

# ALPHA WIRE COMPANY

## CUSTOMER PRODUCT SPECIFICATION

**Part Number: 5102C**  
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**Issue: 11**  
**Issue Date: 1/29/2008**  
**Effective Date: 3/1/2008**

### A. Construction

### Diameters

- |                |                                   |       |
|----------------|-----------------------------------|-------|
| 1) Component 1 | 2 X 1 COND                        |       |
| a) Conductor   | 22 (7/30) AWG TC                  |       |
| b) Insulation  | 0.010" Wall, Nom. PVC, Semi Rigid | 0.050 |
| (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:        | 12.0 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 TC   |                    |
| b) Braid          | TC, 70% Coverage, Min.   |                    |
| 4) Jacket         | 0.032" Wall, Nom., PVC   | 0.196 (0.206 Max.) |
| a) Color(s)       | Gray, Black, Yellow, Orange, Blue, Green, Red, Sand Beige, White |                    |
| b) Ripcord        | 1 End 810 Denier Nylon   |                    |
| c) Print          | ALPHA WIRE-* P/N 5102C 2C 22 AWG                                 |                    |
|                   | XTRAGUARD 1 XTREME PERFORMANCE FOR XTREME                        |                    |
|                   | ENVIRONMENTS - SHIELDED 105C (UL) TYPE CM OR AWM                 |                    |
|                   | 2464 VW-1 --- LLXXXXXX CSA 105C TYPE CMG FT4                     |                    |
|                   | CE ROHS <SEQ FOOTAGE>  |                    |
|                   | * = Factory Code   |                    |

*[Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.]*

### B. Industry Approvals

- |                                   |  |              |
|-----------------------------------|--|--------------|
| 1) UL                             |  |              |
| a) Component 1                    | AWM/STYLE10002   | 105°C / 300V |
| b) Overall                        | AWM/STYLE2464  | 80°C / 300V  |
|                                   | CM   | 105°C        |
|                                   | VW-1   |              |
| 2) CSA International              | CMG  | 105°C        |
|                                   | FT4  |              |
| 3) EU Directive 2002/95/EC(RoHS): | All materials used in the manufacture of this part are in compliance with EU Directive 2002/95/EU regarding the restriction of use of certain hazardous substances in electrical and electronic equipment. Consult Alpha Wire's web site for compliance Date of Manufacture. |              |
| 4) California Proposition 65:     | The outer surface materials used in the manufacture of this part meet the requirements of California Proposition 65.   |              |
| 5) CE:                            | LVD 73/23/EEC Amendment 93/68/EEC  |              |

### C. Physical & Mechanical Properties

- |                        |                    |
|------------------------|--------------------|
| 1) Temperature Range   | -20 to 105°C       |
| 2) Bend Radius         | 10X Cable Diameter |
| 3) Pull Tension        | 19.1 Lbs, Maximum  |
| 4) Sunlight Resistance | Yes                |

### D. Electrical Properties

- |                             |   |
|-----------------------------|---|
|                             | (For Engineering purposes only)                 |
| 1) Voltage Rating           | 300 V <sub>RMS</sub>                            |
| 2) Capacitance              | 39 pf/ft @1 kHz, Nominal Conductor to Conductor |
| 3) Ground Capacitance       | 70 pf/ft @1 kHz, Nominal                        |
| 4) Characteristic Impedance | 48 Ω  |
| 5) Inductance               | 0.18 μH/ft, Nominal                             |
| 6) Conductor DCR            | 16.4 Ω/1000ft @20°C, Nominal                    |
| 7) OA Shield DCR            | 4.6 Ω/1000ft @20°C, Nominal                     |

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**E. Other**

- 1) Packaging
  - a) 1000 FT
  - b) 500 FT
  - c) 100 FT
  - d) Bulk(Made-to-order)

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