



RoHS
Ready 



MFINTY

Modular Hard Wired
Fuse and Relay Box



INDUSTRIAL & COMMERCIAL
TRANSPORTATION

Industrial & Commercial Transportation

When every connection counts, TE Connectivity delivers reliable connectivity products designed to withstand harsh environmental conditions for on and off-highway vehicles and recreational transportation. As a world leader in rough and rugged connectivity, you can depend on TE Connectivity to provide innovative solutions for field applications where failure is not an option.

We go to extremes to make every connection count

The Industrial & Commercial Transportation business unit of TE Connectivity is a world leader in connectors and interconnect systems for use in the toughest and harshest environments. From trucks to tractors, from motorcycles to recreational vehicles, we offer products that work just as hard as the vehicles in which they are installed.

Our intelligent yet robust solutions and technologies function reliably in applications with high vibration and extreme temperature characteristics. The new business unit combines the service portfolios of DEUTSCH and TE Connectivity under one roof. The DEUTSCH brand is a global leader in interconnect solutions for use in heavy equipment and harsh industrial environments.

TE Connectivity has been among the world leaders in interconnect systems for automotive and system manufacturers for over 50 years. We offer you one of the world's most comprehensive connector product portfolios.

Thanks to the breadth of our product range, our global presence and our innovative strength, we are able to develop targeted solutions for the most demanding requirements of a rapidly changing market.

We engineer tough products for your application needs. We know that dependability is a must in the field or at the site. That's why our engineers designed rugged, high vibration resistant connector solutions to meet your application requirements.

Support

We provide options to meet your needs. TE Connectivity offers sales options to service all Industrial & Commercial Transportation customers, including factory direct, LADD Distribution and third party distribution. Contact your local sales representative for more information.

Please note our global contacts on page 21.



Industrial & Commercial Transportation Markets

On-Highway Vehicles

These include trucks (class 6 – 8, and utility), buses (city buses, coaches, school buses) and emergency vehicles.



Off-Highway Vehicles

In this segment, we equip construction vehicles such as front-loaders, dump trucks, excavators and bulldozers. In agriculture vehicles, our products are widely used in tractors and combine harvesters, for example. This segment also includes special vehicles like industrial lifts or material handling vehicles.



Recreational Transportation

From boats (including personal watercraft) to motorcycles, scooters, snowmobiles, ATVs and recreational vehicles, the range of recreational vehicles is broad.

Whatever the application, we have a connector to match.



Industrial & Commercial Transportation

Industrial & Commercial Transportation has the ideal product series for every harsh environment. Our time-tested, high vibration resistant products and technologies provide the right solution for your applications and requirements.

We go to extremes to make every connection count

Interconnection Systems

TE Connectivity's electrical and electronic interconnection products and solutions are used to electrically and mechanically join wires and cables, printed circuit boards, integrated circuit packages and batteries.



Cable Assemblies

TE Connectivity is your partner for vehicle-specific cable assemblies. We offer research and development capabilities, prototypes and samples, as well as manufacturing facilities for special cable assemblies.



Hybrid & Electric Mobility Solutions

Electric mobility is changing the way engineers think about vehicles. The way they're designed and engineered. The way they're fueled. Even the way the fuel is delivered. And we're right there with you helping complete the connections for current and nextgeneration hybrid and electric mobility and the charging infrastructure. TE Connectivity's complete portfolio of connection and protection systems includes battery connectivity systems, connectors, cable assemblies, high-voltage relays and contactors, power distribution units and customer-specific designs.



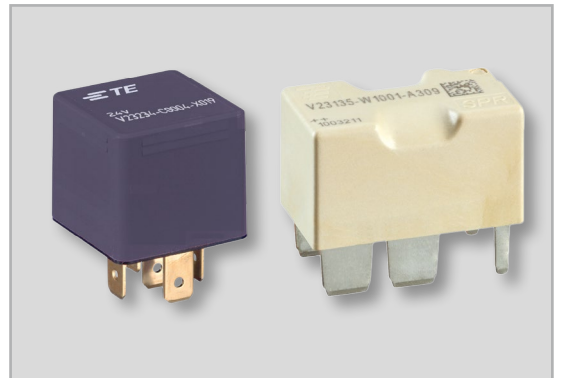
Sensors

TE Connectivity provides contactless and electromechanical sensor products with robust housing technologies, connection systems and temperature-resistant design for use in a variety of industrial and commercial transportation applications.



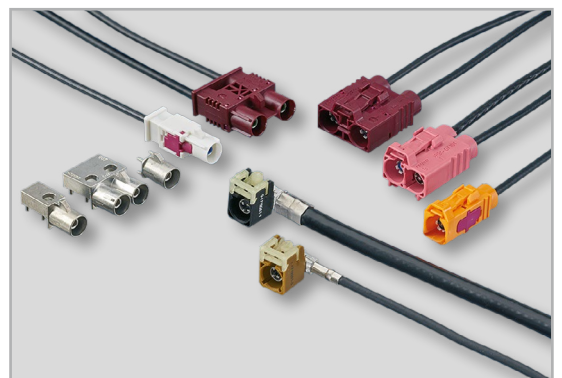
Relays

TE Connectivity's 24 V relay product line includes a broad range of robust and versatile relays for many diverse applications within trucks, buses, agricultural tractors, construction equipment and other heavy duty commercial vehicles. With increased contact gaps and other key design features, these relays are designed for use in challenging environments where they may regularly encounter extended periods of shock and vibration.



Infotainment

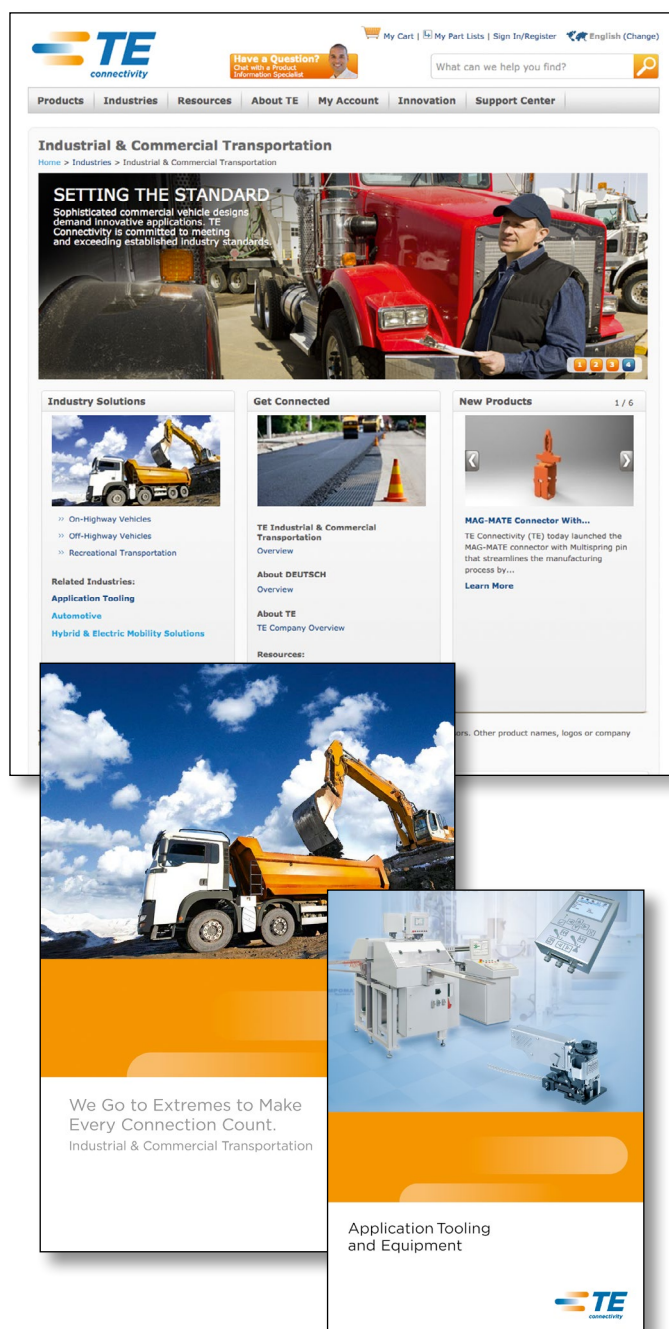
TE Connectivity offers a wide variety of infotainment solutions for consumer port connections, high data rate applications, next-generation harness architecture, board-to-board connections and vehicle-to-vehicle communication.



Industrial & Commercial Transportation

The TE Connectivity Industrial & Commercial Transportation website is an innovative and interactive source for application information, product updates and technical solutions.

Industrial & Commercial Transportation online



Product and Machine Literature

TE Connectivity Industrial & Commercial Transportation offers a variety of product specific catalogs, brochures and high impact flyers to help better serve you!

For more information on literature for TE Connectivity Industrial & Commercial Transportation, please contact your local organization or go to www.te.com/en/industries/industrial-commercial-transportation.html

TE Products

www.te.com/en/products/product-landing.html

Product Information Center (PIC)

You can rely on TE Connectivity's PIC Team to provide you support for answers to your general information or technical questions in an efficient and effective manner.

To reach our PIC staff, please contact your local organization or see our Global Contacts page. Please contact us at www.te.com/support-center

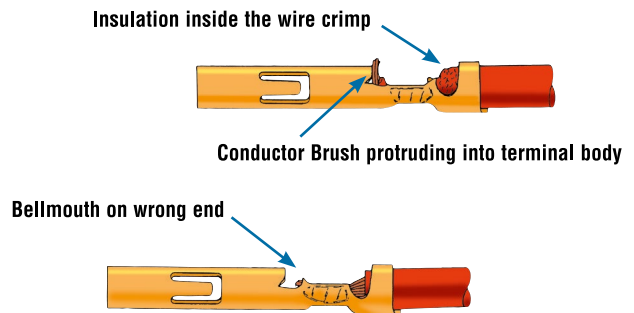
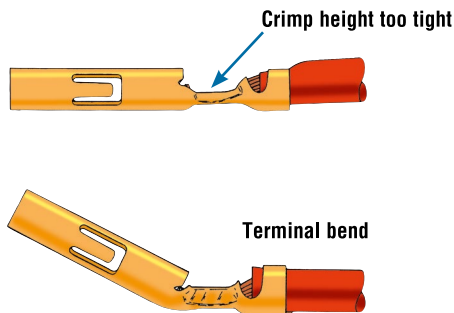
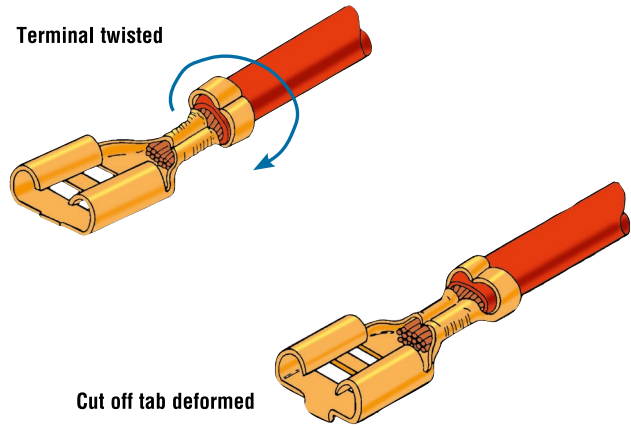
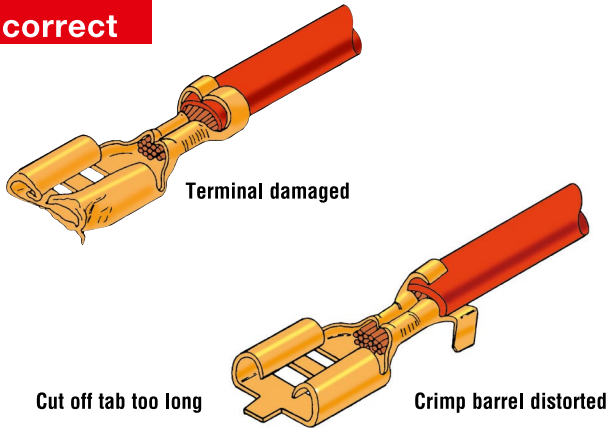
Every connection counts



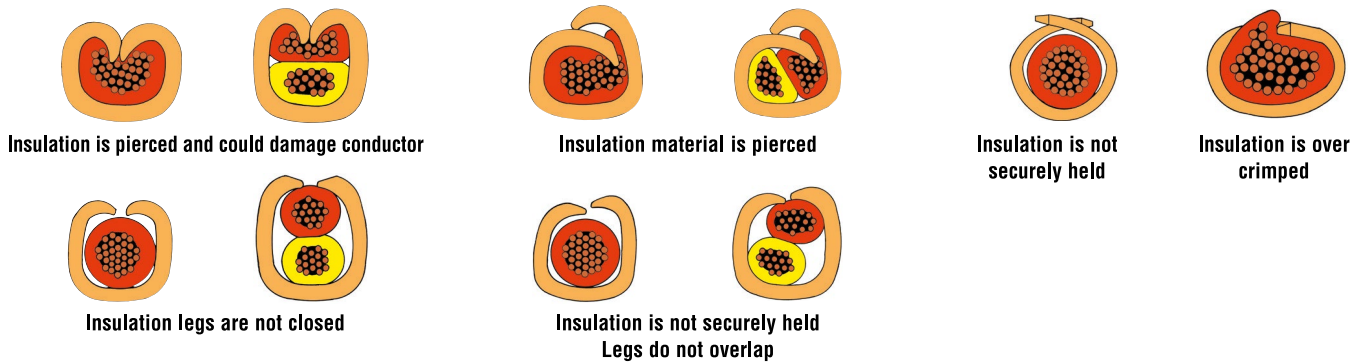
***We are worldwide the right connection
for the toughest jobs***

Quality Guidelines

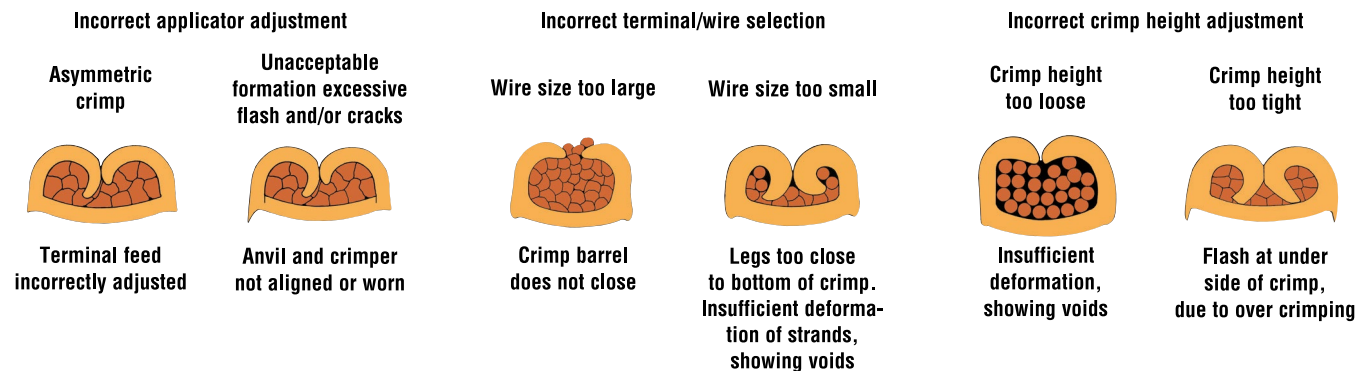
Incorrect



INSULATION CRIMP



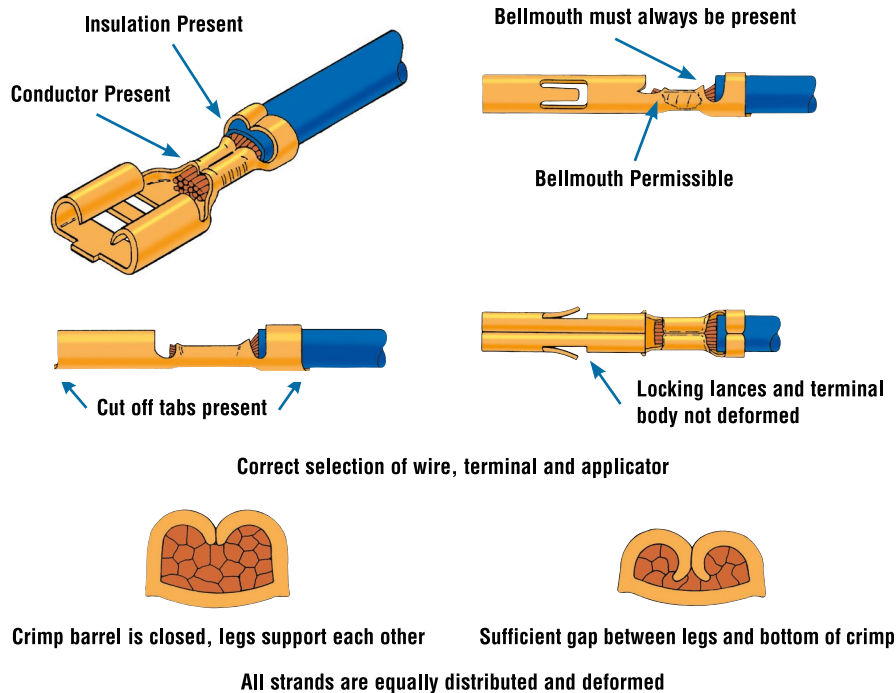
WIRE CRIMP



Quality Guidelines

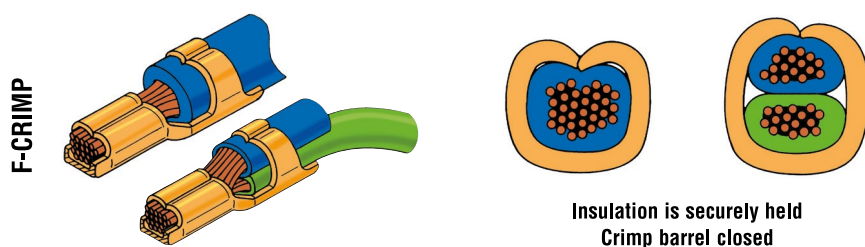
Correct

WIRE CRIMP

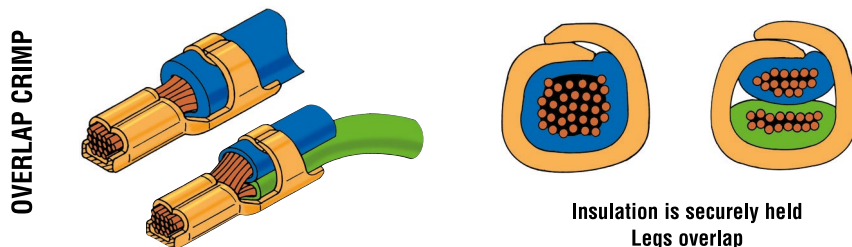


INSULATION CRIMP

Correct Insulation Diameter, Applicator and Terminal



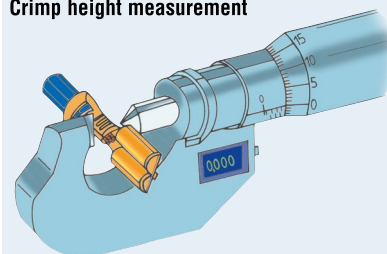
For double wire applications with different size wires always place wire with smallest outer diameter in the bottom



Test

WIRE CRIMP

Crimp height measurement

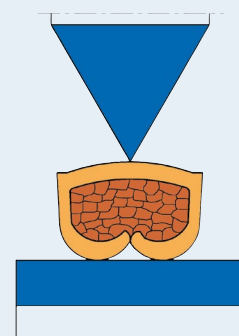


Crimp heights and tolerances

For crimp height tolerances for any given contact, please refer to the relevant application specification.

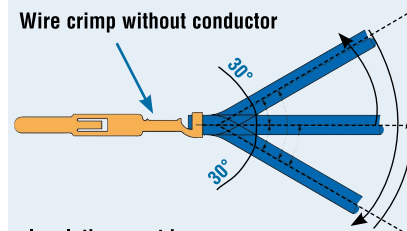
Examples:

| Con- tact | Part No. | Wire Range (mm ²) | Toler- ance (mm) | Appli- cation Spec. |
|--------------|------------------|-------------------------------------|------------------------|---------------------------|
| MQS | 962885 962886 | 0.2–0.5 | ±0.03 | 114-18025 |
| JPT | 927775 | 0.5–1.0 | ±0.05 | 114-18050 |
| JPT | 927773 | 1.5–2.5 | ±0.05 | 114-18050 |



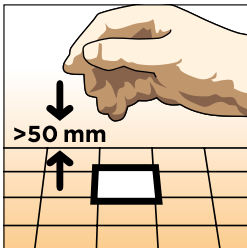
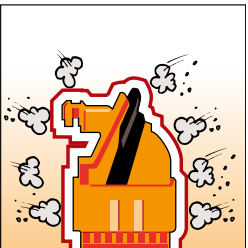
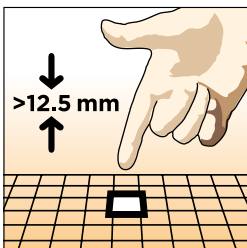
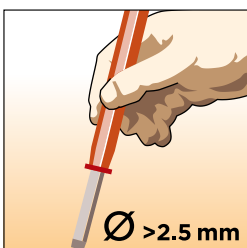
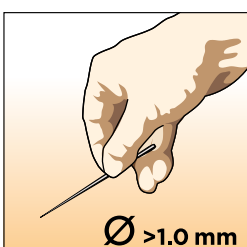
Digital Crimp Height Micrometer
(0.001 mm increments) acc. to DIN ISO 9001
Part No. 547203-1


INSULATION CRIMP



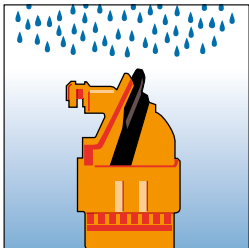

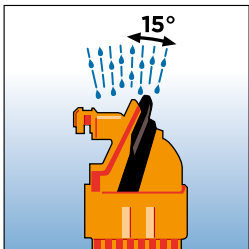

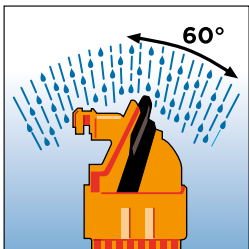
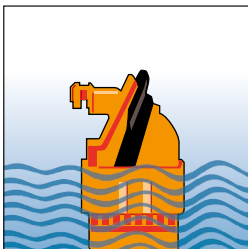
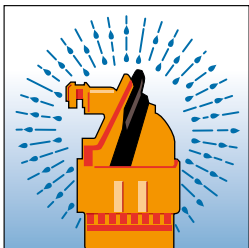
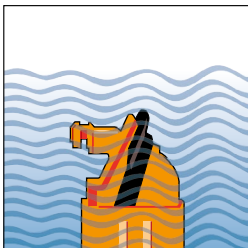
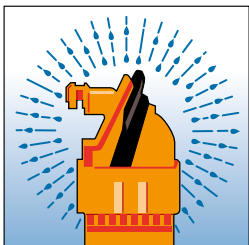

Wire crimp without conductor


Insulation must be
securely held
after bend test

IP Code (Elements and Significance acc. to IEC 60529 and DIN 40050)

| 1st Digit | Against Foreign Objects (incl. Dust) | 1st Digit | Against Foreign Objects (incl. Dust) |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------|
| 0 |  <p>Not protected.</p> | 5K |  <p>Dust protected.</p> |
| 1 |  <p>Protected against solid objects greater than 50 mm (ex. back of hand).</p> | 6K |  <p>Dust tight.</p> |
| 2 |  <p>Protected against solid objects greater than 12.5 mm (ex. finger).</p> | | |
| 3 |  <p>Protected against solid objects greater than 2.5 mm (ex. tool).</p> | | |
| 4 |  <p>Protected against solid objects greater than 1.0 mm (ex. wire).</p> | | |

IP Code (Elements and Significance acc. to IEC 60529 and DIN 40050)

| 2nd Digit | Against Water | | 2nd Digit | Against Water | |
|-----------|-------------------------------------------------------------------------------------|------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| 0 |  | Not protected. | 5 |  | Protected against jetting water. |
| 1 |  | Protected against vertically dripping water. | 6 |  | Protected against powerfully jetting water. |
| 2 |  | Protected against dripping water when tilted up to 15°. | 6K |  | Protected against powerfully jetting water with increased pressure (Automotive). |
| 3 |  | Protected against spraying water (up to 60° inclination). | 7 |  | Protected against the temporary effects of immersion up to 1 meter. |
| 4 |  | Protected against splashing water. | 8 |  | Protected against continuous submersion agreed with customer, but more severe than code 7. |
| 4K |  | Protected against splashing water with increased pressure. | 9K |  | Protected against high-pressure/steam-jet cleaning (Automotive). |

Restriction on the Use of Hazardous Substances (RoHS)

Restriction on the use of Hazardous Substances (RoHS)

At TE Connectivity, we're ready to support your RoHS requirements. We've assessed more than 1.5 million end items/components for RoHS compliance, and issued new part numbers where any change was required to eliminate the restricted materials. Part numbers in this catalog are identified as:

RoHS Compliant

Part numbers in this catalog are RoHS Compliant, unless marked otherwise.

These products comply with European Union Directive 2002/95/EC as amended 1 January 2006 that restricts the use of lead, mercury, cadmium, hexavalent chromium, PBB, and PBDE in certain electrical and electronic products sold into the EU as of 1 July 2006.

Note: For purposes of this Catalog, included within the definition of RoHS Compliant are products that are clearly "Out of Scope" of the RoHS Directive such as hand tools and other non-electrical accessories.

Non-RoHS Compliant

These part numbers are identified with a "◆" symbol. These products do not comply with the material restrictions of the European Union Directive 2002/95/EC.

5 of 6 Compliant

A "●" symbol identifies these part numbers. These products do not fully comply with the European Union Directive 2002/95/EC because they contain lead in solderable interfaces (they do not contain any of the other five restricted substances above allowable limits). However, these products may be suitable for use in RoHS applications where there is an application-based exception for lead in solders, such as the server, storage, or networking infrastructure exemption.

Note: Information regarding RoHS compliance is provided based on reasonable inquiry of our suppliers and represents our current actual knowledge based on the information provided by our suppliers. This information is subject to change. For latest compliance status, refer to our website referenced below.

Getting the information you need

Our comprehensive on-line RoHS Customer Support Center provides a forum to answer your questions and support your RoHS needs. A RoHS FAQ (Frequently Asked Questions) is available with links to more detailed information. You can also submit RoHS questions and receive a response within 24 hours during a normal work week. The Support Center also provides:

- Cross-Reference from Non-compliant to Compliant Products
- Ability to browse RoHS Compliant Products in our on-line catalog:
<http://www.te.com/commerce/alt/RohsAltHome.do>
- Downloadable Technical Data Customer Information Presentation
- More detailed information regarding the definitions used above

So whatever your questions when it comes to RoHS, we've got the answers at <http://www.te.com/customersupport/rohssupportcenter/>

RoHS
Customer
Support
Center 

AWG Conversion Table (Average Value)

Conversion Tables

Most of the wire size ranges are mentioned in mm², as well as the insulation diameters which are in many cases only in mm's.

We therefore included the conversion tables on page X and page XI.

Please note that wire and insulation sizes are for guidance only.

Consult the customer drawing for precise detail.

| AWG Code | Diameter (Inch) | Diameter (mm) | F (mm ²) |
|----------|-----------------|---------------|----------------------|
| 000000 | 0.5800 | 14.733 | 170.0 |
| 00000 | 0.5165 | 13.13 | 135.0 |
| 0000 | 0.4600 | 11.684 | 103.8 |
| 000 | 0.4096 | 10.40 | 79.0 |
| 00 | 0.3648 | 9.27 | 67.5 |
| 0 | 0.3249 | 8.25 | 53.4 |
| 1 | 0.2893 | 7.34 | 42.2 |
| 2 | 0.2576 | 6.55 | 33.7 |
| 3 | 0.2294 | 5.82 | 26.6 |
| 4 | 0.2043 | 5.18 | 21.0 |
| 5 | 0.1819 | 4.62 | 16.9 |
| 6 | 0.1620 | 4.115 | 13.25 |
| 7 | 0.1443 | 3.66 | 10.25 |
| 8 | 0.1285 | 3.26 | 8.34 |
| 9 | 0.1144 | 2.90 | 6.6 |
| 10 | 0.1019 | 2.59 | 5.27 |
| 11 | 0.0907 | 2.30 | 4.15 |
| 12 | 0.0808 | 2.05 | 3.3 |
| 13 | 0.0720 | 1.83 | 2.63 |
| 14 | 0.0641 | 1.63 | 2.08 |
| 15 | 0.0571 | 1.45 | 1.65 |
| 16 | 0.0508 | 1.29 | 1.305 |
| 17 | 0.0453 | 1.14 | 1.01 |
| 18 | 0.0403 | 1.02 | 0.79 |
| 19 | 0.0359 | 0.91 | 0.65 |
| 20 | 0.0320 | 0.81 | 0.51 |
| 21 | 0.0285 | 0.72 | 0.407 |
| 22 | 0.0253 | 0.64 | 0.32 |
| 23 | 0.0226 | 0.57 | 0.255 |
| 24 | 0.0201 | 0.51 | 0.205 |
| 25 | 0.0179 | 0.455 | 0.162 |
| 26 | 0.0159 | 0.40 | 0.125 |
| 27 | 0.0142 | 0.36 | 0.102 |
| 28 | 0.0126 | 0.320 | 0.08 |
| 29 | 0.0113 | 0.287 | 0.0646 |
| 30 | 0.0100 | 0.254 | 0.0516 |
| 31 | 0.0089 | 0.226 | 0.04 |
| 32 | 0.0080 | 0.203 | 0.0324 |
| 33 | 0.0071 | 0.180 | 0.0255 |
| 34 | 0.0063 | 0.160 | 0.02 |
| 35 | 0.0056 | 0.142 | 0.0158 |
| 36 | 0.0050 | 0.127 | 0.0127 |
| 37 | 0.0045 | 0.114 | 0.01 |
| 38 | 0.0040 | 0.101 | 0.008 |
| 39 | 0.0035 | 0.089 | 0.0062 |
| 40 | 0.0031 | 0.079 | 0.0049 |
| 41 | 0.0028 | 0.071 | 0.00395 |
| 42 | 0.0025 | 0.064 | 0.00321 |
| 43 | 0.0022 | 0.056 | 0.00246 |
| 44 | 0.00198 | 0.050 | 0.00196 |
| 45 | 0.00176 | 0.045 | |
| 46 | 0.00157 | 0.040 | |
| 47 | 0.00140 | 0.036 | |
| 48 | 0.00124 | 0.031 | |
| 49 | 0.00110 | 0.028 | |
| 50 | 0.00099 | 0.025 | |

FLK/FLR Cable

FLK and FLR stand for German DIN (72551) abbreviations.

FLK means:

In German:

- Fahrzeug Leitung Kunststoff

In English:

- Vehicle Cable Plastic

FLR means:

In German:

- Fahrzeug Leitung Reduziert

In English:

- Thin Walled Cable (reduced insulation thickness)

Remark: Starting from 0.03 mm² (AWG 32) a wire can be crimped.

Conversion Table – Inch/mm

| Inch | 0 | 0.001 | 0.002 | 0.003 | 0.004 | 0.005 | 0.006 | 0.007 | 0.008 | 0.009 |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0 | 0 | 0.0254 | 0.0508 | 0.0762 | 0.1016 | 0.1270 | 0.1524 | 0.1778 | 0.2032 | 0.2286 |
| 0.010 | 0.2540 | 0.2794 | 0.3048 | 0.3302 | 0.3556 | 0.3810 | 0.4064 | 0.4318 | 0.4572 | 0.4826 |
| 0.020 | 0.5080 | 0.5334 | 0.5588 | 0.5842 | 0.6096 | 0.6350 | 0.6604 | 0.6858 | 0.7112 | 0.7366 |
| 0.030 | 0.7620 | 0.7874 | 0.8128 | 0.8382 | 0.8636 | 0.8890 | 0.9144 | 0.9398 | 0.9652 | 0.9906 |
| 0.040 | 1.0160 | 1.0414 | 1.0668 | 1.0922 | 1.1176 | 1.1430 | 1.1684 | 1.1938 | 1.2192 | 1.2446 |
| 0.050 | 1.2700 | 1.2954 | 1.3208 | 1.3462 | 1.3716 | 1.3970 | 1.4224 | 1.4478 | 1.4732 | 1.4986 |
| 0.060 | 1.5240 | 1.5494 | 1.5748 | 1.6002 | 1.6256 | 1.6510 | 1.6764 | 1.7018 | 1.7272 | 1.7526 |
| 0.070 | 1.7780 | 1.8034 | 1.8288 | 1.8542 | 1.8796 | 1.9050 | 1.9304 | 1.9558 | 1.9812 | 2.0066 |
| 0.080 | 2.0320 | 2.0574 | 2.0828 | 2.1062 | 2.1336 | 2.1590 | 2.1844 | 2.2098 | 2.2352 | 2.2606 |
| 0.090 | 2.2860 | 2.3114 | 2.3368 | 2.3622 | 2.3876 | 2.4130 | 2.4384 | 2.4638 | 2.4892 | 2.5146 |
| 0.100 | 2.5400 | 2.5654 | 2.5908 | 2.6162 | 2.6416 | 2.6670 | 2.6924 | 2.7178 | 2.7432 | 2.7686 |
| 0.110 | 2.7940 | 2.8194 | 2.8448 | 2.8702 | 2.8956 | 2.9210 | 2.9464 | 2.9718 | 2.9972 | 3.0226 |
| 0.120 | 3.0480 | 3.0734 | 3.0988 | 3.1242 | 3.1496 | 3.1750 | 3.2004 | 3.2258 | 3.2512 | 3.2766 |
| 0.130 | 3.3020 | 3.3274 | 3.3528 | 3.3782 | 3.4036 | 3.4290 | 3.4544 | 3.4798 | 3.5052 | 3.5306 |
| 0.140 | 3.5560 | 3.5814 | 3.6068 | 3.6322 | 3.6576 | 3.6830 | 3.7084 | 3.7338 | 3.7592 | 3.7846 |
| 0.150 | 3.8100 | 3.8354 | 3.8608 | 3.8862 | 3.9116 | 3.9370 | 3.9624 | 3.9878 | 4.0132 | 4.0386 |
| 0.160 | 4.0640 | 4.0894 | 4.1148 | 4.1402 | 4.1656 | 4.1910 | 4.2164 | 4.2418 | 4.2672 | 4.2926 |
| 0.170 | 4.3180 | 4.3434 | 4.3688 | 4.3942 | 4.4196 | 4.4450 | 4.4704 | 4.4958 | 4.5212 | 4.5466 |
| 0.180 | 4.5720 | 4.5974 | 4.6228 | 4.6482 | 4.6736 | 4.6990 | 4.7244 | 4.7498 | 4.7752 | 4.8006 |
| 0.190 | 4.8260 | 4.8514 | 4.8768 | 4.9022 | 4.9276 | 4.9530 | 4.9784 | 5.0038 | 5.0292 | 5.0546 |
| 0.200 | 5.0800 | 5.1054 | 5.1308 | 5.1562 | 5.1816 | 5.2070 | 5.2324 | 5.2578 | 5.2832 | 5.3086 |
| 0.210 | 5.3340 | 5.3594 | 5.3848 | 5.4102 | 5.4356 | 5.4610 | 5.4864 | 5.5118 | 5.5372 | 5.5626 |
| 0.220 | 5.5880 | 5.6134 | 5.6388 | 5.6642 | 5.6896 | 5.7150 | 5.7404 | 5.7658 | 5.7912 | 5.8166 |
| 0.230 | 5.8420 | 5.8674 | 5.8928 | 5.9182 | 5.9436 | 5.9690 | 5.9944 | 6.0198 | 6.0452 | 6.0706 |
| 0.240 | 6.0960 | 6.1214 | 6.1468 | 6.1722 | 6.1976 | 6.2230 | 6.2484 | 6.2738 | 6.2992 | 6.3246 |
| 0.250 | 6.3500 | 6.3754 | 6.4008 | 6.4262 | 6.4516 | 6.4770 | 6.5024 | 6.5278 | 6.5532 | 6.5786 |
| 0.260 | 6.6040 | 6.6294 | 6.6548 | 6.6802 | 6.7056 | 6.7310 | 6.7564 | 6.7818 | 6.8072 | 6.8326 |
| 0.270 | 6.8580 | 6.8834 | 6.9088 | 6.9342 | 6.9596 | 6.9850 | 7.0104 | 7.0358 | 7.0612 | 7.0866 |
| 0.280 | 7.1120 | 7.1374 | 7.1628 | 7.1882 | 7.2136 | 7.2390 | 7.2644 | 7.2898 | 7.3152 | 7.3406 |
| 0.290 | 7.3660 | 7.3914 | 7.4168 | 7.4422 | 7.4676 | 7.4930 | 7.5184 | 7.5438 | 7.5692 | 7.5946 |
| 0.300 | 7.6200 | 7.6454 | 7.6708 | 7.6962 | 7.7216 | 7.7470 | 7.7724 | 7.7978 | 7.8232 | 7.8486 |
| 0.310 | 7.8740 | 7.8994 | 7.9248 | 7.9502 | 7.9756 | 8.0010 | 8.0264 | 8.0518 | 8.0772 | 8.1026 |
| 0.320 | 8.1280 | 8.1534 | 8.1788 | 8.2042 | 8.2296 | 8.2550 | 8.2804 | 8.3058 | 8.3312 | 8.3566 |
| 0.330 | 8.3820 | 8.4074 | 8.4328 | 8.4582 | 8.4836 | 8.5090 | 8.5344 | 8.5598 | 8.5852 | 8.6106 |
| 0.340 | 8.6360 | 8.6614 | 8.6868 | 8.7122 | 8.7376 | 8.7630 | 8.7884 | 8.8138 | 8.8392 | 8.8646 |
| 0.350 | 8.8900 | 8.9154 | 8.9408 | 8.9662 | 8.9916 | 9.0170 | 9.0424 | 9.0678 | 9.0932 | 9.1186 |
| 0.360 | 9.1440 | 9.1694 | 9.1948 | 9.2202 | 9.2456 | 9.2710 | 9.2964 | 9.3218 | 9.3472 | 9.3726 |
| 0.370 | 9.3980 | 9.4234 | 9.4488 | 9.4742 | 9.4996 | 9.5250 | 9.5504 | 9.5758 | 9.6012 | 9.6266 |
| 0.380 | 9.6520 | 9.6774 | 9.7028 | 9.7282 | 9.7536 | 9.7790 | 9.8044 | 9.8298 | 9.8552 | 9.8806 |
| 0.390 | 9.9060 | 9.9314 | 9.9568 | 9.9822 | 10.0076 | 10.0330 | 10.0584 | 10.0838 | 10.1092 | 10.1346 |
| 0.400 | 10.1600 | 10.1854 | 10.2108 | 10.2362 | 10.2616 | 10.2870 | 10.3124 | 10.3378 | 10.3632 | 10.3886 |
| 0.410 | 10.4140 | 10.4394 | 10.4648 | 10.4902 | 10.5156 | 10.5410 | 10.5664 | 10.5918 | 10.6172 | 10.6426 |
| 0.420 | 10.6680 | 10.6934 | 10.7188 | 10.7442 | 10.7696 | 10.7950 | 10.8204 | 10.8458 | 10.8712 | 10.8966 |
| 0.430 | 10.9220 | 10.9474 | 10.9728 | 10.9982 | 11.0236 | 11.0490 | 11.0744 | 11.0998 | 11.1252 | 11.1506 |
| 0.440 | 11.1760 | 11.2014 | 11.2268 | 11.2522 | 11.2776 | 11.3030 | 11.3284 | 11.3538 | 11.3792 | 11.4046 |
| 0.450 | 11.4300 | 11.4554 | 11.4808 | 11.5062 | 11.5316 | 11.5510 | 11.5824 | 11.6078 | 11.6332 | 11.6586 |
| 0.460 | 11.6840 | 11.7094 | 11.7348 | 11.7602 | 11.7856 | 11.8110 | 11.8364 | 11.8618 | 11.8872 | 11.9126 |
| 0.470 | 11.9380 | 11.9634 | 11.9888 | 12.0142 | 12.0396 | 12.0650 | 12.0904 | 12.1158 | 12.1412 | 12.1666 |
| 0.480 | 12.1920 | 12.2174 | 12.2428 | 12.2682 | 12.2936 | 12.3190 | 12.3444 | 12.3698 | 12.3952 | 12.4206 |
| 0.490 | 12.4460 | 12.4714 | 12.4968 | 12.5222 | 12.5476 | 12.5730 | 12.5984 | 12.6238 | 12.6492 | 12.6746 |
| 0.500 | 12.7000 | | | | | | | | | |
| Inch | 0 | 0.001 | 0.002 | 0.003 | 0.004 | 0.005 | 0.006 | 0.007 | 0.008 | 0.009 |

Conversion Table – Inch/mm (continued)

| Inch | 0 | 0.001 | 0.002 | 0.003 | 0.004 | 0.005 | 0.006 | 0.007 | 0.008 | 0.009 |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.500 | 12.7000 | 12.7254 | 12.7508 | 12.7762 | 12.8016 | 12.8270 | 12.8524 | 12.8778 | 12.9032 | 12.9286 |
| 0.510 | 12.9540 | 12.9794 | 13.0048 | 13.0302 | 13.0556 | 13.0810 | 13.1064 | 13.1318 | 13.1572 | 13.1826 |
| 0.520 | 13.2080 | 13.2334 | 13.2588 | 13.2842 | 13.3096 | 13.3350 | 13.3604 | 13.3858 | 13.4112 | 13.4366 |
| 0.530 | 13.4620 | 13.4874 | 13.5128 | 15.5382 | 13.5636 | 13.5890 | 13.6144 | 13.6398 | 13.6652 | 13.6906 |
| 0.540 | 13.7160 | 13.7414 | 13.7668 | 13.7922 | 13.8176 | 13.8430 | 13.8684 | 13.8938 | 13.9192 | 13.9446 |
| 0.550 | 13.9700 | 13.9954 | 14.0208 | 14.0462 | 14.0716 | 14.0970 | 14.1224 | 14.1478 | 14.1732 | 14.1986 |
| 0.560 | 14.2240 | 14.2494 | 14.2748 | 14.3002 | 14.3256 | 14.3510 | 14.3764 | 14.4018 | 14.4272 | 14.4526 |
| 0.570 | 14.4780 | 14.5034 | 14.5288 | 14.5542 | 14.5796 | 14.6050 | 14.6304 | 14.6558 | 14.6812 | 14.7066 |
| 0.580 | 14.7320 | 14.7574 | 14.7828 | 14.8082 | 14.8336 | 14.8590 | 14.8844 | 14.9098 | 14.9352 | 14.9606 |
| 0.590 | 14.9860 | 15.0114 | 15.0368 | 15.0622 | 15.0876 | 15.1130 | 15.1384 | 15.1638 | 15.1892 | 15.2146 |
| 0.600 | 15.2400 | 15.2654 | 15.2908 | 15.3162 | 15.3416 | 15.3670 | 15.3924 | 15.4178 | 15.4432 | 15.4686 |
| 0.610 | 15.4940 | 15.5194 | 15.5448 | 15.5702 | 15.5956 | 15.6210 | 15.6464 | 15.6718 | 15.6972 | 15.7226 |
| 0.620 | 15.7480 | 15.7734 | 15.7988 | 15.8242 | 15.8496 | 15.8750 | 15.9004 | 15.9258 | 15.9512 | 15.9766 |
| 0.630 | 16.0020 | 16.0274 | 16.0528 | 16.0782 | 16.1036 | 16.1290 | 16.1544 | 16.1798 | 16.2052 | 16.2306 |
| 0.640 | 16.2560 | 16.2814 | 16.3068 | 16.3322 | 16.3576 | 16.3830 | 16.4084 | 16.4338 | 16.4592 | 16.4846 |
| 0.650 | 16.5100 | 16.5354 | 16.5608 | 16.5862 | 16.6116 | 16.6370 | 16.6624 | 16.6878 | 16.7132 | 16.7386 |
| 0.660 | 16.7640 | 16.7894 | 16.8148 | 16.8402 | 16.8656 | 16.8910 | 16.9164 | 16.9418 | 16.9672 | 16.9926 |
| 0.670 | 17.0180 | 17.0434 | 17.0688 | 17.0942 | 17.1196 | 17.1450 | 17.1704 | 17.1958 | 17.2212 | 17.2466 |
| 0.680 | 17.2720 | 17.2974 | 17.3228 | 17.3482 | 17.3736 | 17.3990 | 17.4244 | 17.4498 | 17.4752 | 17.5006 |
| 0.690 | 17.5260 | 17.5514 | 17.5768 | 17.6022 | 17.6276 | 17.6530 | 17.6784 | 17.7038 | 17.7292 | 17.7546 |
| 0.700 | 17.7800 | 17.8054 | 17.8308 | 17.8562 | 17.8816 | 17.9070 | 17.9324 | 17.9528 | 17.9832 | 18.0086 |
| 0.710 | 18.0340 | 18.0594 | 18.0848 | 18.1102 | 18.1356 | 18.1610 | 18.1864 | 18.2118 | 18.2372 | 18.2626 |
| 0.720 | 18.2880 | 18.3134 | 18.3388 | 18.3642 | 18.3896 | 18.4150 | 18.4404 | 18.4658 | 18.4912 | 19.5166 |
| 0.730 | 18.5420 | 18.5674 | 18.5928 | 18.6182 | 18.6436 | 18.6690 | 18.6944 | 18.7198 | 18.7452 | 18.7706 |
| 0.740 | 18.7960 | 18.8214 | 18.8468 | 18.8722 | 18.8976 | 18.9230 | 18.9484 | 18.9738 | 18.9992 | 19.0246 |
| 0.750 | 19.0500 | 19.0754 | 19.1008 | 19.1262 | 19.1516 | 19.1170 | 19.2024 | 19.2278 | 19.2532 | 19.2786 |
| 0.760 | 19.3040 | 19.3294 | 19.3548 | 19.3802 | 19.4056 | 19.4310 | 19.4564 | 19.4818 | 19.5072 | 19.5326 |
| 0.770 | 19.5580 | 19.5834 | 19.6088 | 19.6342 | 19.6596 | 19.6850 | 19.7104 | 19.7358 | 19.7612 | 19.7866 |
| 0.780 | 19.8120 | 19.8374 | 19.8628 | 19.8882 | 19.9136 | 19.9390 | 19.9644 | 19.9898 | 20.0152 | 20.0406 |
| 0.790 | 20.0660 | 20.0914 | 20.1168 | 20.1422 | 20.1676 | 20.1930 | 20.2184 | 20.2438 | 20.2692 | 20.2946 |
| 0.800 | 20.3200 | 20.3454 | 20.3708 | 20.3962 | 20.4216 | 20.4470 | 20.4724 | 20.4978 | 20.5232 | 20.5486 |
| 0.810 | 20.5740 | 20.5994 | 20.6248 | 20.6502 | 20.6756 | 20.7010 | 20.7264 | 20.7518 | 20.7772 | 20.8026 |
| 0.820 | 20.8280 | 20.8534 | 20.8788 | 20.9042 | 20.9296 | 20.9550 | 20.9804 | 21.0058 | 21.0312 | 21.0566 |
| 0.830 | 21.0820 | 21.1074 | 21.1328 | 21.1582 | 21.1836 | 21.2090 | 21.2344 | 21.2598 | 21.2852 | 21.3106 |
| 0.840 | 21.3360 | 21.3614 | 21.3868 | 21.4122 | 21.4376 | 21.4630 | 21.4884 | 21.5138 | 21.5392 | 21.5646 |
| 0.850 | 21.5900 | 21.6154 | 21.6408 | 21.6662 | 21.6916 | 21.7170 | 21.7424 | 21.7678 | 21.7932 | 21.8186 |
| 0.860 | 21.8440 | 21.8694 | 21.8948 | 21.9202 | 21.9456 | 21.9710 | 21.9964 | 22.0218 | 22.0472 | 22.0726 |
| 0.870 | 22.0980 | 22.1234 | 22.1488 | 22.1742 | 22.1996 | 22.2250 | 22.2504 | 22.2758 | 22.3012 | 22.3266 |
| 0.880 | 22.3520 | 22.3774 | 22.4028 | 22.4282 | 22.4536 | 22.4790 | 22.5044 | 22.5298 | 22.5552 | 22.5806 |
| 0.890 | 22.6060 | 22.6314 | 22.6568 | 22.6822 | 22.7076 | 22.7330 | 22.7584 | 22.7838 | 22.8092 | 22.8346 |
| 0.900 | 22.8600 | 22.8854 | 22.9108 | 22.9362 | 22.9616 | 22.9870 | 23.0124 | 23.0378 | 23.0632 | 23.0886 |
| 0.910 | 23.1140 | 23.1394 | 23.1648 | 23.1902 | 23.2156 | 23.2410 | 23.2664 | 23.2918 | 23.3172 | 23.3426 |
| 0.920 | 23.3680 | 23.3934 | 23.4188 | 23.4442 | 23.4696 | 23.4950 | 23.5204 | 23.5458 | 23.5712 | 23.5966 |
| 0.930 | 23.6220 | 23.6474 | 23.6728 | 23.6982 | 23.7236 | 23.7490 | 23.7744 | 23.7998 | 23.8252 | 23.8506 |
| 0.940 | 23.8760 | 23.9014 | 23.9268 | 23.9522 | 23.9776 | 24.0030 | 24.0284 | 24.0538 | 24.0792 | 24.1046 |
| 0.950 | 24.1300 | 24.1554 | 24.1808 | 24.2062 | 24.2316 | 24.2570 | 24.2824 | 24.3078 | 24.3332 | 24.3586 |
| 0.960 | 24.3840 | 24.4094 | 24.4348 | 24.4602 | 24.4856 | 24.5110 | 24.5364 | 24.5618 | 24.5872 | 24.6126 |
| 0.970 | 24.6380 | 24.6634 | 24.6888 | 24.7142 | 24.7396 | 24.7650 | 24.7904 | 24.8158 | 24.8412 | 24.8666 |
| 0.980 | 24.8920 | 24.9174 | 24.9428 | 24.9682 | 24.9936 | 25.0190 | 25.0444 | 25.0698 | 25.0952 | 25.1206 |
| 0.990 | 25.1460 | 25.1714 | 25.1968 | 25.2222 | 25.2476 | 25.2730 | 25.2984 | 25.3228 | 25.3492 | 25.3746 |
| 1.000 | 25.4000 | | | | | | | | | |
| Inch | 0 | 0.001 | 0.002 | 0.003 | 0.004 | 0.005 | 0.006 | 0.007 | 0.008 | 0.009 |

Engineering Notes


A large rectangular area filled with a fine grid of small squares, intended for handwritten engineering notes.

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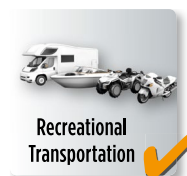


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Engineering Notes

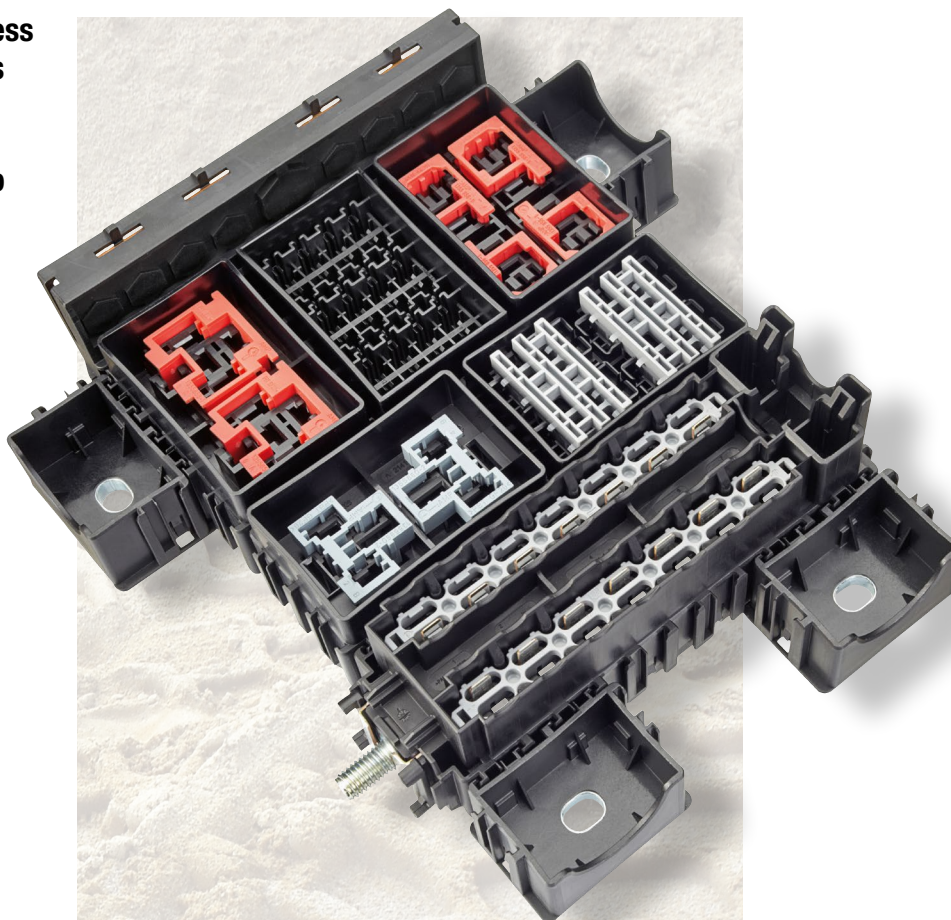
A large rectangular area filled with a fine grid of small squares, intended for handwritten engineering notes or calculations.

Introduction



MFINITY offers limitless combinations with its various modules.

Easily assembled into a complete power distribution panel, without any tooling cost.



All modules and accessories shown in this catalogue are standard products. Upon request, TE Connectivity (TE) will design and manufacture custom modules, wire dress, frame or cover to meet specific customer requirements.

With its proven technology, MFINITY offers flexible, off the shelf products targeting low volume customers to create their own configurations.

Product Facts Overview

- ISO standard
- Modular design
- Temperature class
-40° C to +85° C
- Vibration class on body
- Unsealed
- Overview 114-94092
- Pre-Fuse modules for SF30 (Midi) and Type A (J-Case) Fuses

Modules for Relays
Mini Relay Module, 2 Positions
Technical Features
Material

PBT

Product Specification

108-94263

Application Specification

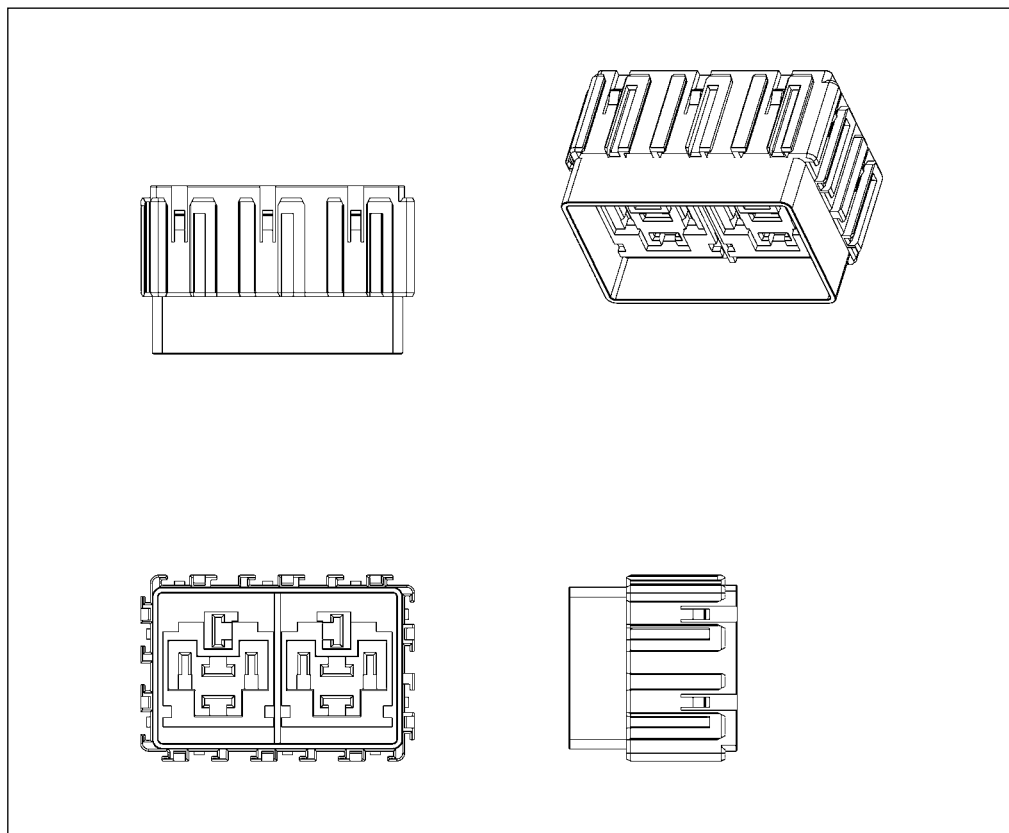
114-94090

Order Informations

2x ISO Mini Relays

Part Number 2141024-1

**Please find suitable relays
on page 5**


Mini Relay Module 2 Positions

| Module P/N | Name | Product Dimensions L x W x H (mm) |
|------------|-------------------|--------------------------------------|
| 2141024-1 | Mini Relay Module | 69.3 x 47 x 42.5 |

Suitable Terminals

| Terminal TE P/N | Description | Material | Plating | Wire Size (mm ²) |
|--------------------|------------------------------|----------|------------|---------------------------------|
| 2208343-1 | LEAR - 6.3mm 361330-YF200 | N/A | Pre-Tinned | 0.5 – 1.5 |
| 2208343-3 | LEAR - 6.3mm 361030-YF200 | N/A | Pre-Tinned | 3 – 5 |

Modules for Relays
Micro Relay Module, 4 Positions
Technical Features
Material

PBT

Product Specification

108-94263

Application Specification

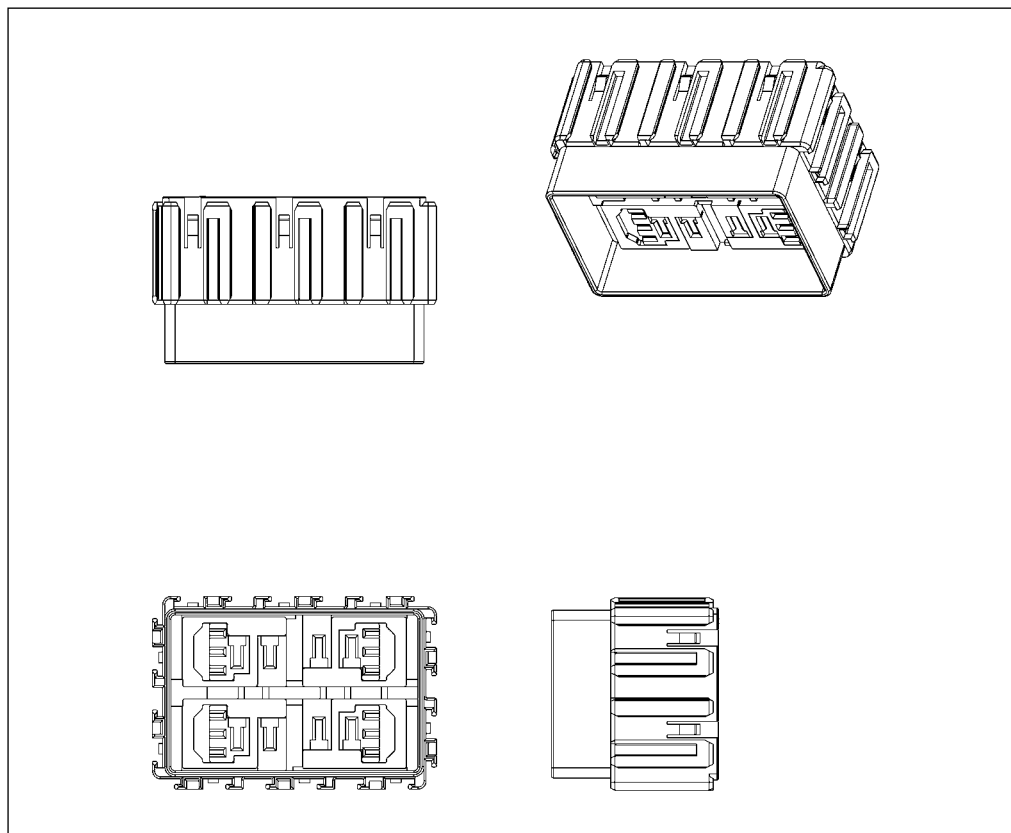
114-94090

Order Informations

4x ISO Micro Relays

Part Number 2141022-1

**Please find suitable relays
on page 5**


Micro Relay Module 4 Positions

| Module P/N | Name | Product Dimensions L x W x H (mm) |
|------------|--------------------|--------------------------------------|
| 2141022-1 | Micro Relay Module | 69.3 x 47 x 40.75 |

Suitable Terminals

| Terminal TE P/N | Description | Material | Plating | Wire Size (mm ²) |
|--------------------|------------------------------|----------|------------|---------------------------------|
| 2208343-2 | LEAR - 6.3mm 361430-YF200 | N/A | Pre-Tinned | 1.5–2.0 |
| 2208342-2 | Molex - 4.8mm 33113-0003 | N/A | N/A | N/A |
| 2208342-1 | Molex - 4.8mm 33113-0005 | N/A | N/A | N/A |

Technical Features

Material

PBT

Product Specification

108-94263

Application Specification

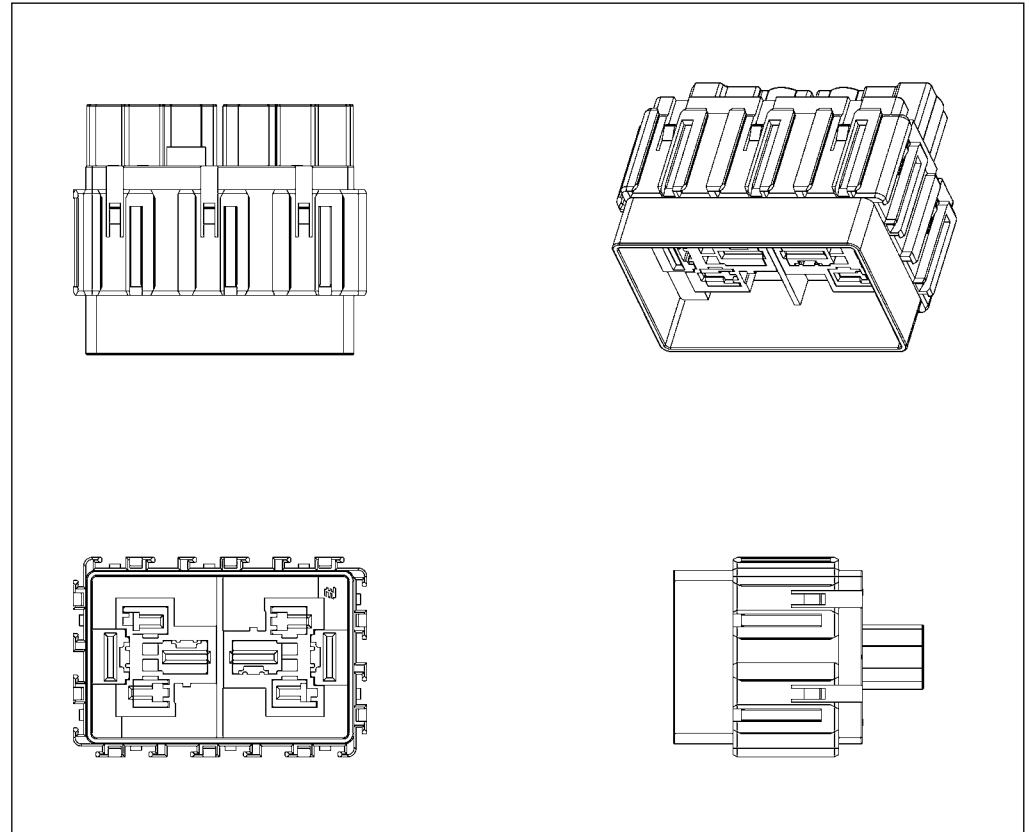
114-94090

Order Informations

2x ISO Maxi Relays

Part Number 2141026-1

**Please find suitable relays
on page 5**



Maxi Relay Module 2 Positions

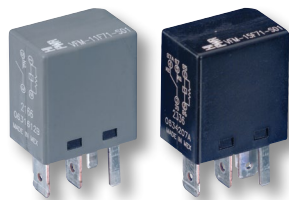
| Module P/N | Name | Product Dimensions L x W x H (mm) |
|------------|-------------------|--------------------------------------|
| 2141026-1 | Maxi Relay Module | 69.3 x 47 x 59 |

Suitable Terminals

| Terminal TE P/N | Description | Material | Plating | Wire Size (mm ²) |
|--------------------|------------------------------|----------|------------|---------------------------------|
| 1-1355849-1 | 9.5 Single Tab | CuNiSi | Pre-Tinned | 6–10 |
| 2208343-1 | LEAR - 6.3mm 361330-YF200 | N/A | Pre-Tinned | 0.5–1.5 |

Relays

Micro ISO Micro Relay A / VFMA, Mini ISO Power Relay B, Maxi ISO Power Relay F7

Micro ISO, Micro Relay A / VFMA (24 V)


| Arrangement | Cover | Coil. Suppr. | Part Number | |
|-----------------------|----------|------------------|-------------------|-------------|
| Micro Make (NO) | Standard | Diode | V23074-A2002-A402 | 6-1393292-2 |
| | | Resistor (680 Ω) | V23074-A1002-A402 | 8-1393292-9 |
| | | | VFMA-11H41-S01 | 6-1415008-2 |
| Micro Changeover (CO) | Standard | Diode | V23074-A2002-A403 | 6-1393292-3 |
| | | Resistor (680 Ω) | V23074-A1002-A403 | 3-1393292-8 |

For detailed information find our data sheets under <http://relays.te.com/telectronics.asp>
Mini ISO, Power Relay B (24 V)


| Arrangement | Cover | Coil. Suppr. | Part Number | |
|-----------------------|----------|--------------------|-------------------|-------------|
| Mini Changeover (C/O) | Standard | – | V23234-A0004-X055 | 2-1904025-6 |
| | | Diode (cathode 86) | V23234-A0004-X051 | 2-1904025-3 |
| | | Resistor (1400 Ω) | V23234-A0004-X053 | 2-1904025-5 |
| | Bracket | – | V23234-A1004-X050 | 1-1904027-1 |
| | | Resistor (1400 Ω) | V23234-A1004-X054 | 3-1904027-2 |
| Mini Make (NO – 2x87) | Standard | – | V23234-C0004-X020 | 1-1904015-3 |
| | | Resistor (1400 Ω) | V23234-C0004-X018 | 2-1904015-1 |
| | Bracket | – | V23234-C1004-X17 | 5-1904014-1 |
| | | Resistor (1400 Ω) | V23234-C1004-X085 | 1904015-5 |

For detailed information find our data sheets under <http://relays.te.com/telectronics.asp>
Maxi ISO Power Relay F7 (24 V)


| Arrangement | Cover | Coil. Suppr. | Part Number | |
|----------------|----------|-------------------|-------------------|-------------|
| Maxi Make (NO) | Standard | – | V23134-J0053-D642 | 9-1393303-7 |
| | | Resistor (1200 Ω) | V23134-J0056-X408 | 1393304-5 |
| | Bracket | – | V23134-J1053-D642 | 1-1393304-1 |

For detailed information find our data sheets under <http://relays.te.com/telectronics.asp>

Modules for Fuses

Medium Fuse Module, 12 Positions

Technical Features

Material

PBT

Product Specification

108-94263

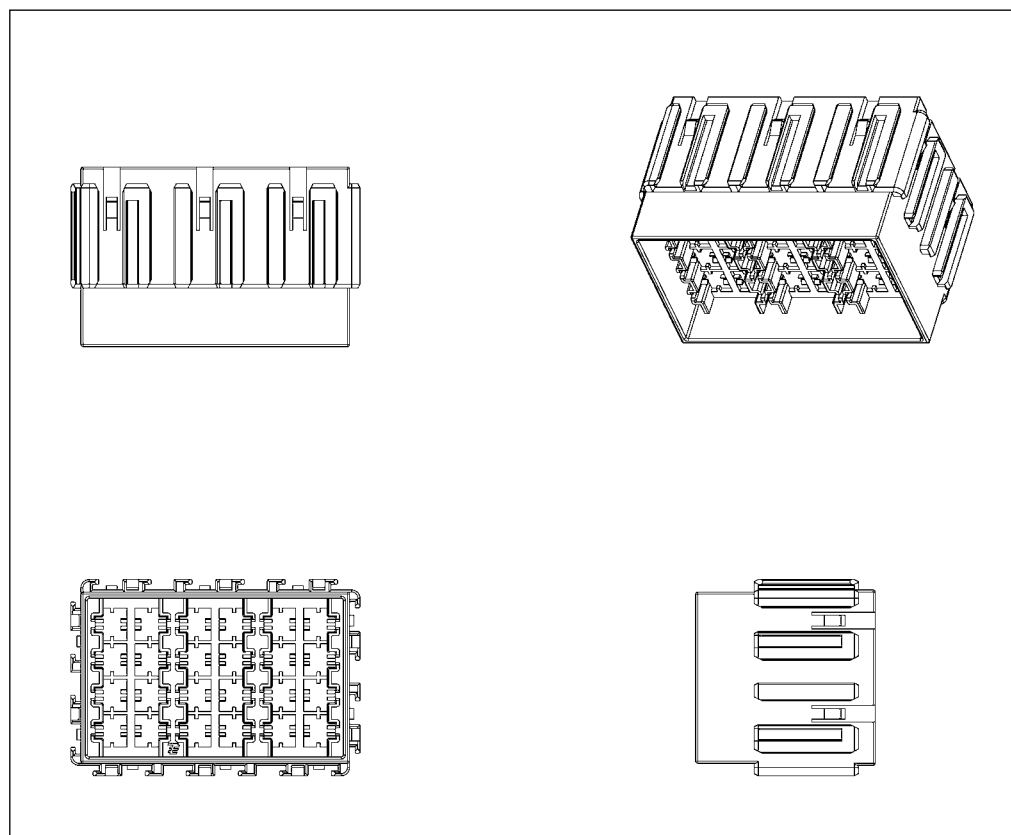
Application Specification

114-94090

Order Informations

12x (ATO) Medium Fuse

Part Number 2141028-1



Medium Fuse Module 12 Positions

| Module P/N | Module Name | Product Dimensions L x W x H (mm) |
|------------|--------------------|--------------------------------------|
| 2141028-1 | Medium Fuse Module | 69.3 x 47 x 43 |

Suitable Terminals

| Terminal TE P/N | Description | Material | Plating | Wire Size (mm ²) |
|--------------------|---------------------|----------|------------|---------------------------------|
| 881572-3 | Fuse Contact Busbar | Brass | Pre-Tinned | 4–6 |
| 880397-2 | Fuse Contact Single | Brass | Pre-Tinned | 0.5–1.5 |
| 880398-1 | Fuse Contact Single | Brass | – | >1–2.5 |
| 880398-2 | Fuse Contact Single | Brass | Pre-Tinned | >1–2.5 |

Modules for Fuses
Miniature Fuse Module, 16 Positions
Technical Features
Material

PBT

Product Specification

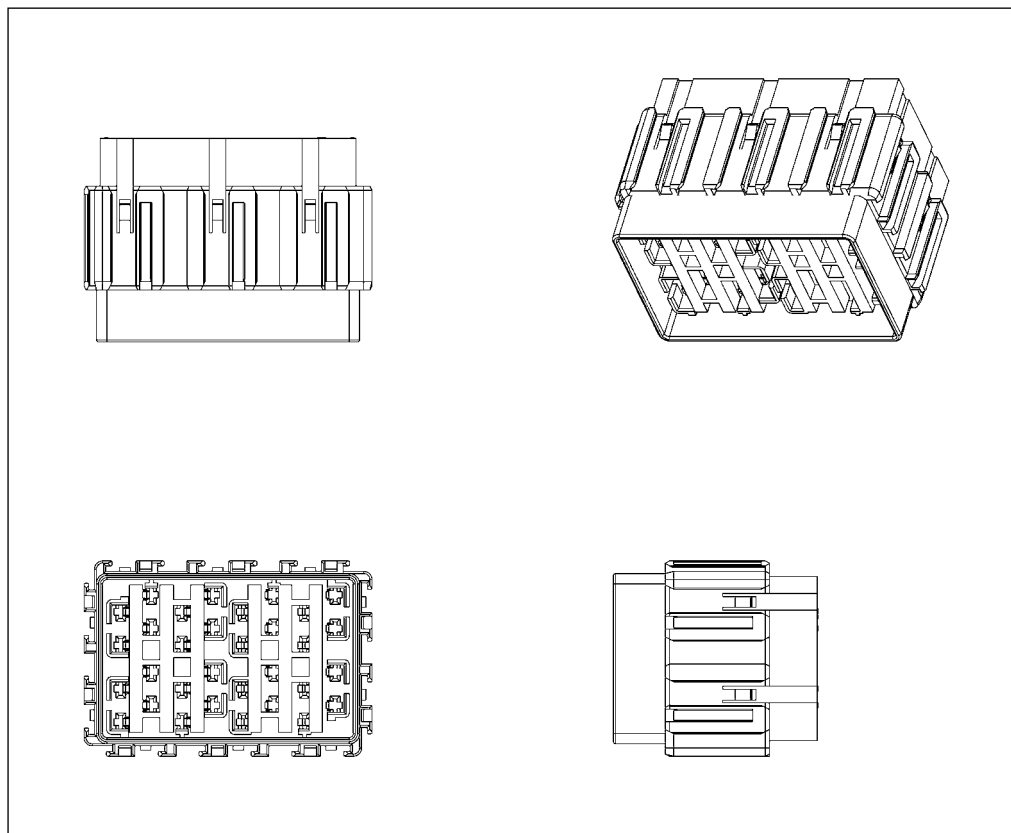
108-94263

Application Specification

114-94090

Order Informations

16x Miniature (Mini) Fuse

Part Number 2141029-1

Miniature Fuse Module 16 Positions

| Module P/N | Module Name | Product Dimensions L x W x H (mm) |
|------------|-----------------------|--------------------------------------|
| 2141029-1 | Miniature Fuse Module | 69.3 x 47 x 43 |

Suitable Terminals

| Terminal TE P/N | Description | Material | Plating | Wire Size (mm ²) |
|--------------------|---------------------|----------|------------|---------------------------------|
| 1-1355844-1 | Fuse Contact Busbar | CuNiSi | Pre-Tinned | 4–6 |
| 1-1355877-1 | Fuse Contact Single | CuNiSi | Pre-Tinned | 1–2.5 |
| 1-1355833-1 | Fuse Contact Single | CuNiSi | Pre-Tinned | 0.5–1.0 |
| 1-1355880-1 | Fuse Contact Single | CuNiSi | Pre-Tinned | 2.5–4 |

Technical Features

Material

PBT

Product Specification

108-94263

Application Specification

114-94090

Order Informations

Spare Fuse Module

Part Number 1-2141095-1

Can contain up to:

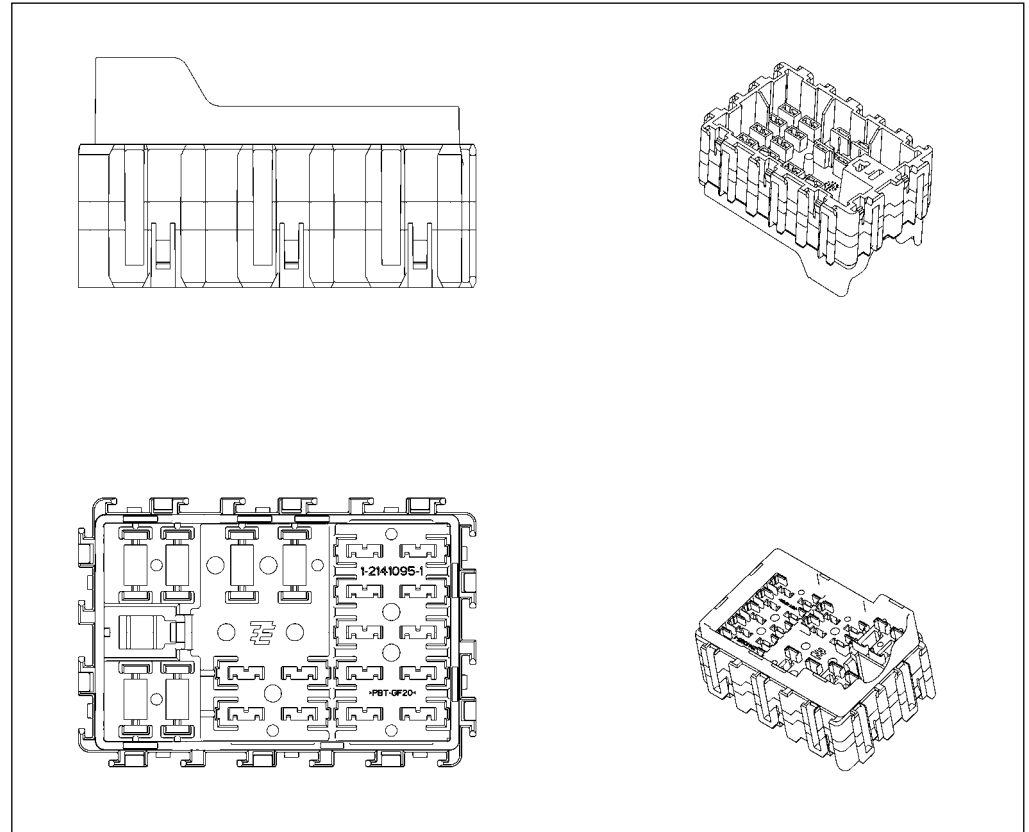
- 7x Medium (ATO) Fuses
used in module

Part Number 2141028-1

- 6x Miniature (Mini) Fuses
used in module

Part Number 2141029-1

- 1x Fuse Puller



Spare Fuse Module

| Module P/N | Module Name | Product Dimensions L x W x H (mm) |
|-------------|-------------------|--------------------------------------|
| 1-2141095-1 | Spare Fuse Module | 69.1 x 46.7 x 40 |

Modules for Pre-Fuses

Type A Fuse Module, 14 Positions – Busbar Version

Technical Features

Material

PA6

Product Specification

108-94263

Application Specification

114-94090

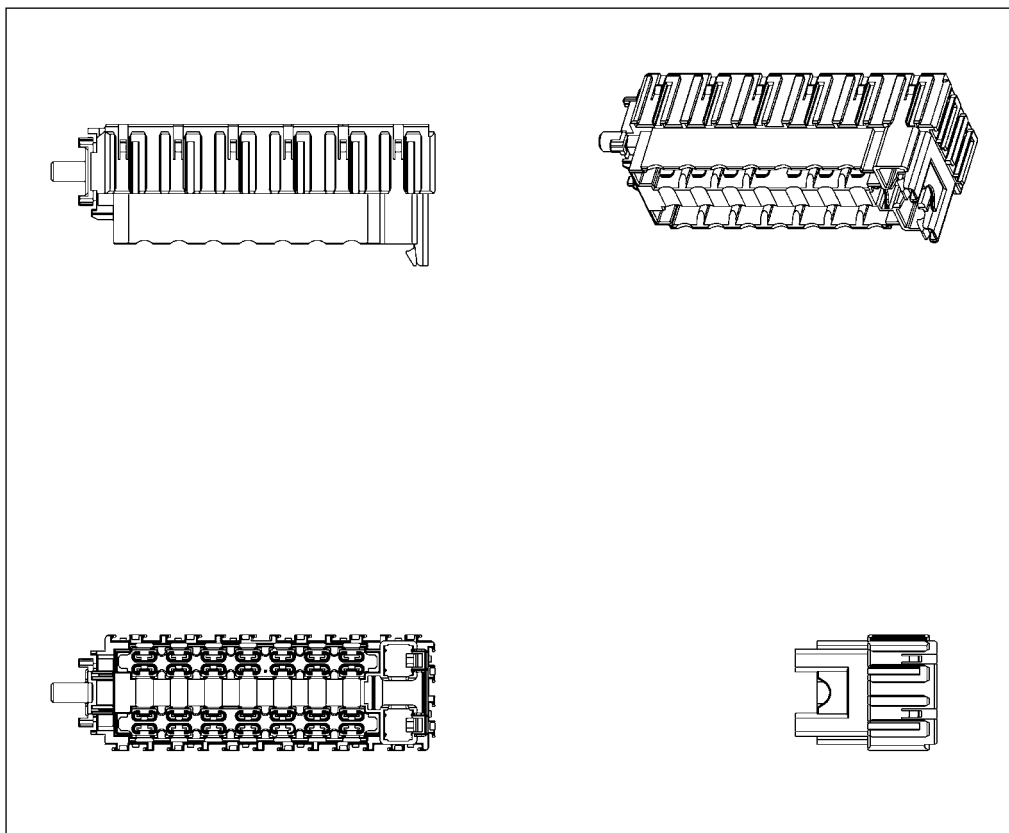
Order Informations

Screw M8 for B+ Connection
with wire up to 35mm²

14x Type A Fuse (J-Case)

Part Number 2141040-1

2x Spare Fuse places



Type A Fuse Module 14 Positions – Busbar Version

| Module P/N | Module Name | Product Dimensions L x W x H (mm) |
|------------|----------------------------------------|--------------------------------------|
| 2141040-1 | Type A Fuse Module (Busbar Version) | 155.55 x 47 x 57.3 |

Mating Cover see page 13
Part Number 2141039-1



Modules for Pre-Fuses
Type A Fuse Module, 14 Positions – Wire-by-Wire Version
Technical Features
Material

PA6

Product Specification

108-94263

Application Specification

114-94090

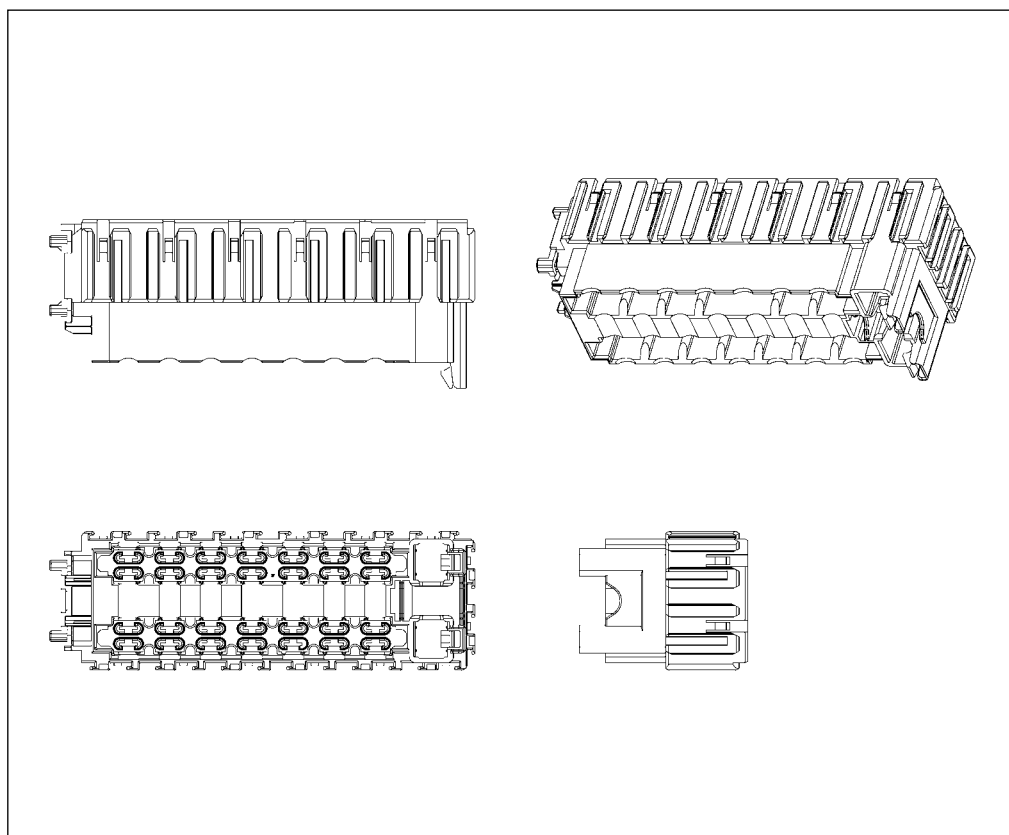
Order Informations

B+ Connection via
wire to busbar – Tab

14x Typ A Fuse (J-Case)

Part Number 2141040-2

2x Spare Fuse places


Type A Fuse Module 14 Positions – Wire by Wire Version

| Module P/N | Module Name | Product Dimensions L x W x H (mm) |
|------------|--------------------|--------------------------------------|
| 2141040-2 | Type A Fuse Module | 144.55 x 47 x 57.3 |

Suitable Terminals

| Terminal TE P/N | Description | Material | Plating | Wire Size (mm ²) |
|--------------------|-------------------------|----------|----------------|---------------------------------|
| 1670225-1 | 6.3 Busbar & Single Tab | – | Tin Hot Dipped | 4–6 |
| 963755-1 | 6.3 Single Tab | N/A | Pre-Tinned | 2.5–4 |

Modules for Pre-Fuses

Pre-Fuse – SF 30 – Module, 8 Positions

Technical Features

Material

PBT

Product Specification

108-94263

Application Specification

114-94090

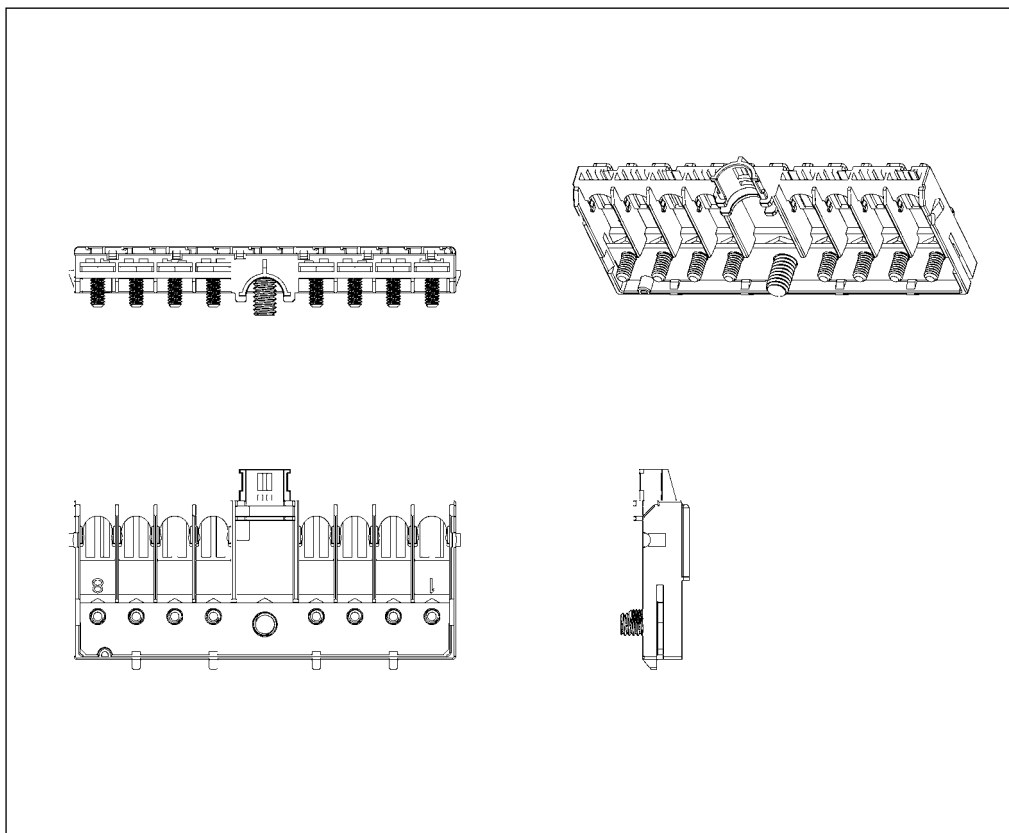
Order Informations

Screw M8 for B+ Connection
with wire up to 35mm²

Part Number 2141034-1

Used with 8 x M5 Bolt

Part Number 1534968-2



Pre-Fuse – SF30 – Module, 8 Positions

| Module P/N | Module Name | Product Dimensions L x W x H (mm) |
|------------|-----------------------|--------------------------------------|
| 2141034-1 | Pre-Fuse SF 30 Module | 137 x 70 x 24.1 |

Mating Cover see page 12
Part Number 2141033-1



Recommended Parts

Cover for Pre-Fuse Module – SF 30

Technical Features

Material

PP

Product Specification

108-94263

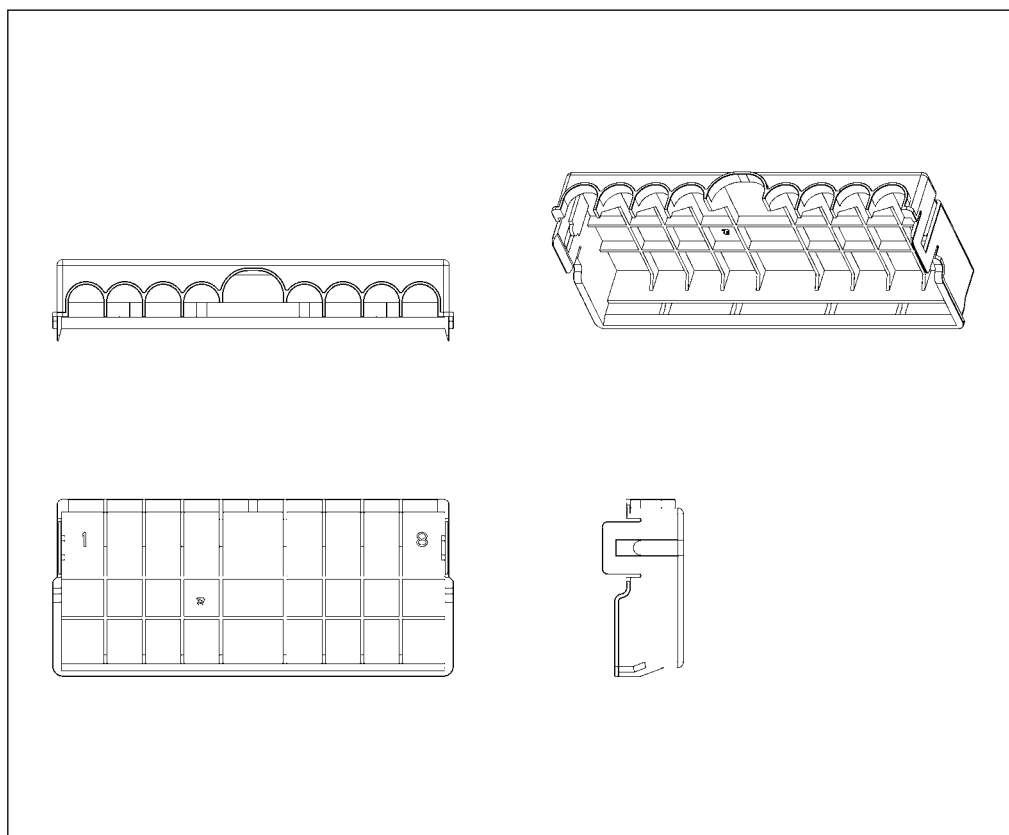
Application Specification

114-94090

Order Informations

Cover for Pre-Fuse Module

Part Number 2141033-1



Cover for Pre-Fuse Module – SF 30

| Module P/N | Module Name | Product Dimensions L x W x H (mm) |
|------------|-------------------------------|--------------------------------------|
| 2141033-1 | Cover for SF30 Fuse Module | 140.4 x 62 x 28.5 |

Mating Module see page 11
Part Number 2141034-1



Recommended Parts

Cover for Fuse Module Type A

Technical Features

Material

PP

Product Specification

108-94263

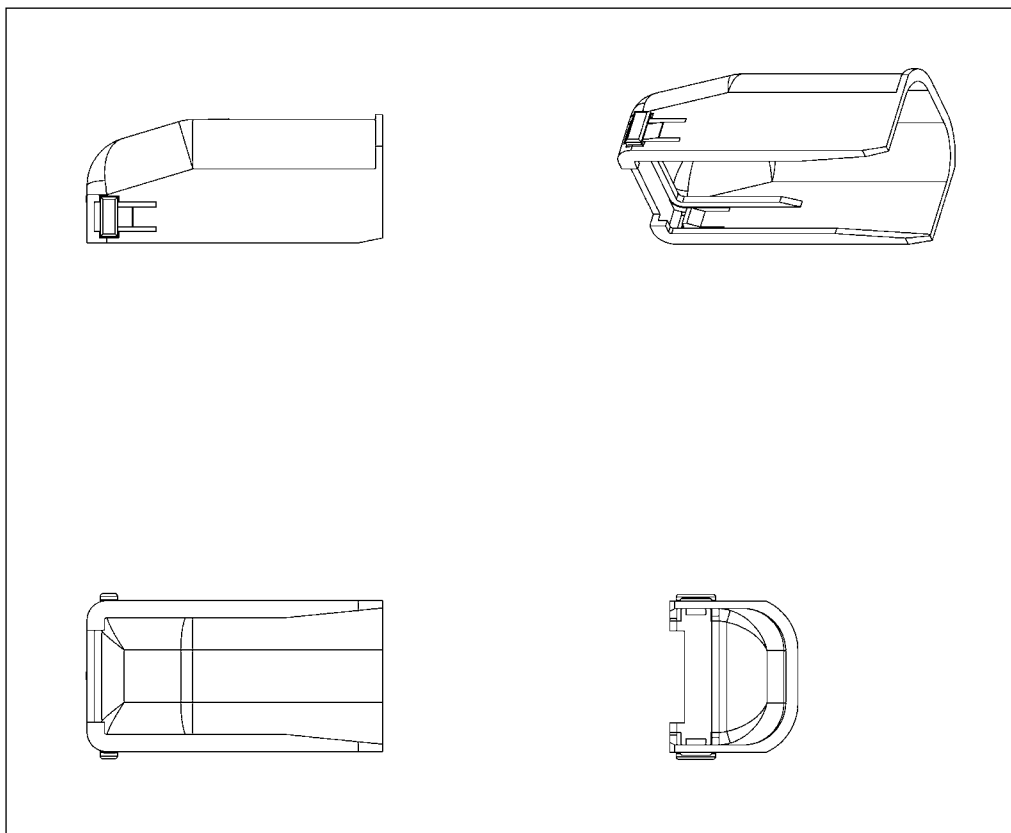
Application Specification

114-94090

Order Informations

Cover for B+ Protection

Part Number 2141039-1



Cover for Fuse Module Type A

| Module P/N | Module Name | Product Dimensions L x W x H (mm) |
|------------|---------------------------------|--------------------------------------|
| 2141039-1 | Cover for Type A Fuse Module | 60 x 33.4 x 26 |

Mating Module see page 9
Part Number 2141040-1



Bracket Module, 180°

Technical Features

Material

PBT

Product Specification

108-94263

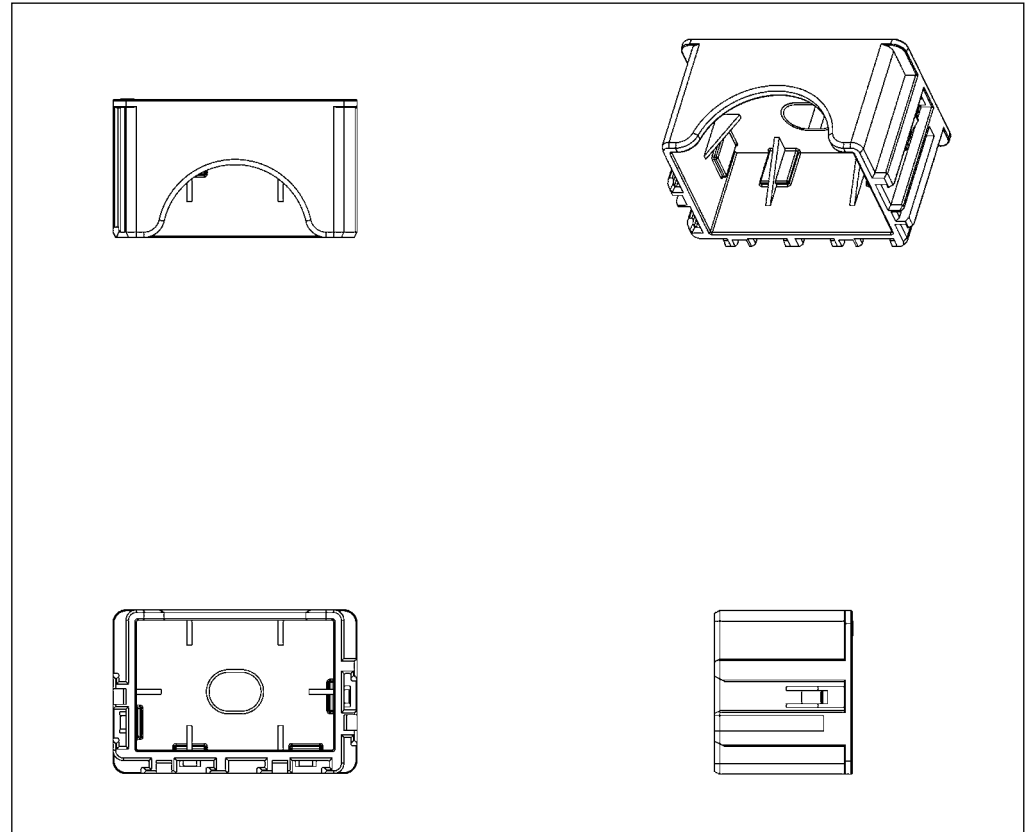
Application Specification

114-94090

Order Informations

Mounting Bracket for Screw M8

Part Number 2141031-1



Bracket Module, 180°

| Module P/N | Module Name | Product Dimensions L x W x H (mm) |
|------------|------------------------|--------------------------------------|
| 2141031-1 | Bracket Module 180° | 42 x 31.5 x 26.5 |

Bracket Module and Interface

Bracket Module, 90°

Technical Features

Material

PBT

Product Specification

108-94263

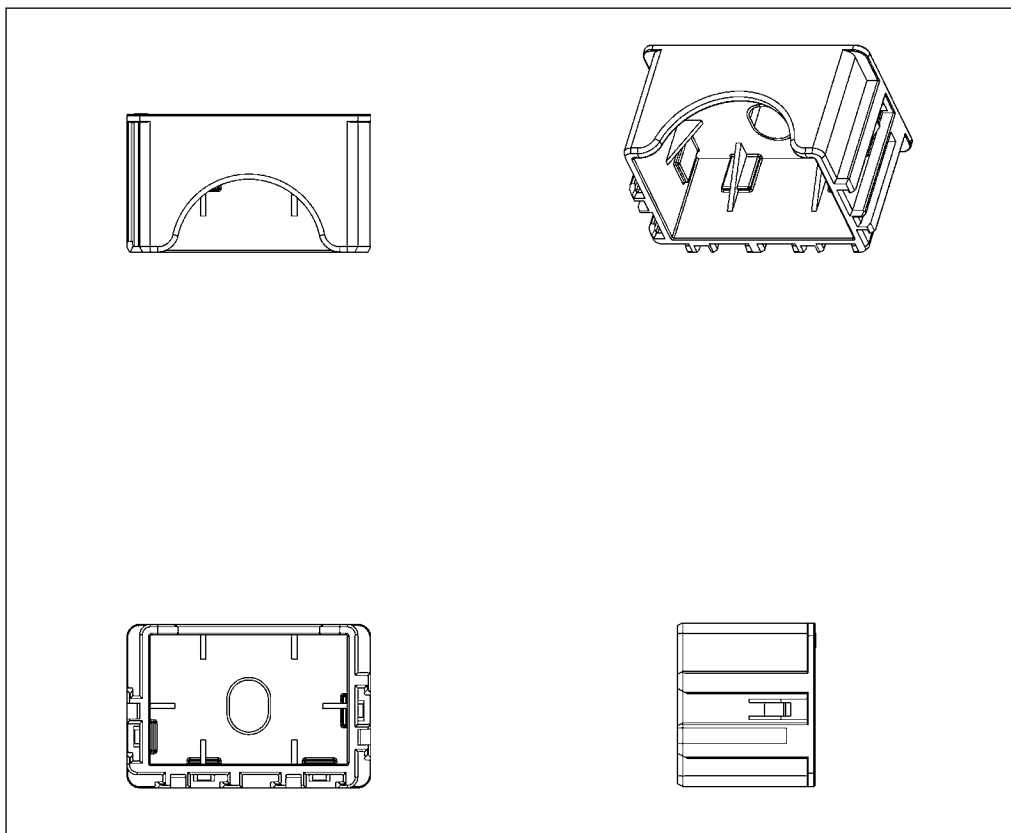
Application Specification

114-94090

Order Informations

Mounting Bracket for Screw M8

Part Number 2141031-2



Bracket Module, 90°

| Module P/N | Module Name | Product Dimensions L x W x H (mm) |
|------------|-----------------------|--------------------------------------|
| 2141031-2 | Bracket Module 90° | 47 x 31.5 x 26.55 |

M2000MC Automatic Insertion Machine

**High Quality.
High Reliability.
High Volume.**



M2000MC Automatic Insertion Machine

With the CE approved M2000MC automatic insertion machine for fuses and relays, TE Application Tooling provides a high-quality solution for high-volume production within the automotive industry.

The M2000MC automatically inserts mini fuses into a Junction Box (J/B) according to the programmed sequence, ensuring that the correct fuses are inserted in the correct location for consistent quality.

The machine reduces the number of operators required in the production process, increasing productivity in the factory, whereat the operator needs to ensure that the machine is supplied with junction boxes and fuses.

The M2000MC can also be optionally equipped with insertion force monitoring and insertion depth control.

Outstanding features deliver tangible benefits

- Dependable high-volume production
- Insertion depth checking by linear scale
- Insertion force monitoring – checking maximum force during insertion
- OCR of fuse before insertion to prevent wrong fuse insertion
- No stopping of production during supply to the bowl feeder
- Robot arm with ionizer that cleans inside the robot arm
- XY table positioning
- Up to 6 heads (fuse)

Machine specification
Layout

LxDxH = 1957.6 x 2584 x 1627.1mm (without tower lamp)
– dimensions may be altered following a technical meeting.

Machine weight

2,500 kg (inc. blow feeders)
– Changeable with various J/B design.

Electrical supply

AC 110 V, single phase, 50/60 Hz, 30 KVA – other specific requirements may be met.

Power consumption

2.1 kW

Air supply

4.5-7.0 kgf /cm²

Air consumption

600 l/min

Temperature and humidity

10~35°C, 30~70%

Noise level

< 75 dB(A)

Operating system

Windows XP Professional (Embedded POS-READY2009) Service pack3

PC specification (incl. accessories)

Intel Pentium(R) 2.6 GHz, 1GB RAMSSD hard disk drive by SATA (capacity: 120 GB) 17" LCD touch screen & equipped with keyboard, mouse, DVD ROM drive

Available languages

English and Korean

XY table speed

90 m/min

Device insertion speed (per point)

Various per component size and J/B design.

- Low profile mini fuse: 0.35~0.55 sec
- Relay: 0.8 ~ 1.0 sec
- SB fuse: 0.45~0.7 sec

Max. J/B size

250 x 250 mm – may be altered to meet specific customer requirements

XY positioning accuracy

+/- 0.01 mm

Insertion depth monitoring

available in 0.01 mm steps

Insertion force monitoring

available in 0.01 N steps

Cmk assessment data

>1.67 (X and Y axis)

Machine configuration

Stand-alone only.

Inline configuration is available on request.

Abbreviation Explanation

OCR: Optical character recognition. (Vision sensor checks color or characters on the components.)

SATA: Connection type between PC mother board and memory unit (CDRom or hard disk).

SB fuse: Slow Blow fuse (type of electric fuse)

Engineering Notes

A large rectangular area filled with a fine grid of small squares, intended for handwritten engineering notes or calculations.

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