2200 US Highway 27 South
Richmond, IN 47374
Tel: 1-800-52 ALPHA
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™ 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 CE ROHS (1 METER MARKING, ---METER---) *[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_{RMS}
	EXPOSED RUN	
2) CSA International	C(UL) TYPE CMG	75°C
	AWM I/II A	80°C / 300 V_{RMS}
	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. Consult Alpha Wire's web site for RoHS C of C.
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 REACH SVHC Declaration.

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_{RMS}
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, Maximum
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, Maximum
h) Attenuation, Max dB/100ft	0.13 @ 125 kHz
	0.25 @ 500 kHz
	0.36 @ 1 MHz

Other

Packaging	Flange x Traverse x Barrel (inches)
a) 1000 FT	24 x 14 x 12 Continuous length
b) 500 FT	18 x 12 x 8 Continuous length
c) 100 FT	16 x 11 x 8 Continuous length
	[Spool dimensions may vary slightly]

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EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 6451

6451, RoHS-Compliant Commencing With 2008/7/1 Production

Note: all colors and put-ups

This document certifies that the Alpha part number cited above, including all packaging materials, 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). This product also complies with UK - RoHS. 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. This product is also in compliance with China RoHS 2 per GB/T 26572-2011.

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 2024/5/19

Alpha Wire
2200 US Highway 27 South
Richmond, IN 47374
Tel: 1-908-925-8000