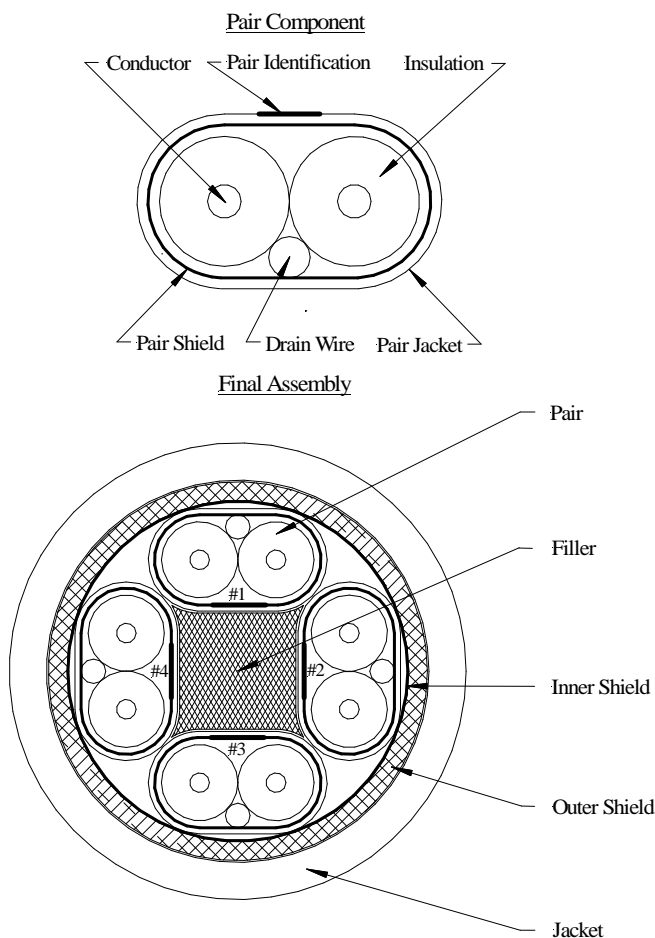


4 PAIR 30 AWG 25G TURBOTWIN™ CABLE

PROPRIETARY DESIGN

THIS CONFIDENTIAL DOCUMENT HAS BEEN RELEASED WITH THE UNDERSTANDING THAT IT SHALL NOT BE SENT TO ANYONE OTHER THAN THE ORIGINAL INTENDED RECIPIENT WITHOUT PRIOR AUTHORIZATION FROM TE CONNECTIVITY / MADISON CABLE



CONSTRUCTION

Pair Component

Conductor: 30 AWG Solid Silver Plated Copper, 0.010 Inch [0.25 mm] Diameter
Insulation: 0.0115 Inches [0.29 mm] of Polyolefin, 0.033 Inch [0.84 mm] Diameter, Color – Natural

Pair: 2 Singles Laid Flat and Parallel

Drain Wire: 30 AWG Solid Silver Plated Copper, 0.010 Inch [0.25 mm] Diameter

Pair Shield: Metallic Tape

Pair Jacket: Polyester Tape

Pair Minor Diameter: 0.042 Inches [1.07 mm] Nominal

Pair Major Diameter: 0.073 Inches [1.85 mm] Nominal

Pair Identification: To be printed on entire length of pair in 1/2 Inch [13 mm] intervals, see Table 1

Final Assembly

Core: 4 Pairs (#1-4) Cabled Around Filler

Inner Shield: Aluminum/Polyester Tape, Aluminum Side Facing Out, 25% Overlap

Outer Shield: 38 AWG Tin Plated Copper Braid, 85% Coverage

Jacket: 0.025 Inches [0.64 mm] of PVC, Color – Black

Diameter: 0.205 Inches [5.21 mm] Nominal

Print Legend (White Ink): “MADISON CABLE (UL) TYPE CL2 75°C 30 AWG CSA AWM I/II A/B 75°C 30V FT1 TurboTwin™ 25G 104-2216 SUBSTANCE COMPLIANT 2011/65/EU {Date Code}”¹

¹ 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.

TABLE 1

Pair #	Pair Identification
1	- 1 - 1 - 1 - 1
2	- - 2 - - 2 - - 2 - - 2
3	- - - 3 - - - 3 - - - 3 - - - 3
4	- 4 - 4 - 4 - 4

ELECTRICAL CHARACTERISTICS²

Production Performance Testing:

Differential Impedance: 100 ± 5 Ohms @ TDR

Attenuation (SDD21): 15 db/3m Maximum @ 12.89 GHz

Return Loss (SDD11): ≤ -19.5 + 2√f for 0.01 GHz ≤ f ≤ 4.1 GHz

≤ -13.6 + 14 log (f/5.5) for 4.1 GHz < f ≤ 19 GHz

SCD21-SDD21:

≤ -12 for 0.01 GHz ≤ f ≤ 12.89 GHz

≤ -29 + (29/22)*f for 12.89 GHz < f ≤ 15.7 GHz

≤ -8.3 for 15.7 GHz < f ≤ 19 GHz

Differential to Common Mode Return Loss (SCD11):

≤ -22 + (20/25.78)*f for 0.01 GHz ≤ f ≤ 12.89 GHz

≤ -15 + (6/25.78)*f for 12.89 GHz < f ≤ 19 GHz

Pair-to-Pair IL Variation: 0.5 dB @ 12.89 GHz Nominal (abs(Max IL – Min IL)) among all pairs

Qualification Testing:

Mutual Capacitance: 12 pF/ft [39 pF/m] Nominal

Insertion Loss Deviation: ILD_{min} = -0.8

ILD_{max} = +0.8

NEXT: -50 dB Maximum from 0.01 GHz to 19 GHz

FEXT: -50 dB Maximum from 0.01 GHz to 19 GHz

Conductor DC Resistance: 0.10 Ohms/ft [330 Ohms/km] Nominal @ 20°C

² All SI measurements made @ 20°C

³ Tested/Functional to 25 GHz over a 3 meter length

⁴ Values are for informational purposes only

PHYSICAL CHARACTERISTICS

Temperature Rating:

Operating: -10°C to +60°C

Transport/Installation: -25°C to +80°C



Madison Cable

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

REVISION HISTORY

1	03/20/18	JT	Initial Release
2	04/16/18	JT	Revised Insulation, Pair and Cable ODs
3	06/05/18	BS	Revised Print Legend and Safety Certification
4	08/08/18	JT	Revised Electrical and Mech. Characteristics

Spec Number: 104-2216

Part Number: 08PB2LF010

Customer:

Customer #:

Prepared By: J. Twomey

Reviewed By: N. Zhang

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Users should evaluate the suitability of this product for their application. Contact factory for latest revision of specification. TE Connectivity reserves the right to make changes in materials or processing, which do not affect compliance with any specification, without notification to the Buyer.

4 PAIR 30 AWG 25G TURBOTWIN™ CABLE

BULK CABLE RELIABILITY REQUIREMENTS

Product Validation Test: Per QS-500A (Exhibit)

INDUSTRY STANDARDS

IEEE 802.3bj: Physical Layer Specifications and Management Parameters for 100 Gb/s Operation Over Backplanes and Copper Cables
InfiniBand™ Architecture (Extended Data Rate): 1X = 25 Gb/s
4X = 100 Gb/s

SAFETY CERTIFICATION

UL Listing: Type CL2 as specified in Article 725 of the National Electrical Code
CSA Certification: AWM I/II A/B 75°C 30 Volts FT1
RoHS II Material Compliance: In accordance with EU Directive 2011/65/EU for the Restriction of Hazardous Substances



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