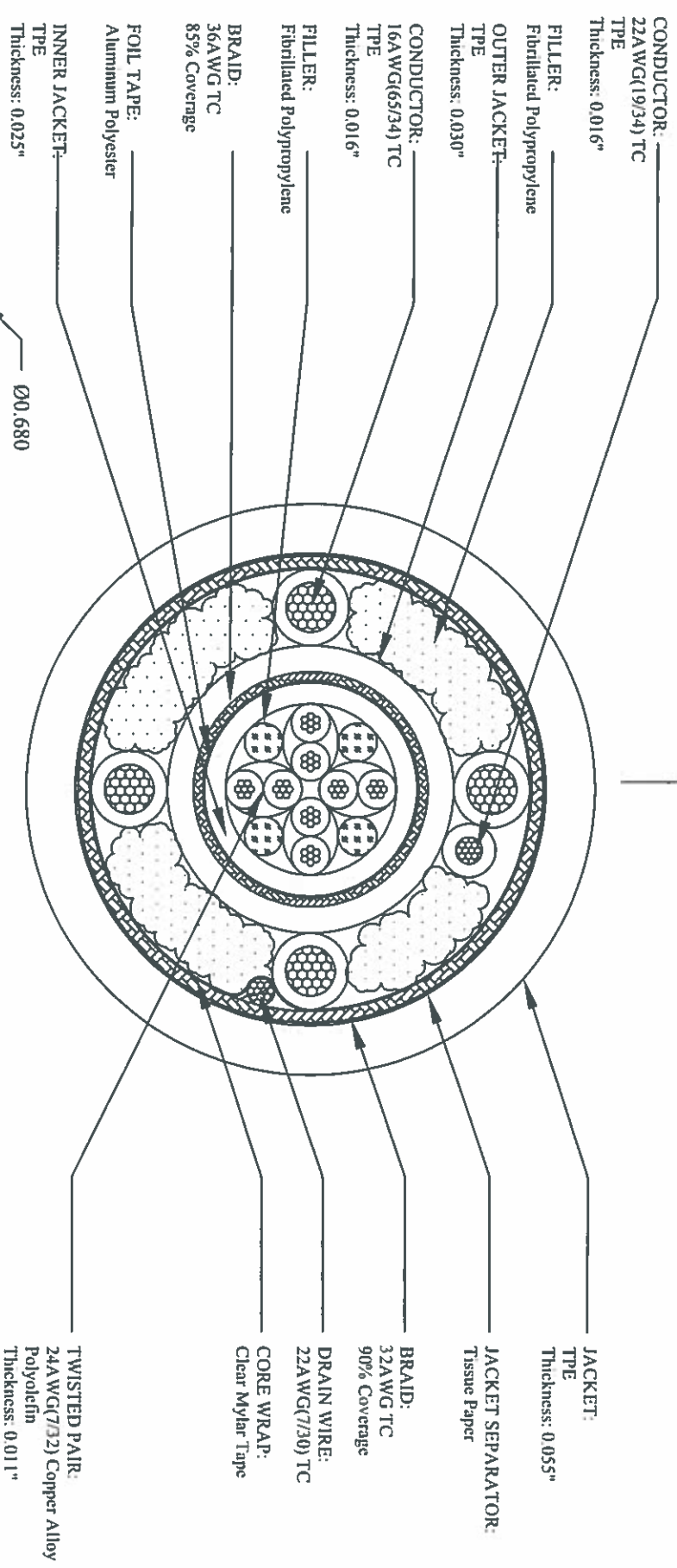


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



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We have reviewed this document and find it accept as detailed.

Signature: Jim Brown Date: 11/5/15
 Name (Print): Jim Brown
 Title: SF Service Eng
 Company: Miller Electric



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4/C 16AWG 1/C 22AWG SHIELDED ETHERNET COMPOSITE CABLE

Part Number 15-1174

SIZE	Issue Date:	DWG NO.	REV
A	11/02/2015	15-1174	1
SCALE 5:1	LLI	SHEET	1 of 1

**ALPHA WIRE
CDC PRODUCT SPECIFICATION**

Part Number: 15-1174
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Issue: 1
Issue Date: 7/31/2015
Effective Date: 9/25/2015

- A. Construction** **Diameters (In)**
- 1) Component 1 1 X 1 CABLE
- (1) 1 X 4 PAIR
- a) Conductor 24 (7/32) AWG Copper Alloy 0.024
- b) Insulation 0.011" Wall, Nom. Polyolefin (PO) 0.046
- (1) Color(s)

Pair	Color	Pair	Color	Pair	Color
1	BLUE - WHITE/BLUE	3	GREEN - WHITE/GREEN		
2	ORANGE - WHITE/ORANGE	4	BROWN - WHITE/BROWN		

- c) Pair 2/Cond Cabled Together
- (1) Twists: 13.7 Twists/foot (approx.)
- d) Cabling 4 PAIR Cabled
- (1) Twists: 3.0 Twists/foot (min)
- e) Jacket 0.025" Wall, Nom., TPE 0.254 (0.268 Max.)
- (1) Color(s) WHITE
- (2) Shield: Alum/Mylar Tape, 25% Overlap, Min.
- a) Foil Direction Foil Facing Out
- b) Braid TC, 85% Coverage, Min.
- (3) Jacket 0.030" Wall, Nom., TPE 0.342 (0.364 Max.)
- a) Color(s) BLACK
- b) Ripcord 1300 1/E NATURAL POLYESTER
- c) Print ALPHA WIRE-* P/N 7602F 4PR 24 AWG
CONTINUOUS FLEX INDUSTRIAL ETHERNET
RU AWM STYLE 20626 80C 300V ANSI/TIA-568-C.2 CAT5E
PATCH CE ROHS (SEQ FOOTAGE)
* = Factory Code
- 2) Component 2 1 X 1 COND
- a) Conductor 22 (19/34) AWG Tinned Copper 0.032
- b) Insulation 0.016" Wall, Nom. TPE 0.064
- (1) Color(s)

Cond	Color	Cond	Color	Cond	Color
1	PURPLE				

- 3) Component 3 4 X 1 COND
- a) Conductor 16 (65/34) AWG Tinned Copper 0.059
- b) Insulation 0.016" Wall, Nom. TPE 0.091
- (1) Color(s)

Cond	Color	Cond	Color	Cond	Color
1	WHITE	3	BROWN		
2	BLACK	4	GREY		

- 4) Cable Assembly Component1 in center, Component2 and Component3 around
- a) Twists: 1.5 Twists/foot (min)
- b) Orientation: Components to be arranged from INSIDE LAYER to OUTSIDE LAYER
- c) Core Wrap Clear Mylar Tape, 25% Overlap, Min.
- 5) Shield Tinned Copper BRAID Shield, 90% Coverage, Min.
- a) Drain Wire 22 (7/30) AWG Tinned Copper
- 6) Jacket 0.055" Wall, Nom., TPE-C 0.680+/- 0.018
- a) Color(s) BLACK
- b) Jacket Separator Tissue Tape, 25% Overlap, Min.
- c) Marker Tape MILLER ELECTRIC MFG. CO., - APPLETON, WI USA -
AUTOMATION

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ALPHA WIRE
CDC PRODUCT SPECIFICATION

Part Number: 15-1174
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Issue: 1
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B. Applicable Specifications

C. Environmental Compliance

1) CE:

EU Directive 2011/65/EU(RoHS2):

This product complies with European Directive 2011/65/EU (RoHS Directive) of the European Parliament and of the Council of 8 June 2011. No Exemptions are required for RoHS Compliance on this item. Consult Alpha Wire's web site for [RoHS C of C](#).

2) REACH Regulation (EC 1907/2006):

This product does not contain Substances of Very High Concern (SVHC) listed on the European Union's REACH candidate list in excess of 0.1% mass of the item. For up-to-date information, please see [Alpha's REACH SVHC Declaration](#).

D. Physical & Mechanical Properties

- 1) Temperature Range -50 to 80°C
- 2) Bend Radius 10X Cable Diameter
- 3) Pull Tension 118 Lbs, Maximum
- 4) Sunlight Resistance Yes
- 5) Flex Life 10 Million Cycles

E. Electrical Properties

(For Engineering purposes only)

1) Voltage Rating

300 V_{RMS}

2) Component 1

- a) Voltage Rating 300 V_{RMS}
- b) Characteristic Impedance 100 Ω +/- 15
- c) Mutual Capacitance 15 pF/ft
- d) Velocity of Propagation 69 % Nom.
- e) Conductor DCR 11 Ω/100m Max
- f) Skew 45 ns/100m Max
- g) Pair to Ground Unbalance 330 pF/100m Max
- h) DC Unbalance of a Pair 5% Max
- i) Insertion Loss
 - 2.5 (Max dB/100m) @ 1 MHz
 - 4.9 (Max dB/100m) @ 4 MHz
 - 6.9 (Max dB/100m) @ 8 MHz
 - 7.8 (Max dB/100m) @ 10 MHz
 - 9.9 (Max dB/100m) @ 16 MHz
 - 11.1 (Max dB/100m) @ 20 MHz
 - 12.5 (Max dB/100m) @ 25 MHz
 - 14.1 (Max dB/100m) @ 31.25 MHz
 - 20.4 (Max dB/100m) @ 62.5 MHz
 - 26.4 (Max dB/100m) @ 100 MHz

3) Component 2

- a) Ground Capacitance 54 pF/ft @1 kHz, Nominal
- b) Inductance 0.06 μH/ft, Nominal
- c) Conductor DCR 15.4 Ω/1000ft @20°C, Nominal

4) Component 3

- a) Capacitance 30 pF/ft @1 kHz, Nominal Conductor to Conductor
- b) Ground Capacitance 54 pF/ft @1 kHz, Nominal
- c) Inductance 0.17 μH/ft, Nominal
- d) Conductor DCR 4.5 Ω/1000ft @20°C, Nominal
- e) OA Shield DCR 0.85 Ω/1000ft @20°C, Nominal

F. Other

1) Packaging

Flange x Traverse x Barrel (inches)

- a) Bulk(Made-to-order)

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**ALPHA WIRE
CDC PRODUCT SPECIFICATION**

**Part Number: 15-1174
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**Issue: 1
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- 2) Notes:
- a) Component1 verified to TIA-568-C.2 Cat5e but not guaranteed after this composite cable completed.
 - b) Jacket printing: 1/4" or wider white stripe interrupted with " MILLER ELECTRIC MFG. CO., - APPLETON, WI USA - AUTOMATION ". Print is every 12".
 - c) Component2 and Coponent3 insulation are same as 518235's insulation - 039160.
 - d) Flexing cycles designed: 10 million for Component1. Estimated 10 million for this composite cable.

*Jim Banki 11/5/15
Miller Electric*

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