



IEEE 1580 (LSX)

Low Smoke Zero Halogen

300V, 1KV, 2KV, 2KV-HD

Rated at 110° C

AWG & Sq. mm Conductors  
Intertek & UL Marine Shipboard

### Features

- Irradiation cross-linked, LSZH insulation
- Heat, Oil, sunlight, & moisture resistant
- Extremely flame retardant
- Rugged, Flexible, Easy to Install
- Easy to strip – has no separator tape
- Circuit Integrity – IEC 60331-830°C × 3hrs with shock
- Flexible Tin-coated conductors for improved terminations and corrosion resistance
- Pigmented insulation with vivid colors
- Better physical and wet electrical properties than halogen free IEC HF cables
- Insulation Resistance Constant, K = 10,000 vs 550 for HF90 per IEC 60092-360
- Limited Smoke, Zero Halogen
- Mud Resistant

### Performance Standards

- Listed by UL as Type X110 and rated for 110°C
- Listed by Intertek as Type LSX per IEEE 1580 and is rated 90°C
- Passes IEEE 1202 & FT-4 at 70,000 Btu/hr Vertical Tray Flame Tests
- Single conductors also pass the UL VW-1 flame test per UL-44/UL-1581
- Passes IEC 60331 at 830°C × 3 hrs with shock
- Type approved by ABS, DNV GL and Lloyd's Register NA
- IEEE 1580 Tests:
  - Halogen Content – 0% < 0.2%
  - Acid Gas – 0.5% < 2%
  - Smoke Index – 8.85 < 25
  - Toxicity Index – 0.6 < 1.5
- IEC Tests:
  - Passes IEC 60332-1-2 & -2-2 Flame Tests
  - Passes EN 50265-2-1 & -2 Flame Tests.
  - Smoke Density, IEC 61034, Light Transmittance = 96%.
  - Ph > 4.3, per IEC 60754
  - Conductivity ≤ 10 μS.mm<sup>-1</sup>, per IEC 60754
  - Halogen Acid, IEC 60754, Pass

### Scope

Exane® ZH-CI, low smoke zero halogen (LSZH) circuit integrity single conductor power, TC and Marine Shipboard Cables, bridge the performance gap between the premium Exane-125 Type P cables and the IEC HF cables. These cables are used in safety and emergency shut down systems, fire pumps, UPS systems, MCC and switch gear. The Exane® ZH, LSZH insulation is radiation cross-linked and provides outstanding physical properties, resistance to abrasion, cut-through, low and high temperature, sunlight, flame. It is a low-smoke, zero halogen material that is extremely tough and durable and withstands the arduous environmental conditions experienced in offshore LV wind substations, mobile offshore drilling units (MODU), FPSO's & TLP's for oil and gas drilling rigs. It provides the low-smoke, non corrosive characteristics that have been deemed to be critical for the crew quarters in MODU's. Exane® ZH is Intertek listed to IEEE 1580 as Type LSX, a low-smoke, zero halogen cable that also meets the IEC HF requirements. It is also listed by Underwriters Laboratories (UL) to UL 1309 Marine Shipboard cable.

### Construction

**Conductor:** AWG – Flexible Tinned Copper, per IEEE 1580. Sq mm – IEC 60228 Class 5, Tinned Copper  
**Fire Resistant Tape:** Mica tape wrapped conductor  
**Insulation:** Irradiation Cross-Linked Exane ZH, Type LSX (IEEE 1580)  
**Color Code:** Vivid pigmented insulation. As specified by customer  
**Overall Braid Shield:** Tinned Copper Braid  
**Temperature Rating:** UL/CSA – 110°C; IEEE – 90°C  
 RSCC Wire & Cable – 125°C