

# Customer Specification

## PART NO. 75031

### Construction

|                   |                          |                                                                                                                                                                                                                                                               |                        | Diameters (In) |       |
|-------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------|-------|
| 1) Component 1    |                          | 2 X 1 PAIR                                                                                                                                                                                                                                                    |                        |                |       |
| a) Conductor      |                          | 24 (7/32) AWG Tinned Copper                                                                                                                                                                                                                                   |                        | 0.024          |       |
| b) Insulation     |                          | 0.012" Wall, Nom. Polyethylene, High Density                                                                                                                                                                                                                  |                        | 0.048          |       |
| (1) Color(s)      |                          |                                                                                                                                                                                                                                                               |                        |                |       |
| Pair              | Color                    | Pair                                                                                                                                                                                                                                                          | Color                  | Pair           | Color |
| 1                 | WHITE/ORANGE<br>- ORANGE | 2                                                                                                                                                                                                                                                             | WHITE/GREEN -<br>GREEN |                |       |
| c) Pair           |                          | 2/Cond Cabled Together                                                                                                                                                                                                                                        |                        |                |       |
| (1) Twists:       |                          | 16.0 Twists/foot (approx.)                                                                                                                                                                                                                                    |                        |                |       |
| 2) Cable Assembly |                          | 2 Components Cabled                                                                                                                                                                                                                                           |                        |                |       |
| a) Twists:        |                          | 2.0 Twists/foot (min)                                                                                                                                                                                                                                         |                        |                |       |
| b) Orientation:   |                          | Components to be arranged from<br>INSIDE LAYER to OUTSIDE LAYER                                                                                                                                                                                               |                        |                |       |
| c) Core Wrap      |                          | Foam Polypropylene Tape, 25%<br>Overlap, Min.                                                                                                                                                                                                                 |                        |                |       |
| 3) Shield:        |                          | Alum/Mylar Tape, 25% Overlap, Min.                                                                                                                                                                                                                            |                        |                |       |
| a) Foil Direction |                          | Foil Facing Out                                                                                                                                                                                                                                               |                        |                |       |
| b) Braid          |                          | Tinned Copper,75% Coverage, Min.                                                                                                                                                                                                                              |                        |                |       |
| 4) Jacket         |                          | 0.032" Wall, Nom.,TPE                                                                                                                                                                                                                                         |                        | 0.260+/- 0.021 |       |
| a) Color(s)       |                          | TEAL                                                                                                                                                                                                                                                          |                        |                |       |
| b) Print          |                          | ALPHA WIRE-A3 P/N 75031 HIGH FLEX CAT5E SF/UTP 2P<br>24AWG E163860 C(UL)US CMX-OUTDOOR - CM 75C SUN RES<br>OR AWM 2463 80C 600V OIL RES II<br>CE ROHS (SEQ FOOTAGE)<br>[Note: Product may have c(UL) or CSA markings depending upon plant of<br>manufacture.] |                        |                |       |

## Applicable Specifications

|          |                                             |                             |
|----------|---------------------------------------------|-----------------------------|
| 1) UL    | CM                                          | 75°C                        |
|          | CMX-Outdoor                                 | 75°C                        |
|          | SUN RES                                     |                             |
|          | AWM/STYLE 2463                              | 80°C / 600 V <sub>RMS</sub> |
| 2) Other | ISO/IEC 11801 Category 5                    |                             |
|          | ANSI/TIA-568.2-D Category 5e                |                             |
|          | OIL RES II                                  |                             |
|          | ODVA EtherNet/IP (TM) Compliant Category 5e |                             |
| 3) CE:   | EU Low Voltage Directive 2014/35/EU         |                             |

## Environmental

|                                                                          |                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1) CE: EU Directive 2011/65/EU(RoHS2), EU Directive 2015/863/EU (RoHS3): |                                                                                                                                                                                                                                                             |
|                                                                          | 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. |
| 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.                                                                                                |

## Properties

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| Physical & Mechanical Properties |                                                        |
| 1) Temperature Range             | -40 to 80°C                                            |
| 2) Bend Radius                   | 8X Cable Diameter(static), 16X Cable Diameter(dynamic) |
| 3) Pull Tension                  | 17 Lbs, Maximum                                        |
| 4) Sunlight Resistance           | Yes                                                    |
| 5) Cable Weight                  | 34 Lbs/1000Ft                                          |
| Electrical Properties            | (For Engineering purposes only)                        |
| 1) Voltage Rating                | 600 V <sub>RMS</sub>                                   |

|                             |                             |                  |                    |                  |                    |                    |
|-----------------------------|-----------------------------|------------------|--------------------|------------------|--------------------|--------------------|
| 2) Characteristic Impedance | 100 Ω +/- 15                |                  |                    |                  |                    |                    |
| 3) Capacitance Unbalance    | 330 pf/100m @1 kHz, Maximum |                  |                    |                  |                    |                    |
| 4) Velocity of Propagation  | 68 %                        |                  |                    |                  |                    |                    |
| 5) Conductor DCR            | 14 Ω/100m @20°C, Maximum    |                  |                    |                  |                    |                    |
| 6) DCR Unbalance            | 5 % Maximum                 |                  |                    |                  |                    |                    |
| 7) Skew                     | 45 ns/100m Maximum          |                  |                    |                  |                    |                    |
|                             |                             |                  |                    |                  |                    |                    |
|                             | <b>Max. Insertion</b>       |                  |                    |                  |                    | <b>Min. Return</b> |
| <b>Frequency</b>            | <b>Loss</b>                 | <b>Min. NEXT</b> | <b>Min. PSNEXT</b> | <b>Min. ACRF</b> | <b>Min. PSACRF</b> | <b>Loss</b>        |
| <b>[MHz]</b>                | <b>[dB]</b>                 | <b>[dB]</b>      | <b>[dB]</b>        | <b>[dB]</b>      | <b>[dB]</b>        | <b>[dB]</b>        |
| 1                           | 2.4                         | 65.3             | 62.3               | 63.8             | 60.8               | 20.0               |
| 4                           | 4.9                         | 56.3             | 53.3               | 51.8             | 48.8               | 23.0               |
| 8                           | 6.9                         | 51.8             | 48.8               | 45.7             | 42.7               | 24.5               |
| 10                          | 7.8                         | 50.3             | 47.3               | 43.8             | 40.8               | 25.0               |
| 16                          | 9.9                         | 47.2             | 44.2               | 39.7             | 36.7               | 25.0               |
| 20                          | 11.1                        | 45.8             | 42.8               | 37.8             | 34.8               | 25.0               |
| 25                          | 12.5                        | 44.3             | 41.3               | 35.8             | 32.8               | 24.2               |
| 31.25                       | 14.1                        | 42.9             | 39.9               | 33.9             | 30.9               | 23.3               |
| 62.5                        | 20.4                        | 38.4             | 35.4               | 27.9             | 24.9               | 20.7               |
| 100                         | 26.4                        | 35.3             | 32.3               | 23.8             | 20.8               | 19.0               |

## Other

|                  |                                             |
|------------------|---------------------------------------------|
| <b>Packaging</b> | Flange x Traverse x Barrel (inches)         |
| a) 1000 FT       | 16 x 11 x 8 Continuous length               |
| b) 100 FT        | 12 x 4.5 x 3.5 Continuous length            |
|                  | <i>[Spool dimensions may vary slightly]</i> |

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# EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 75031

75031, RoHS-Compliant Commencing With 1/1/0001 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). This product also complies with UK - RoHS. 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. This product is also in compliance with China RoHS 2 per GB/T 26572-2011.

| 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) |

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Authorized Signatory for the Alpha Wire:

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

Dave Watson, Director of Engineering

1/9/2024

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