PRODUCT SPECIFICATION DRAWING

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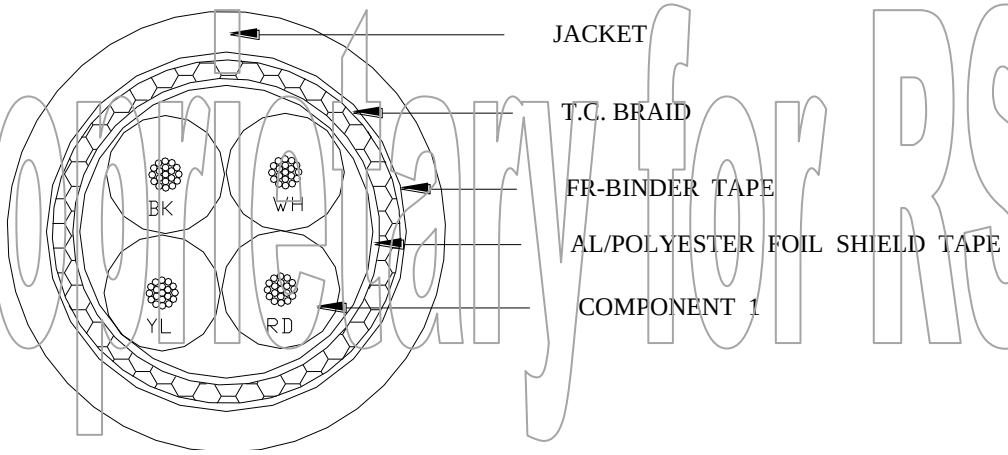
Product Title: **4/C QUAD 20 AWG, EXANE ZH, T. C. BRAID, LSZH JACKET, LOW CAPACITANCE UNBALANCE, HALOGEN FREE MVB CABLE, 120 OHM CABLE**



				NOMINAL DIAMETER (Inches)	(mm)
CONSTRUCTION:					
1.0	**COMPONENT 1:**		**4 REQUIRED**		
	1.1	**Conductor:**	20 AWG (19/#32) Tinned Copper	0.038	0.965
	1.2	**Insulation:**	Foamed, Halogen Free Insulation Nominal Wall **.**025 inches	0.089	2.261
	1.3	**Color Code:**	Pair #1 - Black & Red; Pair #2 – Yellow & White		
2.0	**CABLE:**				
	2.1	**Lay-Up:**	Cable (4) Components 1 twisted together with a 2.50 inch (63.5 mm) Nominal left hand lay.	0.215	5.537
	2.2	**Filler:**	None.		
	2.4	**Shield Tape:**	3.0 Mil AL/Polyester Shield Tape, Helically Applied 50% Nominal Overlap	0.227	5.766
3.0	**BRAID SHIELD:**		36 AWG Tinned Copper, 90% Minimum Coverage	0.249	6.325
	3.1	**Binder Tape:**	2.0 Mil Flame Retardant Binder Tape, Helically Applied 50% Nominal Overlap	0.257	6.528
4.0	**JACKET:**		Flame Retardant, Halogen Free, **Turquoise** Polyolefin.		
			Nominal Wall Thickness **.**035 inches	0.330	8.382
			Maximum Diameter	0.354	8.992

5.0 **PRINT:** Jacket will be Ink-Jet printed with **Black ink** as follows:

"RSCC TD-004799 4/C 20 AWG SHIELDED 120 OHM HALOGEN FREE MVB CABLE" (MM-YR)"

6.0 **FLAME:** Passes the flame test requirements of 49 Code of Federal Regulations (CFR) Part 238, Appendix B, in accordance with NEMA WC 3/ICEA S-19-81, paragraph 6.19.6.

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Drawn By: Gil Shoshani	**Date:** 9-29-14	**Page:** 1 of 3
ED04020-000	**Reviewed By:** Walt Drabek	**Revision:** 6-Test Voltage	**DWG Number:** TD-004799

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7.0 SMOKE: Passes the smoke test requirements of 49 Code of Federal Regulations (CFR) Part 238, Appendix B, in accordance with ASTM E662-97:

Flaming D_s (4.0 minutes)	≤ 200
Non-Flaming D_s (4.0 minutes)	≤ 75

8.0 ELECTRICALS (Per MIL-C-17G):

8.1	Test Voltage:	1.0 KV (DC), Cond to Cond. 1.5 KV (DC), Cond to Shield
8.2	Insulation Resistance:	⩾ 1 GΩ . km (3,281 MΩ . 1000 ft)
8.3	Conductor Resistance:	≤ 32.5 Ω/km (9.905 Ω/1000 ft)
8.4	Impedance:	120 Ohms +/-10% @ 0.5 MHz to 2.0 MHz
8.5	Mutual Capacitance (Shunt):	≤ 11.5 pF/ft, @ 1 KHz
8.6	Capacitance Cond – Cond:	≤ 13.7 pF/ft, (≤ 45 pF/m)
8.7	Capacitance Cond – Shield:	≤ 24.4 pF/ft, (≤ 80 pF/m)
8.8	Capacitance Unbalance to Shield:	≤ 1.5 pF/m
8.9	Attenuation:	

Frequency	dB/100ft	dB/100m
1.0 MHz	≤ 0.366	≤ 1.2
2.0 MHz	≤ 0.518	≤ 1.7
3.0 MHz	≤ 0.640	≤ 2.1

8.10	Near-End Crosstalk: 0.75 to 3 MHz	⩾ 55 dB
8.11	Transfer Impedance:	

10	KHz	≤ 10 mΩ/m	(3.05 mΩ/ft)
100	KHz	≤ 10 mΩ/m	(3.05 mΩ/ft)
1	MHz	≤ 5 mΩ/m	(1.53 mΩ/ft)
10	MHz	≤ 1 mΩ/m	(0.31 mΩ/ft)
30	MHz	≤ 1 mΩ/m	(0.31 mΩ/ft)

8.12	Screening Attenuation: 30 MHz to 1000 MHz	⩾ 70 dB
8.13	Operating Temperature:	-40°C to +90°C
8.14	Pulling Tension: Using Conductors: Using Basket Weave over Jacket:	 33.0 lb_f 33.0 lb_f
8.15	Bending Radii:	
	Static or Permanent Training:	2.00 inches, Minimum
	Dynamic or Pulling:	3.54 inches, Minimum

9.0 WEIGHT: 82.9 lbs / 1,000 ft, Nominal

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10.0 TECH DATA:

10.1 Operating Voltage: 300V (RMS), Max.
850 V (DC), Max.

10.2 Test Voltage: 600V (DC)

10.3 Operating Temperature: -40ºC to +90ºC

10.4 Smoke Density per IEC 61034-1, -2:

10.4.1 Requirement - Light Transmission = 60% (Typical Value = 96%).

10.5 Test on Gases Evolved During Combustion of Electric Cables per IEC 60754-2:

10.5.1 Requirement - pH ≥ 4.3 (Typical Value = 5.18)

10.5.2 Requirement - Conductivity ≤ 10 µS/mm (Typical Value = 9.0 µS/mm)

10.6 Test on Gases Evolved During Combustion of Electric Cables per IEC 60754-1:

10.6.1 Requirement - Halogen Acid ≤ 5.0 mg/g HCL (Typical Value = 0 mg/g).