

**ALPHA WIRE COMPANY  
CUSTOMER PRODUCT SPECIFICATION**

Part Number: 669307 Page 1 of 2 Pages	Issue: 1 Issue Date: 9/4/2008 Effective Date: 9/4/2008
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**A. Construction**

- 1) Component 1 13 X 1 COND Diameters  
 a) Conductor 18 (19/30) AWG BC  
 b) Insulation 0.016" Wall, Nom. PVC/ 0.005" Wall NYLON 0.092  
 (1) Print ALPHA NUMERIC NUMBERS - 1-ONE ALTERNATING AND INVERTED  
 (2) Color(s)

Cond	Color	Cond	Color	Cond	Color
1	BLACK #1	6	BLACK #6	11	BLACK #11
2	BLACK #2	7	BLACK #7	12	BLACK #12
3	BLACK #3	8	BLACK #8	13	BLACK #13
4	BLACK #4	9	BLACK #9		
5	BLACK #5	10	BLACK #10		

- 2) Cable Assembly 13 Components Cabled  
 a) Twists: 2.2 Twists/foot (min)  
 b) Core Wrap REMAY Tape, 25% Overlap, Min.  
 3) Jacket 0.065" Wall, Nom., TPE 0.539+/- 0.029  
 a) Color(s) BLACK  
 b) Print MILLER P/N 240601 EXXXXXX 13C18 TFFN  
 (UL) TYPE TC-ER 90C 600V OIL RES I/II SUN RES  
 OR TYPE PLTC 90C  
 -- LLXXXXXX CSA AWM I/A/B II/A/B 90C 600V FT4  
 CE ROHS (DATE CODE) (SEQ FOOTAGE)  
*[Note: Product may have a(UL) or CSA markings depending upon plant of manufacture.]*

**B. Industry Approvals**

- 1) UL  
 a) Component 1 TFFN 90°C / 600V  
 b) Overall TC 90°C / 600V  
 EXPOSED RUN  
 SUN RES  
 PLTC 90°C  
 OIL RES I/II  
 2) CSA International AWM-I-A/B-II-A/B 90°C / 600V  
 FT4  
 3) 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.  
 4) California Proposition 65:  
 The outer surface materials used in the manufacture of this part meet the requirements of California Proposition 65.  
 5) CE:  
 LVD 73/23/EEC Amendment 93/68/EEC

**C. Physical & Mechanical Properties**

- 1) Temperature Range -25 to 90°C  
 2) Bend Radius 10X Cable Diameter  
 3) Pull Tension 194 Lbs, Maximum  
 4) Sunlight Resistance Yes  
**D. Electrical Properties** (For Engineering purposes only)

- 1) Voltage Rating 600 V<sub>RMS</sub>  
 2) Capacitance 29 pF/ft @1 kHz, Nominal Conductor to Conductor  
 3) Inductance 0.19 µH/ft, Nominal  
 4) Conductor DCR 5.7 Ω/1000ft @20°C, Nominal

**E. Other**

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

Although Alpha Wire Company ("Alpha") makes every reasonable effort to ensure their 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.  
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CUSTOMER PRODUCT SPECIFICATION

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This Design is custom, Made-To-Order & once accepted, the order is NON-CANCELLABLE & NON-RETURNABLE.

Accepted By: <i>Tom Oben</i>	Date: 9/8/08
Company: <i>Miller Electric</i>	Title: <i>Materials Manager</i>

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**A. Construction**

- 1) Component 1 Diameters  
 a) Conductor 2 X 1 COND  
 10 (105/30) AWG BC  
 b) Insulation 0.022" Wall, Nom. PVC/ 0.005" Wall NYLON 0.172  
 (1) Color(s)

Cond	Color	Cond	Color	Cond	Color
1	BLACK	2	WHITE		

- 2) Component 2 1 X 1 COND  
 a) Conductor 12 (65/30) AWG BC  
 b) Insulation 0.016" Wall, Nom. PVC/ 0.005" Wall NYLON 0.135  
 (1) Color(s)

Cond	Color	Cond	Color	Cond	Color
1	GREEN/YELLOW				

- 3) Cable Assembly 3 Components Cabled  
 a) Twists: 2.3 Twists/foot (min)  
 b) Core Wrap REMAY Tape, 25% Overlap, Min.  
 4) Jacket 0.065" Wall, Nom., TPE 0.496+/- 0.022  
 a) Color(s) BLACK  
 b) Print MILLER P/N 240652 EXXXXX 2C10 1C12 THHN  
 (UL) TYPE TC-ER 90C 600V OIL RES I/II SUN RES  
 -- LLXXXXXX CSA AWM I/A/B IIA/B 90C 600V FT4  
 CE ROHS (DATE CODE) (SEQ FOOTAGE)

*(Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.)*

**B. Industry Approvals**

- 1) UL  
 a) Component 1 THHN 90°C / 600V  
 b) Component 2 THHN 90°C / 600V  
 c) Overall TC 90°C / 600V

- 2) CSA International FT4 AWM-I-A/B-II-A/B 90°C / 600V

- 3) 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.  
 LVD 73/23/EEC Amendment 93/68/EEC

**C. Physical & Mechanical Properties**

- 1) Temperature Range -20 to 90°C  
 2) Bend Radius 10X Cable Diameter  
 3) Pull Tension 216 Lbs, Maximum  
 (For Engineering purposes only)

**D. Electrical Properties**

- 1) Voltage Rating 300 V<sub>RMS</sub>  
 2) Component 1  
 a) Capacitance 36 pf/ft @1 kHz, Nominal Conductor to Conductor  
 b) Inductance 0.16 µH/ft, Nominal  
 c) Conductor DCR 1.02 Ω/1000ft @20°C, Nominal  
 3) Component 2  
 a) Capacitance 36 pf/ft @1 kHz, Nominal Conductor to Conductor  
 b) Inductance 0.16 µH/ft, Nominal

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- c) Conductor DCR 1.64  $\Omega$ /1000ft @20°C, Nominal
- E. Other
- 1) Packaging
    - a) Bulk(Made-to-order)

**This Design is custom, Made-To-Order & once accepted, the order is NON-CANCELLABLE & NON-RETURNABLE.**

Accepted By: <i>Tim Obermuller</i>	Date: 9/5/08
Company: <i>Miller Electric</i>	Title: <i>Materials Mgr</i>

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