

## Customer Specification

### PART NO. 74009

## Construction

|                   |                       |  |                     |                    |       |
|-------------------|-----------------------|--|---------------------|--------------------|-------|
|                   |                       |  |                     | Diameters (In)     |       |
| 1) Component 1    |                       | 4 X 1 PAIR   |                     |                    |       |
| a) Conductor      |                       | 22 (SOLID) AWG Bare Copper   |                     | 0.026              |       |
| b) Insulation     |                       | 0.011" Wall, Nom. Polyolefin   |                     | 0.048              |       |
| (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:       |                       | Staggered Lays   |                     |                    |       |
| 2) Cable Assembly |                       | 4 Components Cabled  |                     |                    |       |
| a) Twists:        |                       | 4.0 Twists/foot (min)  |                     |                    |       |
| 3) Jacket         |                       | 0.043" Wall, Nom.,PVC  |                     | 0.301 (0.316 Max.) |       |
| a) Color(s)       |                       | BLACK  |                     |                    |       |
| b) Ripcord        |                       | 1 End 810 Denier Nylon   |                     |                    |       |
| c) Print          |                       | ALPHA WIRE-* P/N 74009 4PR 22 AWG VERIFIED (UL)<br>CAT 5E PLTC OR CMR-CMX OUTDOOR OR C(UL) CMR ---<br>ISO/IEC 11801 CAT 5E SUN RES OIL RES --- US PATENT<br>6273977 CE ROHS (2 FT, 7 DIGIT SEQUENTIAL NUMBER)<br>FT<br>[Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.]<br>* = Factory Code |                     |                    |       |
|                   |                       |  |                     |                    |       |

## Applicable Specifications



| Physical & Mechanical Properties |                           |                                 |                 |                   |
|----------------------------------|---------------------------|---------------------------------|-----------------|-------------------|
| 1) Temperature Range             |                           | -25 to 75°C                     |                 |                   |
| 2) Bend Radius                   |                           | 4X Cable Diameter               |                 |                   |
| 3) Pull Tension                  |                           | 40 Lbs, Maximum                 |                 |                   |
| 4) Sunlight Resistance           |                           | Yes                             |                 |                   |
| 5) Cable Weight                  |                           | 30 Lbs/1000Ft                   |                 |                   |
| Electrical Properties            |                           | (For Engineering purposes only) |                 |                   |
| 1) Voltage Rating                |                           | 300 V <sub>RMS</sub>            |                 |                   |
| 2) Characteristic Impedance      |                           | 100 Ω +/- 15                    |                 |                   |
| 3) Mutual Capacitance            |                           | 15 pF/ft @1 kHz, Nominal        |                 |                   |
| 4) Velocity of Propagation       |                           | 70 %                            |                 |                   |
| 5) Propagation Delay             |                           | 510 nS/100m, Maximum            |                 |                   |
| 6) Delay Skew                    |                           | 25 nS/100m, Maximum             |                 |                   |
| 7) Conductor DCR                 |                           | 9 Ω/100m @20°C, Maximum         |                 |                   |
| 8) DCR Unbalance                 |                           | 3% @20°C, Maximum               |                 |                   |
|                                  |                           |                                 |                 |                   |
|                                  |                           |                                 |                 |                   |
| Frequency(MHz)                   | Max. Attenuation(dB/100m) | Min. NEXT(dB)                   | Min. PSNEXT(dB) | Min. ACR(dB)      |
| 1                                | 2                         | 65.3                            | 65.3            | 63.3              |
| 4                                | 4                         | 56.3                            | 56.3            | 52.3              |
| 8                                | 5.7                       | 51.8                            | 51.8            | 46.1              |
| 10                               | 6.4                       | 50.3                            | 50.3            | 43.9              |
| 16                               | 8.1                       | 47.3                            | 47.3            | 39.1              |
| 20                               | 9.2                       | 45.8                            | 45.8            | 35.2              |
| 25                               | 10.3                      | 44.3                            | 44.3            | 34.1              |
| 31.25                            | 11.6                      | 42.9                            | 42.9            | 31.3              |
| 62.5                             | 16.8                      | 38.4                            | 38.4            | 21.6              |
| 100                              | 21.7                      | 35.3                            | 35.3            | 17.1              |
|                                  |                           |                                 |                 |                   |
| Frequency (MHz)                  | Min. PSACR(dB)            | Min. RL(dB)                     | Min. ELFEXT(dB) | Min. PSELFEXT(dB) |
| 1                                | 63.3                      | 20                              | 63.8            | 60.8              |
| 4                                | 52.3                      | 23                              | 51.7            | 48.7              |
| 8                                | 46.1                      | 24.5                            | 45.7            | 42.7              |
| 10                               | 43.9                      | 25                              | 43.8            | 40.8              |
| 16                               | 39.1                      | 25                              | 39.7            | 36.7              |
| 20                               | 35.2                      | 25                              | 37.7            | 34.7              |
| 25                               | 34.1                      | 24.3                            | 35.8            | 32.8              |
| 31.25                            | 31.3                      | 23.6                            | 33.9            | 30.9              |
| 62.5                             | 21.6                      | 21.5                            | 27.8            | 24.8              |
| 100                              | 17.1                      | 20.1                            | 23.8            | 20.8              |
|                                  |                           |                                 |                 |                   |
|                                  |                           |                                 |                 |                   |

Other

|                  |   |
|------------------|---|
| <b>Packaging</b> | Flange x Traverse x Barrel (inches)         |
| a) 500 FT        | 12 x 10 x 5 Continuous length               |
|                  | <i>[Spool dimensions may vary slightly]</i> |
|                  |   |

[www.alphawire.com](http://www.alphawire.com)

Alpha Wire  
2200 US Highway 27 South  
Richmond, IN 47374

Tel: 1-800-52 ALPHA

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# EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 74009

74009, RoHS-Compliant Commencing With 9/30/2013 Production

Note: all colors and put-ups

This document certifies that the Alpha part number cited above, including all packaging materials, 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

Lead  
Mercury  
Cadmium  
Hexavalent Chromium  
Polybrominated Biphenyls (PBB)  
Polybrominated Diphenyl Ethers (PBDE) ,  
Including Deca-BDE  
Bis(2-ethylhexyl) phthalate (DEHP)  
Butyl benzyl phthalate (BBP)  
Dibutyl phthalate (DBP)  
Diisobutyl phthalate (DIBP)

## Maximum Control Value

0.1% by weight (1000 ppm)  
0.1% by weight (1000 ppm)  
0.01% by weight (100 ppm)  
0.1% by weight (1000 ppm )  
0.1% by weight (1000 ppm)  
  
0.1% by weight (1000 ppm)  
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0.1% by weight (1000 ppm)

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Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering 5/5/2024

Alpha Wire  
2200 US Highway 27 South  
Richmond, IN 47374  
Tel: 1-908-925-8000