



# MARMON AEROSPACE & DEFENSE

## RSCC Aerospace & Defense™

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**Marmon A&D**

**Part Number**

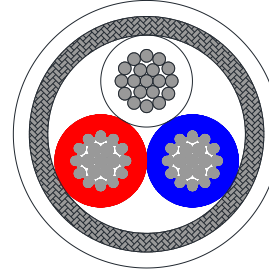
**DN-10198**

**NEMA WC27500**

**Part Number (Modified)**

**M27500U24SB3T23**

Section View



**Singles (M22759/32-24)**

Dimensions (Nom.)

**Conductor:** 24 AWG Tin-Copper – 19 Strands per AS29606

.0235"

**Insulation:** Irradiation Cross-linked ETFE – .007" Nom. Wall

.037"

**Twist:** Three singles twisted together with a 1.0" Nom. Lay

.080"

**Shield:** 38 AWG Tin-Copper Braided Shield – 85% Min. Coverage

.098"

**Jacket:** Irradiation Cross-linked ETFE – .005" Min. to .010" Max. Wall

.113"

**Finished Diameter:** N/R Min. – .113" Nom. – .122" Max.

**Component Print Legend:** M22759/32-24 61123 REV [Current Rev]

**Cable Print Legend:** NONE

**Component Colors:** White, Blue, Red

**Electricals:**

Voltage Rating: 600V

Spark Test (Jacket Flaws): 1500V

Voltage Withstand: 1500V

Testing shall be in accordance with SAE AS22759/32 (newest revision) for singles and NEMA WC27500 (newest revision) for the finished cable.

Customer:	Drawn By: Kyle Coderre	Approved By: Kevin Coderre	Revision: 0	Date: 1-8-20
Changes	Made By:	Approved By:	Revision:	Date:

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A MARMON WIRE & CABLE / BERKSHIRE HATHAWAY COMPANY

## Drawing Number

**DN-10198**

Test	Requirement	
<b>Singles (IAW SAE AS22759/32)</b>		
Conductor Construction	24 AWG TC	
Conductor Elongation	6% Min.	
Conductor Stranding	19 X 36	
Conductor Diameter	0.0225" Min. – 0.0244" Max.	
Conductor Resistance	26.20 $\Omega$ / kft. Max. @ 20°C	
Insulation Material	XLETFE	
Removability of Insulation	Readily Removable	
Identification Marking	M22759/32-24 REV [Current Rev]	
Insulation Resistance	5000 M $\Omega$ / kft. Min.	
Insulation Diameter	0.0350" Min. – 0.0390" Max.	
Finished Wire Weight	2.0 lbs. / kft. Max.	
Insulation Concentricity	70% Min.	
Insulation Wall Thickness	0.0050" Min.	
Conductor Solderability	95% Min.	
Insulation Shrinkage	0.125" Max. @ 200°C	
Low Temp. (Cold Bend)	4 hrs @ -65°C, 0.500" Mandrel, 1.0 lb. Load, 2.5 kV Voltage	No Cracking
		No Breakdown
Thermal Shock Resistance	No Flaring	
	0.060" Max. @ 150°C	
Insulation Cross-link Proof	7 hrs @ 300°C, 0.375" Mandrel, 0.25 lb. Load, 2.5 kV Voltage	No Cracking
		No Breakdown
Insulation Wrap Back Bend	200°C, 2.5 kV Voltage	No Cracking
		No Breakdown
Wire Final Insulation Flaws	Spark Test – 5.7 kV – 100% Test	
Insulation Tensile Strength	5000 PSI Min.	
Insulation Elongation	75 % Min.	
Flammability	3" Max. Length, 3 Second Self Extinguish Time	
<b>Cable (IAW NEMA WC27500)</b>		
Component Colors	WHITE, BLUE, RED	
Cable Lay-up	0.48" Min. – 1.27" Max. LHL	
Shield Material	38 AWG TC	
Shield Coverage	85% Min.	
Braid Angle	18° Min. – 40° Max.	
Identification of Product	NONE	
Jacket Material & Color	XLETFE / White	
Jacket Wall Thickness	0.0050" Min. to 0.0100" Max.	
Jacket Concentricity	70% Min.	
Cable Jacket Removability	Removable without adherence to underlying shield or cable	
Cable Diameter	0.122" Max.	
Cable Weight	16.3 lbs. / kft. Max.	
Low Temp. (Cold Bend)		No Cracking

	4 hrs @ -55°C, 1.0 kV Voltage	No Breakdown
Jacket Tensile Strength	5000 PSI Min.	
Jacket Elongation	50% Min.	
Jacket Blocking	No Sticking 200°C, 6" Mandrel	
Flammability	3" Max. Length, 30 Seconds Max. Time	
Crosslinked Verification	6 hrs @ 300°C, 0.38 lb. Load, 1.0 kV Voltage	No Cracking
		No Breakdown
Shield Solderability	95% Min.	
Dielectric Withstand – Component Wires	1500V RMS Min.	Cond. – Cond.
		Cond. – Shield
Spark Test	1500V RMS Min.	