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# Customer Specification

## PART NO. 74002

### Construction

				Diameters (In)	
1) Component 1		2 X 1 PAIR			
a) Conductor		26 (7/34) AWG Bare Copper		0.019	
b) Insulation		0.010" Wall, Nom. Polypropylene(PP)		0.039	
(1) Color(s)					
Pair	Color	Pair	Color	Pair	Color
1	WHITE/BLUE - BLUE	2	WHITE/ORANGE - ORANGE		
c) Pair		2/Cond Cabled Together			
(1) Twists:		Staggered Lays			
2) Cable Assembly		2 Components Cabled			
a) Twists:		6.9 Twists/foot (min)			
c) Core Wrap		Clear Mylar Tape, 25% Overlap, Min.			
3) Shield:		Alum/Mylar Tape, 25% Overlap, Min.			
a) Foil Direction		Foil Facing Out			
b) Braid		Tinned Copper, 80% Coverage, Min.			
4) Jacket		0.031" Wall, Nom., TPU (ZH)		0.236 (0.249 Max.)	
a) Color(s)		BLACK			
b) Ripcord		1 End 810 Denier Nylon			
c) Print		ALPHA WIRE-* P/N 74002 2PR 26 AWG INDUSTRIAL ETHERNET SHIELDED ANSI/TIA-568-C.2 CAT5E VERIFIED CE ROHS (SEQ FOOTAGE) * = Factory Code			

### Applicable Specifications

1) UL	AWM/STYLE 20549	80°C / 300 V <sub>RMS</sub>
2) CSA International	FT2	
3) IEC	EN 60811-2-1 Oil Resistance	
	EN 60754-2 Acid Gas Generation	
4) Other	ISO/IEC 11801 Category 5e Patch Cable	
	ISO/IEC 24702	
	EN 50173-1	
	ANSI/TIA-568-C.2 Category 5e	
5) CE:	EU Low Voltage Directive 2014/35/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 and the amending Directive 2015/863/EU of 4 June 2015. 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.

## Properties

Physical & Mechanical Properties																																																								
1) Temperature Range	-40 to 80°C																																																							
2) Bend Radius	5X Cable Diameter(static), 10X Cable Diameter(dynamic)																																																							
3) Pull Tension	9 Lbs, Maximum																																																							
Electrical Properties (For Engineering purposes only)																																																								
1) Max. operating voltage UL	300 V <sub>RMS</sub>																																																							
2) Dielectric strength cond. – cond. (2 sec.)	2.5kVdc																																																							
3) D.C. resistance conductor	< 140 Ω/km																																																							
4) Resistance unbalance	< 2%																																																							
5) D.C. insulation resistance	> 5000 MΩ.km																																																							
6) Mutual capacitance	< 56 nF/km																																																							
7) Capacitance unbalance	< 1600 pF/km																																																							
8) Velocity of propagation @ 4 – 100 MHz	≥ 60%																																																							
9) Skew @ 1 – 100 MHz	≤ 40 ns/100m																																																							
10) Propagation delay @ 1 – 100 MHz	≤ 534 + 36/√f ns/100m																																																							
11) Mean characteristic impedance (Zcm) @ 100 MHz	100 ± 15 Ω																																																							
	<table border="1"> <thead> <tr> <th>Frequency(MHz)</th> <th>Max. Attenuation(dB/100m)</th> <th>Min. NEXT(dB)</th> <th>Min. ELFEXT(dB/100m)</th> <th>Min. RL(dB)</th> </tr> </thead> <tbody> <tr> <td>0.772</td> <td>-</td> <td>67</td> <td>-</td> <td>19.4</td> </tr> <tr> <td>1</td> <td>3.2</td> <td>65.3</td> <td>63.8</td> <td>20</td> </tr> <tr> <td>4</td> <td>6.0</td> <td>56.3</td> <td>51.8</td> <td>23</td> </tr> <tr> <td>10</td> <td>9.5</td> <td>50.3</td> <td>43.8</td> <td>25</td> </tr> <tr> <td>16</td> <td>12.1</td> <td>47.2</td> <td>39.7</td> <td>25</td> </tr> <tr> <td>20</td> <td>13.6</td> <td>45.8</td> <td>37.8</td> <td>25</td> </tr> <tr> <td>25</td> <td>15.3</td> <td>44.3</td> <td>35.8</td> <td>24.3</td> </tr> <tr> <td>31.25</td> <td>17.1</td> <td>42.9</td> <td>33.9</td> <td>23.6</td> </tr> <tr> <td>62.5</td> <td>24.8</td> <td>38.3</td> <td>27.9</td> <td>21.5</td> </tr> <tr> <td>100</td> <td>32</td> <td>35.3</td> <td>23.8</td> <td>20.1</td> </tr> </tbody> </table>	Frequency(MHz)	Max. Attenuation(dB/100m)	Min. NEXT(dB)	Min. ELFEXT(dB/100m)	Min. RL(dB)	0.772	-	67	-	19.4	1	3.2	65.3	63.8	20	4	6.0	56.3	51.8	23	10	9.5	50.3	43.8	25	16	12.1	47.2	39.7	25	20	13.6	45.8	37.8	25	25	15.3	44.3	35.8	24.3	31.25	17.1	42.9	33.9	23.6	62.5	24.8	38.3	27.9	21.5	100	32	35.3	23.8	20.1
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## Other

<b>Packaging</b>	Flange x Traverse x Barrel (inches)
a) 500 FT	12 x 6 x 3.5 Continuous length
	<i>[Spool dimensions may vary slightly]</i>

[www.alphawire.com](http://www.alphawire.com)

Alpha Wire | 711 Lidgerwood Avenue, Elizabeth, NJ 07207

Tel: 1-800-52 ALPHA (25742)

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# EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 74002

74002 , RoHS-Compliant Commencing With 9/30/2013 Production

Note: all colors and put-ups

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 (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) 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.

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 & QA

5/24/2019

Alpha Wire

711 Lidgerwood Ave.

Elizabeth, NJ 07207

Tel: 1-908-925-8000