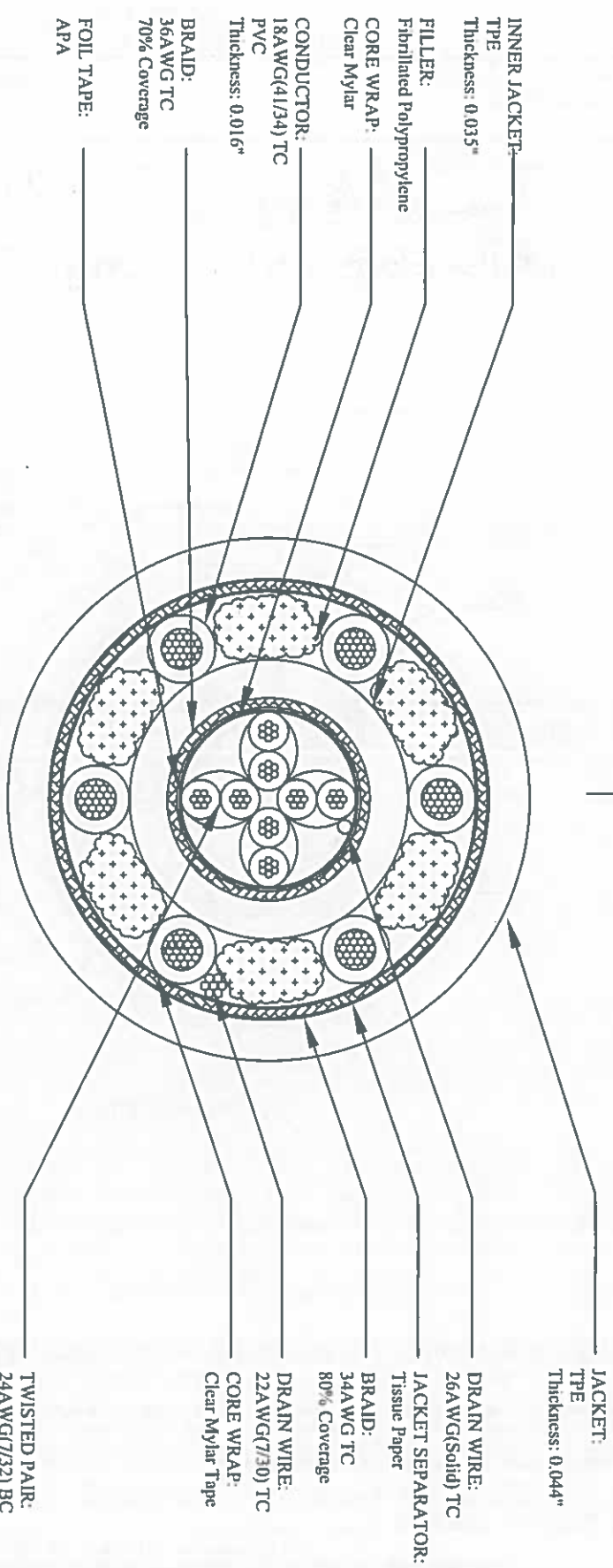
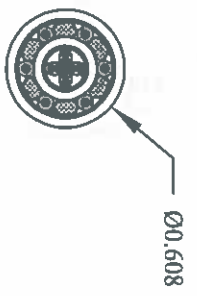


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



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

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Name (Print): \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Company: \_\_\_\_\_



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**Alpha Wire**  
*Cables you trust. Services you deserve.*

Alpha Wire  
 711 Lidgerwood Avenue  
 Elizabeth, NJ 07207-0711  
 www.alpha-wire.com

**6/C 18AWG SHIELDED ETHERNET COMPOSITE CABLE**

**Part Number 17-1099RD**

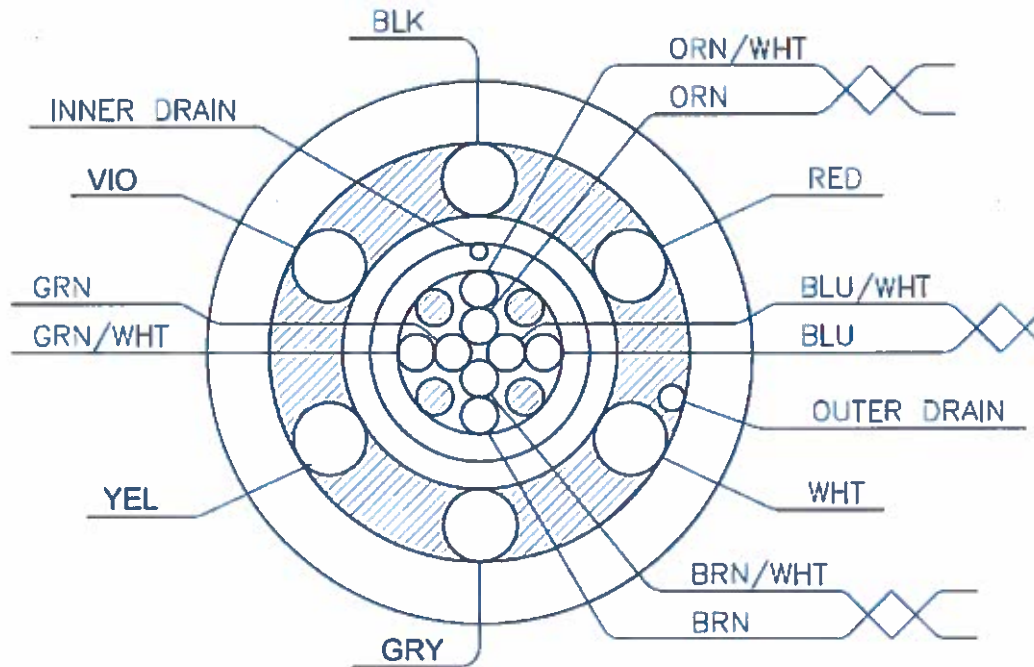
SIZE	Issue Date:	DWG NO.	REV
A	02/27/2018	LL1	D
SCALE 5:1		SHEET	1 of 1

**ALPHA WIRE  
CUSTOMER PRODUCT SPECIFICATION**

**Part Number: 17-1099RD**  
**Page 3 of 3 Pages**

**Issue: 2**  
**Issue Date: 4/23/2018**  
**Effective Date: 4/24/2018**

Accepted By: <i>Brian Schwartz</i>	Date: 4/24/18
Company: Miller Electric Mfg. Co.	Title: Design Engineer



COLOR ROTATION

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**ALPHA WIRE**  
**CUSTOMER PRODUCT SPECIFICATION**

**Part Number: 17-1099RD**  
**Page 2 of 3 Pages**

**Issue: 2**  
**Issue Date: 4/23/2018**  
**Effective Date: 4/24/2018**

This product complies with European Directive 2011/65/EU (RoHS Directive) of the European Parliament and of the Council of 8 June 2011 and the amending Directive 2015/863/EU of 4 June 2015. 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 96 Lbs, Maximum
- 4) Sunlight Resistance Yes

**E. Electrical Properties**

(For Engineering purposes only)

- 1) Voltage Rating 300 V<sub>RMS</sub>
- 2) Component 1
  - a) Voltage Rating 300 V<sub>RMS</sub>
  - 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) Capacitance 52 pF/ft @1 kHz, Nominal Conductor to Conductor
  - b) Ground Capacitance 94 pF/ft @1 kHz, Nominal
  - c) Inductance 0.18 μH/ft, Nominal
  - d) Conductor DCR 7 Ω/1000ft @20°C, Nominal
- 4) OA Shield DCR 1.52 Ω/1000ft @20°C, Nominal

**F. Other**

- 1) Packaging Flange x Traverse x Barrel (inches)
  - a) Bulk(Made-to-order)
- 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 - DIGITAL". Print is every 12".

**This Design is custom, Made-To-Order & once accepted, the order is NON-CANCELLABLE & NON-RETURNABLE.**

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## ALPHA WIRE CUSTOMER PRODUCT SPECIFICATION

**Part Number: 17-1099RD**  
**Page 1 of 3 Pages**

**Issue: 2**  
**Issue Date: 4/23/2018**  
**Effective Date: 4/24/2018**

### A. Construction

Diameters (In)

- 1) Component 1                      1 X 1 CABLE 76022
- (1) Component                    1 X 4 PAIR
- a) Conductor                24 (7/32) AWG BC                      0.024
- b) Insulation                0.014" Wall, Nom. Polypropylene (PP)                      0.051
- (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, Non-bonded
- (1) Lay Length:        Various Lay
- (2) Cabling                      4 PAIR Cabled
- (1) Twists:                3.0 Twists/foot (min)
- (2) Core Wrap:            Clear Mylar Tape, 25% Overlap, Min.
- (3) Shield:                    A/P/A Tape, 25% Overlap, Min.
- a) Drain Wire              26 (SOLID) AWG TC
- b) Braid                    TC, 70% Coverage, Min.
- (4) Jacket                      0.035" Wall, Nom., TPE                      0.325 (0.335 Max.)
- a) Color(s)                BLACK
- b) Ripcord                Nylon
- c) Print                    ALPHA WIRE- \* P/N 76022 4PR 24 AWG  
XTRA-GUARD(R) INDUSTRIAL ETHERNET (UL) C(UL) TYPE  
CMR 75C FT4 ANSI/TIA-568-C.2 CAT5E VERIFIED  
CE ROHS (SEQUENTIAL FOOTAGE MARKING)  
\* = Factory Code
- 2) Component 2                      6 X 1 COND
- a) Conductor                    18 (41/34) AWG Tinned Copper                      0.047
- b) Insulation                    0.016" Wall, Nom. PVC                      0.079
- (1) Color Code              Alpha Wire Color Code D

Cond	Color	Cond	Color	Cond	Color
1	BLACK	3	WHITE	5	YELLOW
2	RED	4	GRAY	6	VIOLET

- 3) Cable Assembly                    7 Components Cabled
- a) Twists:                    1.7 Twists/foot (min)
- b) Orientation:                Components to be arranged from INSIDE LAYER to OUTSIDE LAYER
- c) Core Wrap                Clear Mylar Tape, 25% Overlap, Min.
- 4) Shield                            Tinned Copper BRAID Shield, 80% Coverage, Min.
- a) Drain Wire                22 (7/30) AWG Tinned Copper
- 5) Jacket                            0.044" Wall, Nom., TPE-C                      0.608+/- 0.020
- a) Color(s)                    BLACK
- b) Jacket Separator        Tissue Tape, 25% Overlap, Min.
- c) Print                        MILLER ELECTRIC MFG. CO.,  
- APPLETON, WI USA - 279665A
- d) Print Color                WHITE

### B. Applicable Specifications

### C. Environmental Compliance

- 1) CE:                                EU Directive 2011/65/EU(RoHS2):

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