A
1. Map all sources	1. DC shock 2. Arc exposure 3. Stored-charge release	1. AC-only isolation 2. No-load mistaken for dead 3. Wait omitted	1. Identify every source 2. Define DC boundaries 3. Set model verification	1. AC DC and storage 2. Isolation and access 3. Wait and test instruction				
2. Mount and isolate	1. Inverter falls 2. AC backfeed 3. PV voltage contact	1. Wrong fasteners 2. Supply omitted 3. Sunlight ignored	1. Verify structural support 2. Control AC and DC sources 3. Lock and test work boundary	1. Mount and fastening 2. Source inventory 3. Tester and work-point result				
3. Prepare connectors	1. Reverse polarity 2. DC arc 3. Hot contact	1. Unverified pair 2. Wrong crimp tool 3. Wrong strip length	1. Match permitted pair 2. Use specified tooling 3. Follow assembly dimensions	1. Both connector part IDs 2. Tool and die match 3. Polarity and crimp				
4. Wire and support	1. Live terminal contact 2. Hot termination 3. Earth path lost	1. State not rechecked 2. Torque guessed 3. Earth omitted	1. Recheck work-point state 2. Use specified tightening 3. Connect protective earth	1. Terminal voltage state 2. Tightening record 3. Earth connection				
5. Test and restore	1. Reversed string damage 2. Test overvoltage 3. Earth fault	1. Mapping incorrect 2. Electronics connected 3. Defect ignored	1. Verify design and polarity 2. Use approved test setup 3. Resolve faults before start	1. String range and polarity 2. Test settings and boundary 3. Alarm and stop results				
6. Handoff operation	1. Wrong circuit starts 2. Earthing incomplete 3. Defect operated	1. Final map unchecked 2. Inspection missing 3. Startup-only release	1. Match final string map 2. Check earthing and seals 3. Record operating scope	1. As-built mapping 2. Polarity earth and sealing 3. Test and startup record				

P/S/R/A: Complete only after actual site assessment using the site risk method.

4. Pre-work checklist

☐ AC DC and storage	☐ Mount and fastening	☐ Both connector part IDs
☐ Terminal voltage state	☐ String range and polarity	☐ As-built mapping
☐ Wait and test instruction	☐ Earth connection	☐ Test and startup record