

## Customer Specification

### PART NO. SPM1809

### Construction

|                   |       |      |        |      |             | Diameters (In)  |                |
|-------------------|-------|------|--------|------|-------------|---|----------------|
| 1) Component 1    |       |      |        |      |             | 9 X 1 COND  |                |
| a) Conductor      |       |      |        |      |             | 18 (19/30) AWG Bare Copper  | 0.050          |
| b) Insulation     |       |      |        |      |             | 0.016" Wall, Nom. PVC/ 0.005" Wall NYLON  | 0.092          |
| (1) Color Code    |       |      |        |      |             | Alpha Wire Color Code F   |                |
| Cond              | Color | Cond | Color  | Cond | Color       |   |                |
| 1                 | BLACK | 4    | GREEN  | 7    | WHITE/BLACK |   |                |
| 2                 | WHITE | 5    | ORANGE | 8    | RED/BLACK   |   |                |
| 3                 | RED   | 6    | BLUE   | 9    | GREEN/BLACK |   |                |
| 2) Cable Assembly |       |      |        |      |             | 9 Components Cabled   |                |
| a) Twists:        |       |      |        |      |             | 2.7 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) Jacket         |       |      |        |      |             | 0.050" Wall, Nom.,PVC   | 0.438+/- 0.025 |
| a) Color(s)       |       |      |        |      |             | GREEN   |                |
| b) Print          |       |      |        |      |             | ALPHA WIRE-* P/N SPM1809 9C 18 AWG (0.963mm2)<br>SERIES SPM (UL) WTTC 90C DRY/WET 1000V OR<br>(UL) TC-ER 90C DRY/WET 600V DIR BUR SUN RES<br>OR MTW 18 AWG FLEXING --- C(RU) AWM I/II A/B 105C<br>600V FT1 CE ROHS<br>(DATE CODE) (SEQ FOOTAGE)<br>* = Factory Code |                |

### Applicable Specifications

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|                      |                                     |   |
|----------------------|-------------------------------------|---|
| 1) UL                |                                     |   |
| a) Component 1       | Unlisted Conductor                  | 90°C Dry / 90°C Wet / 600 V <sub>RMS</sub>  |
| b) Overall           | UL 1277 TC                          | 90°C Dry / 90°C Wet / 600 V <sub>RMS</sub>  |
|                      | UL 2277 WTTC                        | 90°C Dry / 90°C Wet / 1000 V <sub>RMS</sub> |
|                      | SUN RES                             |   |
|                      | UL 1685 Vertical Tray Flame Test    |   |
|                      | UL 1063 MTW                         | 90°C Dry / 60°C Wet / 600 V <sub>RMS</sub>  |
|                      | DIRECT BURIAL                       |   |
|                      | EXPOSED RUN                         |   |
|                      | OIL RES I                           |   |
| 2) CSA International | C(RU) AWM I/II A/B FT1              | 105°C / 600 V <sub>RMS</sub>                |
| 3) Other             |                                     |   |
| a) Component 1       | ASTM-B174 Class K                   |   |
| 4) 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.  |

## Properties

| <b>Physical &amp; Mechanical Properties</b> |   |
|---|---|
| 1) Temperature Range                        | -40 to 90°C(static), -30 to 90°C (dynamic)      |
| 2) Bend Radius                              | 10X Cable Diameter                              |
| 3) Pull Tension                             | 134 Lbs, Maximum                                |
| 4) Sunlight Resistance                      | Yes   |
| 5) Direct Burial                            | Yes   |
| <b>Electrical Properties</b>                |   |
| (For Engineering purposes only)             |   |
| 1) Voltage Rating                           | 600/1000 V <sub>RMS</sub>                       |
| 2) Capacitance                              | 27 pF/ft @1 kHz, Nominal Conductor to Conductor |
| 3) Inductance                               | 0.19 μH/ft, Nominal                             |
| 4) Conductor DCR                            | 5.6 Ω/1000ft @20°C, Nominal                     |

# Other

| Packaging              | Flange x Traverse x Barrel (inches) |
|------------------------|-------------------------------------|
| a) Bulk(Made-to-order) |                                     |
|                        |                                     |

[www.alphawire.com](http://www.alphawire.com)

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# EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: SPM1809

SPM1809, RoHS-Compliant Commencing With 8/24/2009 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

Lead  
Mercury  
Cadmium  
Hexavalent Chromium  
Polybrominated Biphenyls (PBB)  
Polybrominated Diphenyl Ethers (PBDE) ,  
Including Deca-BDE  
Bis(2-ethylhexyl) phthalate (DEHP)  
Butyl benzyl phthalate (BBP)  
Dibutyl phthalate (DBP)  
Diisobutyl phthalate (DIBP)

## Maximum Control Value

0.1% by weight (1000 ppm)  
0.1% by weight (1000 ppm)  
0.01% by weight (100 ppm)  
0.1% by weight (1000 ppm)  
0.1% by weight (1000 ppm)  
0.1% by weight (1000 ppm)  
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Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering 11/28/2024

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