

ALPHA WIRE
TECHNICAL PRODUCT SPECIFICATION

Part Number: B963021
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Issue: 2
Issue Date: 1/4/2013
Effective Date: 1/18/2013

A. Construction

Diameters (In)

- | | | |
|----------------|-----------------------------------|----------------|
| 1) Component 1 | 2 X 1 PAIR | |
| a) Conductor | 24 (7/32) AWG TC, 0.500" Max Lay | 0.024 |
| b) Insulation | 0.010" Wall, Nom. PVC, Semi Rigid | 0.044+/- 0.002 |
| (1) Color Code | Alpha Wire Color Code B | |

Pair	Color	Pair	Color	Pair	Color
1	WHITE-BLACK	2	WHITE-BROWN		

- | | | |
|-------------------|--|--------------------|
| c) Pair | 2/Cond Cabled Together | |
| (1) Max Lay: | 1.25" LH Lay | |
| 2) Cable Assembly | 2 Components Bunch Cabled | 0.144 |
| a) Max Lay: | 1.50" LH Lay | |
| b) Layup: | 2 & 2f(0.072) | |
| c) Orientation: | Components to be arranged from INSIDE LAYER to OUTSIDE LAYER | |
| d) Filler | Flame-retardant Fibrillated Polypropylene | |
| e) Core Wrap | 0.0010" Clear Mylar Tape, 25% Overlap, Min. | |
| 3) Jacket | 0.032+/-0.002" Wall, PVC, Tubed | 0.211 (0.222 Max.) |
| a) Material | PolyOne WJLK503L | |
| b) Color(s) | GREY | |
| c) Ripcord | 1 End 810 Denier Nylon | |
| d) Print | ALPHA WIRE-* P/N B963021 | |
| | 0.23MM2 (24AWG) (UL) TYPE CM 105C OR AWM 2464 | |
| | VW-1 --- LLXXXXXX CSA 105C TYPE CMG FT4 CE | |
| | ROHS (SEQ METERS) | |
| | * = Factory Code | |
| | <i>[Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.]</i> | |
| e) Print Size | 1/16" Block lettering | |
| f) Print Color | Black, Blue or Red | |

B. Applicable Specifications

- | | | |
|----------------------|--|------------------------------|
| 1) UL | | |
| a) Component 1 | AWM/STYLE 10002 | 105°C / 300 V _{RMS} |
| b) Overall | AWM/STYLE 2464 | 80°C / 300 V _{RMS} |
| | CM | 105°C |
| | VW-1 | |
| 2) CSA International | CMG | 105°C |
| | FT4 | |
| 3) IEC | EN 60332-1 Flame Behavior | |
| | EN 60332-2 Flame Behavior | |
| 4) CE: | EU Low Voltage Directive 2006/95/EC | |
| 5) Colors | Munsell® Component limits of deviation | |

C. Environmental Compliance

- | | |
|-------------------------------------|--|
| 1) CE: | EU Directive 2011/65/EU(RoHS2):
All materials used in the manufacture and packaging of this part must meet the requirements of European Directive 2011/65/EU regarding the restriction of use of certain hazardous substances in electrical and electronic equipment. |
| 2) REACH Regulation (EC 1907/2006): | This product may not contain any of the substances listed in the latest issue European Union's REACH Substance of Very High Concern (SVHC) candidate list in excess of 0.1% mass of the item. |

This specification outlines the requirements for the product(s) described herein. Deviations from this specification are not permitted without the written authorization of the Alpha Wire Engineering Department. All finished products will be inspected to the specification and noncompliance or unauthorized deviations will be cause for rejection and return of product.
If vendor certifying agency requirements are in conflict with this document, **it is incumbent upon the vendor to notify the Alpha Wire Engineering Department** and mark up differences on this document and submit them for **review and approval prior to any production**. Be advised that **product legend information and product legend information and product label information must be in concert**; both are the responsibility of the vendor.
It is the **responsibility of the vendor** to insure that this product meets the requirements of subservient certifying agency documents even though they are not directly noted herein.
All information contained herein is confidential. Its use is restricted to authorized Alpha Wire Company personnel or authorized vendors of the Alpha Wire Company. Under no circumstances shall this document be duplicated in any form or shown to/discussed with unauthorized personnel without the expressed written consent of the Alpha Wire Engineering Department.

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D. Physical & Mechanical Properties

- 1) Temperature Range -30 to 105°C
- 2) Bend Radius 10X Cable Diameter
- 3) Pull Tension 14.1 Lbs, Maximum
- 4) Sunlight Resistance Yes

E. Electrical Properties

- (For Engineering purposes only)
- 1) Voltage Rating 300 V_{RMS}
- 2) Mutual Capacitance 21.8 pf/ft @1 kHz, Nominal
- 3) Characteristic Impedance 86 Ω
- 4) Inductance 0.19 μH/ft, Nominal
- 5) Conductor DCR 26 Ω/1000ft @20°C, Nominal

F. Other

- 1) Packaging Per Alpha Wire Standards RS-002, PS-001, CE-001
 - a) 3280 FT W20-11: 20 x 11 x 8 Continuous length
 - b) 1640 FT W16-11: 16 x 11 x 8 Continuous length
 - c) 328 FT W12-4.5: 12 x 4.5 x 3.5 Continuous length
 - d) 164 FT W12-4.5: 12 x 4.5 x 3.5 Continuous length

[Finished Goods: Packages shall be -0/+1% in length.]
- 2) Notes:
 - a) Gray Jacket color is RAL 7032.
 - b) UL File E163869 10002/2464 E163860 Vol. 1, Sec 26 and CSA File LL49185 Rpt 1438589 Part C.
- 3) CE Logo required on the product label.
- 4) Certificates of Compliance required with each order.

G. Incoming Inspection Criteria

- 1) Physical Construction
- 2) Appearance
- 3) Packaging & Labeling

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Revisions

Issue 1: 8/11/2010 Original Release. KB.

Issue 2: 1/4/2013 Updated RoHS to RoHS2. Added CSA CMG. Updated jacket print. CCS

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