



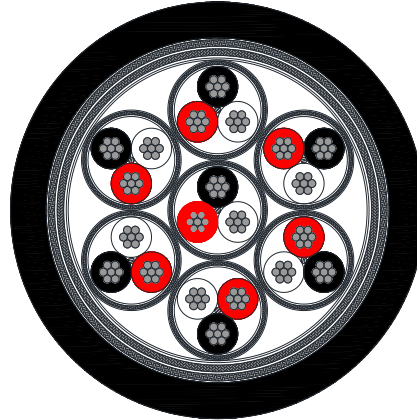
MARMON AEROSPACE & DEFENSE

RSCC Aerospace & Defense™

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Product Type
Seven Triads Double Shielded Low Smoke Shipboard Cable 12AWG

Drawing Number
DN-20236



Component	Dimensions (Nom.)
Conductor: 12 AWG Tin-Coated Copper – 7 Strands of .0305”	.092”
Insulation: Cross-linked Polyethylene – .032” Nom. Wall	.156”
Twisted Triad: Three (3) Singles twisted together with a 5.0” Lay. Fillers may be used as required to maintain water-blocking and roundness	.335”
Binder: Water-swellable Tape – 25% Nom. Lap	.350”
Braid: #34 AWG Tin-Copper Braided Shield – 85% Min. Coverage	.375”
Jacket: Cross-wrapped sealed Mylar Tapes	.385”
Cable: Seven (7) components cabled together with a 13” Lay. Fillers may be used as required to maintain water-blocking and roundness	1.125”
Binder: Mylar Tape – 10% Min. Lap	1.128”
Tape: Water-swellable Tape – 10% Min. Lap	1.134”
Braid: #34 AWG Tin-Copper Braided Shield – 85% Min. Coverage	1.156”
Separator: Mylar Tape – 50% Nom. Lap	1.162”
Braid: #34 AWG Tin-Copper Braided Shield – 85% Min. Coverage	1.190”
Tape: Water-swellable Tape – 10% Min. Lap	1.200”
Jacket: Cross-linked Low Smoke Polyolefin (Black) – .100” Nom. Wall	1.400” ± .050”

Cable Print Legend:

MARMON AEROSPACE & DEFENSE TYPE LS3SWUS-7SP DN-20236

Component Identification: The Singles of each triad shall be colored Black, White & Red. Triad identification per Method 2 of MIL-DTL-24643 as shown below:

Triad #1	1 BLACK	Triad #5	5 ORANGE
Triad #2	2 WHITE	Triad #6	6 BLUE
Triad #3	3 RED	Triad #7	7 WHITE BLACK
Triad #4	4 GREEN		

All materials used shall conform to MIL-DTL-24643 for low smoke, halogen, acid gas and toxicity content.

Changes:	Drawn By: L Roper	Approved By: Kevin Coderre	Revision: -	Date: 11-20-15
Full rework with Dry-Block	Made By: Kyle Coderre	Approved By: Kevin Coderre	Revision: 4	Date: 1-10-18

INSPECTION:**Basic Electricals:**

Conductor Resistance 1.95 Ω /1000 feet (Max.)

Voltage Withstand

Conductor to Conductor 2000 Volts (RMS, Min.)

Conductor to Shield 1000 Volts (RMS, Min.)

Component Shield to Component Shield 500 Volts (RMS, Min.)

Overall Shield to Overall Shield 200 Volts (RMS, Min.)

Insulation Resistance

Conductor to Conductor 500 M Ω /1000 feet (Min.)

Conductor to Shield 500 M Ω /1000 feet (Min.)

Component Shield to Component Shield 100 M Ω /1000 feet (Min.)

Overall Shield to Overall Shield 100 M Ω /1000 feet (Min.)

Conductor Continuity No Failure

Shield Continuity No Failure

Jacket Flaws No Failure

Group A:

Visual and Dimensional No Failure

Capacitance

Mutual Capacitance, at 1 KHz 30 pF/ft (Max.)

Watertightness 10 inch³ (Max.)

Group B:

Thermoset Proof Test

Insulation 50% (Max.)

Jacket (at 200°C) 50% (Max.)

Drip (95 \pm 1°C) Zero

Physicals (Unaged)

Insulation

Tensile Strength 700 lb/inch² (Min.)

Elongation 150% (Min.)

Jacket

Tensile Strength 1300 lb/inch² (Min.)

Elongation 160% (Min.)

Tear 35 lb/inch thickness (Min.)

Group C:

Physicals (Aged) Air Oven

Insulation

Tensile Strength 75% (percent of unaged, Min.)

Elongation 75% (percent of unaged, Min.)

Jacket

Tensile Strength 60% (percent of unaged, Min.)

Elongation 60% (percent of unaged, Min.)

Permanence of Print (Jacket)	125 Cycles (Min.)
Heat Distortion	30% (percent of unaged, Max.)
Cable Sealant Removability	No Failure
Shrinkage	No Failure
Shield (conformance to material, construction and coverage)	No Failure
Surface Transfer Impedance	70 mΩ/meter (Max.)
EMP Response	60 dB (Min.)

Group D:

Flame Propagation	No Failure
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Material Requirements:

Aging and Compatibility (125 ± 5°C)	No Failure
Abrasion Resistance (Jacket)	75 Scrapes (Min.)
Acid Gas Equivalent	
Jacket	2 (percent, Max.)
Fillers	2 (percent, Max.)
Insulation	18 (percent, Max.)
Halogen Content	
Jacket	2 (percent, Max.)
Fillers	2 (percent, Max.)
Insulation	18 (percent, Max.)
Immersion (Jacket)	
Tensile Strength	50 (percent of unaged, Max.)
Elongation	50 (percent of unaged, Max.)
Smoke Index	
Jacket	25 (Max.)
Fillers	45 (Max.)
Insulation	45 (Max.)
Toxicity Index	
Jacket	5 (Max.)
Fillers	5 (Max.)
Insulation	1.5 (Max.)
Durometer (Jacket)	80 Hardness (Shore-A, Min.)
Weathering (Jacket)	No Failure
Electrical Moisture Absorption	No Failure

WWW.MARMON-AD.COM

MARMON AEROSPACE & DEFENSE, 680 HAYWARD STREET, MANCHESTER NH 03103



TEL 866.303.9473 FAX 800.639.5701

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