



Alpha Wire | 711 Lidgerwood Avenue, Elizabeth, NJ 07207  
Tel: 1-800-52 ALPHA (25742), Web: [www.alphawire.com](http://www.alphawire.com)

# Customer Specification

## PART NO. V16116

Construction

|                       |             |                                                                                                                                                                                                                                                                                                                                         |                       | Diameters (In) |       |
|-----------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|-------|
| 1) Component 1        |             | 4 X 1 COND                                                                                                                                                                                                                                                                                                                              |                       |                |       |
| a) Conductor          |             | 16 (26/30) AWG TC                                                                                                                                                                                                                                                                                                                       |                       | 0.059          |       |
| b) Insulation         |             | 0.047" Wall, Nom. XLPE                                                                                                                                                                                                                                                                                                                  |                       | 0.156          |       |
| (1) Separator         |             | Paper Tape, 10% Overlap, Min.                                                                                                                                                                                                                                                                                                           |                       |                |       |
| (2) Color(s)          |             |                                                                                                                                                                                                                                                                                                                                         |                       |                |       |
| Cond                  | Color       | Cond                                                                                                                                                                                                                                                                                                                                    | Color                 | Cond           | Color |
| 1                     | BLACK#1     | 3                                                                                                                                                                                                                                                                                                                                       | BLACK#3               |                |       |
| 2                     | BLACK#2     | 4                                                                                                                                                                                                                                                                                                                                       | GREEN OR GREEN/YELLOW |                |       |
| 2) Component 2        |             | 1 X 1 PAIR                                                                                                                                                                                                                                                                                                                              |                       |                |       |
| a) Conductor          |             | 14 (41/30) AWG TC                                                                                                                                                                                                                                                                                                                       |                       | 0.074          |       |
| b) Insulation         |             | 0.032" Wall, Nom. XLPE                                                                                                                                                                                                                                                                                                                  |                       | 0.142          |       |
| (1) Separator         |             | Paper Tape, 10% Overlap, Min.                                                                                                                                                                                                                                                                                                           |                       |                |       |
| (2) Color(s)          |             |                                                                                                                                                                                                                                                                                                                                         |                       |                |       |
| Pair                  | Color       | Pair                                                                                                                                                                                                                                                                                                                                    | Color                 | Pair           | Color |
| 1                     | BLACK-WHITE |                                                                                                                                                                                                                                                                                                                                         |                       |                |       |
| c) Pair               |             | 2/Cond Cabled Together                                                                                                                                                                                                                                                                                                                  |                       |                |       |
| (1) Twists:           |             | 2.8 Twists/foot (min)                                                                                                                                                                                                                                                                                                                   |                       |                |       |
| Individually Applied: |             |                                                                                                                                                                                                                                                                                                                                         |                       |                |       |
| d) Shield:            |             | Alum/Mylar Tape, 25% Overlap, Min.                                                                                                                                                                                                                                                                                                      |                       |                |       |
| (1) Foil Direction    |             | Foil Facing In                                                                                                                                                                                                                                                                                                                          |                       |                |       |
| (2) Drain Wire        |             | 14 (41/30) AWG TC                                                                                                                                                                                                                                                                                                                       |                       |                |       |
| 3) Cable Assembly     |             | 5 Components Cabled                                                                                                                                                                                                                                                                                                                     |                       |                |       |
| a) Twists:            |             | 1.7 Twists/foot (min)                                                                                                                                                                                                                                                                                                                   |                       |                |       |
| 4) Shield:            |             | A/P/A Tape, 25% Overlap, Min.                                                                                                                                                                                                                                                                                                           |                       |                |       |
| a) Drain Wire         |             | 16 (26/30) AWG TC                                                                                                                                                                                                                                                                                                                       |                       |                |       |
| b) Braid              |             | TC,85% Coverage, Min.                                                                                                                                                                                                                                                                                                                   |                       |                |       |
| 5) Jacket             |             | 0.065" Wall, Nom.,PVC                                                                                                                                                                                                                                                                                                                   |                       | 0.717+/- 0.026 |       |
| a) Color(s)           |             | BLACK                                                                                                                                                                                                                                                                                                                                   |                       |                |       |
| b) Jacket Separator   |             | Tissue Tape, 25% Overlap, Min.                                                                                                                                                                                                                                                                                                          |                       |                |       |
| c) Print              |             | ALPHA WIRE- E64067-L P/N V16116 4/C 16 AWG 1PR 14<br>AWG XHHW-2 SERIES V VFD CABLE W/ BRAKE PAIR<br>600V TYPE TC-ER (UL) XLPE/PVC 90C DRY/WET SUN RES<br>DIR BUR 4/C 16 AWG 1PR 14 AWG--- LLXXXXXX CSA AWM<br>I/II A/B 1000V 90C FT4 --- CE ROHS<br>[Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.] |                       |                |       |

## Applicable Specifications

|                      |                                   |                              |
|----------------------|-----------------------------------|------------------------------|
| 1) UL                |                                   |                              |
| a) Component 1       | RHW-2Wet/Dry                      | 90°C / 600 V <sub>RMS</sub>  |
|                      | XHHW-2Wet/Dry                     | 90°C / 600 V <sub>RMS</sub>  |
| b) Component 2       | XHHW-2Wet/Dry                     | 90°C / 600 V <sub>RMS</sub>  |
| c) Overall           | TC                                | 90°C / 600 V <sub>RMS</sub>  |
|                      | EXPOSED RUN                       |                              |
|                      | DIRECT BURIAL                     |                              |
|                      | SUN RES                           |                              |
| 2) CSA International |                                   |                              |
| a) Component 1       | AWM I A/B                         | 90°C / 1000 V <sub>RMS</sub> |
| b) Component 2       | AWM I A/B                         | 90°C / 1000 V <sub>RMS</sub> |
| c) Overall           | AWM I/II A/B                      | 90°C / 1000 V <sub>RMS</sub> |
|                      | FT4                               |                              |
| 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. |

## Properties

|                                  |                                        |
|----------------------------------|----------------------------------------|
| Physical & Mechanical Properties |                                        |
| 1) Temperature Range             | -40 to 90°C                            |
| 2) Bend Radius                   | 10X Cable Diameter                     |
| 3) Pull Tension                  | 214 Lbs, Maximum                       |
| 4) Sunlight Resistance           | Yes                                    |
| 5) Direct Burial                 | Yes                                    |
| Electrical Properties            |                                        |
| (For Engineering purposes only)  |                                        |
| 1) Voltage Rating                | 1000 V <sub>RMS</sub>                  |
| 2) Component 1                   |                                        |
| a) Characteristic Impedance      | 90                                     |
| b) Inductance                    | 0.23 μH/ft, Nominal                    |
| c) Mutual Capacitance            | 21 pf/ft @1 kHz, Nominal               |
| d) Ground Capacitance            | 38 pf/ft @1 kHz, Nominal               |
| e) Conductor DCR                 | 4.4 /1000ft @20°C, Nominal             |
| f) OA Shield DCR                 | 1.06 /1000ft @20°C, Nominal            |
| g) Current                       | 14.4 amps per conductor @30°C, Maximum |
| h) Insulation Resistance         | 300 M/MFt (Est.)                       |
| 3) Component 2                   |                                        |
| a) Inductance                    | 0.19 μH/ft, Nominal                    |
| b) Mutual Capacitance            | 22 pf/ft @1 kHz, Nominal               |
| c) Ground Capacitance            | 40 pf/ft @1 kHz, Nominal               |
| d) Conductor DCR                 | 2.6 /1000ft @20°C, Nominal             |
| e) Ind. Shield DC Resistance     | 2.43 /1000ft @20°C, Nominal            |
| f) Current                       | 20 amps per conductor @30°C, Maximum   |
| g) Insulation Resistance         | 300 M/MFt (Est.)                       |

## Other

|                        |                                     |
|------------------------|-------------------------------------|
| <b>Packaging</b>       | Flange x Traverse x Barrel (inches) |
| a) Bulk(Made-to-order) |                                     |

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# RoHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: V16116

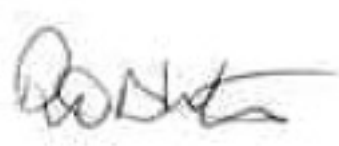
V16116 , RoHS-Compliant Commencing With 10/1/2005 Production

*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                             | 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) | 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

11/2/2012

# Mouser Electronics

Authorized Distributor

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