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# Customer Specification

## PART NO. V16012

### Construction

				Diameters (In)	
1) Component 1		4 X 1 COND			
a) Conductor		12 (65/30) AWG Tinned Copper		0.093	
b) Insulation		0.046" Wall, Nom. XLPE		0.189	
(1) Separator		Paper Tape, 10% Overlap, Min.			
(2) Color(s)					
Cond	Color	Cond	Color	Cond	Color
1	BLACK#1	3	BLACK#3		
2	BLACK#2	4	GREEN OR GREEN/YELLOW		
2) Cable Assembly		4 Components Cabled			
a) Twists:		1.8 Twists/foot (min)			
3) Shield:		A/P/A Tape, 25% Overlap, Min.			
a) Drain Wire		12 (65/30) AWG Tinned Copper			
b) Braid		Tinned Copper, 85% Coverage, Min.			
4) Jacket		0.065" Wall, Nom., PVC		0.631 +/- 0.017	
a) Color(s)		BLACK			
b) Jacket Separator		Tissue Tape, 25% Overlap, Min.			
c) Print		ALPHA WIRE-* P/N V16012 4C12 SHIELDED (UL) 1000V FLEXIBLE MOTOR SUPPLY CABLE OR WTTC 90C WET/DRY OR 600V TC-ER XHHW-2 CDRS XLPE/PVC 90C WET/DRY OR 4C12 C(UL) 600V CIC TC 90C WET/DRY FT4 (-25C) --- P-07-KA080006-MSHA --- LLXXXXXX CSA AWM I/II A/B 1000V 90C FT4 CE ROHS (SEQ FOOTAGE) * = Factory Code <i>[Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.]</i>			

### Applicable Specifications

1) UL		
a) Component 1	RHW-2Wet/Dry	90°C Dry / 90°C Wet / 600 V <sub>RMS</sub>
	XHHW-2Wet/Dry	90°C Dry / 90°C Wet / 600 V <sub>RMS</sub>
b) Overall	TC	90°C Dry / 90°C Wet / 600 V <sub>RMS</sub>
	EXPOSED RUN	
	DIRECT BURIAL	
	SUN RES	
	1000V Flexible Motor Supply Cable	
	WTTC	90°C / 1000 V <sub>RMS</sub>
2) CSA International	AWM I/II A/B	90°C / 1000 V <sub>RMS</sub>
	FT4	
	C(UL) TC	90°C Dry / 90°C Wet / 600 V <sub>RMS</sub>
	C(UL) CIC CONTROL	90°C Dry / 90°C Wet / 600 V <sub>RMS</sub>
	C(UL) -25C	
3) Other	PMSHA Specification	
4) CE:	EU Low Voltage Directive 2006/95/EC	

## 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.

## Properties

Physical & Mechanical Properties	
1) Temperature Range	-40 to 90°C
2) Bend Radius	10X Cable Diameter
3) Pull Tension	269 Lbs, Maximum
4) Sunlight Resistance	Yes
5) Direct Burial	Yes
6) Copper Weight	139 Lbs/1000Ft
7) Cable Weight	285 Lbs/1000Ft
Electrical Properties	
(For Engineering purposes only)	
1) Voltage Rating	600 V <sub>RMS</sub>
2) Characteristic Impedance	71 Ω
3) Inductance	0.197 μH/ft, Nominal
4) Mutual Capacitance	26 pf/ft @1 kHz, Nominal
5) Ground Capacitance	47 pf/ft @1 kHz, Nominal
6) Conductor DCR	1.76 Ω/1000ft @20°C, Nominal
7) OA Shield DCR	0.81 Ω/1000ft @20°C, Nominal
8) Current	24 amps per conductor @30°C, Maximum
9) Insulation Resistance	300 MO/MFt (Est.)

## Other

1) Packaging	
a) Bulk(Made-to-order)	?

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# EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: V16012

V16012 , RoHS-Compliant Commencing With 10/1/2005 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 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) 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.

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 & QA

4/24/2020

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