

# Custom Terminal Lugs & Splices



2-hole, angled tongue, splice, 1-hole, flag and transition splice

## INTRODUCTION

Carlisle Interconnect Technologies (CarlisleIT) engineers connectors, installation tooling, and cable assembly systems that meet the most demanding of specifications. CarlisleIT qualifies products to those specifications and manufactures to meet uncompromising delivery schedules.

By leveraging broad experience in terminal lug and splice design, CarlisleIT meets the challenges of the aerospace industry, including solutions to problems such as weight reduction, installation efficiency and connection reliability.

Whether your need is for power or grounding, CarlisleIT has the capability to meet your project objectives.

## MATERIALS

Connector Body	Tin Plating	Nickel Plating
Aluminum	150°C	175°C
Copper	150°C	260°C

Solid nickel connector designs are also available for high vibration environments such as engine harnesses.

## FEATURES

- » Typical applications range in gauge size from #8 AWG to 4/0 (8mm<sup>2</sup> to 120mm<sup>2</sup>)
- » Crimp dies for standard barrel designs work with industry standard 22 and 33 ton tooling, allowing customers to leverage their existing investment in tooling
- » 1-hole and 2-hole tongues can be produced at any angle to the barrel or configured as required to meet custom application requirements
- » Terminal lug and splice designs are compatible with popular cable specifications, including:
  - » BMS 13-60
  - » BMS 13-78
  - » ABS0949 (AD)
  - » ASNE0438 (YV)
  - » MIL-SPEC



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## WEIGHT SAVINGS

CarlisleIT offers aluminum terminal lugs and splices, among other materials. The aluminum version is 65% lighter than copper equivalents.




## INSTALLATION EFFICIENCY



**Hex Crimp:** The CarlisleIT modified hex crimp produces an environmentally sealed termination with a single crimp operation. The hex crimp eliminates any sharp edges (flashing) and there is no risk of exposing the base metal to corrosion. To achieve this hex style crimp, CarlisleIT has developed a shank style die set that is used with industry standard hydraulic crimp heads that produce either 22 or 33 tons of compressive force, allowing you to leverage your existing investment in tooling.



**Crimp Indicators:** Crimp indicators are embossed during the crimping operation, providing a visual indication of full wire insertion and proper connector installation.



Fully formed crimp indicator:  Note: Crimp indicators vary with gauge size.

Malformed crimp indicator:  

## RELIABILITY

CarlisleIT's environmentally-sealed connectors meet the toughest certification requirements to provide maximum reliability. Certifications include:

- » EN 3373-001, Aerospace Series—Terminal Lugs and In-Line Splices for Crimping on Electric Conductors, which specifies series tests that includes:
  - » 500 hour salt fog with negligible degradation as measured by the millivolt drop test of EN 3373-001
  - » 1,500 repeating thermal cycles from 30°C to 180°C
  - » Four hours of random vibration in each of the three axes with frequencies ranging from 10 – 2,000 Hz, under a current that maintains a 180°C temperature, as per EN 2591-403 Method B Table 2, Level G
  - » Tensile strength, as per EN 2591-102
- » EN 2591-305, Elements of Electrical and Optical Connection – Test Methods. Part 305. Rapid Change of Temperature, which requires ten thermal shock cycles from -65°C for thirty minutes to 180°C for thirty minutes
- » Thermal shock test that includes 300 cycles of 175°C to -65°C with negligible degradation as measured by millivolt drop
- » 300 cycles of humidity/temperature cycling from 82°C at 95% RH to 54°C with negligible degradation as measured by millivolt drop
- » Environmentally sealed and hydrostatically tested to 80 psi