



Alpha Wire | 711 Lidgerwood Avenue, Elizabeth, NJ 07207  
Tel: 1-800-52 ALPHA (25742), Web: www.alphawire.com

# Customer Specification

## PART NO. 6451

### Construction

				Diameters (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/foot (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 DEVICENET(TM) THICK --- 1PR16 1PR18 SHIELDED (UL) EXXXXX CMG 75C OR PLTC-ER SUN RES OR AWM 20201 600V C(UL) CMG OR AWM I/II A 80C 300V --- FT4 OIL RES (1 METER MARKING, ---METER---) * = Factory Code [Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.]			

### 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	

## Environmental

1) EU Directive 2002/95/EC(RoHS):	
	All materials used in the manufacture of this part are in compliance with EU Directive 2002/95/EU regarding the restriction of use of certain hazardous substances in electrical and electronic equipment. Consult Alpha Wire's web site for compliance Date of Manufacture.

## Properties

Physical & Mechanical Properties	
1) Temperature Range	-20 to 75°C(static), 0 to 80°C (dynamic)
2) Bend Radius	10X Cable Diameter
3) Pull Tension	104 Lbs, Maximum
Electrical Properties (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 /1000ft @20°C, Nominal
c) Current	8 amps per conductor @30°C, Maximum
3) Component 2	
a) Characteristic Impedance	120 +/- 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 /1000ft @20°C, Nominal
f) Current	5 amps per conductor @30°C, Maximum
g) Attenuation, Max dB/100ft	0.13 @ 125 kHz
	0.25 @ 500 kHz
	0.36 @ 1 MHz
4) OA Shield DCR	1.8 /1000ft @20°C, Nominal

## Other

1) Packaging	
a) 1000 FT	
b) 500 FT	
c) 100 FT	

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## RoHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number:6451

6451 , RoHS-Compliant Commencing With7/1/2008Production

*This document certifies that the Alpha part numbers cited above are manufactured in accordancewith Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003,better known as the RoHS Directives, with regards to restrictions of the use of certain hazardousubstances used in the manufacture of electrical and electronic equipment. The reader is referredto these Directives for the specific definitions and extents of these Directives. **No Exemptions arerequired for RoHS Compliance on this item.***

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)	0.1% by weight (1000 ppm)
Including Deca-BDE	0.1% by weight (1000 ppm)

*The information provided in this document and disclosure is correct to the best of Alpha Wire'sknowledge, information and belief at the date of its release. The information provided is designedonly as a general guide for the safe handling, storage, and any other operation of the productitself or the one that it will become part of. The intent of this document is not to be considered awarranty or quality specification. Regulatory information is for guidance purposes only. Productusers are responsible for determining the applicability of legislation and regulations based ontheir individual usage of the product.*

Authorized Signatory for the Alpha Wire Company:

A handwritten signature in black ink, appearing to read 'Dave Watson'.

Dave Watson, Director of Engineering & QA

11/1/2012



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