

## Customer Specification

### PART NO. 5100/25C

### Construction

|                   |        |      |              |      |             | Diameters (In)   |                    |
|-------------------|--------|------|--------------|------|-------------|--|--------------------|
| 1) Component 1    |        |      |              |      |             | 25 X 1 COND  |                    |
| a) Conductor      |        |      |              |      |             | 24 (7/32) AWG Tinned Copper  | 0.024              |
| b) Insulation     |        |      |              |      |             | 0.010" Wall, Nom. PVC, Semi Rigid  | 0.044              |
| (1) Color Code    |        |      |              |      |             | Alpha Wire Color Code E  |                    |
| Cond              | Color  | Cond | Color        | Cond | Color       |  |                    |
| 1                 | BLACK  | 10   | WHITE        | 19   | WHITE/SLATE |  |                    |
| 2                 | BROWN  | 11   | WHITE/BLACK  | 20   | WHITE/BLACK |  |                    |
| 3                 | RED    | 12   | WHITE/BROWN  | 21   | WHITE/BLACK |  |                    |
| 4                 | ORANGE | 13   | WHITE/RED    | 22   | WHITE/BLACK |  |                    |
| 5                 | YELLOW | 14   | WHITE/ORANGE | 23   | WHITE/BLACK |  |                    |
| 6                 | GREEN  | 15   | WHITE/YELLOW | 24   | WHITE/BLACK |  |                    |
| 7                 | BLUE   | 16   | WHITE/GREEN  | 25   | WHITE/BLACK |  |                    |
| 8                 | VIOLET | 17   | WHITE/BLUE   |      |             |  |                    |
| 9                 | SLATE  | 18   | WHITE/VIOLET |      |             |  |                    |
| 2) Cable Assembly |        |      |              |      |             | 25 Components Cabled   |                    |
| a) Twists:        |        |      |              |      |             | 3.2 Twists/foot (min)  |                    |
| b) Orientation:   |        |      |              |      |             | Components to be arranged from INSIDE LAYER to OUTSIDE LAYER   |                    |
| c) Core Wrap      |        |      |              |      |             | Nonwoven Polyester Tape, 20% Overlap, Min.   |                    |
| 3) Shield:        |        |      |              |      |             | Alum/Mylar Tape, 20% Overlap, Min.   |                    |
| a) Foil Direction |        |      |              |      |             | Foil Facing In   |                    |
| b) Drain Wire     |        |      |              |      |             | 24 (7/32) AWG Tinned Copper  |                    |
| 4) Jacket         |        |      |              |      |             | 0.032" Wall, Nom.,PVC  | 0.336 (0.355 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 5100/25C 25C 24 AWG<br>XTRAGUARD(R) 1 SHIELDED (UL) TYPE CM 105C SUN RES<br>OR AWM 2464 80C 300V OR AWM 2517 105C 300V<br>VW-1 --- LLXXXXXX CSA 105C TYPE CMG FT4<br>CE ROHS OIL RESISTANT (SEQ FOOTAGE)<br>* = Factory Code<br>[Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.] |                    |

## Applicable Specifications

|                      |                                     |                              |
|----------------------|-------------------------------------|------------------------------|
| 1) UL                |                                     |                              |
| a) Component 1       | AWM/STYLE 10002                     | 105°C / 300 V <sub>RMS</sub> |
| b) Overall           | AWM/STYLE 2517                      | 105°C / 300 V <sub>RMS</sub> |
|                      | SUN RES                             |                              |
|                      | AWM/STYLE 2464                      | 80°C / 300 V <sub>RMS</sub>  |
|                      | CM                                  | 105°C                        |
|                      | VW-1                                |                              |
| 2) CSA International | CMG                                 | 105°C                        |
|                      | FT4                                 |                              |
| 3) IEC               | EN 60332-1 Flame Behavior           |                              |
|                      | EN 60332-2 Flame Behavior           |                              |
| 4) Other             | Oil Resistant                       |                              |
| 5) CE:               | EU Low Voltage Directive 2014/35/EU |                              |

## Environmental

|  |   |
|--|---|
| 1) CE: EU Directive 2011/65/EU(RoHS2), EU Directive 2015/863/EU (RoHS3): |   |
|  | This product complies with European Directive 2011/65/EU (RoHS Directive) of the European Parliament and of the Council of 8 June 2011 and the amending Directive 2015/863/EU of 4 June 2015 . No Exemptions are required for RoHS Compliance on this item. |
| 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.  |
| 3) California Proposition 65:  |   |
|  | This product may contain substances known to the State of California to cause Cancer or Reproductive Harm, but is exempt from labeling based on the Consent Judgement. See the Alpha Wire website for more information.                                     |

## Properties

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| <b>Physical &amp; Mechanical Properties</b> |   |
|---|---|
| 1) Temperature Range                        | -35 to 105°C                                    |
| 2) Bend Radius                              | 10X Cable Diameter                              |
| 3) Pull Tension                             | 91 Lbs, Maximum                                 |
| 4) Sunlight Resistance                      | Yes   |
| <b>Electrical Properties</b>                |   |
| (For Engineering purposes only)             |   |
| 1) Voltage Rating                           | 300 V <sub>RMS</sub>                            |
| 2) Capacitance                              | 31 pF/ft @1 kHz, Nominal Conductor to Conductor |
| 3) Ground Capacitance                       | 56 pF/ft @1 kHz, Nominal                        |
| 4) Inductance                               | 0.19 μH/ft, Nominal                             |
| 5) Conductor DCR                            | 26 Ω/1000ft @20°C, Nominal                      |
| 6) OA Shield DCR                            | 13.4 Ω/1000ft @20°C, Nominal                    |

## Other

| <b>Packaging</b>                    | Flange x Traverse x Barrel (inches)         |
|-------------------------------------|---|
| a) 1000 FT                          | 18 x 14.25 x 8 Continuous length            |
| b) 500 FT                           | 13.5 x 10 x 4 Continuous length             |
| c) 100 FT                           | 12 x 5.94 x 5 Continuous length             |
| d) Bulk(Made-to-order)              |   |
|                                     | <i>[Spool dimensions may vary slightly]</i> |
| <b>Notes:</b>                       |   |
| a) Oil Resistant Jacket (7d @ 60C). |   |

[www.alphawire.com](http://www.alphawire.com)

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# EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 5100/25C

5100/25C, RoHS-Compliant Commencing With 01/08/2005 Production

Note: all colors and put-ups

This document certifies that the Alpha part number cited above is manufactured in accordance with Directive 2011/65/EU of the European Union (RoHS 2), with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. This document also certifies compliance with the list of restricted substances to 10 items (commonly known as RoHS 3). The reader is referred to these Directives for the specific definitions and requirements. **Compliance on this item.** Additionally, Alpha certifies that the listed part number is in compliance with China RoHS "Marking for Control" requirements.

## Substance

Lead  
Mercury  
Cadmium  
Hexavalent Chromium  
Polybrominated Biphenyls (PBB)  
Polybrominated Diphenyl Ethers (PBDE),  
Including Deca-BDE  
Bis(2-ethylhexyl) phthalate (DEHP)  
Butyl benzyl phthalate (BBP)  
Dibutyl phthalate (DBP)  
Diisobutyl phthalate (DIBP)

## Maximum Control Value

0.1% by weight (1000 ppm)  
0.1% by weight (1000 ppm)  
0.01% by weight (100 ppm)  
0.1% by weight (1000 ppm)  
0.1% by weight (1000 ppm)  
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0.1% by weight (1000 ppm)

The information provided in this document and disclosure is correct to the best of Alpha Wire's knowledge, information and belief at the date of issuance. This document is intended to provide guidance for the safe handling, storage, and any other operation of the product itself or the one that it will become part of. The intent of this document is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulatory requirements. Alpha Wire is an Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering & QA 01/04/2025

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