

Customer Specification

PART NO. M4271

Construction

						Diameter ("in")	
1) Component 1						1 x 2 COND	
a) Conductor						20 (7/28) AWG (1/C BC - 1/C TC)	0.038
b) Insulation						0.0225" Wall, Nom. Polyethylene (PE)	0.083
(1) Color(s)							
Cond	Color	Cond	Color	Cond	Color		
1	NATURAL	2	NATURAL				
c) Cabling						2 COND Cabled	
(1) Twists						5.3 Twists/foot (min.)	
d) Jacket						0.032" Wall, Nom., Polyethylene (PE)	0.236+/- 0.012
(1) Color(s)						NATURAL	
(2) Jacket Separator						Tissue Tape, 25% Overlap (min.)	
2) Shield						A/P/A Tape, 25% Overlap (min.)	
a) Braid						TC,85% Coverage (min.)	
3) Jacket						0.030" Wall, Nom., PVC	0.330+/- 0.020
a) Color(s)						BLACK	
b) Print						ALPHA WIRE-* P/N M4271 EXXXXX 75C 1PR20 SHIELDED (UL) CL2 OR CMG OR C(UL) 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	CMG	75°C
	CL2	75°C
2) CSA International	C(UL) TYPE CMG	75°C
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. Refer to the RoHS Certificate of Compliance for more detail.
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	Outer surface materials used in manufacturing this part meet the requirements of California Proposition 65.

Properties

Physical & Mechanical Properties	
1) Temperature Range	-30 to 75°C
2) Bend Radius	10X Cable Diameter
3) Pull Tension	27 lbs. max.
Electrical Properties	
	<i>Engineering purposes only</i>
1) Voltage Rating	300 V _{RMS}
2) Characteristic Impedance	100 ω +/- 5
3) Inductance	0.155 μ H/ft., Nominal
4) Mutual Capacitance	14.5 pf/ft. @1 kHz, Nominal
5) Ground Capacitance	23 pf/ft. @1 kHz, Nominal
6) Velocity of Propagation	66%
7) Conductor DCR	BC- 9.6, TC- 10.2 ω /1000ft. @20°C, Nominal
8) OA Shield DCR	1.74 ω /1000ft. @20°C, Nominal
9) Attenuation (nom. dB/100ft.)	0.3 @1 MHz
	1.2 @10 MHz
	2.8 @50 MHz
	4.1 @100 MHz
	6.4 @200 MHz
	10.2 @400 MHz

Other

Packaging	Flange x Traverse x Barrel (inches)
a) 1000 FT	18 x 12 x 8 Continuous Length
b) 500 FT	12 x 12 x 3.5 Continuous Length
c) 100 FT	12 x 4.5 x 3.5 Continuous Length
d) Bulk (<i>made-to-order</i>)	
	<i>Spool dimensions may vary slightly.</i>

www.alphawire.com

Alpha Wire
2200 US Highway 27 South
Richmond, IN 47374

Tel: 1-800-52 ALPHA

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EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: M4271

M4271, RoHS-Compliant Commencing With 2/1/2006 Production

Note: all colors and put-ups

This document certifies that the Alpha part number cited above, including all packaging materials, is manufactured in accordance with Directive 2011/65/EU of the European Parliament, better known as the RoHS Directive (commonly known as RoHS 2), with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. This certification extends to amending Directive 2015/863/EU which expanded the list of restricted substances to 10 items (commonly known as RoHS 3). This product also complies with UK - RoHS. The reader is referred to these Directives for the specific definitions and extents of the Directives. **No Exemptions are required for RoHS Compliance on this item.** 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 11364-2014. This product is also in compliance with China RoHS 2 per GB/T 26572-2011.

Substance

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)
Bis(2-ethylhexyl) phthalate (DEHP)	0.1% by weight (1000 ppm)
Butyl benzyl phthalate (BBP)	0.1% by weight (1000 ppm)
Dibutyl phthalate (DBP)	0.1% by weight (1000 ppm)
Diisobutyl phthalate (DIBP)	0.1% by weight (1000 ppm)

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Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering 4/3/2025

Alpha Wire
2200 US Highway 27 South
Richmond, IN 47374
Tel: 1-908-925-8000