

## Customer Specification

**PART NO. M9746020**

## Construction

						Diameters (In)		
1) Component 1						2 X 1 PAIR		
a) Conductor						16 (7/.0192) AWG Bare Copper		0.058
b) Insulation						0.016" Wall, Nom. PVC		0.090
(1) Print						ALPHA NUMERIC NUMBERS - WHITE CONDUCTOR ONLY (ONE-1) ALTERNATE INVERTED 2"SPACING(CTR. TO CTR.)		
(2) Color Code						Alpha Wire Color Code BW		
Pair	Color	Pair	Color	Pair	Color			
1	BLACK-WHITE#1	2	BLACK-WHITE#2					
c) Pair						2/Cond Cabled Together		
(1) Twists:						4.8 Twists/foot (min)		
Individually Applied:								
d) Shield:						Foil Free Alum/Mylar Tape, 25% Overlap, Min.		
(1) Foil Direction						Foil Facing In		
(2) Drain Wire						18 (7/.0152) AWG Tinned Copper		
2) Component 2						1 X 1 COND		
a) Conductor						22 (7/30) AWG Bare Copper		0.030
b) Insulation						0.016" Wall, Nom. PVC		0.062
(1) Color(s)								
Cond	Color	Cond	Color	Cond	Color			
1	ORANGE							
3) Cable Assembly						3 Components Cabled		
a) Twists:						2.5 Twists/foot (min)		
b) Orientation:						Components to be arranged from INSIDE LAYER to OUTSIDE LAYER		
c) Core Wrap						Clear Mylar Tape, 25% Overlap, Min.		
4) Shield:						Alum/Mylar Tape, 25% Overlap, Min.		
a) Foil Direction						Foil Facing In		
b) Drain Wire						18 (7/.0152) AWG Tinned Copper		
5) Jacket						0.053" Wall, Nom.,PVC		0.439 (0.456 Max.)
a) Color(s)						BLACK		
b) Ripcord						1 End 810 Denier Nylon		
c) Print						ALPHA WIRE-* P/N M9746020 2PR 16 AWG 1C 22 AWG SHIELDED EXXXXX (UL) TYPE PLTC/ITC 105C SUN RES OR CL3 105C OR C(UL) CMG 105C FT4 CE ROHS * = Factory Code [Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.]		

Applicable Specifications

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Physical & Mechanical Properties	
1) Temperature Range	-20 to 105°C
2) Bend Radius	10X Cable Diameter
3) Pull Tension	125 Lbs, Maximum
4) Sunlight Resistance	Yes
Electrical Properties	
(For Engineering purposes only)	
1) Voltage Rating	300 V <sub>RMS</sub>
2) Component 1	
a) Mutual Capacitance	54 pF/ft @1 kHz, Nominal
b) Ground Capacitance	97 pF/ft @1 kHz, Nominal
c) Characteristic Impedance	39 Ω
d) Inductance	0.17 μH/ft, Nominal
e) Conductor DCR	4.2 Ω/1000ft @20°C, Nominal
f) Component Shield DCR	6.1 Ω/1000ft @20°C, Nominal
g) OA Shield DCR	5.6 Ω/1000ft @20°C, Nominal
3) Component 2	
a) Ground Capacitance	94 pF/ft @1 kHz, Nominal
b) Inductance	0.044 μH/ft, Nominal
c) Conductor DCR	15.3 Ω/1000ft @20°C, Nominal
d) OA Shield DCR	5.6 Ω/1000ft @20°C, Nominal

## Other

Packaging	Flange x Traverse x Barrel (inches)
a) 1000 FT	24 x 14 x 12 Continuous length
b) 500 FT	18 x 9 x 8 Continuous length
c) 100 FT	12 x 5.94 x 5 Continuous length
d) Bulk(Made-to-order)	
	<i>[Spool dimensions may vary slightly]</i>

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## EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: M9746020

M9746020, RoHS-Compliant Commencing With 1/1/2006 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 8/4/2025

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