

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 _{RMS} |
| 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. Refer to the RoHS Certificate of Compliance 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 REACH SVHC Declaration . |

Properties

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| 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. max. |
| 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 (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

| Packaging | 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> |

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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 7/1/2008 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) |

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Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering 11/22/2024

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