

# Customer Specification

## PART NO. 6451

### Construction

						Diameter ("in")	
1) Component 1						1 x 1 PAIR	
a) Conductor						15 (19/.0135) AWG TC	0.067
b) Insulation						0.021" Wall, Nom. PVC	0.109
(1) Color(s)							
Pair	Color	Pair	Color	Pair	Color		
1	BLACK-RED						
Individually Applied:							
c) Shield						Alum/Mylar Tape, 25% Overlap (min.)	
(1) Foil Direction						Foil Facing Out	
2) Component 2						1 X 1 PAIR	
a) Conductor						18 (19/30) AWG TC	0.049
b) Insulation						0.053" Wall, Nom. Foam HDPE	0.150
(1) Color(s)							
Pair	Color	Pair	Color	Pair	Color		
1	BLUE-WHITE						
Individually Applied:							
c) Shield						Alum/Mylar Tape, 25% Overlap (min.)	
(1) Foil Direction						Foil Facing Out	
3) Cable Assembly						2 Components Cabled	
a) Twists						2.4 Twists/ft. (min.)	
4) Shield						TC BRAID Shield, 65% Coverage (min.)	
a) Drain Wire						18 (19/30) AWG TC	
5) Jacket						0.060" Wall, Nom., PVC	0.480+/- 0.015
a) Color(s)						SLATE	
b) Print						ALPHA WIRE P/N 6451 DEVICEBUS® THICK --- 1PR16 1PR18 SHIELDED (UL) EXXXXX CMG 75C OR PLTC SUN RES OR AWM 20201 600V C(UL) CMG OR AWM I/II A 80C 300V --- FT4 OIL RES CE ROHS (1 METER MARKING, ---METER---) <i>Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.</i>	

## Applicable Specifications

1) UL	PLTC	75°C
	SUN RES	75°C
	CMG	75°C
	AWM/STYLE 20201	60°C / 600 V <sub>RMS</sub>
2) CSA International	C(UL) TYPE CMG	75°C
	AWM I/II A	80°C / 300 V <sub>RMS</sub>
	FT4	
3) Other	ODVA CLASS 2 THICK	
4) CE	EU Low Voltage Directive 2006/95/EC	

## Environmental

1) CE: EU Directive 2011/65/EU(RoHS2)	
	This product complies with European Directive 2011/65/EU (RoHS Directive) of the European Parliament and of the Council of 8 June 2011. No exemptions are required for RoHS Compliance on this item. Refer to the <a href="#">RoHS Certificate of Compliance</a> for more detail.
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. For up-to-date information, please see Alpha's <a href="#">REACH SVHC Declaration</a> .

## Properties

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<b>Physical &amp; Mechanical Properties</b>	
1) Temperature Range	-20 to 75°C (static); 0 to 80°C (dynamic)
2) Bend Radius	10X Cable Diameter
3) Pull Tension	104 lbs. max.
<b>Electrical Properties</b>	
(For Engineering purposes only)	
1) Voltage Rating	300 V <sub>RMS</sub>
2) Component 1	
a) Inductance	0.174 μH/ft., Nominal
b) Conductor DCR	3.6 ω/1000ft. @20°C, Nominal
c) Current	8 amps per conductor @30°C (max.)
3) Component 2	
a) Characteristic Impedance	120 ω +/- 12
b) Inductance	0.258 μH/ft., Nominal
c) Mutual Capacitance	12 pf/ft. @1 kHz, Nominal
d) Velocity of Propagation	75%
e) Conductor DCR	6.9 ω/1000ft. @20°C, Nominal
f) OA Shield DCR	1.8 ω/1000ft. @20°C, Nominal
g) Current	5 amps per conductor @30°C (max.)
h) Attenuation (max. dB/100ft.)	0.13 @125 kHz
	0.25 @500 kHz
	0.36 @1 MHz

## Other

<b>Packaging</b>	Flange x Traverse x Barrel (inches)
a) 1000 FT	24 x 14 x 12 Continuous Length
b) 500 FT	18 x 14.25 x 8 Continuous Length
c) 100 FT	12 x 5.94 x 5 Continuous Length
	<i>Spool dimensions may vary slightly.</i>

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

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# EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 6451

6451, RoHS-Compliant Commencing With 01/07/2008 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 restrictions. **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 issuance. This document is intended to provide guidance 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 for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulatory requirements. Alpha Wire is an Authorized Signatory for the Alpha Wire:

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

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