



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

# Customer Specification

## PART NO. 6454

### Construction

				Diameters (In)	
1) Component 1		1 X 1 PAIR			
a) Conductor		22 (7/30) AWG TC		0.030	
b) Insulation		0.0325" Wall, Nom. Foam HDPE		0.095	
(1) Color(s)					
Pair	Color	Pair	Color	Pair	Color
1	ORANGE/WHITE- WHITE/ORANGE				
Individually Applied:					
c) Shield:		Alum/Mylar Tape, 25% Overlap, Min.			
(1) Foil Direction		Foil Facing Out			
(2) Drain Wire		22 (7/30) AWG TC			
2) Component 2		1 X 1 COND			
a) Conductor		22 (7/.0096) AWG TC		0.030	
b) Insulation		0.0165" Wall, Nom. PVC		0.062	
(1) Color(s)					
Cond	Color	Cond	Color	Cond	Color
1	BLUE/WHITE				
3) Cable Assembly		3 Components Cabled			
a) Twists:		4.0 Twists/foot (min)			
4) Shield		TC BRAID Shield,65% Coverage, Min.			
5) Jacket		0.042" Wall, Nom.,PVC		0.300 (0.315 Max.)	
a) Color(s)		BLACK			
b) Print		ALPHA WIRE-* P/N 6454 EXXXXX 3C22 SHIELDED (UL) CM OR PLTC SUN RES OR C(UL) CM --- FT1 * = Factory Code [Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.]			

### Applicable Specifications

1) UL	PLTC	60°C
	CM	60°C
	SUN RES	
2) CSA International	CM	60°C
	FT1	

## 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 60°C
2) Bend Radius	10X Cable Diameter
3) Pull Tension	26 Lbs, Maximum
Electrical Properties (For Engineering purposes only)	
1) Voltage Rating	300 V <sub>RMS</sub>
2) Component 1	
a) Characteristic Impedance	120 Ω +/- 12
b) Mutual Capacitance	11 pf/ft @1 kHz, Nominal
c) Ground Capacitance	20.9 pf/ft @1 kHz, Nominal
d) Velocity of Propagation	78 %
e) Conductor DCR	15.1 Ω/1000ft @20°C, Nominal
f) Current	2.7 amps per conductor @30°C, Maximum
g) Attenuation, Max dB/100ft	0.5 @ 1 MHz
3) Component 2	
a) Conductor DCR	17.8 Ω/1000ft @20°C, Nominal
b) Current	2.7 amps per conductor @30°C, Maximum
4) OA Shield DCR	5.2 Ω/1000ft @20°C, Nominal

## Other

1) Packaging	
a) 1000 FT	
b) 500 FT	
c) 100 FT	
2) Notes:	
a) EIA Industrial RS485 cable.	

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## RoHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 6454

6454 , RoHS-Compliant Commencing With 7/1/2008 Production

*This document certifies that the Alpha part numbers cited above are manufactured in accordance with 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 hazardous substances used in the manufacture of electrical and electronic equipment. The reader is referred to these Directives for the specific definitions and extents of these Directives. **No Exemptions are required 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'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 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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Authorized Distributor

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