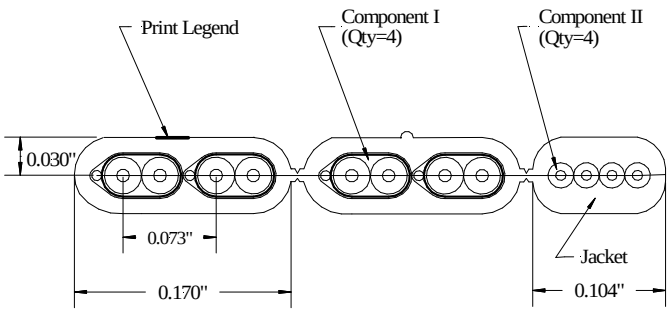
4 PAIR 30 AWG + 4 CONDUCTOR 30 AWG 12G TURBOTWIN™ INTERNAL MSAS FLAT CABLE



CONSTRUCTION

Component I – 30 AWG Pairs
Conductor: 30 AWG Solid Bare Copper, 0.010 Inch Diameter
Insulation: 0.0095 Inches of Foam Polyolefin, 0.029 Inch Diameter
Pair: 2 Singles Laid Flat and Parallel
Pair Shield: Aluminum/Polyester Tape, Aluminum Side Facing Out, Color – Yellow
Pair Drain Wire: 32 AWG Solid Tin Plated Copper, 0.008 Inch Diameter
Pair Jacket: Polyester Tape
Pair Diameter: 0.036 x 0.073 Inches Nominal

Component II – 30 AWG Singles
Conductor: 30 AWG Solid Bare Copper, 0.010 Inch Diameter
Insulation: 0.005 Inches of Polyolefin, 0.020 Inch Diameter

Final Assembly
Core: 4 Pairs (#1-4) and 4 Singles (#5-8) Laid Flat and Parallel
Jacket[1]: 0.012 Inches of Pressure-Extruded PVC, Color – Black
Minor Diameter: 0.060 ± 0.005 Inches
Major Diameter: 0.465 ± 0.015 Inches
Print Legend (White Ink): "MADISON CABLE AWM STYLE 2725 80°C 30V VW-1 TurboTwin™ 12G 12ZZ2LF003 SUBSTANCE COMPLIANT 2011/65/EU {Date Code}[2]"

[1] Triamese construction with a common overall jacket and separable webs
[2] Date Code is a 4-digit code with the first two digits identifying the calendar week and the last two identifying the calendar year of manufacturing. Example – 0206 for cable manufactured in the second week of January 2006.

COLOR CODE

Comp #	Comp	Conductor #1 Insulation Color	Conductor #2 Insulation Color
1	I	Natural	Natural
2	I	Natural	Natural
3	I	Natural	Natural
4	I	Natural	Natural
5	II	Red	
6	II	Yellow	
7	II	Blue	
8	II	Green	

ELECTRICAL CHARACTERISTICS

Component I – 30 AWG Pairs
Differential Impedance: 100 ± 5 Ohms @ TDR
Mutual Capacitance: 14 pF/ft Nominal
Time Delay: 1.40 ns/ft Nominal
Time Delay Skew (Within Pair): 20 ps/m Maximum
Attenuation (SDD21)[3]

Frequency (GHz)	(dB/m Nominal)
1.25	1.6
5.00	3.3
6.00	3.7
7.00	4.0
10.00	5.3
12.00	6.0

Differential to Common Mode Conversion SCD21: 26 dB Minimum from 100 MHz to 6 GHz
Return Loss (SDD22)[3]:

Frequency (GHz)	dB (Minimum)
0.1	10.0
1.25	10.0
1.5	10.0
3.0	7.9
4.5	5.6
5.0	5.0
6.0	3.9

Differential to Common Mode Conversion (SCD22)[3]:

Frequency (GHz)	dB (Minimum)
0.1	20.0
1.25	17.7
1.5	16.7
3.0	12.7
4.5	10.4
5.0	10.0
6.0	10.0

Conductor DC Resistance: 0.10 Ohms/ft Nominal @ 20°C

[3] Tested/Functional to 12 GHz over a 1 meter length.

Component II – 30 AWG Singles
Conductor DC Resistance: 0.10 Ohms/ft Nominal @ 20°C

Madison Cable
125 Goddard Memorial Drive
Worcester, MA 01603 USA
(508) 752-2884 (877) MADISON

REVISION HISTORY

1	07/12/13	HA	Initial Release
2	06/05/14	DC	Removed Polarity Mark; Revised Print, et. al

Spec Number:	**102-2699**			
Part Number:	**12ZZ2LF003**			
Customer:		**Prepared By:**	D.M. Card	
Customer #:		**Reviewed By:**	T. Grzysiewicz	A. Fan

SAFETY CERTIFICATION

UL Recognized: AWM Style 2725 80°C 30V VW-1

RoHS II Material Compliance: In accordance with EU Directive 2011/65/EU for the Restriction of Hazardous Substances

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