



Alpha Wire | 711 Lidgerwood Avenue, Elizabeth, NJ 07207  
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# Customer Specification

## PART NO. M3191

Construction

		Diameters (In)			
1) Component 1		51 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 B			
Pair	Color	Pair	Color	Pair	Color
1	WHITE-BLACK	18	BROWN-RED	35	ORANGE-SLATE
2	WHITE-BROWN	19	BROWN-ORANGE	36	YELLOW-GREEN
3	WHITE-RED	20	BROWN-YELLOW	37	YELLOW-BLUE
4	WHITE-ORANGE	21	BROWN-GREEN	38	YELLOW-VIOLET
5	WHITE-YELLOW	22	BROWN-BLUE	39	YELLOW-SLATE
6	WHITE-GREEN	23	BROWN-VIOLET	40	GREEN-BLUE
7	WHITE-BLUE	24	BROWN-SLATE	41	GREEN-VIOLET
8	WHITE-VIOLET	25	RED-ORANGE	42	GREEN-SLATE
9	WHITE-SLATE	26	RED-YELLOW	43	BLUE-VIOLET
10	BLACK-BROWN	27	RED-GREEN	44	BLUE-SLATE
11	BLACK-RED	28	RED-BLUE	45	VIOLET-SLATE
12	BLACK-ORANGE	29	RED-VIOLET	46	WHITE/BLACK-BLACK
13	BLACK-YELLOW	30	RED-SLATE	47	WHITE/BLACK-BROWN
14	BLACK-GREEN	31	ORANGE-YELLOW	48	WHITE/BLACK-RED
15	BLACK-BLUE	32	ORANGE-GREEN	49	WHITE/BLACK-ORANGE
16	BLACK-VIOLET	33	ORANGE-BLUE	50	WHITE/BLACK-YELLOW
17	BLACK-SLATE	34	ORANGE-VIOLET	51	WHITE/BLACK-GREEN
c) Pair		2/Cond Cabled Together			
(1) Twists:		9.6 Twists/foot (min)			
2) Cable Assembly		51 Components Cabled			
a) Twists:		1.3 Twists/foot (min)			
b) Core Wrap		Clear Mylar Tape, 25% Overlap, Min.			
3) Shield:		Alum/Mylar Tape, 25% Overlap, Min.			
a) Foil Direction		Foil Facing In			
b) Drain Wire		22 (7/30) AWG TC			
4) Jacket		0.050" Wall, Nom.,PVC		0.716 (0.756 Max.)	
a) Color(s)		SLATE			
b) Ripcord		1 End 810 Denier Nylon			
c) Print		ALPHA WIRE-* P/N M3191 51PR 22 AWG EXXXXXX SHIELDED 75C CMG (UL) C(UL) OR AWM 2464 CE ROHS * = Factory Code [Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.]			

## Applicable Specifications

1) UL	CMG	75°C
	AWM/STYLE 2464	80°C / 300 V <sub>RMS</sub>
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	518 Lbs, Maximum
Electrical Properties (For Engineering purposes only)	
1) Voltage Rating	300 V <sub>RMS</sub>
2) Mutual Capacitance	34 pf/ft @1 kHz, Nominal
3) Ground Capacitance	61 pf/ft @1 kHz, Nominal
4) Characteristic Impedance	65 Ω
5) Inductance	0.19 μH/ft, Nominal
6) Conductor DCR	17.3 Ω/1000ft @20°C, Nominal
7) OA Shield DCR	7.6 Ω/1000ft @20°C, Nominal

## Other

<b>Packaging</b>	Flange x Traverse x Barrel (inches)
a) 1000 FT	36 x 14 x 12 Continuous length
b) 500 FT	30 x 14 x 12 Continuous length
c) 100 FT	16 x 11 x 8 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: M3191

M3191 , RoHS-Compliant Commencing With 7/1/2005 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)

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Authorized Signatory for the Alpha Wire Company:

Dave Watson, Director of Engineering & QA

5/13/2013