Reducing Joint Failures at the Source

Installation-forgiving MV jointing for fast-track grids

Summary

In real projects, joint reliability is often decided during installation. Traditional jointing technologies can be sensitive to small deviations: heat shrink relies on consistent heating and bonding, while cold shrink systems maintained under radial tension can fail after minor surface damage.
This download explains why “installer-forgiving” jointing reduces failure probability in fast-track environments and multi-contractor projects — and how to specify for lower dependency on perfect technique.

Section 1 — Why traditional systems fail under real-world constraints

- Heat shrink: inconsistent shrinkage or incomplete bonding may leave small voids, enabling ingress of water and contaminants.
- Cold shrink: maintained under constant radial tension; even minor cuts or scratches can initiate tearing and seal failure.
- Over time: mechanical pressure can diminish; adhesives may lose grip or form air pockets that may initiate partial discharge.

Section 2 — What “installation-forgiving” actually means

An installation-forgiving system reduces risk when conditions are not ideal:

- less reliance on perfect heating / perfect tension
- components that conform to geometry and reduce sensitivity to small errors
- sealing that remains robust under wet exposure and mechanical stress

Section 3 — The practical risk reduction effect

Field failure investigations show a meaningful share of failures relates to installation errors and moisture/mechanical damage — exactly the categories that forgiving design aims to reduce.

Checklist

Use this checklist to reduce installation-driven joint failures:

- Do we have multi-contractor variability risk?
- Is installation under time pressure / poor access likely?
- Are joints buried in saturated soil or fluctuating water table zones?
- Are mechanical impacts (debris, scratches) plausible?
- Do we require documentation & traceability per joint?
- Do we include training/certification early in the project?

CTA (decision)

CTA Plan training or a trial installation for your renewable project Lovink ACADEMY

CTA Go to ‘Training & Support’ section on the Renewables Pillar Renewables pillar page