

## Customer Specification

**PART NO. 5100/50C**

## Construction

						Diameters (In)		
1) Component 1						50 X 1 COND		
a) Conductor						24 (7/32) AWG Tinned Copper		0.024
b) Insulation						0.010" Wall, Nom. PVC, Semi Rigid		0.044
(1) Color Code						Alpha Wire Color Code E		
Cond	Color	Cond	Color	Cond	Color			
1	BLACK	18	WHITE/VIC	35	WHITE/RED			
2	BROWN	19	WHITE/SL	36	WHITE/RED			
3	RED	20	WHITE/BL	37	WHITE/RED			
4	ORANGE	21	WHITE/BL	38	WHITE/RED			
5	YELLOW	22	WHITE/BL	39	WHITE/RED			
6	GREEN	23	WHITE/BL	40	WHITE/RED			
7	BLUE	24	WHITE/BL	41	WHITE/OR			
8	VIOLET	25	WHITE/BL	42	WHITE/OR			
9	SLATE	26	WHITE/BL	43	WHITE/OR			
10	WHITE	27	WHITE/BL	44	WHITE/OR			
11	WHITE/BL	28	WHITE/BR	45	WHITE/OR			
12	WHITE/BR	29	WHITE/BR	46	WHITE/YEL			
13	WHITE/RE	30	WHITE/BR	47	WHITE/YEL			
14	WHITE/OR	31	WHITE/BR	48	WHITE/YEL			
15	WHITE/YEL	32	WHITE/BR	49	WHITE/YEL			
16	WHITE/GR	33	WHITE/BR	50	WHITE/GRI			
17	WHITE/BLI	34	WHITE/BR					
2) Cable Assembly						50 Components Cabled		
a) Twists:						2.3 Twists/foot (min)		
b) Orientation:						Components to be arranged from INSIDE LAYER to OUTSIDE LAYER		
c) Core Wrap						Nonwoven Polyester Tape, 20% Overlap, Min.		
3) Shield:						Alum/Mylar Tape, 20% Overlap, Min.		
a) Foil Direction						Foil Facing In		
b) Drain Wire						24 (7/32) AWG Tinned Copper		
4) Jacket						0.032" Wall, Nom.,PVC		0.433 (0.458 Max.)
a) Color(s)						Slate, Black, Yellow, Orange, Blue, Green, Red, Sand Beige, White		
b) Ripcord						1 End 810 Denier Nylon		
c) Print						ALPHA WIRE-* P/N 5100/50C 50C 24 AWG XTRAGUARD(R) 1 SHIELDED (UL) TYPE CM 105C SUN RES OR AWM 2464 80C 300V OR AWM 2517 105C 300V VW-1 --- LLXXXXXX CSA 105C TYPE CMG FT4 CE ROHS OIL RESISTANT (SEQ FOOTAGE) * = 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	-35 to 105°C
2) Bend Radius	10X Cable Diameter
3) Pull Tension	179 Lbs, Maximum
4) Sunlight Resistance	Yes
Electrical Properties	(For Engineering purposes only)
1) Voltage Rating	300 V <sub>RMS</sub>
2) Capacitance	31 pF/ft @1 kHz, Nominal Conductor to Conductor
3) Ground Capacitance	56 pF/ft @1 kHz, Nominal
4) Inductance	0.19 µH/ft, Nominal
5) Conductor DCR	26 Ω/1000ft @20°C, Nominal
6) OA Shield DCR	13.4 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)	
	[Spool dimensions may vary slightly]
Notes:	
a) Oil Resistant Jacket (7d @ 60C).	

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

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## EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 5100/50C

5100/50C, RoHS-Compliant Commencing With 8/1/2005 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

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)

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 8/18/2025

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