JascoPro Under-Eave Lights

Splicing Guidelines and Product Limitations

These guidelines define the **allowable limits** and **installation expectations** when splicing JascoPro under-eave light strands. They are intended to help contractors stay within performance limits, not to teach splicing technique.

Applies to:

- **16 AWG stranded flat wire (smooth or ribbed)**
- A **maximum UEL run** of **6 strands, 99 ft total lit length, 108 light pucks**

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1) Splice Length Limits

To maintain expected performance on a maximum UEL run:

- **Maximum added splice length between any two pucks: 25 ft**

PUCK A splice extension [ ]====================< up to 25 ft >====================[ ] PUCK B

- **Maximum total added splice length across the entire run: 90 ft**

Run start -> [puck][puck]---splice---[puck]---splice---[puck] ... -> Run end |<----- added splice #1 ----->| |<- added splice #2 ->|

  - Sum of all added splice sections across the run must be ≤ 90 ft.

Exceeding these limits can contribute to voltage drop, data instability, or inconsistent light behavior. (Recommendation based on product performance intent; keep within published limits.)

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2) Wire Identification and Consistency

- Maintain **consistent conductor identification** end-to-end for every splice.
- Do not rely on "left/right orientation" after cutting. Re-verify which conductor is **V+**, **V-**, and **Data** before finalizing each splice.

Tip: Miswiring is one of the most common causes of downstream failures after a splice.

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3) Data Direction Awareness

- Preserve the original strand orientation through any extension or splice so that **data direction** is not unintentionally reversed.
- If a section is flipped, the system may not pass control/data correctly beyond that point.

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4) Installation Requirements (Safety and Environmental Placement)

- Perform all installation and splicing with the **power supply unplugged**.

- Place splice points **under the eave or in a sheltered location** where water will not directly hit the connection.
    - Do not leave spliced sections exposed on the roof surface or inside gutters.
- Ensure each splice has:
    - Solid electrical contact
    - Correct conductor matching (V+ to V+, V- to V-, Data to Data)
    - A **watertight seal**, such as heat shrink or a third-party waterproof splice connector
- Provide strain relief so the splice is not supporting tension or repeated flexing.

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5) Testing During Installation

After each splice:

- Temporarily power the system and confirm lights behave correctly before proceeding.
- If a problem appears, stop and troubleshoot immediately to avoid compounding issues across additional splices.

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6) Prohibited Practices (Do Not)

- Do not exceed the stated splice length limits (**25** ft between pucks, **90** ft total added splice length).
- Do not leave splices unsealed or partially sealed.
- Do not install splice points where they are exposed to direct water, runoff, or standing water (roof surface, gutters).
- Do not power the system while actively making or modifying connections (power supply must be unplugged during work).

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7) Troubleshooting

If lights do not illuminate past a splice point, most likely causes:

- A wire is broken or not making contact at the splice
- Conductors are connected incorrectly (example: V+ to V-, Data to V+, etc.)

If no lights illuminate on the entire run, most likely cause:

- A short circuit at one of the splice points

Tip: Correct the issue and retest before proceeding to the next splice.

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8) Environmental and Compliance Disclaimer

- Splice reliability depends on proper placement, sealing, and strain relief. Failures caused by improper environmental protection or workmanship are installer-controlled.
- The product as sold remains certified, but once a contractor modifies wiring by splicing, **Jasco cannot guarantee the modified installation still meets the applicable UL/ETL standard**.

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9) Final Commissioning Test

Before leaving the job site:

- Perform a full power-on verification of the entire run and confirm the system operates correctly across all strands and pucks.