

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

**Part Number: 80145**  
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**Issue: 1**  
**Issue Date: 3/27/2015**  
**Effective Date: 5/22/2015**

**A. Construction**

**Diameters (In)**

- |                |                                                       |       |
|----------------|-------------------------------------------------------|-------|
| 1) Component 1 | 7 X 1 COND                                            |       |
| a) Conductor   | 16 (65/34) AWG Tinned Copper                          | 0.056 |
| b) Insulation  | 0.012" Wall, Nom. MPPE                                | 0.080 |
| (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 | 4    | BLACK#3 | 7    | BLACK#6 |
| 2    | BLACK#1      | 5    | BLACK#4 |      |         |
| 3    | BLACK#2      | 6    | BLACK#5 |      |         |
- 
- |                     |                                                                                                                                                                                       |                 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 2) Cable Assembly   | 7 Components Cabled                                                                                                                                                                   |                 |
| a) Twists:          | 4.4 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)                                                                                                                                    | 0.338 +/- 0.013 |
| a) Color(s)         | SLATE                                                                                                                                                                                 |                 |
| b) Jacket Separator | Tissue Tape, 25% Overlap, Min.                                                                                                                                                        |                 |
| c) Print            | ALPHA WIRE-* P/N 80145 7C 16 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        | 148 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 32 pf/ft @1 kHz, Nominal Conductor to Conductor
  - 3) Ground Capacitance 58 pf/ft @1 kHz, Nominal
  - 4) Inductance 0.16  $\mu$ H/ft, Nominal
  - 5) Conductor DCR 4.5  $\Omega$ /1000ft @20°C, Nominal
  - 6) OA Shield DCR 3.5  $\Omega$ /1000ft @20°C, Nominal
- F. Other**
- 1) Packaging Flange x Traverse x Barrel (inches)
    - a) 100 FT 12 x 10 x 5 Continuous length
    - b) Bulk(Made-to-order)
- [Spool dimensions may vary slightly]*

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