

## Customer Specification

**PART NO. SF61112CY**

## Construction

|                     |                                                                                                                                                                                                                                                                                                                                                                                            |      |         |                |       |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---------|----------------|-------|
|                     |                                                                                                                                                                                                                                                                                                                                                                                            |      |         | Diameters (In) |       |
| 1) Component 1      | 4 X 1 COND                                                                                                                                                                                                                                                                                                                                                                                 |      |         |                |       |
| a) Conductor        | 12 (65/30) AWG Tinned Copper                                                                                                                                                                                                                                                                                                                                                               |      |         | 0.093          |       |
| b) Insulation       | 0.016" Wall, Nom. PVC/ 0.005" Wall NYLON                                                                                                                                                                                                                                                                                                                                                   |      |         | 0.135          |       |
| (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                                                                                                                                                                                                                                                                                                                                                                               | 3    | BLACK#2 |                |       |
| 2                   | BLACK#1                                                                                                                                                                                                                                                                                                                                                                                    | 4    | BLACK#3 |                |       |
| 2) Cable Assembly   | 4 Components Cabled                                                                                                                                                                                                                                                                                                                                                                        |      |         |                |       |
| a) Twists:          | 3.7 Twists/foot (min)                                                                                                                                                                                                                                                                                                                                                                      |      |         |                |       |
| b) Orientation:     | Components to be arranged from INSIDE LAYER to OUTSIDE LAYER                                                                                                                                                                                                                                                                                                                               |      |         |                |       |
| c) Core Wrap        | REMAI Tape, 25% Overlap, Min.                                                                                                                                                                                                                                                                                                                                                              |      |         |                |       |
| 3) Shield:          | A/P/A Tape, 25% Overlap, Min.                                                                                                                                                                                                                                                                                                                                                              |      |         |                |       |
| a) Drain Wire       | 20 (19/32) AWG Tinned Copper                                                                                                                                                                                                                                                                                                                                                               |      |         |                |       |
| b) Braid            | Tinned Copper,85% Coverage, Min.                                                                                                                                                                                                                                                                                                                                                           |      |         |                |       |
| 4) Jacket           | 0.065" Wall, Nom.,TPE                                                                                                                                                                                                                                                                                                                                                                      |      |         | 0.508+/- 0.021 |       |
| a) Color(s)         | ORANGE                                                                                                                                                                                                                                                                                                                                                                                     |      |         |                |       |
| b) Jacket Separator | Tissue Tape, 25% Overlap, Min.                                                                                                                                                                                                                                                                                                                                                             |      |         |                |       |
| c) Print            | ALPHA WIRE-* P/N SF61112CY 4C 12 AWG<br>THHN E324185 (UL) WTTC 90C 1000 VOLT OR (UL)<br>TC-ER 90C 600V OIL RES I/II SUN RES OR C(UL) CIC<br>CONTROL/TC 90C PVC/NYLON INS SHIELDED FT4 12 AWG<br>--- LLXXXXXX CSA AWM I/II A/B 90C 600V FT4<br>CE ROHS (DATE CODE) (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       | THHN                                | 90°C / 600 V <sub>RMS</sub>  |
| b) Overall           | TC                                  | 90°C / 600 V <sub>RMS</sub>  |
|                      | EXPOSED RUN                         |                              |
|                      | OIL RES I/II                        |                              |
|                      | SUN RES                             |                              |
|                      | WTTC                                | 90°C / 1000 V <sub>RMS</sub> |
| 2) CSA International | AWM I/II A/B                        | 90°C / 600 V <sub>RMS</sub>  |
|                      | FT4                                 |                              |
|                      | C(UL) CIC CONTROL                   | 90°C / 600 V <sub>RMS</sub>  |
|                      | C(UL) TC                            | 90°C / 600 V <sub>RMS</sub>  |
| 3) Other             | Conductors NEMA Class K             |                              |
|                      | Conductors IEC Class 5 on AWG size  |                              |
| 4) CE:               | EU Low Voltage Directive 2014/35/EC |                              |
|                      |                                     |                              |

## Environmental

|                                     |                                                                                                                                                                                                                                                                                  |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1) EU Directive 2011/65/EU(RoHS2):  |                                                                                                                                                                                                                                                                                  |
|                                     | All materials used in the manufacture of this part are in compliance with European Directive 2011/65/EU regarding the restriction of use of certain hazardous substances in electrical and electronic equipment. 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> .                             |
| 3) California Proposition 65:       | The outer surface materials used in the manufacture of this part meet the requirements of California Proposition 65.                                                                                                                                                             |
|                                     |                                                                                                                                                                                                                                                                                  |

## Properties

| Physical & Mechanical Properties |                                                         |
|----------------------------------|---------------------------------------------------------|
| 1) Temperature Range             | -30 to 90°C(static), -5 to 90°C (dynamic)               |
| 2) Bend Radius                   | 10X Cable Diameter(static), 10X Cable Diameter(dynamic) |
| 3) Pull Tension                  | 223 Lbs, Maximum                                        |
| 4) Sunlight Resistance           | Yes                                                     |
| <b>Electrical Properties</b>     | (For Engineering purposes only)                         |
| 1) Voltage Rating                | 600 V <sub>RMS</sub>                                    |
| 2) Capacitance                   | 60 pF/ft @1 kHz, Nominal Conductor to Conductor         |
| 3) Ground Capacitance            | 108 pF/ft @1 kHz, Nominal                               |
| 4) Inductance                    | 0.16 µH/ft, Nominal                                     |
| 5) Conductor DCR                 | 1.78 Ω/1000ft @20°C, Nominal                            |
| 6) OA Shield DCR                 | 1.83 Ω/1000ft @20°C, Nominal                            |
|                                  |                                                         |

Other

| Packaging                                                                                                | Flange x Traverse x Barrel (inches)         |
|----------------------------------------------------------------------------------------------------------|---------------------------------------------|
| a) 1000 FT                                                                                               | 24 x 14 x 12 Continuous length              |
| b) 500 FT                                                                                                | 20 x 11 x 8 Continuous length               |
| c) 100 FT                                                                                                | 16 x 11 x 8 Continuous length               |
|                                                                                                          | <i>[Spool dimensions may vary slightly]</i> |
| <b>Notes:</b>                                                                                            |                                             |
| a) Suitable for use in Industrial Machinery per the requirements of NFPA-79                              |                                             |
| b) Suitable for intermittent or light duty flexing where cycle count will be less than 1,000,000 cycles. |                                             |
|                                                                                                          |                                             |

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# EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: SF61112CY

SF61112CY, RoHS-Compliant Commencing With 2/9/2009 Production

Note: all colors and put-ups

This document certifies that the Alpha part number cited above, including all packaging materials, is manufactured in accordance with Directive 2011/65/EU of the European Parliament, better known as the RoHS Directive (commonly known as RoHS 2), with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. This certification extends to amending Directive 2015/863/EU which expanded the list of restricted substances to 10 items (commonly known as RoHS 3). This product also complies with UK - RoHS. The reader is referred to these Directives for the specific definitions and extents of the Directives. **No Exemptions are required for RoHS Compliance on this item.** Additionally, Alpha certifies that the listed part number is in compliance with China RoHS "Marking for Control of Pollution by Electronic Information Products" standard SJ/T 11364-2014. This product is also in compliance with China RoHS 2 per GB/T 26572-2011.

## 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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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 its release. The information provided is designed only as a general guide 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 not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering 5/7/2024

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