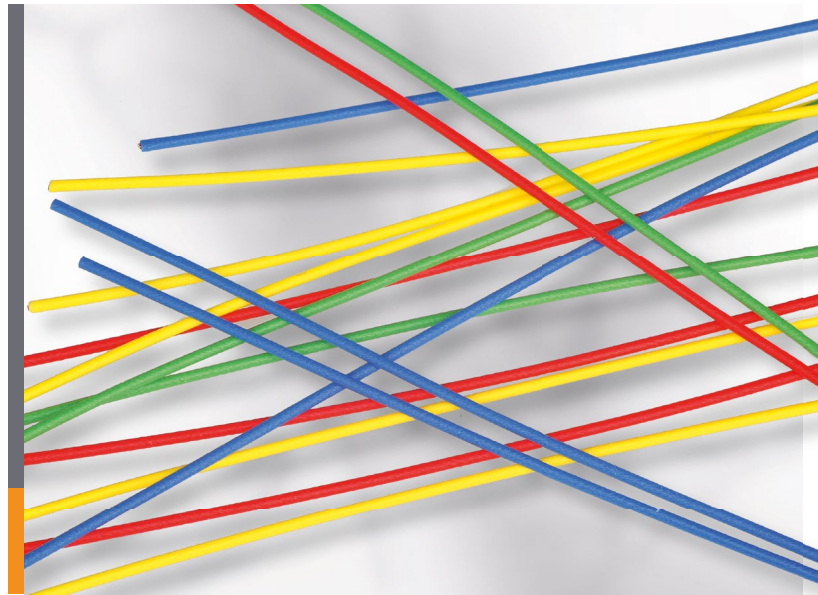


0.13 mm<sup>2</sup> and 0.17 mm<sup>2</sup>

**AUTOMOTIVE  
MINIATURE WIRE  
(AMW)**

T4 (150 °C/3000 hrs)

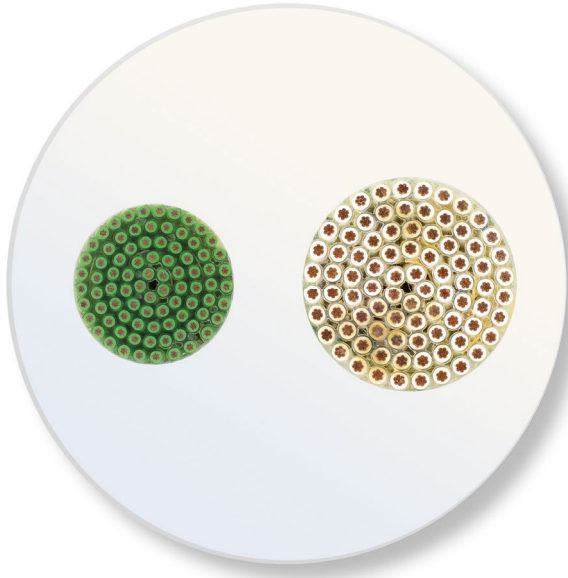


0.13 mm<sup>2</sup> and 0.17 mm<sup>2</sup>

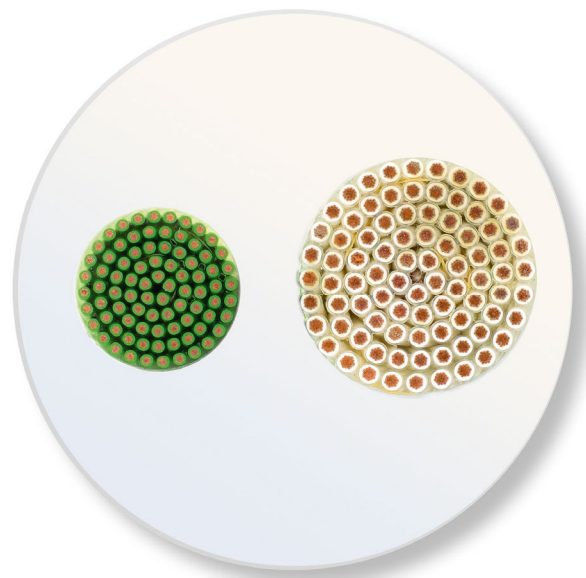
# AUTOMOTIVE MINIATURE WIRE (AMW)

T4 (150° C/3000 hrs)

## High-Performance Automotive Wire



84 wires using 0.13 mm<sup>2</sup> vs 0.35 mm<sup>2</sup>



84 wires using 0.17 mm<sup>2</sup> vs 0.50 mm<sup>2</sup>

As the trend towards miniaturization and increasingly dense packaging continues, TE Connectivity (TE) is launching the newly developed Automotive Miniature Wire (AMW).

The AMW range is rated T4 with an operating temperature of 150 °C/3000 hrs and is manufactured using high strength copper alloy conductors and

TE's unique compound formulations that are designed to perform at high level within harsh environments.

In-line with market trends, particularly CO<sub>2</sub> reduction, the AMW range can contribute in reaching these targets with the weight and space savings the wire brings.

|   |                  | Approx.                  |                     |
|---|------------------|--------------------------|---------------------|
|   | Finished OD (mm) | Conductor Weight (kg/km) | Wire Weight (kg/km) |
| 84 x 0.50 mm <sup>2</sup> Wire Bundle           | 16.1             | 369.60                   | 504.00              |
| 84 x Miniature 0.17 mm <sup>2</sup> Wire Bundle | 11.2             | 134.99                   | 214.00              |
| <b>Saving</b>                                   | <b>4.9</b>       | <b>234.61</b>            | <b>290.00</b>       |

### Product Features

- Continuous operating temperature from -40°C to +150°C (300 hrs)
- Excellent tensile strength
- 50 Volts, thin wall
- Fully compliant with LV112-4
- Resistant to heat damage during splice installation

### TE Connectivity's Raychem AMW range

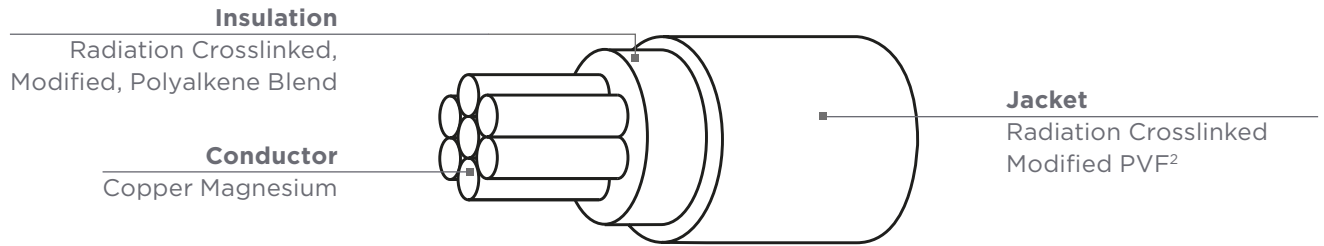
TE's AMW range is designed to perform in harsh environments. These wires are light-weight and offer excellent temperature resistance.

### Typical Properties

| Typical Properties            | Method                             | Typical Value                               |
|-------------------------------|------------------------------------|---|
| Operating Temperature         | LV112/ISO 6722                     | -40°C to +150°C                             |
| Voltage                       |                                    | 50 Volts                                    |
| Thermal Life                  | LV112/ISO 6722                     | 3000 hours @ 150°C                          |
| Heat Shock                    | LV112/ISO 6722                     | 24 hours @ 175°C                            |
| Thermal Overload              | LV112/ISO 6723                     | 6 hours @ 200°C                             |
| Abrasion                      | LV112/ISO 6722                     | Pass 45° < 30 seconds                       |
| Flammability                  | LV112/ISO 6722                     | > 300 cycles                                |
| Insulation Strip Force        | LV112/ISO 6722                     | < 40N                                       |
| Volume Resistivity            | LV112/ISO 6722                     | 2 x 10 <sup>6</sup> Mohms m                 |
| Resistance to Substances      | LV112/ISO 6722                     | No breakdown @ 1 KV for 1 minute < 1% swell |
| Ozone Resistance              | LV112/ISO 6722                     | Pass  |
| Mycological                   | BS2 011 Part 2 1J                  | Pass  |
| Hydrolysis                    | 21 days 90°C, 48V                  | Pass  |
| Shrinkage @ 150°C for 15 mins | LV112/ISO 6722                     | Pass  |
| Resistance to winding tapes   | 3000 hours @ 150°C                 | No breakdown @ 1KV                          |
| Release Specification         | TE Connectivity's Raychem WSD 2519 |   |

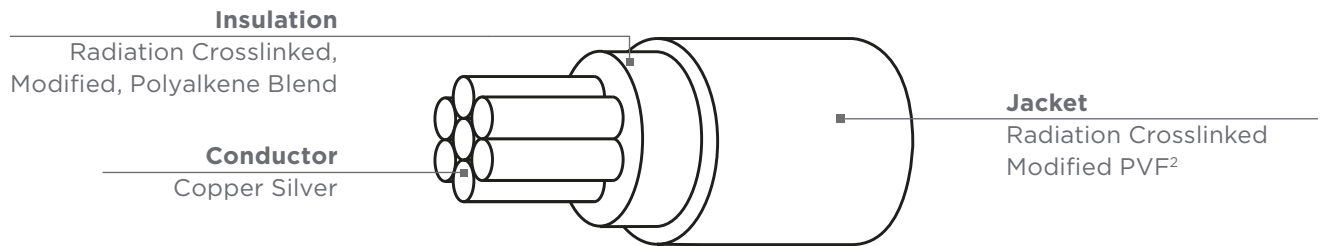
| Cross Section (mm <sup>2</sup> ) | Approx. Conductor Weight (kg/km) | Tensile Strength (N) |
|----------------------------------|----------------------------------|----------------------|
| 0.13                             | 1.31                             | 87.5                 |
| 0.17                             | 1.70                             | 102.6                |
| 0.35                             | 3.05                             | 88.9                 |
| 0.50                             | 4.40                             | 115.6                |

## Automotive AMW range



| Part Number        | Conductor Cross Sectional Area (mm <sup>2</sup> ) | Maximum Conductor Stranding No. / Diam. (mm) | Conductor Diameter (mm)<br>Max. | Max. Conductor Resistance @ 20° C (ohms/km) | Overall Insulation Thickness Min. (mm) | Finished Wire     |        |                   | Approx. Weight per Unit Length (kg/km) | Copper Weight Information only (g/m) |
|--------------------|---|--|---------------------------------|---|--|-------------------|--------|-------------------|--|--------------------------------------|
|                    |   |  |                                 |   |  | Diameter (mm)     |        |                   |  |                                      |
|                    |   |  |                                 |   |  | Lower Spec. Limit | Target | Upper Spec. Limit |  |                                      |
| AMW021-CUMG-0.13-* | 0.13  | 7/0.158                                      | 0.460                           | 170   | 0.20                                   | 0.95              | 1.00   | 1.05              | 2.1                                    | 1.2                                  |
| AMW021-CUMG-0.17-* | 0.17  | 7/0.185                                      | 0.549                           | 140   | 0.20                                   | 1.00              | 1.05   | 1.10              | 2.5                                    | 1.6                                  |

\* Wire color and packaging type



| Part Number        | Conductor Cross Sectional Area (mm <sup>2</sup> ) | Maximum Conductor Stranding No. / Diam. (mm) | Conductor Diameter (mm)<br>Max. | Max. Conductor Resistance @ 20° C (ohms/km) | Overall Insulation Thickness Min. (mm) | Finished Wire     |        |                   | Approx. Weight per Unit Length (kg/km) | Copper Weight Information only (g/m) |
|--------------------|---|--|---------------------------------|---|--|-------------------|--------|-------------------|--|--------------------------------------|
|                    |   |  |                                 |   |  | Diameter (mm)     |        |                   |  |                                      |
|                    |   |  |                                 |   |  | Lower Spec. Limit | Target | Upper Spec. Limit |  |                                      |
| AMW021-CUAG-0.13-* | 0.13  | 7/0.158                                      | 0.460                           | 145   | 0.20                                   | 0.95              | 1.00   | 1.05              | 2.1                                    | 1.2                                  |
| AMW021-CUAG-0.17-* | 0.17  | 7/0.185                                      | 0.549                           | 105   | 0.20                                   | 1.00              | 1.05   | 1.10              | 2.5                                    | 1.6                                  |

\* Wire color and packaging type

# TE CONNECTIVITY ONLINE

[TE.com](http://TE.com) offers an enhanced digital experience, with more than 250,000 parts profiled. The site has deep, rich product data and easier access to tools and services. Other offerings include improved search and navigation and knowledge and idea sharing.



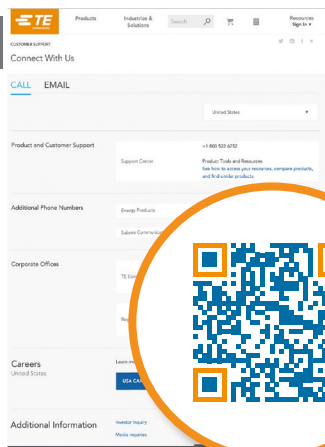
## COLLATERAL

TE.com offers a variety of product-specific catalogs, brochures, white papers and other technical information. To download our literature visit [www.te.com/usa-en/industries/automotive/automotiveliterature.html](http://www.te.com/usa-en/industries/automotive/automotiveliterature.html)



## PRODUCT INFORMATION

Search for a specific product by category, part number or document number. [www.TE.com](http://www.TE.com)



## STAY CONNECTED

You can rely on TE's PIC Team to answer your general or technical questions. To contact a PIC representative, visit [www.TE.com/support-center](http://www.TE.com/support-center)

---

**TE Connectivity Germany GmbH**

Ampèrestrasse 12-14

64625 Bensheim

Germany

Phone: +49 (0)6251 133-0

Fax: +49 (0)6251 133-1600

TE Connectivity Germany GmbH certified acc. ISO 14001 and ISO/TS 16949:2002

© 2016 TE Connectivity family of companies. All rights reserved.

Raychem, TE, TE Connectivity, and TE connectivity (logo) are trademarks.

TE Connectivity's only obligations are those stated in TE's General Terms and Conditions of Business ([www.te.com/aboutus/tandc.asp](http://www.te.com/aboutus/tandc.asp)). TE expressly disclaims any implied warranty regarding the information contained herein, including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose.

1654396-1 | Published 04-2016