2200 US Highway 27 South
Richmond, IN 47374
Tel: 1-800-52 ALPHA
Web: www.alphawire.com

Customer Specification

PART NO. 6431

Construction

		Diameter ("in")
1) Component 1	9 x 1 PAIR	
a) Conductor	18 (19/30) AWG Tinned Copper	0.050
b) Insulation	0.016" Wall, Nom. PVC	0.082
(1) Print	ALPHANUMERIC NUMBERS - 1-ONE ALTERNATING & INVERTED	
(2) Color Code	Alpha Wire Color Code BR	

Pair	Color	Pair	Color	Pair	Color
1	BLACK #1-RED #1	4	BLACK #4-RED #4	7	BLACK #7-RED #7
2	BLACK #2-RED #2	5	BLACK #5-RED #5	8	BLACK #8-RED #8
3	BLACK #3-RED #3	6	BLACK #6-RED #6	9	BLACK #9-RED #9

c) Pair	2/Cond Cabled Together	
(1) Twists	5.3 Twists/foot (approx.)	
2) Cable Assembly	9 Components Cabled	
a) Twists	1.7 Twists/foot (min.)	
b) Orientation	Components to be arranged from INSIDE LAYER-to-OUTSIDE LAYER	
c) Core Wrap	Clear Mylar Tape, 25% Overlap (min.)	
3) Shield	Alum/Mylar Tape, 25% Overlap (min.)	
a) Foil Direction	Foil Facing In	
b) Drain Wire	20 (7/28) AWG Tinned Copper	
4) Jacket	0.063" Wall, Nom. PVC	0.622 (0.646 max.)
a) Color(s)	SLATE	
b) Print	ALPHA WIRE-* P/N 6431 9PR 18 AWG SHIELDED 105C (UL) TYPE PLTC SUN RES OR TYPE CM OR C(UL) 60C TYPE CMG FT4 CE ROHS * = Factory Code *Note: Product may have c(UL) or CSA markings depending upon plant of manufacture.*	

Applicable Specifications

1) UL	CM	105°C
	PLTC	105°C
	SUN RES	
2) CSA International	C(UL) TYPE CMG	60°C
	FT4	
3) CE	EU Low Voltage Directive 2014/35/EU	

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.
3) California Proposition 65	This product may contain substances known to the State of California to cause Cancer or Reproductive Harm, but is exempt from labeling based on the Consent Judgement. See the Alpha Wire website for more detail.

Properties

Physical & Mechanical Properties	
1) Temperature Range	-20 to 105°C
2) Bend Radius	10X Cable Diameter
3) Pull Tension	277 lbs. (max.)
Electrical Properties	*For Engineering purposes only*
1) Voltage Rating	300 V_{RMS}
2) Mutual Capacitance	32 pF/ft @1 kHz, Nominal
3) Ground Capacitance	58 pF/ft @1 kHz, Nominal
4) Characteristic Impedance	66 ω
5) Inductance	0.17 µH/ft, Nominal
6) Conductor DCR	6 ω/1000ft @20°C, Nominal
7) OA Shield DCR	6.4 ω/1000ft @20°C, Nominal

Other

Packaging	Flange x Traverse x Barrel (inches)
a) 1000 FT	30 x 14 x 12 Continuous Length
b) 500 FT	24 x 14 x 12 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: 6431

6431, RoHS-Compliant Commencing With 8/1/2005 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 10/5/2026

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