



# Customer Specification

## PART NO. SF61112CY

### Construction

|                     |              |                                                                                                                                                                                                                                                                                                                                                                                   |         |                |       |
|---------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------|-------|
|                     |              |                                                                                                                                                                                                                                                                                                                                                                                   |         | Diameters (In) |       |
| 1) Component 1      |              | 4 X 1 COND                                                                                                                                                                                                                                                                                                                                                                        |         |                |       |
| a) Conductor        |              | 12 (65/30) AWG TC                                                                                                                                                                                                                                                                                                                                                                 |         | 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) Core Wrap        |              | REMAI Tape, 25% Overlap, Min.                                                                                                                                                                                                                                                                                                                                                     |         |                |       |
| 3) Shield:          |              | A/P/A Tape, 25% Overlap, Min.                                                                                                                                                                                                                                                                                                                                                     |         |                |       |
| a) Drain Wire       |              | 20 (19/32) AWG TC                                                                                                                                                                                                                                                                                                                                                                 |         |                |       |
| b) Braid            |              | TC,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 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) CE:               | EU Low Voltage Directive 2006/95/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 RoHS C of C. |
| 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 Alpha's REACH SVHC Declaration.                             |
| 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             | -25 to 90°C(static), -5 to 90°C (dynamic)       |
| 2) Bend Radius                   | 10X Cable Diameter                              |
| 3) Pull Tension                  | 223 Lbs, Maximum                                |
| 4) Sunlight Resistance           | Yes                                             |
| Electrical Properties            |                                                 |
| (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 |                                             |

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## EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: SF61112CY

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

This document certifies that the Alpha part number cited above is manufactured in accordance with Directive 2011/65/EU of the European Parliament, better known as the RoHS Directive, with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. The reader is referred to this Directive for the specific definitions and extents of this Directive. **No Exemptions are required for RoHS Compliance on this item.** It should be noted that this product does not fall within the scope of Directive 2011/65/EU, but this Certificate is offered for cases where this product will be used within EEE that does fit within the Directive's scope. 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 11364-2006.

### Substance

### Maximum Control Value

|                                                               |                            |
|---------------------------------------------------------------|----------------------------|
| Lead                                                          | 0.1% by weight (1000 ppm)  |
| Mercury                                                       | 0.1% by weight (1000 ppm)  |
| Cadmium                                                       | 0.01% by weight (100 ppm)  |
| Hexavalent Chromium                                           | 0.1% by weight (1000 ppm ) |
| Polybrominated Biphenyls (PBB)                                | 0.1% by weight (1000 ppm)  |
| Polybrominated Diphenyl Ethers (PBDE) ,<br>Including Deca-BDE | 0.1% by weight (1000 ppm)  |

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Authorized Signatory for the Alpha Wire Company:

A handwritten signature in black ink, appearing to read 'Dave Watson'.

Dave Watson, Director of Engineering & QA

2/27/2013