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**ALPHA WIRE COMPANY  
CUSTOMER PRODUCT SPECIFICATION**

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**Date:** 5/7/2004  
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**Part Number:** V16008  
**Issue:** 5

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**Description:** Cable, multi-conductor, 4-Conductor, No. 8 AWG, TC-ER, XLPE Insulation, Foil/Braid Shield with 4 X No. 14 AWG Drain Wire & PVC Jacket

This is a **round VFD** cable is typically used with Variable Frequency Drive Systems in the 40 HP range.

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**A. CONSTRUCTION:**

- 1) Conductor:
  - a) Material: Copper, Tinned
  - b) AWG: 8
  - c) Geometry: 7 X 19/29
- 2) Insulation:
  - a) Material: XLPE
  - b) Insulation Wall, In, Nom.:
    - (1) Multi-conductors: 0.062
    - (2) Ground: 0.062
  - c) Identification:
    - (1) Multi-conductors: Black with Numbers (Alt/Invert)
    - (2) Ground: Green or Green/Yellow
- 3) Core Assembly:
  - a) Fillers: As required to facilitate roundness
  - b) Filler Type: Non-hygroscopic only
- 4) Shield:
  - a) Cable, Overall:
    - (1) Material: Aluminum/Polyester/Aluminum & Tinned Copper Braid
    - (2) Coverage, Min.: 85%
    - (3) Drain Wire:
      - (a) Location: Under overall foil
      - (b) AWG (Strand) Material: 14 (41/30) TC
      - (c) Number: 4 (Equally spaced about core)
- 5) Jacket:
  - a) Material, Color: PVC, Black
  - b) Separator: Tissue Paper or Non-Woven Polyester
  - c) Finished Cable O.D., In., Nom.: 0.920 ± 0.011
  - d) Geometry: Round, No Convolutions
  - e) Print Legend:

**"ALPHA WIRE - \* SERIES V - PN V16008 VFD CABLE 4C8 1000V FLEXIBLE MOTOR SUPPLY CABLE 600V TYPE TC-ER (UL) RHW-2 CDRS XLPE/PVC 90C DRY/WET SUN RES DIR BUR --- LL\*\* CSA AWM I/II A/B 1000 V 90C FT4 --- CE\*\*\*\*"**

\* - Factory Code    \*\* - Factory CSA File Number    \*\*\* - CE LOGO

**B. PHYSICAL CHARACTERISTICS:**

- 1) Cable Temperature Rating: -40C TO +90C (UL: Dry/Wet)
- 2) Bend Radius, In., Min.: 8.9
- 3) Pulling Tension, Lbs., Max.: 422
- 4) Weight, Lbs/MFt.: 409

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**C. ELECTRICAL CHARACTERISTICS:**

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|--|-----------------------|
| 1) Maximum Operating Voltage,                          |                       |
| a) Per UL 1277   | 600 V <sub>RMS</sub>  |
| b) Per UL Flexible Motor Supply Cable                  | 1000 V <sub>RMS</sub> |
| c) Per CSA AWM Style                                   | 1000 V <sub>RMS</sub> |
| 2) Continuous Current per Conductor, Max. @ 30C (NEC): | 55 Amps               |
| 3) Conductor DC Resistance, Ω/MFt., Nom. @20C:         | 0.64                  |
| 4) Capacitance:  |                       |
| a) Conductor-to-Conductor, pF/Ft. Nom.:                | 30                    |
| b) Conductor-to-Shield, pF/Ft. Nom:                    | 54                    |
| 5) Impedance, Ω Nom.:                                  | 62                    |
| 6) Loop Inductance, μH/Ft. Nom.:                       | 0.181                 |
| 7) Insulation Resistance, M-Ω/MFt. Nom.:               | 300                   |

**D. CERTIFYING AGENCIES & SPECIFICATIONS:**

- 1) UL Subject 1277, Type TC
- 2) UL Exposed Run (-ER)
- 3) UL Direct Burial (Jacket)
- 4) UL Sunlight Resistant (Jacket)
- 5) UL XHHW-2, RHW-2 (Single Insulated Conductors)
- 6) UL 1000 Volt Flexible Motor Supply Cable
- 7) CSA AWM I/II A/B FT4
- 8) CE – LVD, 73/68/EEC Amend. 93/68/EEC