



## **Customer Specification**

#### **PART NO. F16049LW**

Construction				

			Diameters (I	ln)	
t 1	49 X 1 COND	49 X 1 COND			
	16 (65/34) AV	16 (65/34) AWG Bare Copper			
	0.016" Wall, N	0.016" Wall, Nom. PVC/ 0.005" Wall NYLON		0.101	
	ALPHANUME INVERTED	ALPHANUMERIC NUMBERS - 1-ONE ALTERNATING AND INVERTED			
9	Alpha Wire Co	Alpha Wire Color Code LW			
Color	Cond	Color	Cond	Color	
GREEN/YELLOW	18	DK. BLUE#17	35	DK. BLUE#34	
DK. BLUE#1	19	DK. BLUE#18	36	DK. BLUE#35	
WHITE/BLUE	20	DK. BLUE#19	37	DK. BLUE#36	
DK. BLUE#3	21	DK. BLUE#20	38	DK. BLUE#37	
DK. BLUE#4	22	DK. BLUE#21	39	DK. BLUE#38	
DK. BLUE#5	23	DK. BLUE#22	40	DK. BLUE#39	
DK. BLUE#6	24	DK. BLUE#23	41	DK. BLUE#40	
DK. BLUE#7	25	DK. BLUE#24	42	DK. BLUE#41	
DK. BLUE#8	26	DK. BLUE#25	43	DK. BLUE#42	
DK. BLUE#9	27	DK. BLUE#26	44	DK. BLUE#43	
DK. BLUE#10	28	DK. BLUE#27	45	DK. BLUE#44	
DK. BLUE#11	29	DK. BLUE#28	46	DK. BLUE#45	
DK. BLUE#12	30	DK. BLUE#29	47	DK. BLUE#46	
DK. BLUE#13	31	DK. BLUE#30	48	DK. BLUE#47	
DK. BLUE#14	32	DK. BLUE#31	49	DK. BLUE#48	
DK. BLUE#15	33	DK. BLUE#32			
DK. BLUE#16	34	DK. BLUE#33			
2) Cable Assembly		49 Components Cabled			
	1.4 Twists/foc	1.4 Twists/foot (min)			
a) Twists: b) Orientation:		Components to be arranged from OUTSIDE LAYER to INSIDE LAYER			
	Polyester Fab	Polyester Fabric Tape, 25% Overlap, Min.			
	0.085" Wall, N	0.085" Wall, Nom.,TPE		51	
	BLACK	BLACK			
	SERIES F (UL) OIL RES I/II -4 C(UL) CIC CO PVC/NYLON I CE ROHS (DA * = Factory Co	ALPHA WIRE-* P/N F16049LW 49C 16 AWG (1.31mm2)  SERIES F (UL) TYPE TC-ER 90C WET/DRY 600V  OIL RES I/II -40C SUN RES OR TYPE PLTC 90C OR  C(UL) CIC CONTROL/TC 16 AWG -40C 90C WET 90C DRY  PVC/NYLON INS FT4 OR CRU AWM I/II A/B 90C 600V FT4  CE ROHS (DATE CODE) (SEQ FOOTAGE)  * = Factory Code  [Note: Product may have c(III) or CSA markings depending upon plant of manufacture I			
	GREEN/YELLOW  DK. BLUE#1  WHITE/BLUE  DK. BLUE#3  DK. BLUE#4  DK. BLUE#5  DK. BLUE#6  DK. BLUE#7  DK. BLUE#8  DK. BLUE#8  DK. BLUE#10  DK. BLUE#11  DK. BLUE#11  DK. BLUE#12  DK. BLUE#13  DK. BLUE#14  DK. BLUE#15  DK. BLUE#16  mbly	16 (65/34) AV	16 (65/34) AWG Bare Copper   0.016" Wall, Nom. PVC/ 0.005" Wall NYLON   ALPHANUMERIC NUMBERS - 1-ONE ALTER! INVERTED   Alpha Wire Color Code LW   Color   Cond   Color   GREEN/YELLOW   18   DK. BLUE#17   DK. BLUE#18   DK. BLUE#18   DK. BLUE#19   DK. BLUE#19   DK. BLUE#19   DK. BLUE#19   DK. BLUE#20   DK. BLUE#20   DK. BLUE#20   DK. BLUE#20   DK. BLUE#21   DK. BLUE#21   DK. BLUE#21   DK. BLUE#22   DK. BLUE#22   DK. BLUE#23   DK. BLUE#23   DK. BLUE#24   DK. BLUE#24   DK. BLUE#25   DK. BLUE#25   DK. BLUE#26   DK. BLUE#26   DK. BLUE#26   DK. BLUE#27   DK. BLUE#26   DK. BLUE#27   DK. BLUE#27   DK. BLUE#28   DK. BLUE#27   DK. BLUE#28   DK. BLUE#28   DK. BLUE#29   DK. BLUE#29   DK. BLUE#29   DK. BLUE#30   DK. BLUE#30   DK. BLUE#31   DK. BLUE#31   DK. BLUE#32   DK. BLUE#33   DK. BLUE#33   DK. BLUE#33   DK. BLUE#34   DK. BLUE#35   DK. BLUE#36   DK. BLUE#37   DK. BLUE#36   DK. BLUE#37   DK. BLUE#36   DK. BLUE#37   DK. BLUE#37   DK. BLUE#36   DK. BLUE#37   DK. BLUE#36   DK. BLUE#37   DK. BLUE#36   DK. BLUE#37   DK. BLUE#37   DK. BLUE#38   DK. BLUE#37   DK. BLUE#36   DK. BLUE#37   DK. BLUE#38   DK. BLUE#37   DK. BLUE#38   DK. BLU	16 (65/34) AWG Bare Copper	

# **Applicable Specifications**

1) UL			
a) Component 1	MTW	90°C Dry / 60°C Wet / 600 V <sub>RMS</sub>	
b) Overall	-40C		
	тс	90°C Dry / 90°C Wet / 600 V <sub>RMS</sub>	
	EXPOSED RUN		
	SUN RES		
	PLTC	90°C	
	OIL RES I/II		
2) CSA International	C(RU) AWM I/II A/B	90°C / 600 V <sub>RMS</sub>	
	FT4		
	C(UL) CIC CONTROL	90°C / 600V V <sub>RMS</sub>	
	C(UL) TC	90°C Dry / 90°C Wet / 600V V <sub>RMS</sub>	
	-40C		
3) Other	Conductors ASTM Class M		
	Conductors IEC Class 6 on AWG size		
4) 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.					
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	-40 to 90°C(static), -5 to 90°C (dynamic)				
2) Bend Radius	6X Cable Diameter(static), 8X Cable Diameter(dynamic)				
3) Pull Tension	993 Lbs, Maximum				
4) Sunlight Resistance	Yes				
<b>Electrical Properties</b>	(For Engineering purposes only)				
1) Voltage Rating	600 V <sub>RMS</sub>				
2) Capacitance	29 pF/ft @1 kHz, Nominal Conductor to Conductor				
3) Inductance	0.18 μH/ft, Nominal				
4) Conductor DCR	4.3 Ω/1000ft @20°C, Nominal				

#### Other

Packaging	Flange x Traverse x Barrel (inches)	
a) Bulk(Made-to-order)		
Notes:		
a) Suitable for constant flexing where cycle count will be less than 20	,000,000 cycles.	

#### www.alphawire.com

Alpha Wire 2200 US Highway 27 South Richmond, IN 47374

Tel: 1-800-52 ALPHA

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.

Alpha provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Alpha be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary) whatsoever, even if Alpha had been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

ALPHA WIRE - CONFIDENTIAL AND PROPRIETARY Notice to persons receiving this document and/or technical information. This document is confidential and is the exclusive property of ALPHA WIRE, and is merely on loan and subject to recall by ALPHA WIRE at any time. By taking possession of this document, the recipient acknowledges and agrees that this document cannot be used in any manner adverse to the interests of ALPHA WIRE, and that no portion of this document may be copied or otherwise reproduced without the prior written consent of ALPHA WIRE. In the case of conflicting contractual provisions, this notice shall govern the status of this document. ©2024 ALPHA WIRE - all rights reserved.



### **EU/UK/China ROHS CERTIFICATE OF COMPLIANCE**

To Whom It May Concern:

Alpha Wire Part Number: F16049LW

F16049LW, 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 5/3/2024

Alpha Wire 2200 US Highway 27 South Richmond, IN 47374 Tel: 1-908-925-8000