

Customer Specification

PART NO. XM1649R

Construction

						Diameters (In)	
1) Component 1						49 X 1 COND	
a) Conductor						16 (65/34) AWG Bare Copper	0.059
b) Insulation						0.016" Wall, Nom. PVC/ 0.005" Wall NYLON	0.101
(1) Print						ALPHANUMERIC NUMBERS - 1-ONE ALTERNATING AND INVERTED	
(2) Color Code						Alpha Wire Color Code RW	
Cond	Color	Cond	Color	Cond	Color		
1	GREEN/YELLOW	18	RED#17	35	RED#34		
2	RED#1	19	RED#18	36	RED#35		
3	WHITE/RED	20	RED#19	37	RED#36		
4	RED#3	21	RED#20	38	RED#37		
5	RED#4	22	RED#21	39	RED#38		
6	RED#5	23	RED#22	40	RED#39		
7	RED#6	24	RED#23	41	RED#40		
8	RED#7	25	RED#24	42	RED#41		
9	RED#8	26	RED#25	43	RED#42		
10	RED#9	27	RED#26	44	RED#43		
11	RED#10	28	RED#27	45	RED#44		
12	RED#11	29	RED#28	46	RED#45		
13	RED#12	30	RED#29	47	RED#46		
14	RED#13	31	RED#30	48	RED#47		
15	RED#14	32	RED#31	49	RED#48		
16	RED#15	33	RED#32				
17	RED#16	34	RED#33				
2) Cable Assembly						49 Components Cabled	
a) Twists:						1.4 Twists/foot (min)	
b) Orientation:						Components to be arranged from OUTSIDE LAYER to INSIDE LAYER	
c) Core Wrap						REMAI Tape, 25% Overlap, Min.	
3) Jacket						0.085" Wall, Nom.,PVC	1.069+/- 0.051
a) Color(s)						BLACK	
b) Print						ALPHA WIRE-* P/N XM1649R 49C 16 AWG (1.31mm2) SERIES XM (UL) WTTC 90C WET/DRY 1000V OR (UL) TC-ER 90C WET/DRY 600V SUN RES DIR BUR OIL RES I OR MTW 16 AWG OR CRU AWM I/II A/B 90C 600V FT4 CE ROHS (DATE CODE) (SEQ FOOTAGE) * = Factory Code	

Applicable Specifications

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1) UL		
a) Component 1	Unlisted Conductor	90°C Dry / 90°C Wet / 600 V _{RMS}
b) Overall	MTW	90°C Dry / 60°C Wet / 600 V _{RMS}
	TC	90°C Dry / 90°C Wet / 600 V _{RMS}
	EXPOSED RUN	
	SUN RES	
	OIL RES I	
	WTTC	90°C Dry / 90°C Wet / 1000 V _{RMS}
2) CSA International	C(RU) AWM I/II A/B	90°C / 600 V _{RMS}
	FT4	
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.
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	-30 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
Electrical Properties	
(For Engineering purposes only)	
1) Voltage Rating	600/1000 V _{RMS}
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 12,000,000 cycles.	

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EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: XM1649R

XM1649R, RoHS-Compliant Commencing With 16/03/2010 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 Union (RoHS 2), with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. This document also certifies that the listed part number is in compliance with 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 requirements. **Compliance on this item.** Additionally, Alpha certifies that the listed part number is in compliance with China RoHS "Marking for Control" requirements.

Substance

Lead
Mercury
Cadmium
Hexavalent Chromium
Polybrominated Biphenyls (PBB)
Polybrominated Diphenyl Ethers (PBDE),
Including Deca-BDE
Bis(2-ethylhexyl) phthalate (DEHP)
Butyl benzyl phthalate (BBP)
Dibutyl phthalate (DBP)
Diisobutyl phthalate (DIBP)

Maximum Control Value

0.1% by weight (1000 ppm)
0.1% by weight (1000 ppm)
0.01% by weight (100 ppm)
0.1% by weight (1000 ppm)
0.1% by weight (1000 ppm)
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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 this document. It is intended to be used as a 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 to provide Regulatory information for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulatory requirements. Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering & QA 31/03/2025

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