

# Customer Specification

## PART NO. 76001

### Construction

|                   |               |                                                                                                                                                                                                   |               |                         |             |
|-------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------|-------------|
|                   |               |                                                                                                                                                                                                   |               | Diameters (In)          |             |
| 1) Component 1    |               | 4 X 1 PAIR                                                                                                                                                                                        |               |                         |             |
| a) Conductor      |               | 24 (SOLID) AWG BC                                                                                                                                                                                 |               | 0.021                   |             |
| b) Insulation     |               | 0.009" Wall, Nom. FEP                                                                                                                                                                             |               | 0.039                   |             |
| (1) Color(s)      |               |                                                                                                                                                                                                   |               |                         |             |
| Pair              | Color         | Pair                                                                                                                                                                                              | Color         | Pair                    | Color       |
| 1                 | BLU - WHT/BLU | 2                                                                                                                                                                                                 | ORG - WHT/ORG | 3                       | GRN-WHT/GRN |
| 4                 | BRN - WHT/BRN |                                                                                                                                                                                                   |               |                         |             |
| c) Pair           |               | 2/Cond Cabled Together                                                                                                                                                                            |               |                         |             |
| (1) Lay Length:   |               | Various Lay                                                                                                                                                                                       |               |                         |             |
| 2) Cable Assembly |               | 4 Components Bunch Cabled                                                                                                                                                                         |               |                         |             |
| a) Twists:        |               | 4.0 Twists/foot                                                                                                                                                                                   |               |                         |             |
| b) Core Wrap      |               | Clear Mylar Tape, 25% Overlap, Min.                                                                                                                                                               |               |                         |             |
| 3) Shield:        |               | Alum/Mylar Tape, 25% Overlap, Min.                                                                                                                                                                |               |                         |             |
| a) Foil Direction |               | Foil Facing In                                                                                                                                                                                    |               |                         |             |
| b) Drain Wire     |               | 24 (7/32) AWG TC                                                                                                                                                                                  |               |                         |             |
| 4) Jacket         |               | 0.035" Wall, Nom.,TPE                                                                                                                                                                             |               | 0.300 Avg. (0.309 Max.) |             |
| a) Color(s)       |               | BLACK                                                                                                                                                                                             |               |                         |             |
| b) Ripcord        |               | Nylon                                                                                                                                                                                             |               |                         |             |
| c) Print          |               | ALPHA WIRE-* P/N 76001 4PR 24 AWG<br>XTRAGUARD(R) INDUSTRIAL ETHERNET (UL) C(UL) TYPE<br>CMR 105C FT4 ANSI/TIA-568-C.2 CAT5E VERIFIED<br>CE ROHS (SEQUENTIAL FOOTAGE MARKING)<br>* = Factory Code |               |                         |             |

### Applicable Specifications

|                      |                                   |       |
|----------------------|-----------------------------------|-------|
| 1) UL                | CMR                               | 105°C |
|                      | FT4                               |       |
| 2) CSA International | C(UL) TYPE CMR                    | 105°C |
|                      | FT4                               |       |
| 3) CE:               | LVD 73/23/EEC Amendment 93/68/EEC |       |

### Environmental

|                                        |                                                                                                                                                                                                                                                     |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.                 |

## Properties

|                                  |                                 |
|----------------------------------|---------------------------------|
| Physical & Mechanical Properties |                                 |
| 1) Temperature Range             | -50 to 105°C                    |
| 2) Bend Radius                   | 8X Cable Diameter               |
| 3) Pull Tension                  | 29.0 Lbs, Maximum               |
| 4) Sunlight Resistance           | Yes                             |
| Electrical Properties            | (For Engineering purposes only) |
| 1) Voltage Rating                | 300 V <sub>RMS</sub>            |
| 2) Characteristic Impedance      | 100 Ω +/- 15                    |
| 3) Mutual Capacitance            | 5.6 nf/100m Max                 |
| 4) Velocity of Propagation       | 70 % Nom.                       |
| 5) Conductor DCR                 | 9.38 Ω/100m @20°C, Max          |
| 6) Skew                          | 45 ns/100m, Max                 |
| 7) Pair to Ground Unbalance      | 330 pf/100m, Max                |
| 8) DC Unbalance of a Pair        | 5%, Max                         |
| 9) Insertion Loss, Max dB/100m   | 2.4 @ 1 MHz                     |
|                                  | 4.9 @ 4 MHz                     |
|                                  | 6.9 @ 8 MHz                     |
|                                  | 7.8 @ 10 MHz                    |
|                                  | 9.9 @ 16 MHz                    |
|                                  | 11.1 @ 20 MHz                   |
|                                  | 12.5 @ 25 MHz                   |
|                                  | 14.1 @ 31.25 MHz                |
|                                  | 20.4 @ 62.5 MHz                 |
|                                  | 26.4 @ 100 MHz                  |

## Other

|            |                                      |
|------------|--------------------------------------|
| Packaging  | Flange x Traverse x Barrel (inches)  |
| a) 1000 FT | 18 x 10.5 x 8 Continuous length      |
| b) 500 FT  | 12.5 x 9 x 8 Continuous length       |
|            | [Spool dimensions may vary slightly] |

www.alphawire.com

Alpha Wire | 711 Lidgerwood Avenue, Elizabeth, NJ 07207  
Tel: 1-800-52 ALPHA (25742)

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## EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 76001

76001, RoHS-Compliant Commencing With 3/21/2012 Production

Note: all colors and put-ups

This document certifies that the Alpha part number cited above is manufactured in accordance with Directive 2011/65/EU of the European Parliament, better known as the RoHS Directive (commonly known as RoHS 2), with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. This certification extends to amending Directive 2015/863/EU which expanded the list of restricted substances to 10 items (commonly known as RoHS 3). The reader is referred to these Directives for the specific definitions and extents of the Directives. **No Exemptions are required for RoHS Compliance on this item.** Additionally, Alpha certifies that the listed part number is in compliance with China RoHS "Marking for Control of Pollution by Electronic Information Products" standard SJ/T 11364-2014.

| Substance                               | Maximum Control Value      |
|-----------------------------------------|----------------------------|
| Lead                                    | 0.1% by weight (1000 ppm)  |
| Mercury                                 | 0.1% by weight (1000 ppm)  |
| Cadmium                                 | 0.01% by weight (100 ppm)  |
| Hexavalent Chromium                     | 0.1% by weight (1000 ppm ) |
| Polybrominated Biphenyls (PBB)          | 0.1% by weight (1000 ppm)  |
| Polybrominated Diphenyl Ethers (PBDE) , |                            |
| Including Deca-BDE                      | 0.1% by weight (1000 ppm)  |
| Bis(2-ethylhexyl) phthalate (DEHP)      | 0.1% by weight (1000 ppm)  |
| Butyl benzyl phthalate (BBP)            | 0.1% by weight (1000 ppm)  |
| Dibutyl phthalate (DBP)                 | 0.1% by weight (1000 ppm)  |
| Diisobutyl phthalate (DIBP)             | 0.1% by weight (1000 ppm)  |

The information provided in this document and disclosure is correct to the best of Alpha Wire's knowledge, information and belief at the date of its release. The information provided is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it will become part of. The intent of this document is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

Authorized Signatory for the Alpha Wire:

A handwritten signature in black ink, appearing to read 'Dave Watson'.

Dave Watson, Director of Engineering & QA

2/9/2017

Alpha Wire

711 Lidgerwood Ave.

Elizabeth, NJ 07207

Tel: 1-908-925-8000