

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

**Part Number: 78142**  
**Page 1 of 2 Pages**

**Issue: 1**  
**Issue Date: 4/3/2014**  
**Effective Date: 5/29/2014**

**A. Construction**

**Diameters (In)**

- |    |                |   |       |
|----|----------------|---|-------|
| 1) | Component 1    | 2 X 1 COND  |       |
|    | a) Conductor   | 20 (19/32) AWG Tinned Copper                      | 0.040 |
|    | b) Insulation  | 0.007" Wall, Nom. Modified Polyphenylene Ether-PE | 0.054 |
|    | (1) Color Code | Alpha Wire Color Code D                           |       |

Cond	Color	Cond	Color	Cond	Color
1	BLACK	2	RED		

- |    |                   |  |                    |
|----|-------------------|--|--------------------|
| 2) | Cable Assembly    | 2 Components Cabled  |                    |
|    | a) Twists:        | 8.0 Twists/foot (min)  |                    |
|    | b) Core Wrap      | Nonwoven Polyester Tape, 25% Overlap, Min.   |                    |
| 3) | Shield:           | Alum/Mylar Tape, 25% Overlap, Min.   |                    |
|    | a) Foil Direction | Foil Facing In   |                    |
|    | b) Drain Wire     | 20 (7/28) AWG Tinned Copper  |                    |
| 4) | Jacket            | 0.015" Wall, Nom., Modified Polyphenylene Ether-PE   | 0.146 (0.153 Max.) |
|    | a) Color(s)       | SLATE  |                    |
|    | b) Ripcord        | 1 End 810 Denier Nylon   |                    |
|    | c) Print          | ALPHA WIRE-* P/N 78142 2C 20 AWG<br>ECOCABLE(R) MINI RU AWM 21460 80C 300V VW-1<br>C(RU) AWM I A/B FT1 80C 300V<br>CE ROHS (SEQ FOOTAGE)<br>* = Factory Code |                    |

**B. Applicable Specifications**

- |    |                   |                                     |                             |
|----|-------------------|-------------------------------------|-----------------------------|
| 1) | UL                | AWM/STYLE 21460                     | 80°C / 300 V <sub>RMS</sub> |
|    |                   | VW-1                                |                             |
| 2) | CSA International | C(RU) AWM I A/B FT1                 | 80°C / 300 V <sub>RMS</sub> |
| 3) | Other             | Halogen-Free                        |                             |
| 4) | CE:               | EU Low Voltage Directive 2006/95/EC |                             |

**C. Environmental Compliance**

- |    |                                  |   |
|----|----------------------------------|---|
| 1) | CE:                              | EU Directive 2011/65/EU(RoHS2):<br>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 <a href="#">RoHS C of C</a> . |
| 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 <a href="#">Alpha's REACH SVHC Declaration</a> .  |

**D. Physical & Mechanical Properties**

- |    |                   |                    |
|----|-------------------|--------------------|
| 1) | Temperature Range | -40 to 80°C        |
| 2) | Bend Radius       | 10X Cable Diameter |
| 3) | Pull Tension      | 28 Lbs, Maximum    |

**E. Electrical Properties**

- |                                 |                          |   |
|---------------------------------|--------------------------|---|
| (For Engineering purposes only) |                          |   |
| 1)                              | Voltage Rating           | 300 V <sub>RMS</sub>                            |
| 2)                              | Capacitance              | 43 pf/ft @1 kHz, Nominal Conductor to Conductor |
| 3)                              | Ground Capacitance       | 77 pf/ft @1 kHz, Nominal                        |
| 4)                              | Characteristic Impedance | 38 Ω  |
| 5)                              | Inductance               | 0.15 μH/ft, Nominal                             |
| 6)                              | Conductor DCR            | 9.4 Ω/1000ft @20°C, Nominal                     |
| 7)                              | OA Shield DCR            | 9.1 Ω/1000ft @20°C, Nominal                     |

**F. Other**

- |    |            |                                     |
|----|------------|-------------------------------------|
| 1) | Packaging  | Flange x Traverse x Barrel (inches) |
|    | a) 1000 FT | 12 x 4.5 x 3.5 Continuous length    |

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**Page 2 of 2 Pages**

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- b) 100 FT                      6.5 x 2 x 1.9 Continuous length  
c) Bulk(Made-to-order)                      *[Spool dimensions may vary slightly]*

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