

# Customer Specification PART NO. 87104

### Construction

|                   |              |   |         | Diameters (In) |                    |  |
|-------------------|--------------|---|---------|----------------|--------------------|--|
| 1) Component 1    |              | 4 X 1 COND  |         |                |                    |  |
| a) Conductor      |              | 22 (19/34) AWG BC   |         |                |                    |  |
| b) Insulation     |              | 0.016" Wall, Nom. Hytrel  |         | 0.064          |                    |  |
| (1) Print         |              | ALPHA NUMERIC NUMBERS - 1-ONE ALTERNATING AND INVERTED  |         |                |                    |  |
| (2) Color Code    |              | Alpha Wire Company 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:        |              | 3.0 Twists/foot (min)   |         |                |                    |  |
| b) Core Wrap      |              | Teflon(skived) Tape, 25% Overlap, Min.  |         |                |                    |  |
| 3) Jacket         |              | 0.050" Wall, Nom.,Polyurethane (PU)   |         | 0.261 (0.274 M | 0.261 (0.274 Max.) |  |
| a) Color(s)       |              | BLACK   |         |                |                    |  |
| b) Print          |              | ALPHA WIRE-* P/N 87104  XTRAGUARD FLEXIBLE TORSION CABLE XTREME  PERFORMANCE FOR XTREME ENVIRONMENTS - RU AWM 20234 LLXXXXXX CSA AWM IA/B IIA/B 80C 600VOLTS FT1  CE ROHS * = Factory Code  [Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.] |         |                |                    |  |

**Applicable Specifications** 

| Application of commentations |                                   |                             |  |  |
|------------------------------|-----------------------------------|-----------------------------|--|--|
| 1) UL                        |                                   |                             |  |  |
| a) Component 1               | AWM/STYLE 10162                   | 90°C / 600 V <sub>RMS</sub> |  |  |
| b) Overall                   | AWM/STYLE 20234                   | 80°C / 600 V <sub>RMS</sub> |  |  |
|                              | VW-1                              |                             |  |  |
| 2) CSA International         | AWM I/II A/B                      | 80°C / 600 V <sub>RMS</sub> |  |  |
|                              | FT1                               |                             |  |  |
| 3) CE:                       | LVD 73/23/EEC Amendment 93/68/EEC |                             |  |  |

## Environmental

| 1) 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. |  |  |
| 2) 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 80°C(static), -10 to 80°C (dynamic)              |  |  |  |
| 2) Bend Radius                  | 10X Cable Diameter(static), 15X Cable Diameter(dynamic) |  |  |  |
| 3) Pull Tension                 | 23.7 Lbs, Maximum                                       |  |  |  |
| Electrical Properties           | (For Engineering purposes only)                         |  |  |  |
| 1) Voltage Rating               | 600 V <sub>RMS</sub>                                    |  |  |  |
| 2) Capacitance                  | 23.3 pf/ft @1 kHz, Nominal Conductor to Conductor       |  |  |  |
| 3) Inductance                   | 0.2 μH/ft, Nominal                                      |  |  |  |
| 4) Conductor DCR                | 14 /1000ft @20°C, Nominal                               |  |  |  |

## Other

| 1) Packaging           |  |  |
|------------------------|--|--|
| a) Bulk(Made-to-order) |  |  |

www.alphawire.com

Alpha Wire | 711 Lidgerwood Avenue, Elizabeth, NJ 07207 Tel: 1-800-52 ALPHA (25742)

Although Alpha Wire ("Alpha") makes every reasonable effort to ensure there accuracy at the time of publication, information and specifications described herein are subject to errors or omissions and to changes without notice, and the listing of such information and specifications does not ensure product availability.

Alpha provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Alpha be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary) whatsoever, even if Alpha had been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.



# RoHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number:87104

87104, RoHS-Compliant Commencing With11/1/2004Production

This document certifies that the Alpha part numbers cited above are manufactured in accordance with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003, better known as the RoHS Directives, 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 these Directives for the specific definitions and extents of these Directives. **No Exemptions are required for RoHS Compliance on this item.** 

| Substance  | <b>Maximum Control Value</b> |
|--|------------------------------|
| Lead   | 0.1% by weight (1000 ppm)    |
| Mercury  | 0.1% by weight (1000 ppm)    |
| Cadmium  | 0.1% by weight (100 ppm)     |
| Hexavalent Chromium  | 0.1% by weight (1000 ppm)    |
| Polybrominated Biphenyls (PBB) Polybrominated Diphenyl Ethers (PBDE) | 0.1% by weight (1000 ppm)    |
| Including Deca-BDE   | 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 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 Company:

Dave Watson, Director of Engineering &QA

1/23/2011