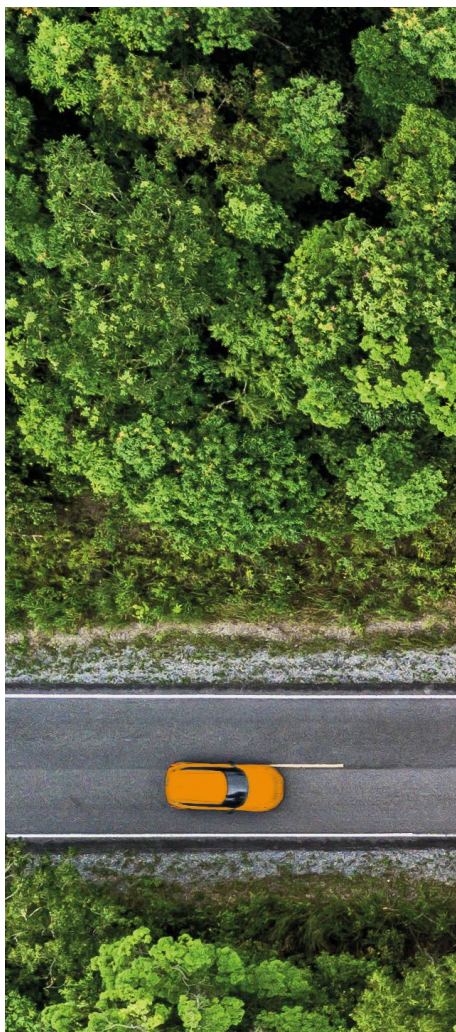


# AMP SUPERSEAL 1.5 Series Connectors

for the Automotive Industry



# INNOVATIVE TECHNOLOGIES

TE Connectivity (TE) is a leader in automotive connectivity and sensor technology. Our engineers are always working to meet complex requirements. We connect nearly every electronic function in the vehicle - from alternative power systems to data connectivity and sensor technologies. Our technologies withstand harsh environments and tolerate high temperature, vibration, shock, pressure and long-life in electronic control systems.



## INTERCONNECTION SYSTEMS

Our electrical and electronic interconnection products and solutions are used to electrically and mechanically connect wires and cables, printed circuit boards, integrated circuit packages, batteries and more.



## HYBRID & ELECTRIC MOBILITY SOLUTIONS

Our technologies leverage decades of innovation and experience with high-voltage transmission and distribution. Our hybrid and electric mobility solutions include a complete line of connectors, terminals, sensors, cable assemblies, contactors, and battery connection protection to help safeguard the flow of power in hybrid and electric vehicles.



## DATA CONNECTIVITY

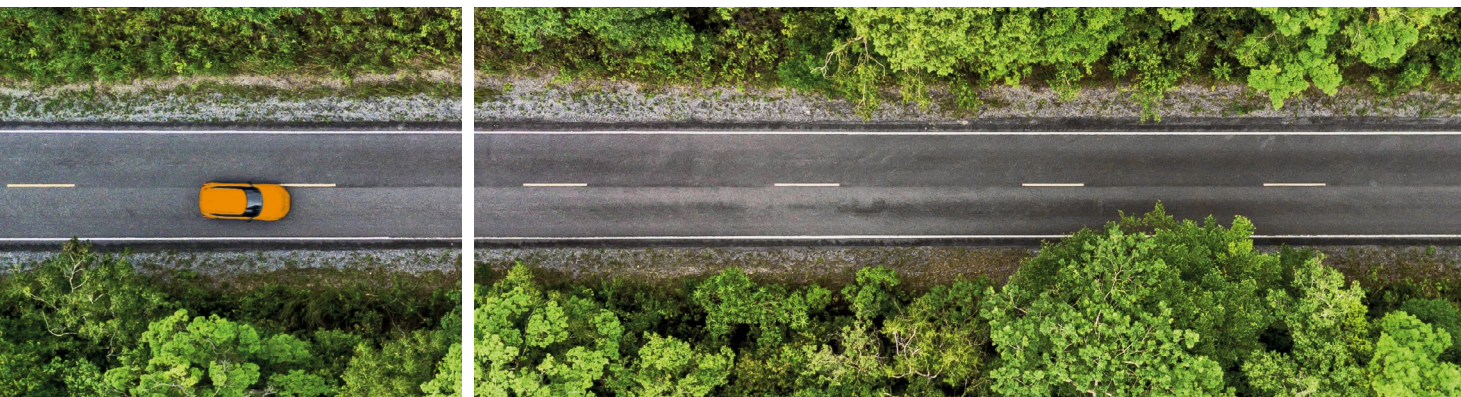
Our wide range of data connectivity solutions are ideal for consumer port connections, high data rate applications, next-generation harness architecture, board-to-board connections and vehicle-to-vehicle communication.



## WIRELESS

HIRSCHMANN MOBILITY Wireless Solutions enable high-performance signal reception and transmission for vehicles. We offer customized antenna systems as well as radio tuner systems for all common global standards. Together with the TE connectors solutions we provide One-Stop-Connectivity Solutions with components along the signal chain that are optimized and compatible with each other to provide best signal quality and real-time data.





## SENSOR SOLUTIONS

Customers rely on our sensor technology to provide data for control, adaptation and response of vehicle functions and features that increase safety, comfort, efficiency, and more. We collaborate to provide solutions for demanding and harsh applications such as automated transmissions, engines, chassis, clutch, brake and exhaust. Our products can be found in vehicles traveling the world's roads and highways.



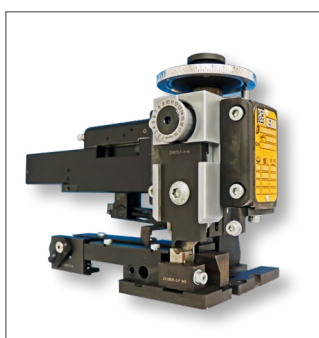
## CABLE ASSEMBLY

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



## RELAYS



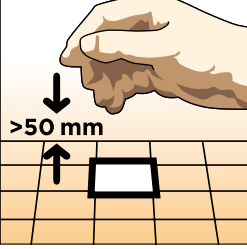
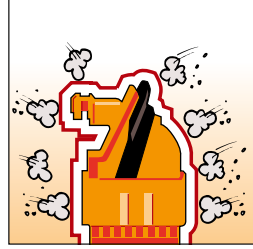
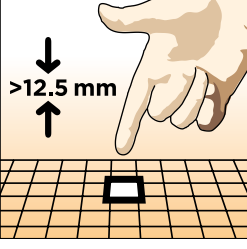
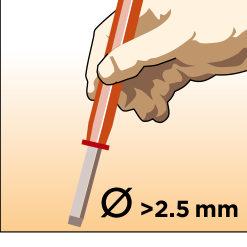
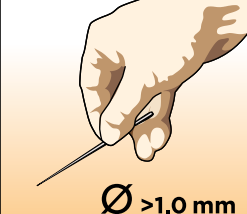
From passenger comfort and infotainment to higher DC voltages and power levels to harsh environments, our relays and contactors provide critical switching functions in multiple vehicle applications. With increased contact gaps and other key design features, our relays are ideal for harsh environments such as shock and vibration.





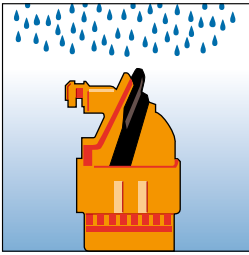

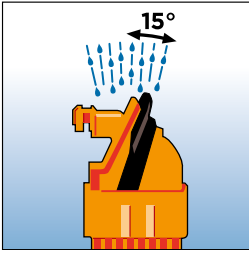

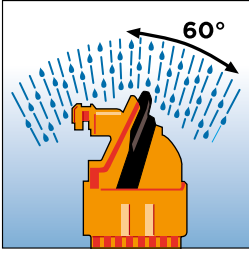
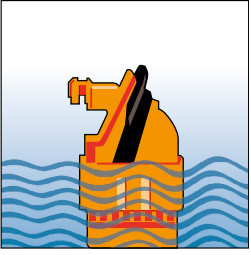
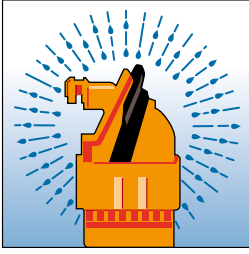
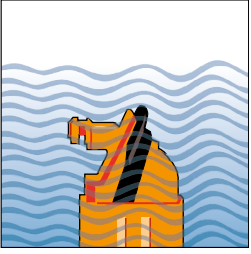


## APPLICATION TOOLING

Ensuring a quality connection is essential to delivering high performance and reliability in extreme environments. From crimping a terminal onto a wire or pressing a connector onto a board, our equipment and services are designed to maximize production uptime, extend tooling life and minimize manufacturing waste.

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         |  <p data-bbox="466 472 651 501">Not protected.</p>   | 5         |  <p data-bbox="1173 456 1394 517">Protected against jetting water.</p>   |
| 1         |  <p data-bbox="466 725 691 817">Protected against vertically dripping water.</p>                   | 6         |  <p data-bbox="1173 725 1394 817">Protected against powerfully jetting water.</p>  |
| 2         |  <p data-bbox="466 1012 724 1104">Protected against dripping water when tilted up to 15°.</p>     | 6K        |  <p data-bbox="1173 996 1458 1122">Protected against powerfully jetting water with increased pressure (Automotive).</p>             |
| 3         |  <p data-bbox="466 1299 748 1391">Protected against spraying water (up to 60° inclination).</p>  | 7         |  <p data-bbox="1173 1281 1442 1406">Protected against the temporary effects of immersion up to 1 meter.</p>                        |
| 4         |  <p data-bbox="466 1599 687 1659">Protected against splashing water.</p>                         | 8         |  <p data-bbox="1173 1554 1458 1704">Protected against continuous submersion agreed with customer, but more severe than code 7.</p> |
| 4K        |  <p data-bbox="466 1872 722 1964">Protected against splashing water with increased pressure.</p> | 9K        |  <p data-bbox="1173 1852 1401 1977">Protected against high-pressure/steam-jet cleaning (Automotive).</p>                           |

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## AMP SUPERSEAL 1.5 CONNECTORS

TE Connectivity (TE) has developed the AMP SUPERSEAL 1.5 series connector family to meet the increasing requirements for reliability and water proofness.

AMP SUPERSEAL 1.5 series connector exceed the requirements prescribed by IP 67 according IEC 60529 and DIN 40050-9 standards and has its application in the automotive, agriculture and industrial machinery.

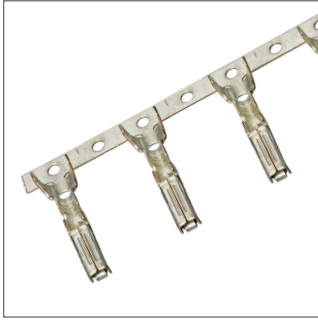
For sensor application the AMP SUPERSEAL 1.5 series connector system is qualified as well.

### Advantages

- Compact system minimizes packaging requirements
- Sealing reliability proven under harsh conditions
- Designed for ease of manual harness assembly, engine mounting and under hood environments

### Applications

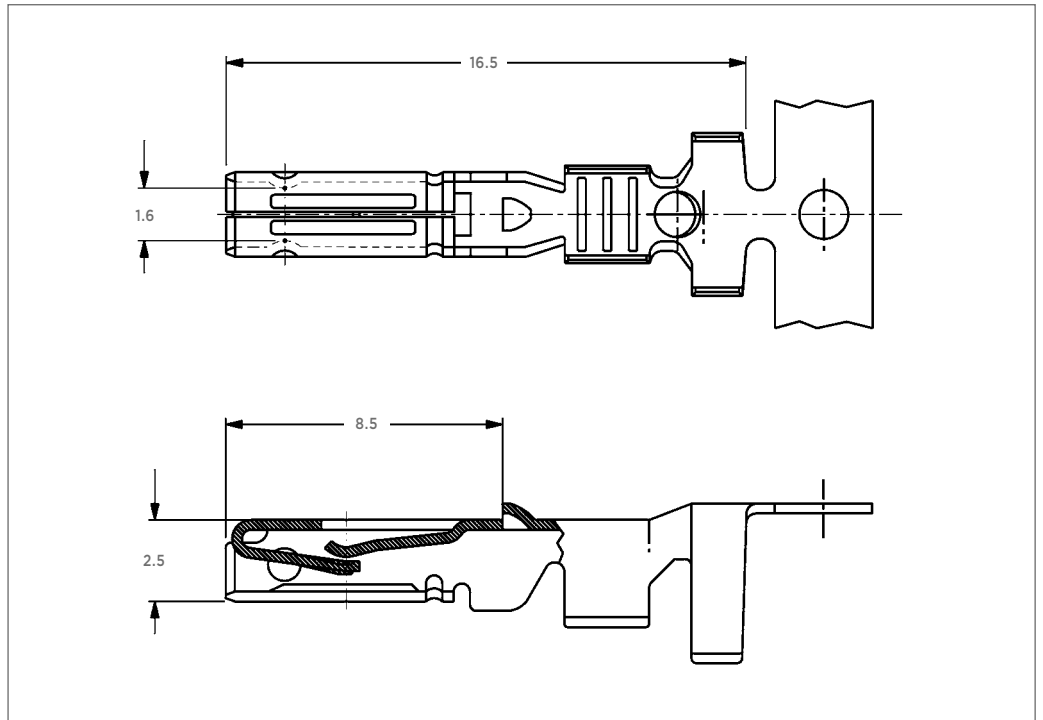
- Wire-to-Wire (1.5 mm) and ECU applications, under hood or any location where sealing is required
- Suitable for automotive, truck, bus, or off-road vehicles



**Technical Features**

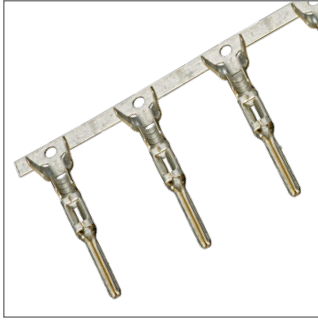
- Contact Finish:**  
Tin plated
- Current Carrying Capacity:**  
14 A max.
- Wire Size Range:**  
0.35 - 2.5 mm<sup>2</sup>
- Insulation Diameter:**  
1.2 - 3.3 mm FLR
- Extraction Tool:**  
Part No. 9-1579007-1
- Product Specification:**  
108-20090
- Application Specification:**  
114-20045

**1.5 mm Receptacle Contacts**

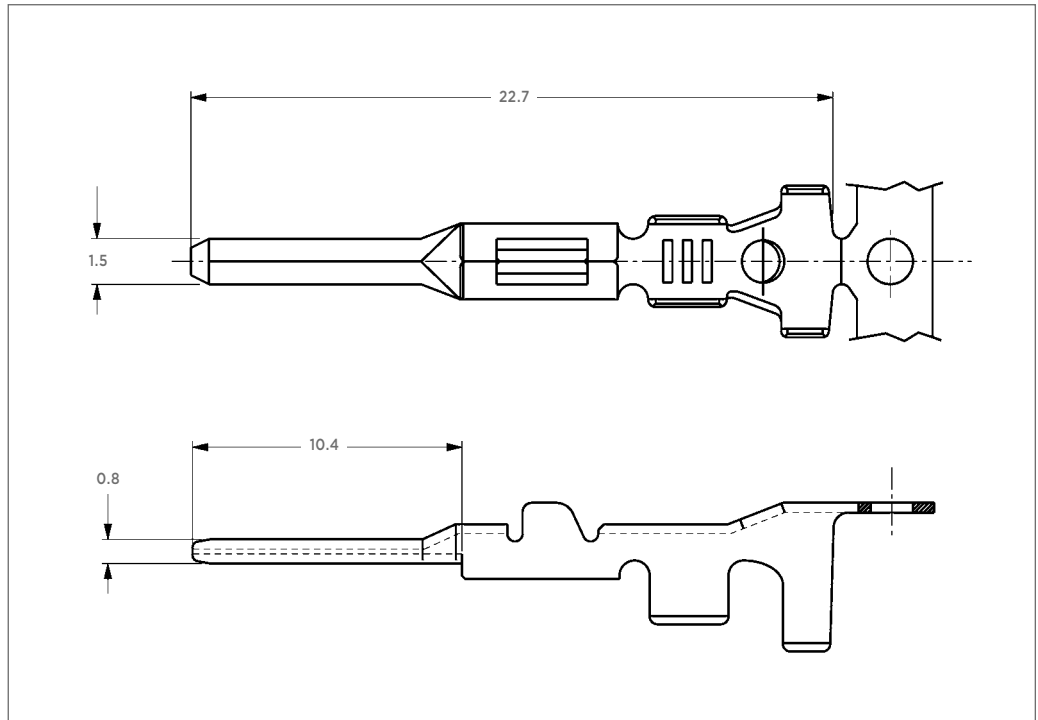


**1.5 mm Receptacle Contacts**

| Wire Size Range (mm <sup>2</sup> ) | Insulation Diameter (mm) |           | Material and Finish | Part Number Strip Form   |
|------------------------------------|--------------------------|-----------|---------------------|--------------------------|
|                                    | FLK                      | FLR       |                     |                          |
| 0.35 - 0.50                        | 1.45 - 2.20              | 1.2 - 1.6 | CuSn, tin plated    | <a href="#">282403-1</a> |
| 0.75 - 1.50                        | 2.40 - 3.35              | 1.7 - 2.4 |                     | <a href="#">282110-1</a> |
| 1.50 - 2.50                        | 3.15 - 3.80              | 2.2 - 3.3 |                     | <a href="#">282466-1</a> |



1.5 mm Tab Contacts



Technical Features

**Contact Finish:**

Tin plated, gold plated

**Current Carrying Capacity:**

14 A max.

**Wire Size Range:**

0.35 - 2.5 mm<sup>2</sup>

**Extraction Tool:**

Part No. 9-1579007-1

**Product Specification:**

108-20090

**Application Specification:**

114-20045

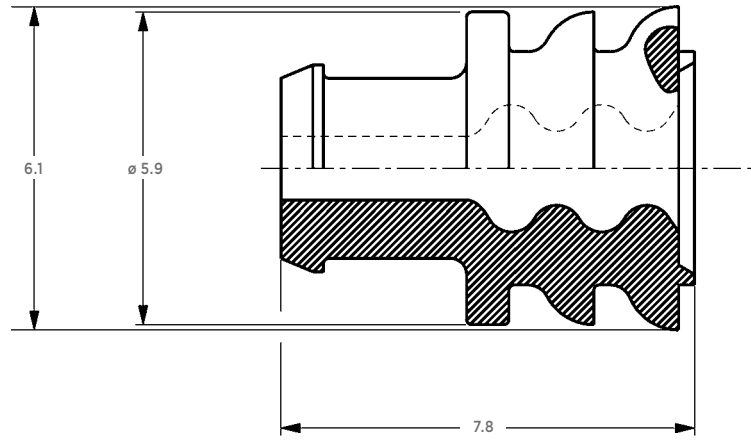
1.5 mm Tab Contacts

| Wire Size Range (mm <sup>2</sup> ) | Insulation Diameter (mm) |           | Material and Finish | Part Number Strip Form   |
|------------------------------------|--------------------------|-----------|---------------------|--------------------------|
|                                    | FLK                      | FLR       |                     |                          |
| 0.35 - 0.50                        | 1.45 - 2.20              | 1.2 - 1.6 | CuZn, tin plated    | <a href="#">282404-1</a> |
|                                    |                          |           | CuZn, gold plated   | <a href="#">282404-3</a> |
| 0.75 - 1.50                        | 2.40 - 3.35              | 1.7 - 2.4 | CuZn, tin plated    | <a href="#">282109-1</a> |
|                                    |                          |           | CuZn, gold plated   | <a href="#">282109-3</a> |
| 1.50 - 2.50                        | 3.15 - 3.80              | 2.2 - 3.3 | CuZn, tin plated    | <a href="#">282465-1</a> |

## Single Wire Seals and Cavity Plug

## Technical Features

- Made from silicon rubber material
- For insulation diameters of 1.2 - 3.3 mm
- Loose-piece wire seals are crimped simultaneously with the contacts



## Single Wire Seals and Cavity Plug

| Insulation Diameter (mm) | Color  | Part Number              |
|--------------------------|--------|--------------------------|
| 1.2 - 1.6                | Green  | <a href="#">281934-4</a> |
| 1.7 - 2.4                | Yellow | <a href="#">281934-2</a> |
| 2.5 - 3.3                | Red    | <a href="#">281934-3</a> |
| Cavity Plug              | Red    | <a href="#">282081-1</a> |



1 to 6 positions

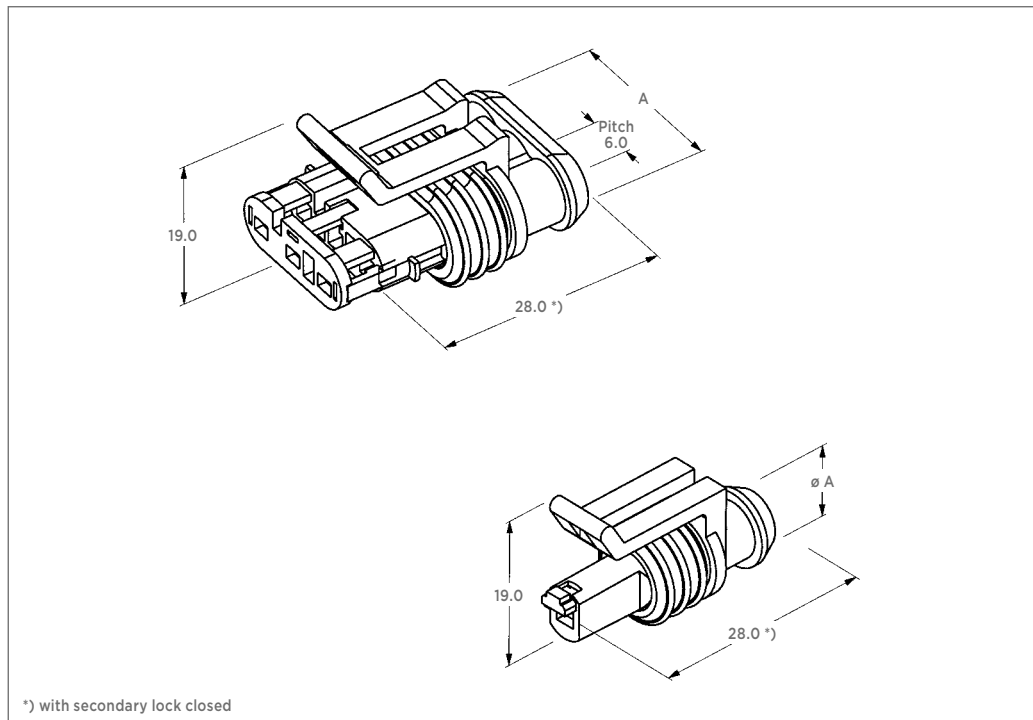


**Technical Features**

**Product Specification:**  
108-20090

**Application Specification:**  
412-20000

**Plug Housings (utilizes Receptacle Contacts)**



**Plug Housings (utilizes Receptacle Contacts)**

| No. of Positions | Dimension A (mm) | Part Number              |
|------------------|------------------|--------------------------|
| 1                | 9.3              | <a href="#">282079-2</a> |
| 2                | 15.3             | <a href="#">282080-1</a> |
| 3                | 21.3             | <a href="#">282087-1</a> |
| 4                | 27.3             | <a href="#">282088-1</a> |
| 5                | 33.3             | <a href="#">282089-1</a> |
| 6                | 39.3             | <a href="#">282090-1</a> |





1 to 6 positions



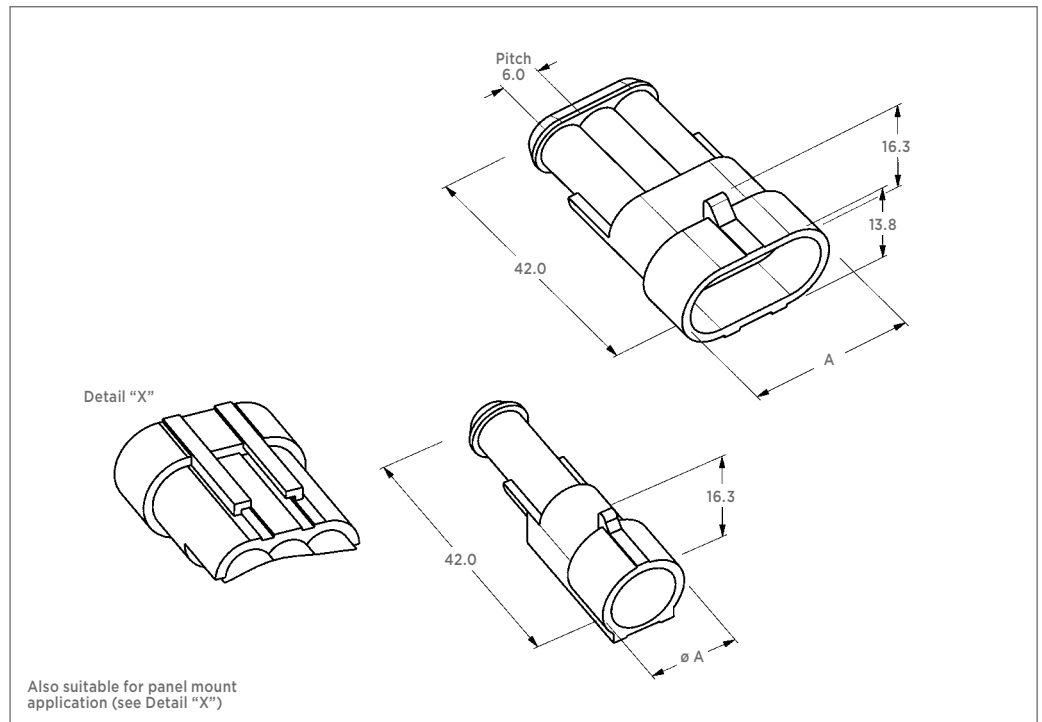
**Technical Features**

**Extraction Tool for Secondary Lock of Cap Housing:**  
Part No. 785084-1

**Insertion Tool for Secondary Lock of Cap Housing:**  
Part No. 785061-1 for 1 and 2 positions  
Part No. 785061-2 for 3 - 6 positions

**Product Specification:**  
108-20090

**Cap Housings (utilizes Tab Contacts)**

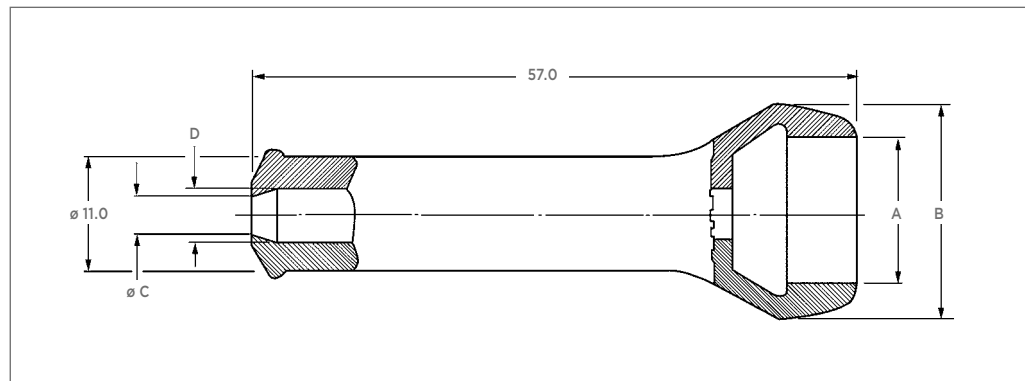


**Cap Housings (utilizes Tab Contacts)**

| No. of Positions | Dimension A (mm) | Part Number              |
|------------------|------------------|--------------------------|
| 1                | 13.8             | <a href="#">282103-1</a> |
| 2                | 19.8             | <a href="#">282104-1</a> |
| 3                | 25.8             | <a href="#">282105-1</a> |
| 4                | 31.8             | <a href="#">282106-1</a> |
| 5                | 37.8             | <a href="#">282107-1</a> |
| 6                | 43.8             | <a href="#">282108-1</a> |

**Rubber Boots**

| No. of Positions | Part Number Connector Housing | Description  | Part Number Rubber Boot  | Color |
|------------------|-------------------------------|--------------|--------------------------|-------|
| 2                | <a href="#">282080-1</a>      | Plug Housing | <a href="#">880810-1</a> | Black |
|                  | <a href="#">282104-1</a>      | Cap Housing  |                          |       |
| 3                | <a href="#">282087-1</a>      | Plug Housing | <a href="#">880811-2</a> | Black |
|                  | <a href="#">282105-1</a>      | Cap Housing  |                          |       |



**Dimensional Data**

| No. of Wires | Part Number Boot          | Dimensions (mm) |      |     |     |
|--------------|---------------------------|-----------------|------|-----|-----|
|              |                           | A               | B    | C   | D   |
| 2            | <a href="#">880810-1</a>  | 12.5            | 20.5 | 4.6 | 5.0 |
| 3            | <a href="#">880811-2</a>  | 17.5            | 25.5 | 4.6 | 5.0 |
| 4            | <a href="#">493581-1*</a> | 21.0            | 34.5 | -   | 7.0 |
| 5            | <a href="#">880814-1</a>  | 27.5            | 35.0 | 6.5 | 7.0 |

\*) Different style, see customer drawing



Images representative of tool type only.



## APPLICATION TOOLING

TE Application Tooling is dedicated to providing high quality equipment options to meet all levels of our connector products specifications. We are also able to provide a broad range of equipment for other manufacturer's products.

Our equipment range is vast and almost unmatched by others operating in the same industry segments, as is our global presence and support network in the form of field service engineers and product managers. We supply everything from simple hand tools to the most complex automated systems.

Equipment is segregated into two types and managed accordingly:

### Generic equipment

Where we can supply you with sufficient information referenced by Part Number such that you can identify and order what you need yourself.

### Specialised Equipment

Where you will need help from our specialist product managers to identify what's just right for your application.

### Finding Equipment Online

[www.tooling.te.com](http://www.tooling.te.com)

- Powerful searches to find generic equipment options (Hand Tools / Applicators)
- Brochures and more detailed flyers for the specialized equipment.
- It's quick, easy and more importantly the latest and most up to date information is available online.

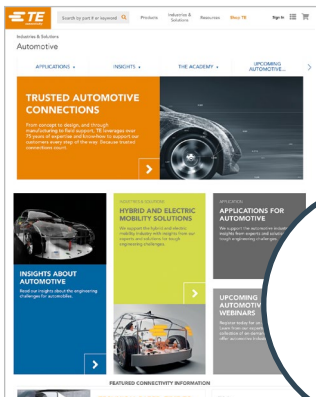
### Regional Assistance

[www.te.com/support-center](http://www.te.com/support-center)

# www.TE.com

## TE CONNECTIVITY ONLINE

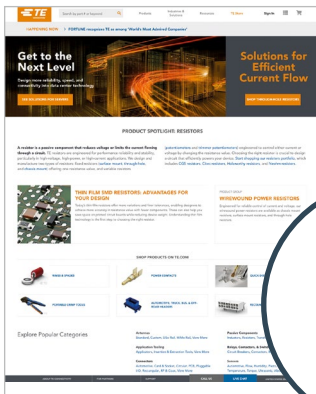
[TE.com](http://www.TE.com) offers an enhanced digital experience, with more than 250,000 parts profiled. The site has deep, rich product data and easier access to tools and services. Other offerings include improved search and navigation and knowledge and idea sharing.



### TE AUTOMOTIVE

We are one of the leading providers of advanced automobile connectivity solutions. The automotive industry uses our products in automotive technologies for body and chassis systems, convenience applications, driver information, infotainment solutions, miniaturization solutions, motor and powertrain applications, and safety and security systems. TE Connectivity is developing automotive solutions to help drive innovations for designs today and into tomorrow.

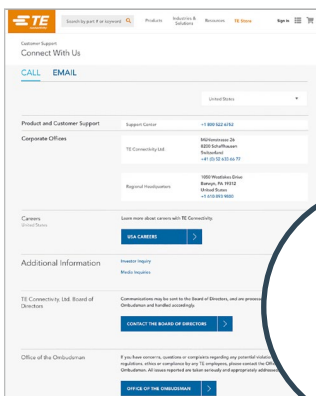
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### PRODUCT INFORMATION

Search for a specific product by category, part number or document number.

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### STAY CONNECTED

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