

## Customer Specification

**PART NO. 5640B2012**

## Construction

						<b>Diameters (In)</b>	
1) Component 1						12 X 1 TRIAD	
a) Conductor						20 (7/.0121) AWG Bare Copper	0.036
b) Insulation						0.013" Wall, Nom. PVC	0.062
(1) Print						ALPHA NUMERIC NUMBERS - WHITE CONDUCTOR ONLY (ONE-1) ALTERNATE INVERTED 2"SPACING(CTR. TO CTR.)	
(2) Color(s)							
Triad	Color	Triad	Color	Triad	Color		
1	BLACK-WHITE#1-RED	5	BLACK-WHITE#5-RED	9	BLACK-WHITE#9-RED		
2	BLACK-WHITE#2-RED	6	BLACK-WHITE#6-RED	10	BLACK-WHITE#10-RED		
3	BLACK-WHITE#3-RED	7	BLACK-WHITE#7-RED	11	BLACK-WHITE#11-RED		
4	BLACK-WHITE#4-RED	8	BLACK-WHITE#8-RED	12	BLACK-WHITE#12-RED		
c) Pair						3/Cond Cabled Together	
(1) Twists:						6.0 Twists/foot (approx.)	
2) Cable Assembly						12 Components Cabled	
a) Twists:						1.6 Twists/foot (min)	
b) Orientation:						Components to be arranged from INSIDE LAYER to OUTSIDE LAYER	
c) 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 Tinned Copper	
4) Jacket						0.065" Wall, Nom.,PVC	0.641 (0.670 Max.)
a) Color(s)						BLACK	
b) Print						ALPHA WIRE-* P/N 5640B2012 12TRIAD 20 AWG SHIELDED 105C (UL) TYPE PLTC SUN RES OR C(UL) 105C TYPE CMG FT4 CE ROHS * = Factory Code <i>[Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.]</i>	

## Applicable Specifications

1) UL	PLTC	105°C
	SUN RES	
2) CSA International	C(UL) TYPE CMG	105°C
	FT4	
3) CE:	EU Low Voltage Directive 2014/35/EU	

# Environmental

1) CE: EU Directive 2011/65/EU(RoHS2), EU Directive 2015/863/EU (RoHS3):	
	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.
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.
3) California Proposition 65:	This product may contain substances known to the State of California to cause Cancer or Reproductive Harm, but is exempt from labeling based on the Consent Judgement. See the Alpha Wire website for more information.

# Properties

Physical & Mechanical Properties	
1) Temperature Range	-20 to 105°C
2) Bend Radius	10X Cable Diameter
3) Pull Tension	294 Lbs, Maximum
Electrical Properties	
(For Engineering purposes only)	
1) Voltage Rating	300 V <sub>RMS</sub>
2) Mutual Capacitance	35 pF/ft @1 kHz, Nominal
3) Ground Capacitance	63 pF/ft @1 kHz, Nominal
4) Characteristic Impedance	66 Ω
5) Inductance	0.18 μH/ft, Nominal
6) Conductor DCR	10.6 Ω/1000ft @20°C, Nominal
7) OA Shield DCR	8.3 Ω/1000ft @20°C, Nominal

# Other

Packaging	Flange x Traverse x Barrel (inches)
a) 1000 FT	30 x 14 x 12 Continuous length
b) Bulk(Made-to-order)	
	[Spool dimensions may vary slightly]

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

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Although Alpha Wire ("Alpha") makes every reasonable effort to ensure the accuracy at the time of publication, information and specifications described herein are subject to errors or omissions and to changes without notice, and the listing of such information and specifications does not ensure product availability.

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## EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 5640B2012

5640B2012, RoHS-Compliant Commencing With 10/1/2005 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

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)

### Maximum Control Value

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:

Dave Watson, Director of Engineering 8/8/2025

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