



Customer Specification

PART NO. 5100/50C

Construction

					Diameters (In)	
1) Component 1						
a) Conductor						0.024
b) Insulation					· ·	0.044
I '					Alpha Wire Color Code E	
Color	Cond	Color	Cond	Color		
		· ·				
-		1				
YELLOW	22					
GREEN	23			WHITE/REC		
BLUE	24					
VIOLET	25	WHITE/BL/	42	WHITE/OR		
SLATE	26	WHITE/BL/	43	WHITE/OR		
WHITE	27	WHITE/BL/	44	WHITE/OR		
WHITE/BL/	28	WHITE/BR	45	WHITE/OR		
WHITE/BR	29	WHITE/BR	46	WHITE/YEL		
WHITE/RE	30	WHITE/BR	47	WHITE/YEL		
WHITE/OR	31	WHITE/BR	48	WHITE/YEL		
WHITE/YE	32	WHITE/BR	49	WHITE/YEL		
WHITE/GR	33	WHITE/BR	50	WHITE/GRI		
WHITE/BLI	34	WHITE/BR				
le Assembly					50 Components Cabled	
its:					2.3 Twists/foot (min)	
b) Orientation:					Components to be arranged from INSIDE LAYER to OUTSIDE LAYER	
e Wrap					Nonwoven Polyester Tape, 20% Overlap, Min.	
ıld:					Alum/Mylar Tape, 20% Overlap, Min.	
Direction					Foil Facing In	
n Wire					24 (7/32) AWG Tinned Copper	
et					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.]	
	ductor lation or Code Color BLACK BROWN RED ORANGE YELLOW GREEN BLUE VIOLET SLATE WHITE/BL WHITE/BL WHITE/RE WHITE/OR WHITE/YEI WHITE/GR WHITE/GR WHITE/BLI le Assembly sts: entation: e Wrap eld: Direction in Wire let or(s)	ductor lation or Code Color Cond BLACK 18 BROWN 19 RED 20 ORANGE 21 YELLOW 22 GREEN 23 BLUE 24 VIOLET 25 SLATE 26 WHITE 27 WHITE/BL 28 WHITE/BL 28 WHITE/BL 30 WHITE/OR 31 WHITE/YEI 32 WHITE/GR 33 WHITE/BL 34 Ile Assembly Sts: Entation: E Wrap Eld: Direction In Wire Elet Or(s)	ductor Ilation or Code Color Cond Color BLACK 18 WHITE/VIC BROWN 19 WHITE/SL/ RED 20 WHITE/BL/ ORANGE 21 WHITE/BL/ YELLOW 22 WHITE/BL/ GREEN 23 WHITE/BL/ UOLET 25 WHITE/BL/ WHITE 27 WHITE/BL/ WHITE 27 WHITE/BL/ WHITE/BL 28 WHITE/BR/ WHITE/BR 29 WHITE/BR/ WHITE/OR 31 WHITE/BR/ WHITE/OR 31 WHITE/BR/ WHITE/OR 33 WHITE/BR/ WHITE/GR 33 WHITE/BR/ WHITE/BR 34 WHITE/BR/	ductor ilation or Code Color Cond Color Cond BLACK 18 WHITE/VIC 35 BROWN 19 WHITE/SLJ 36 RED 20 WHITE/BLJ 37 ORANGE 21 WHITE/BLJ 38 YELLOW 22 WHITE/BLJ 40 BLUE 24 WHITE/BLJ 41 VIOLET 25 WHITE/BLJ 42 SLATE 26 WHITE/BLJ 43 WHITE 27 WHITE/BLJ 44 WHITE/BLJ 28 WHITE/BLJ 44 WHITE/BLJ 28 WHITE/BRJ 45 WHITE/BRJ 29 WHITE/BRJ 45 WHITE/BRJ 30 WHITE/BRJ 46 WHITE/CRJ 31 WHITE/BRJ 48 WHITE/CRJ 31 WHITE/BRJ 49 WHITE/CRJ 33 WHITE/BRJ 49 WHITE/CRJ 33 WHITE/BRJ 50 WHITE/BLJ 34 WHITE/BRJ 50 WHOM TO THE	ductor color Cond Color Cond Color BLACK 18 WHITE/VIC 35 WHITE/REE BROWN 19 WHITE/SL 36 WHITE/REE RED 20 WHITE/BL 37 WHITE/REE ORANGE 21 WHITE/BL 39 WHITE/REE GREEN 23 WHITE/BL 40 WHITE/REE BLUE 24 WHITE/BL 41 WHITE/OR. VIOLET 25 WHITE/BL 42 WHITE/OR. VIOLET 25 WHITE/BL 43 WHITE/OR. WHITE 27 WHITE/BL 44 WHITE/OR. WHITE/BL 28 WHITE/BR 45 WHITE/OR. WHITE/BR 29 WHITE/BR 46 WHITE/OR. WHITE/CR 30 WHITE/BR 47 WHITE/CR. WHITE/CR 31 WHITE/BR 48 WHITE/YEL WHITE/CR 31 WHITE/BR 49 WHITE/YEL WHITE/CR 31 WHITE/BR 50 WHITE/GRI WHITE/CR 31 WHITE/BR 50 WHITE/CRI WHITE/CR 31 WHITE/CR 50 WHITE/CR 50 WHITE/CRI WHITE/CR 50	SO X 1 COND

Applicable Specifications

1) UL			
a) Component 1	AWM/STYLE 10002	105°C / 300 V _{RMS}	
b) Overall	AWM/STYLE 2517	105°C / 300 V _{RMS}	
	SUN RES		
	AWM/STYLE 2464	80°C / 300 V _{RMS}	
	СМ	105°C	
	VW-1		
2) CSA International	CMG	105°C	
	FT4		
B) IEC	EN 60332-1 Flame Behavior		
	EN 60332-2 Flame Behavior		
4) Other	Oil Resistant		
5) 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	-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 _{RMS}	
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

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Although Alpha Wire ("Alpha") makes every reasonable effort to ensure there 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: 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	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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