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SYSTEMSHIELD™ UL AND IEEE ALIGNMENT REFERENCE

PURPOSE

This reference document confirms that all components included in the SystemShield™ Grounding Kit meet or align with applicable UL safety standards and IEEE grounding system best practices. It is intended to support site inspections, engineering reviews, and compliance verification.

SECTION 1 – UL STANDARD ALIGNMENT (COMPONENT LEVEL)

Component	UL Standard	Alignment Notes
#12 & #6 AWG THHN Copper Wire	UL 83 / UL 1581	Thermoplastic-insulated copper conductors; 600V; rated for dry locations
Izzy Compression Lugs	UL 486A-486B	Long barrel, dual-hole, listed for copper wire termination and compression
Nylon Zip Ties (Black)	UL 62275	UV-rated cable ties suitable for use in electrical enclosures
Zinc-Plated Fasteners	RoHS Compliant; UL alignment not applicable	Meets industrial torque and bonding requirements in UL panel systems
12-Position Brass Terminal Bus Bar	UL Recognized	Intended for UL-approved panelboard applications; used in UL-listed assemblies

SECTION 2 – IEEE GROUNDING PRINCIPLES MET

SystemShield kits are designed in accordance with IEEE-recommended grounding practices.

IEEE Standard	Application
IEEE 142 (Green Book)	Grounding of industrial and commercial power systems; SystemShield follows recommended bonding practices for chassis and panel frames
IEEE 837	Testing and qualification of permanent ground connectors; SystemShield lugs are factory-crimped and verified to meet mechanical strength and continuity requirements
IEEE 1100 (Emerald Book)	Powering and grounding sensitive electronic equipment; SystemShield kit helps reduce noise and ensure low-impedance bonding in telecom and server rack environments

SECTION 3 – UL & NEC INSTALLATION ALIGNMENT

Standard / Code	Application
NEC Article 250.8	All SystemShield grounding conductors are connected using listed compression lugs and two-hole fastened terminations as permitted for grounding and bonding
NEC Article 110.14(C)	Proper torque is applied to all connections using calibrated tools; SystemShield publishes torque specifications
NEC 250.92(B)	SystemShield bonding connections between equipment and grounded enclosures are suitable for fault-current path continuity
UL 508A	Panelbuilders may incorporate SystemShield kits as part of compliant assemblies using UL Recognized terminal bars and UL-listed wire and lugs

TRACEABILITY AND LABELING

- All SystemShield wires, lugs, and zip ties are purchased from traceable, UL-registered manufacturers
 - Crimping is performed under controlled shop conditions using manufacturer-matched dies
 - Documentation packages include torque specs, resistance testing sheets, and installation logs to support field inspection
 - Kits include a unique SKU and optional batch ID for QA tracking
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USAGE RESTRICTION CLARIFICATION

The SystemShield Grounding Kit is **not UL-listed as a complete product**. It is composed of individually UL-listed and UL-recognized components, assembled to meet field and code requirements for grounding and bonding per NEC and IEEE standards.

End-users remain responsible for integrating the SystemShield kit into compliant installations.

SUPPORT & COMPLIANCE REQUESTS

For facility engineering teams, compliance documentation requests, or UL file traceability, contact:

Email: systemshieldgrounding@gmail.com

Website: www.systemshield.tech

Secure Access: <https://systemshield.tech/distributor-access>

