

**ALPHA WIRE  
CUSTOMER PRODUCT SPECIFICATION**

**Part Number: 80121**  
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**Issue: 1**  
**Issue Date: 3/27/2015**  
**Effective Date: 5/22/2015**

**A. Construction**

**Diameters (In)**

- |                |   |       |
|----------------|---|-------|
| 1) Component 1 | 3 X 1 COND  |       |
| a) Conductor   | 20 (26/34) AWG Tinned Copper                          | 0.035 |
| b) Insulation  | 0.010" Wall, Nom. MPPE                                | 0.055 |
| (1) Print      | ALPHANUMERIC NUMBERS - 1-ONE ALTERNATING AND INVERTED |       |
| (2) Color Code | Alpha Wire Color Code KX                              |       |

Cond	Color	Cond	Color	Cond	Color
1	GREEN/YELLOW	2	BLACK#1	3	BLACK#2

- |                     |   |                |
|---------------------|---|----------------|
| 2) Cable Assembly   | 3 Components Cabled   |                |
| a) Twists:          | 9.6 Twists/foot (min)   |                |
| b) Core Wrap        | Nonwoven Polyester Tape, 25% Overlap, Min.  |                |
| 3) Shield           | Tinned Copper BRAID Shield, 85% Coverage, Min.  |                |
| 4) Jacket           | 0.032" Wall, Nom., Polyurethane, Zero Halogen (ZH)  | 0.215+/- 0.010 |
| a) Color(s)         | SLATE   |                |
| b) Jacket Separator | Tissue Tape, 25% Overlap, Min.  |                |
| c) Print            | ALPHA WIRE-* P/N 80121 3C 20 AWG<br>RU AWM STYLE 21959 90C 600V SUN RES 60C OIL OR<br>CRU AWM I/II A/B 90C 600V FT2 --- IEC EN 60332-1/2<br>CE ROHS (SEQ FOOTAGE)<br>* = Factory Code |                |

**B. Applicable Specifications**

- |                      |  |                              |
|----------------------|--|------------------------------|
| 1) UL                |  |                              |
| a) Component 1       | AWM/STYLE 11231  | 105°C / 600 V <sub>RMS</sub> |
| b) Overall           | AWM/STYLE 21959<br>60C OIL<br>SUN RES  | 90°C / 600 V <sub>RMS</sub>  |
| 2) CSA International | C(RU) AWM I/II A/B<br>FT2  | 90°C / 600 V <sub>RMS</sub>  |
| 3) IEC               |  |                              |
| a) Component 1       | EN 60228 Conductors, Class 6   |                              |
| b) Overall           | EN 60754-1 Acid Gas Generation<br>EN 60754-2 Acid Gas Generation<br>EN 60332-1 Flame Behavior<br>EN 60332-2 Flame Behavior |                              |
| 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   | -50 to 90°C(static), -40 to 80°C (dynamic)            |
| 2) Bend Radius         | 4X Cable Diameter(static), 6X Cable Diameter(dynamic) |
| 3) Pull Tension        | 28 Lbs, Maximum                                       |
| 4) Sunlight Resistance | Yes   |

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- E. Electrical Properties** (For Engineering purposes only)
- 1) Voltage Rating 600 V<sub>RMS</sub>
  - 2) Capacitance 28 pf/ft @1 kHz, Nominal Conductor to Conductor
  - 3) Ground Capacitance 50 pf/ft @1 kHz, Nominal
  - 4) Inductance 0.17  $\mu$ H/ft, Nominal
  - 5) Conductor DCR 11.1  $\Omega$ /1000ft @20°C, Nominal
  - 6) OA Shield DCR 5.1  $\Omega$ /1000ft @20°C, Nominal
- F. Other**
- 1) Packaging Flange x Traverse x Barrel (inches)
    - a) 100 FT 6.5 x 4 x 2.5 Continuous length
    - b) Bulk(Made-to-order)
- [Spool dimensions may vary slightly]*

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