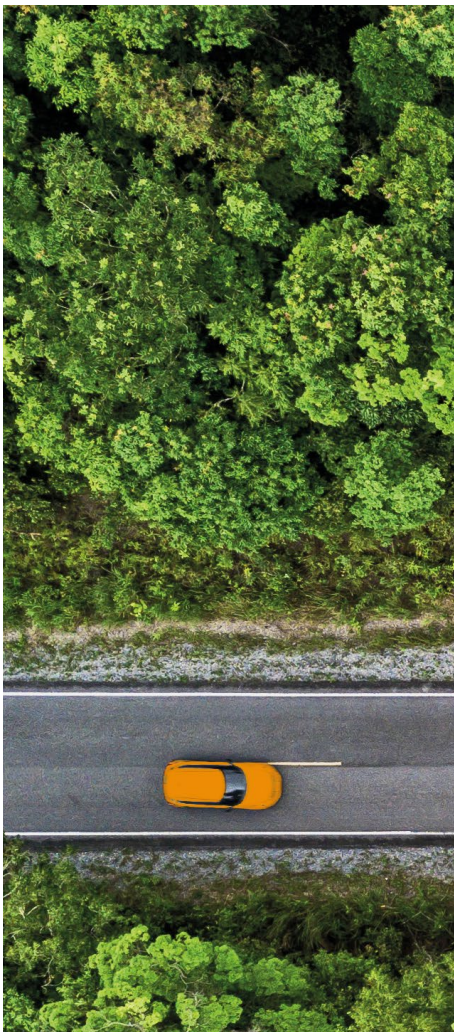


AMP SUPERSEAL 1.5 Series Connectors

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.



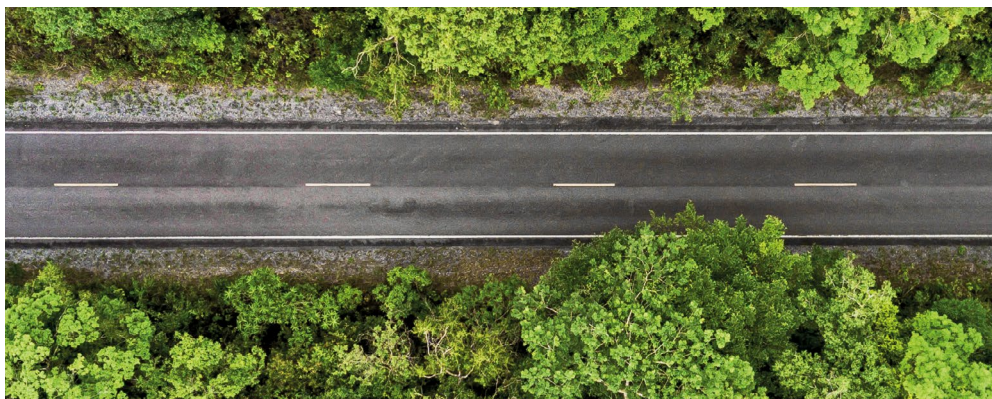
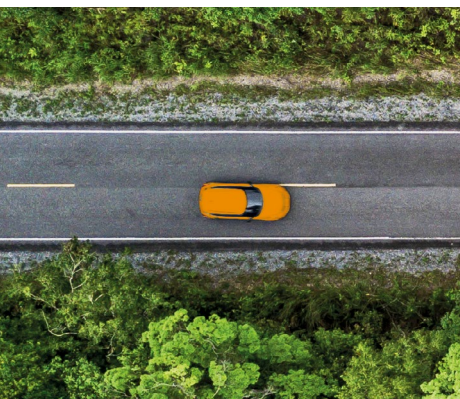
DATA CONNECTIVITY

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.



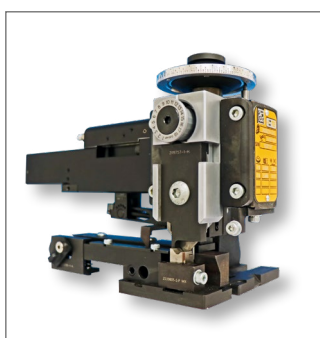
CABLE ASSEMBLY

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



RELAYS

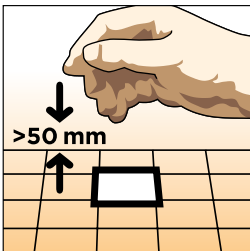
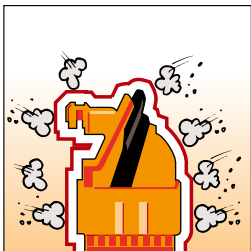
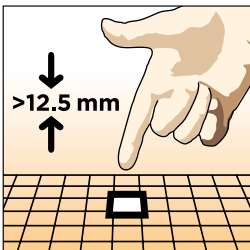
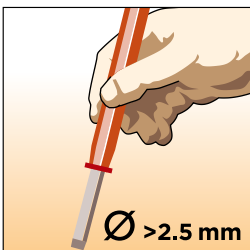
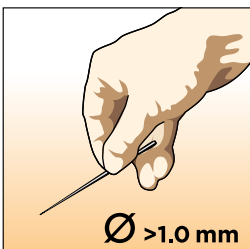
From passenger comfort and infotainment to higher DC voltages and power levels to harsh environments, our relays and contactors provide critical switching functions in multiple vehicle applications. With increased contact gaps and other key design features, our relays are ideal for harsh environments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



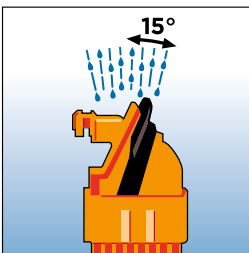
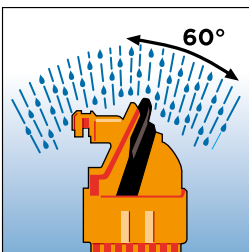
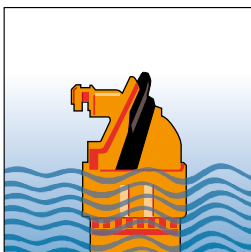
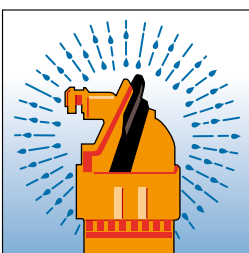
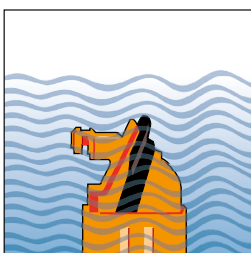
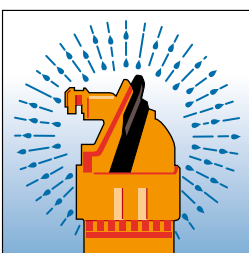
APPLICATION TOOLING

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	 Not protected.	5K	 Dust protected.
1	 >50 mm Protected against solid objects greater than 50 mm (ex. back of hand).	6K	 Dust tight.
2	 >12.5 mm Protected against solid objects greater than 12.5 mm (ex. finger).		
3	 Ø >2.5 mm Protected against solid objects greater than 2.5 mm (ex. tool).		
4	 Ø >1.0 mm Protected against solid objects greater than 1.0 mm (ex. wire).		

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).

AMP SUPERSEAL 1.5 Series Connectors		Page
Introduction		9
1.5 mm Receptacle Contacts		10
1.5 mm Tab Contacts		11
Single Wire Seals and Cavity Plug		12
Plug Housings		13
Cap Housings		14
Rubber Boots		15
APPLICATION TOOLING		17
TE CONNECTIVITY ONLINE		18
GLOBAL CONTACTS		19
IMPRINT		19



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

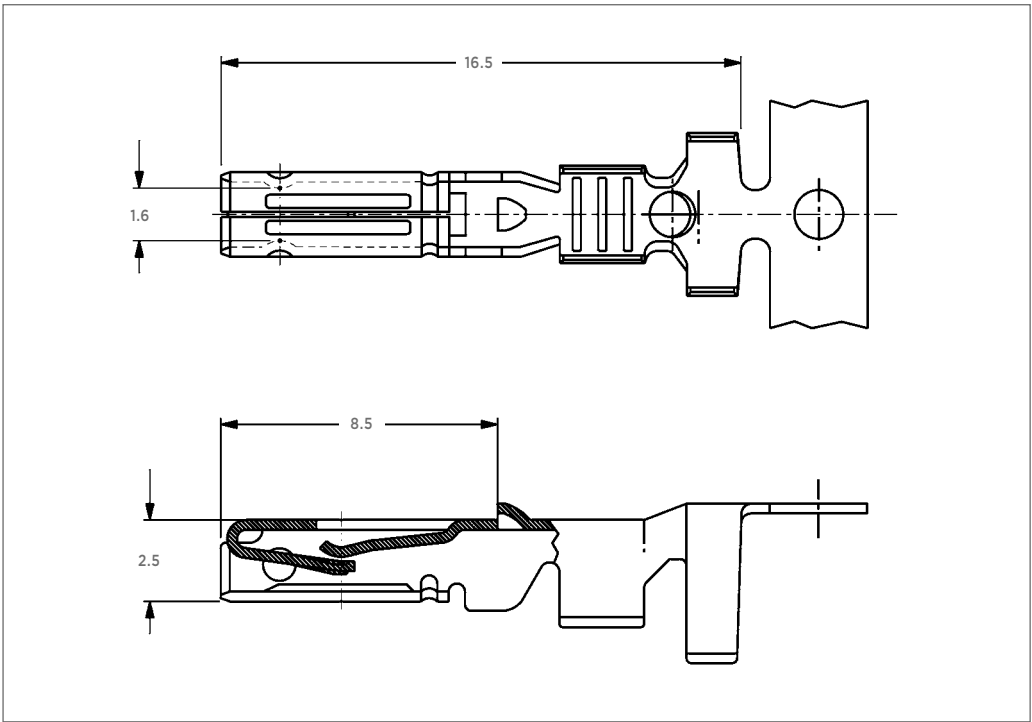
- Wire-to-Wire (1.5 mm) and ECU applications, under hood or any location where sealing is required
- Suitable for automotive, truck, bus, or off-road vehicles



Technical Features

- Contact Finish:**
Tin plated
- Current Carrying Capacity:**
14 A max.
- Wire Size Range:**
0.35 – 2.5 mm²
- 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

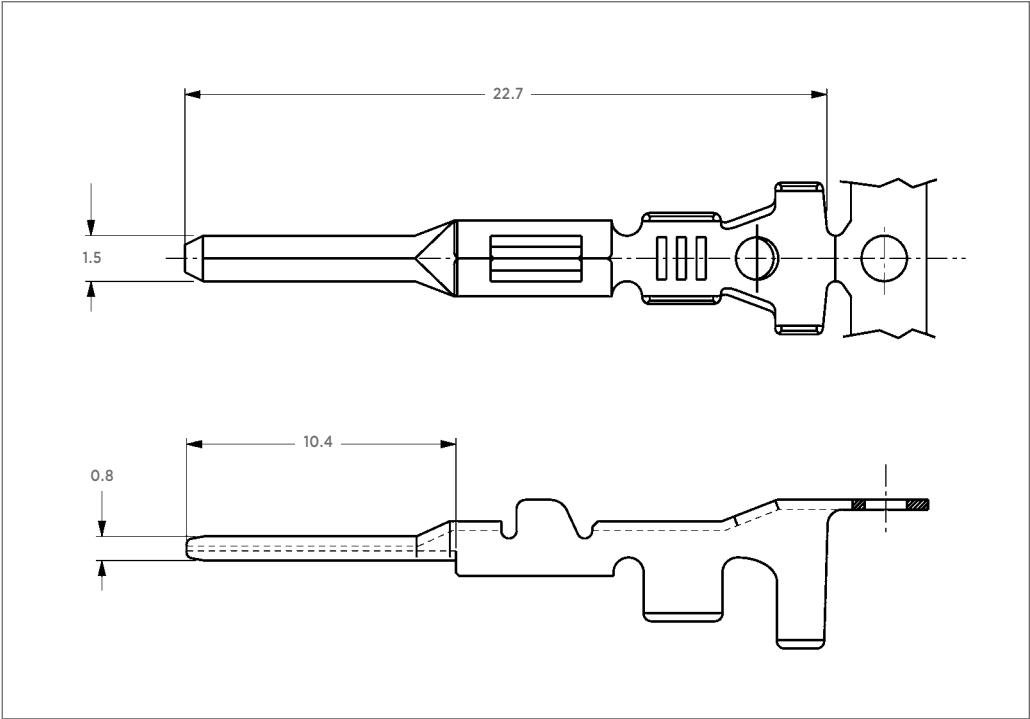
Wire Size Range (mm ²)	Insulation Diameter mm)		Material and Finish	Part Number Strip Form
	FLK	FLR		
0.35 – 0.50	1.45 – 2.20	1.2 – 1.6	CuSn, tin plated	282403-1
0.75 – 1.50	2.40 – 3.35	1.7 – 2.4		282110-1
1.50 – 2.50	3.15 – 3.80	2.2 – 3.3		282466-1



Technical Features

- Contact Finish:**
Tin plated, gold plated
- Current Carrying Capacity:**
14 A max.
- Wire Size Range:**
0.35 - 2.5 mm²
- Extraction Tool:**
Part No. 9-1579007-1
- Product Specification:**
108-20090
- Application Specification:**
114-20045

1.5 mm Tab Contacts



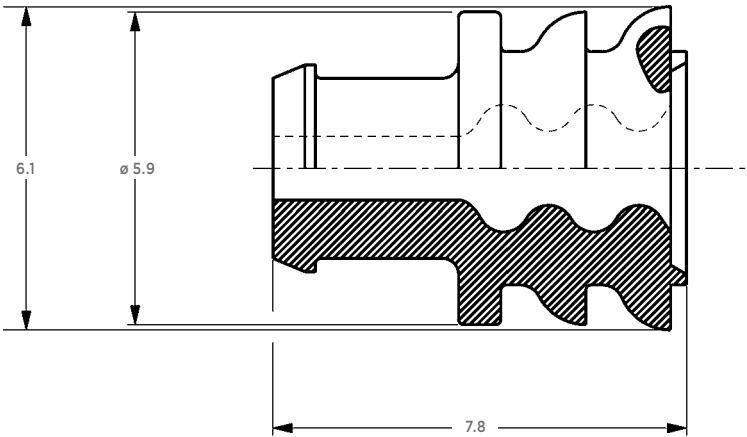
1.5 mm Tab Contacts

Wire Size Range (mm ²)	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	282404-1
			CuZn, gold plated	282404-3
0.75 - 1.50	2.40 - 3.35	1.7 - 2.4	CuZn, tin plated	282109-1
			CuZn, gold plated	282109-3
1.50 - 2.50	3.15 - 3.80	2.2 - 3.3	CuZn, tin plated	282465-1

Single Wire Seals and Cavity Plug

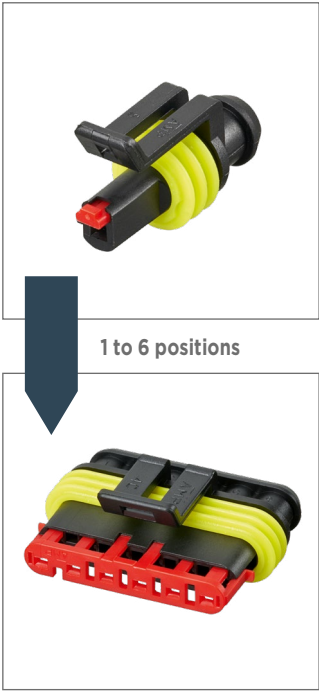
Technical Features

- 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

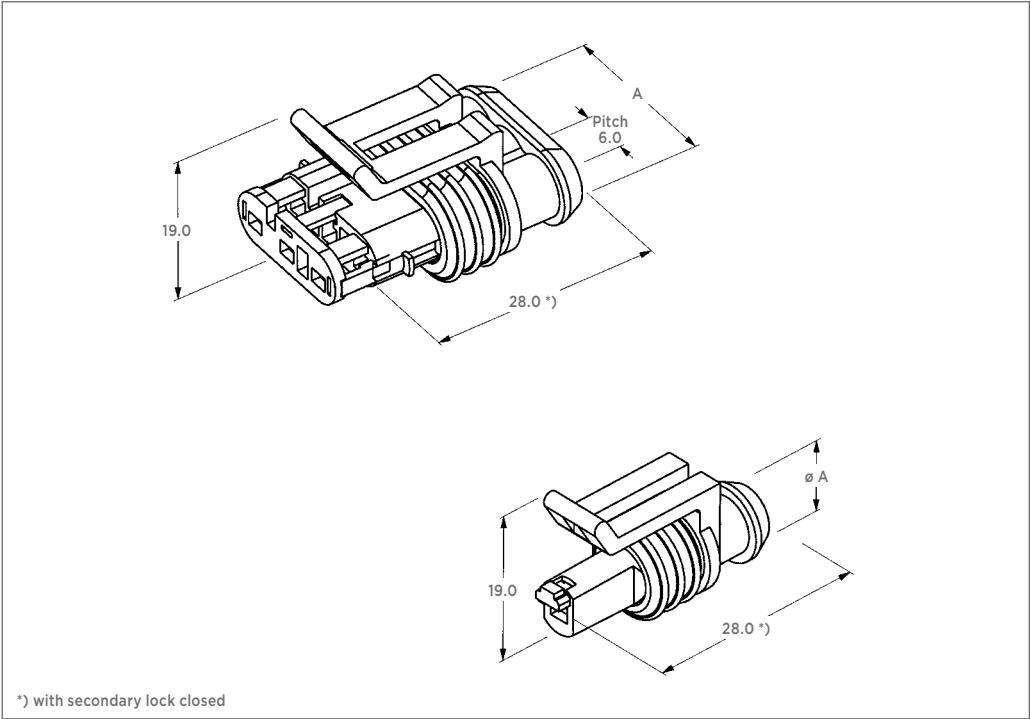
Insulation Diameter (mm)	Color	Part Number
1.2 – 1.6	Green	281934-4
1.7 – 2.4	Yellow	281934-2
2.5 – 3.3	Red	281934-3
Cavity Plug	Red	282081-1



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	282079-2
2	15.3	282080-1
3	21.3	282087-1
4	27.3	282088-1
5	33.3	282089-1
6	39.3	282090-1



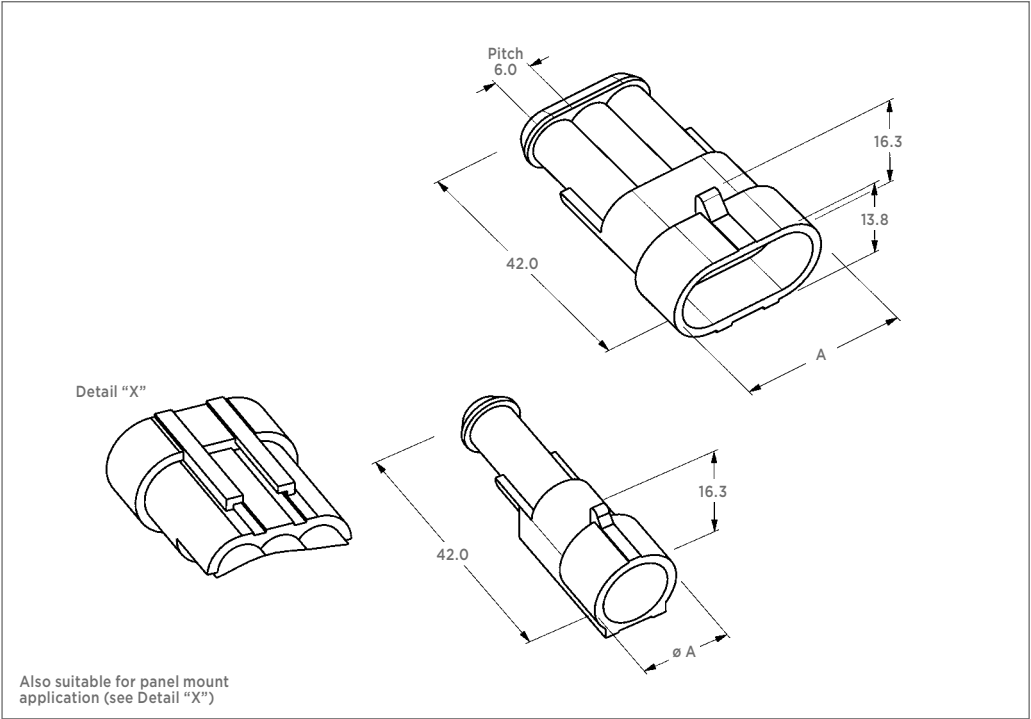
Technical Features

**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)

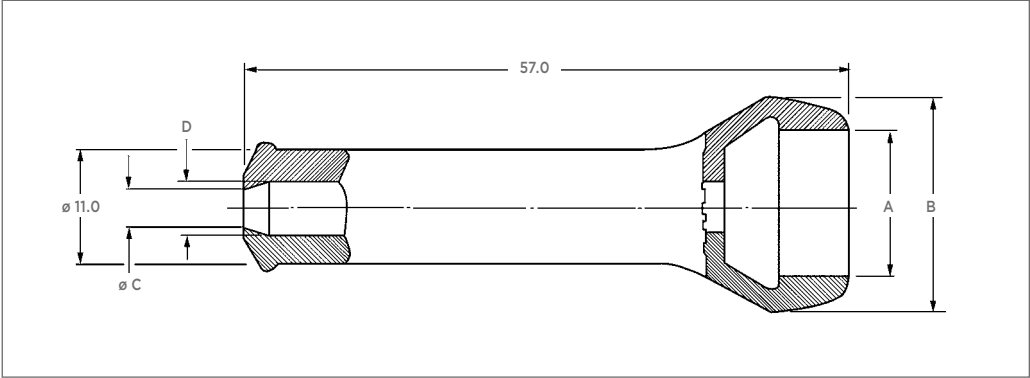


Cap Housings (utilizes Tab Contacts)

No. of Positions	Dimension A (mm)	Part Number
1	13.8	282103-1
2	19.8	282104-1
3	25.8	282105-1
4	31.8	282106-1
5	37.8	282107-1
6	43.8	282108-1

Rubber Boots

No. of Positions	Part Number Connector Housing	Description	Part Number Rubber Boot	Color
2	282080-1	Plug Housing	880810-1	Black
	282104-1	Cap Housing		
3	282087-1	Plug Housing	880811-2	Black
	282105-1	Cap Housing		



Dimensional Data

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

*) Different style, see customer drawing



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

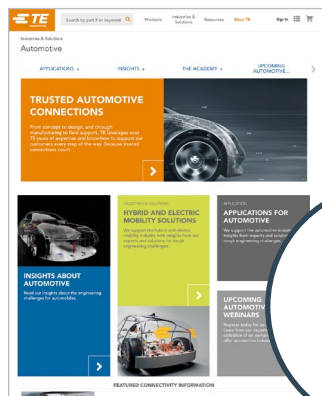
- Powerful searches to find generic equipment options (Hand Tools / Applicators)
- Brochures and more detailed flyers for the specialized equipment.
- It's quick, easy and more importantly the latest and most up to date information is available online.

Regional Assistance

www.te.com/support-center

TE CONNECTIVITY ONLINE

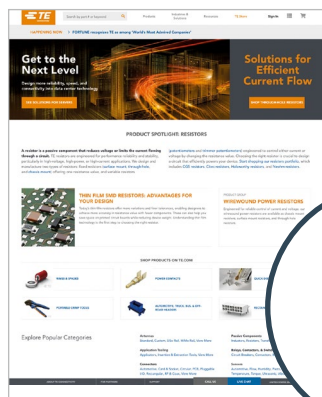
[TE.com](http://www.TE.com) offers an enhanced digital experience, with more than 250,000 parts profiled. The site has deep, rich product data and easier access to tools and services. Other offerings include improved search and navigation and knowledge and idea sharing.



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.

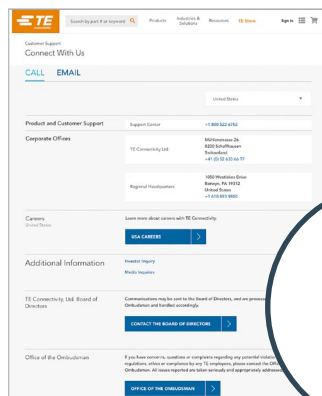
www.TE.com/automotive



PRODUCT INFORMATION

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

www.TE.com



STAY CONNECTED

You can rely on TE's Product Information Center (PIC) Team to answer your general or technical questions. To contact a PIC representative, visit

www.TE.com/support-center

EUROPE**Germany**

Product Information Center:

Phone: +800 0440-5100

Fax: +49 6251-133-1988

UNITED STATES**United States - Harrisburg**

Product Information Center:

Phone: +1 800-522-6752

Fax: +1 717-986-7575

SOUTH AMERICA**South America**

Phone: +54 11-4733-2015

Fax: +54 11-4733-2083

AFRICA**South Africa -****Port Elizabeth**

Phone: +27 41-503-4500

Fax: +27 41-581-0440

ASIA/PACIFIC**Australia - Sydney**

Product Information Center:

Phone: +61 2-9840-8200

Fax: +61 2-9634-6188

ASIA/PACIFIC**People's Republic of China**

Hong Kong

Phone: +852 2738-8731

Fax: +852 2735-0243

ASIA/PACIFIC**People's Republic of China**

Shanghai

Phone: +86 21-3398-0000

Fax: +86 21-3398-1999

ASIA/PACIFIC**Korea - Seoul**

Phone: +82 2-3415-4500

Fax: +82 2-3486-3810

DISCLAIMER

This document reflects the state-of-the-art result of the work of TE Connectivity (TE). While TE has made every reasonable effort to ensure the accuracy of the information in this document, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The document is subject to change without notice. Consult TE for the latest dimensions and design specifications.

TRADEMARKS

AMP, SUPERSEAL, TE, TE Connectivity, TE connectivity (logo), and EVERY CONNECTION COUNTS are trademarks owned or licensed by the TE Connectivity Ltd. family of companies.

Other product names, logos, and company names mentioned herein may be trademarks of their respective owners.

COPYRIGHT

© 2021 TE Connectivity | All rights reserved.

aut-ampsuperseal1p5-cat-1654242-2-en | Revision 0921

PUBLISHED BY

TE Connectivity Germany GmbH

Ampèrestrasse 12-14

64625 Bensheim | Germany

