

## Customer Specification

### PART NO. M10107KW

### Construction

|                   |             |      |         |      |         | Diameters (In)  |  |                |
|-------------------|-------------|------|---------|------|---------|---|--|----------------|
| 1) Component 1    |             |      |         |      |         | 7 X 1 COND  |  |                |
| a) Conductor      |             |      |         |      |         | 10 (105/30) AWG Bare Copper   |  | 0.118          |
| b) Insulation     |             |      |         |      |         | 0.022" Wall, Nom. PVC/ 0.005" Wall NYLON  |  | 0.172          |
| (1) Print         |             |      |         |      |         | ALPHANUMERIC NUMBERS - 1-ONE ALTERNATING AND INVERTED   |  |                |
| (2) Color Code    |             |      |         |      |         | Alpha Wire Color Code KX  |  |                |
| Cond              | Color       | Cond | Color   | Cond | Color   |   |  |                |
| 1                 | GREEN/YELLO | 4    | BLACK#3 | 7    | BLACK#6 |   |  |                |
| 2                 | BLACK#1     | 5    | BLACK#4 |      |         |   |  |                |
| 3                 | BLACK#2     | 6    | BLACK#5 |      |         |   |  |                |
| 2) Cable Assembly |             |      |         |      |         | 7 Components Cabled   |  |                |
| a) Twists:        |             |      |         |      |         | 1.7 Twists/foot (min)   |  |                |
| b) Orientation:   |             |      |         |      |         | Components to be arranged from OUTSIDE LAYER to INSIDE LAYER  |  |                |
| c) Core Wrap      |             |      |         |      |         | Clear Mylar Tape, 25% Overlap, Min.   |  |                |
| 3) Jacket         |             |      |         |      |         | 0.065" Wall, Nom.,PVC   |  | 0.652+/- 0.031 |
| a) Color(s)       |             |      |         |      |         | SLATE   |  |                |
| b) Print          |             |      |         |      |         | ALPHA WIRE-* P/N M10107KW 7C 10 AWG (5.32mm2)<br>SERIES M (UL) WTTC 90C WET/DRY 1000V OR<br>(UL) TC-ER 90C WET/DRY 600V<br>SUN RES DIR BUR OIL RES I OR MTW 10 AWG<br>OR CRU AWM I/II A/B 90C 600V FT4<br>CE ROHS (DATE CODE) (SEQ FOOTAGE)<br>* = Factory Code |  |                |

### Applicable Specifications

|  |
|--|
|  |
|--|

|                      |                                     |   |
|----------------------|-------------------------------------|---|
| 1) UL                | TC                                  | 90°C Dry / 90°C Wet / 600 V <sub>RMS</sub>  |
|                      | EXPOSED RUN                         |   |
|                      | SUN RES                             |   |
|                      | DIRECT BURIAL                       |   |
|                      | OIL RES I                           |   |
|                      | MTW                                 | 90°C Dry / 60°C Wet / 600 V <sub>RMS</sub>  |
|                      | WTTC                                | 90°C Dry / 90°C Wet / 1000 V <sub>RMS</sub> |
| 2) CSA International | FT4                                 |   |
|                      | C(RU) AWM I/II A/B                  | 90°C / 600 V <sub>RMS</sub>                 |
| 3) Other             | Conductors ASTM Class K             |   |
|                      | Conductors IEC Class 5 on AWG size  |   |
| 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.  |
| 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 information.                                     |

## Properties

| <b>Physical &amp; Mechanical Properties</b> |   |
|---|---|
| 1) Temperature Range                        | -30 to 90°C(static), -5 to 90°C (dynamic)             |
| 2) Bend Radius                              | 8X Cable Diameter(static), 8X Cable Diameter(dynamic) |
| 3) Pull Tension                             | 577 Lbs, Maximum                                      |
| 4) Sunlight Resistance                      | Yes   |
| 5) Direct Burial                            | Yes   |
| <b>Electrical Properties</b>                |   |
| (For Engineering purposes only)             |   |
| 1) Voltage Rating                           | 600 V <sub>RMS</sub>                                  |
| 2) Capacitance                              | 33 pF/ft @1 kHz, Nominal Conductor to Conductor       |
| 3) Inductance                               | 0.16 μH/ft, Nominal                                   |
| 4) Conductor DCR                            | 1.02 Ω/1000ft @20°C, Nominal                          |

# Other

| <b>Packaging</b>   | Flange x Traverse x Barrel (inches) |
|--|-------------------------------------|
| a) Bulk(Made-to-order)   |                                     |
| <b>Notes:</b>  |                                     |
| a) Suitable for intermittent or light duty flexing where cycle count will be less than 1,500,000 cycles. |                                     |
|  |                                     |

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

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# EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: M10107KW

M10107KW, RoHS-Compliant Commencing With 01/08/2005 Production

Note: all colors and put-ups

This document certifies that the Alpha part number cited above is manufactured in accordance with Directive 2011/65/EU of the European Union (RoHS 2), with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. The list of restricted substances to 10 items (commonly known as RoHS 3) The reader is referred to these Directives for the specific definitions and **Compliance on this item**. Additionally, Alpha certifies that the listed part number is in compliance with China RoHS "Marking for Control"

## 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)  
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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 this document. This document is intended to be used as a 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 to provide Regulatory information for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulatory requirements. Alpha Wire is an Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering & QA 31/03/2025

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