

# ALPHA WIRE

## CUSTOMER PRODUCT SPECIFICATION

**Part Number: 45462**  
**Page 1 of 2 Pages**

**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   | 20 (7/28) AWG Tinned Copper | 0.038 |
| b) Insulation  | 0.016" Wall, Nom. TPE       | 0.070 |
| (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         | 0.045" Wall, Nom., TPE  | 0.238 (0.248 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 45462 2C 20 AWG                                  |                    |
|                   | XTRAGUARD(R) 4 (UL) TYPE PLTC 105C SUN RES OR AWM                 |                    |
|                   | 20237/21918 125C 300 V OR   |                    |
|                   | CRU AWM I/II A/B 125C 300 V FT1                                   |                    |
|                   | P-07-KA140023-MSHA CE ROHS  |                    |
|                   | (SEQ FOOTAGE)   |                    |
|                   | * = 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        | 26 Lbs, Maximum    |
| 4) Sunlight Resistance | Yes                |

### E. Electrical Properties

- |                             |   |
|-----------------------------|---|
|                             | (For Engineering purposes only)                   |
| 1) Voltage Rating           | 300 V <sub>RMS</sub>                              |
| 2) Capacitance              | 24.7 pf/ft @1 kHz, Nominal Conductor to Conductor |
| 3) Ground Capacitance       | 44 pf/ft @1 kHz, Nominal                          |
| 4) Characteristic Impedance | 65 Ω  |
| 5) Inductance               | 0.19 μH/ft, Nominal                               |
| 6) Conductor DCR            | 10.2 Ω/1000ft @20°C, Nominal                      |

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**Page 2 of 2 Pages**

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7) OA Shield DCR 8.2  $\Omega$ /1000ft @20°C, Nominal

**F. Other**

- 1) Packaging Flange x Traverse x Barrel (inches)
- a) 1000 FT 12 x 12 x 3.5 Continuous length
  - b) 500 FT 12 x 6 x 3.5 Continuous length
  - c) Bulk(Made-to-order)

*[Spool dimensions may vary slightly]*

2) Notes:

- a) Print legend will contain CSA SUN RES on black cables only.

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