



# Customer Specification

## PART NO. M13019

### Construction

		<b>Diameters (In)</b>			
1) Component 1		19 X 1 PAIR			
a) Conductor		22 (SOLID) AWG TC		0.025	
b) Insulation		0.010" Wall, Nom. PVC		0.045	
(1) Color Code		Alpha Wire Color Code K			
Pair	Color	Pair	Color	Pair	Color
1	BLACK-RED	8	RED-WHITE	15	GREEN-BLUE
2	BLACK-WHITE	9	RED-GREEN	16	GREEN-YELLOW
3	BLACK-GREEN	10	RED-BLUE	17	GREEN-BROWN
4	BLACK-BLUE	11	RED-YELLOW	18	GREEN-ORANGE
5	BLACK-YELLOW	12	RED-BROWN	19	WHITE-BLUE
6	BLACK-BROWN	13	RED-ORANGE		
7	BLACK-ORANGE	14	GREEN-WHITE		
c) Pair		2/Cond Cabled Together			
(1) Twists:		9.6 Twists/foot (min)			
2) Cable Assembly		19 Components Cabled			
a) Twists:		2.2 Twists/foot (min)			
b) Core Wrap		Clear Mylar Tape, 25% Overlap, Min.			
3) Jacket		0.040" Wall, Nom.,PVC		0.452 (0.477 Max.)	
a) Color(s)		SLATE			
b) Print		ALPHA WIRE-* P/N M13019 19PR 22 AWG EXXXXX (UL) 75C TYPE CMG OR AWM 2576 OR C(UL) 60C TYPE CMG CE ROHS * = Factory Code <i>[Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.]</i>			

### Applicable Specifications

1) UL	AWM/STYLE 2576	80°C / 150 V <sub>RMS</sub>
	CMG	75°C
2) CSA International	C(UL) TYPE CMG	75°C
	FT4	
3) CE:	EU Low Voltage Directive 2006/95/EC	

### Environmental

1) CE: EU Directive 2011/65/EU(RoHS2):	
	This product complies with European Directive 2011/65/EU (RoHS Directive) of the European Parliament and of the Council of 8 June 2011. No Exemptions are required for RoHS Compliance on this item. Consult Alpha Wire's web site for RoHS C of C.
2) REACH Regulation (EC 1907/2006):	
	This product does not contain Substances of Very High Concern (SVHC) listed on the European Union's REACH candidate list in excess of 0.1% mass of the item. For up-to-date information, please see Alpha's REACH SVHC Declaration.
3) 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	-20 to 80°C
2) Bend Radius	10X Cable Diameter
3) Pull Tension	191 Lbs, Maximum
Electrical Properties (For Engineering purposes only)	
1) Voltage Rating	300 V <sub>RMS</sub>
2) Mutual Capacitance	32 pf/ft @1 kHz, Nominal
3) Characteristic Impedance	67 Ω
4) Inductance	0.19 μH/ft, Nominal
5) Conductor DCR	17.3 Ω/1000ft @20°C, Nominal

## Other

<b>Packaging</b>	Flange x Traverse x Barrel (inches)
a) 1000 FT	24 x 14 x 12 Continuous length
b) 500 FT	18 x 12 x 8 Continuous length
c) 100 FT	12 x 10 x 5 Continuous length
d) Bulk(Made-to-order)	
	<i>[Spool dimensions may vary slightly]</i>

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# EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: M13019

M13019 , RoHS-Compliant Commencing With 1/1/2006 Production

This document certifies that the Alpha part number cited above is manufactured in accordance with Directive 2011/65/EU of the European Parliament, better known as the RoHS Directive, 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 this Directive for the specific definitions and extents of this Directive. **No Exemptions are required for RoHS Compliance on this item.** It should be noted that this product does not fall within the scope of Directive 2011/65/EU, but this Certificate is offered for cases where this product will be used within EEE that does fit within the Directive's scope. Additionally, Alpha certifies that the listed part number is in compliance with China RoHS "Marking for Control of Pollution by Electronic Information Products" standard SJ/T 11364-2006.

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) , 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

5/1/2013