

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

**Part Number: 45102**  
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**Issue: 15**  
**Issue Date: 1/19/2015**  
**Effective Date: 1/31/2015**

**A. Construction**

**Diameters (In)**

- |    |                |                             |       |
|----|----------------|-----------------------------|-------|
| 1) | Component 1    | 2 X 1 COND                  |       |
|    | a) Conductor   | 22 (7/30) AWG Tinned Copper | 0.030 |
|    | b) Insulation  | 0.016" Wall, Nom. TPE       | 0.062 |
|    | (1) Color Code | Alpha Wire Color Code E     |       |

Cond	Color	Cond	Color	Cond	Color
1	BLACK	2	BROWN		

- |    |                |  |                    |
|----|----------------|--|--------------------|
| 2) | Cable Assembly | 2 Components Cabled  |                    |
|    | a) Twists:     | 8.0 Twists/foot (min)  |                    |
|    | b) Core Wrap   | Nonwoven Polyester Tape, 25% Overlap, Min.   |                    |
| 3) | Shield:        | A/P/A Tape, 25% Overlap, Min.  |                    |
|    | a) Drain Wire  | 22 (7/30) AWG Tinned Copper  |                    |
|    | b) Braid       | Tinned Copper, 70% Coverage, Min.  |                    |
| 4) | Jacket         | 0.045" Wall, Nom., TPE   | 0.246 (0.256 Max.) |
|    | a) Color(s)    | Slate, Black, Yellow, Orange, Blue, Green, Red, Sand Beige, White  |                    |
|    | b) Ripcord     | 1 End 810 Denier Nylon   |                    |
|    | c) Print       | ALPHA WIRE-* P/N 45102 2C 22 AWG<br>XTRAGUARD(R) 4 (UL) TYPE PLTC 105C SUN RES OR AWM<br>20237/21918 125C 300 V OR<br>CRU AWM I/II A/B 125C 300 V FT1<br>P-07-KA140023-MSHA CE ROHS<br>(SEQ FOOTAGE)<br>* = Factory Code |                    |

**B. Applicable Specifications**

- |    |                   |   |                              |
|----|-------------------|---|------------------------------|
| 1) | UL                | AWM/STYLE 20237                             | 125°C / 300 V <sub>RMS</sub> |
|    |                   | PLTC  | 105°C                        |
|    |                   | AWM/STYLE 21918                             | 125°C / 300 V <sub>RMS</sub> |
|    |                   | SUN RES                                     |                              |
| 2) | CSA International | C(RU) AWM I/II A/B FT1                      | 125°C / 300 V <sub>RMS</sub> |
|    |                   | SUN RES (Black only)                        |                              |
| 3) | Other             | PENNSYLVANIA BUREAU OF MINE SAFETY APPROVED |                              |
| 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) | California Proposition 65: | The outer surface materials used in the manufacture of this part meet the requirements of California Proposition 65.   |

**D. Physical & Mechanical Properties**

- |    |                     |                    |
|----|---------------------|--------------------|
| 1) | Temperature Range   | -50 to 125°C       |
| 2) | Bend Radius         | 10X Cable Diameter |
| 3) | Pull Tension        | 19.1 Lbs, Maximum  |
| 4) | Sunlight Resistance | Yes                |

**E. Electrical Properties**

- |                                 |                          |   |
|---------------------------------|--------------------------|---|
| (For Engineering purposes only) |                          |   |
| 1)                              | Voltage Rating           | 300 V <sub>RMS</sub>                              |
| 2)                              | Capacitance              | 21.8 pf/ft @1 kHz, Nominal Conductor to Conductor |
| 3)                              | Ground Capacitance       | 39 pf/ft @1 kHz, Nominal                          |
| 4)                              | Characteristic Impedance | 74 Ω  |
| 5)                              | Inductance               | 0.2 μH/ft, Nominal                                |
| 6)                              | Conductor DCR            | 16.3 Ω/1000ft @20°C, Nominal                      |

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7) OA Shield DCR                      4.3  $\Omega$ /1000ft @20°C, Nominal

**F. Other**

- 1) Packaging                              Flange x Traverse x Barrel (inches)
  - a) Bulk(Made-to-order)
- 2) Notes:
  - a) Print legend will contain CSA SUN RES on black cables only.

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