



# Customer Specification

## PART NO. M42891

### Construction

|                       |                         |   |                             |                       |       |
|-----------------------|-------------------------|---|-----------------------------|-----------------------|-------|
|                       |                         |   |                             | <b>Diameters (In)</b> |       |
| 1) Component 1        |                         | 2 X 1 PAIR  |                             |                       |       |
| a) Conductor          |                         | 24 (7/32) AWG TC  |                             | 0.024                 |       |
| b) Insulation         |                         | 0.019" Wall, Nom. Foam FEP Teflon   |                             | 0.062                 |       |
| (1) Color Code        |                         | Alpha Wire Color Code M   |                             |                       |       |
| Pair                  | Color                   | Pair  | Color                       | Pair                  | Color |
| 1                     | BLUE/WHITE - WHITE/BLUE | 2   | ORANGE/WHITE - WHITE/ORANGE |                       |       |
| c) Pair               |                         | 2/Cond Cabled Together  |                             |                       |       |
| (1) Twists:           |                         | 6.0 Twists/foot (min)   |                             |                       |       |
| Individually Applied: |                         |   |                             |                       |       |
| d) Shield:            |                         | Alum/Mylar Tape, 25% Overlap, Min.  |                             |                       |       |
| (1) Foil Direction    |                         | Foil Facing In  |                             |                       |       |
| (2) Drain Wire        |                         | 24 (7/32) AWG TC  |                             |                       |       |
| 2) Cable Assembly     |                         | 2 Components Cabled   |                             |                       |       |
| a) Twists:            |                         | 3.7 Twists/foot (min)   |                             |                       |       |
| 3) Jacket             |                         | 0.017" Wall, Nom., PVDF   |                             | 0.261 (0.272 Max.)    |       |
| a) Color(s)           |                         | SLATE   |                             |                       |       |
| b) Print              |                         | ALPHA WIRE-* P/N M42891 2PR 24 AWG<br>EXXXXX CMP (UL) C(UL) 150C ROHS<br>* = Factory Code<br><i>[Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.]</i> |                             |                       |       |

### Applicable Specifications

|                      |                |       |
|----------------------|----------------|-------|
| 1) UL                | CMP            | 150°C |
| 2) CSA International | C(UL) TYPE CMP | 150°C |

### Environmental

|                                   |  |
|-----------------------------------|--|
| 1) EU Directive 2002/95/EC(RoHS): |  |
|                                   | All materials used in the manufacture of this part are in compliance with EU Directive 2002/95/EU regarding the restriction of use of certain hazardous substances in electrical and electronic equipment. Consult Alpha Wire's web site for compliance Date of Manufacture. |
| 2) California Proposition 65:     | The outer surface materials used in the manufacture of this part meet the requirements of California Proposition 65.   |

### Properties

| Physical & Mechanical Properties |                              |
|----------------------------------|------------------------------|
| 1) Temperature Range             | -20 to 150°C                 |
| 2) Bend Radius                   | 10X Cable Diameter           |
| 3) Pull Tension                  | 21.1 Lbs, Maximum            |
| Electrical Properties            |                              |
| (For Engineering purposes only)  |                              |
| 1) Voltage Rating                | 300 V <sub>RMS</sub>         |
| 2) Characteristic Impedance      | 100 Ω                        |
| 3) Inductance                    | 0.24 μH/ft, Nominal          |
| 4) Mutual Capacitance            | 13.5 pf/ft @1 kHz, Nominal   |
| 5) Ground Capacitance            | 22.5 pf/ft @1 kHz, Nominal   |
| 6) Velocity of Propagation       | 76 %                         |
| 7) Conductor DCR                 | 24 Ω/1000ft @20°C, Nominal   |
| 8) Ind. Shield DC Resistance     | 14.4 Ω/1000ft @20°C, Nominal |

## Other

| Packaging                                   | Flange x Traverse x Barrel (inches) |
|---|-------------------------------------|
| a) 1000 FT                                  | 12 x 10 x 5 Continuous length       |
| b) 500 FT                                   | 12 x 4.5 x 3.5 Continuous length    |
| c) 100 FT                                   | 6.5 x 4 x 2.5 Continuous length     |
| d) Bulk(Made-to-order)                      |                                     |
| <i>[Spool dimensions may vary slightly]</i> |                                     |

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# EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: M42891

M42891 , RoHS-Compliant Commencing With 2/1/2005 Production

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, with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. The reader is referred to this Directive for the specific definitions and extents of this Directive. **No Exemptions are required for RoHS Compliance on this item.** It should be noted that this product does not fall within the scope of Directive 2011/65/EU, but this Certificate is offered for cases where this product will be used within EEE that does fit within the Directive's scope. 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 11364-2006.

| 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) ,<br>Including Deca-BDE | 0.1% by weight (1000 ppm)  |

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Authorized Signatory for the Alpha Wire Company:

Dave Watson, Director of Engineering & QA

5/14/2013