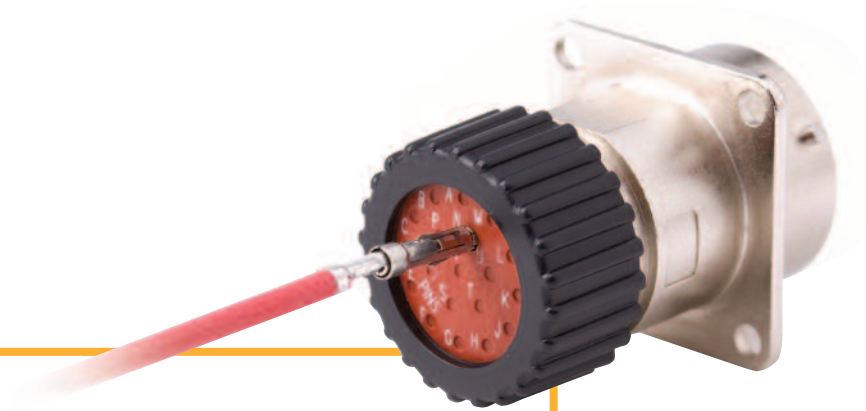




# ITT

## Interconnect Solutions

### Cannon Trident T2P Contact



*Engineered for life*

## Technical overview

ITT has been manufacturing Trident contacts for decades. These contacts have enjoyed a rich history in many Industrial and Transportation applications. Now, ITT ICS expands its contact innovation by enhancing the historical design and providing superior performance with our new, T2P contact system.

The T2P (two piece) contact system represents an innovative stamped and formed contact created for use in the Trident product range including the APD 6 / 7 way connectors. Noting its extensive benefits, the T2P also represents an excellent choice for higher density solutions in other product ranges.

## Performance specifications, materials & finishes

|                                      | Standard              | High conductivity     |
|--------------------------------------|-----------------------|-----------------------|
| <b>Body material</b>                 | Brass                 | Copper Alloy          |
| <b>Retention spring material</b>     | Stainless Steel       | Stainless Steel       |
| <b>Contact retention force (min)</b> | 67N                   | 67N                   |
| <b>Current rating*</b>               | 13 A                  | 16 A                  |
| <b>Contact resistance (initial)</b>  | 5mOhm                 | 5mOhm                 |
| <b>Mechanical endurance (max.)**</b> | 200 mating cycles     | 200 mating cycles     |
| <b>Wire sizes</b>                    | AWG 14 - 26           | AWG 14 - 26           |
| <b>Plating options</b>               | Tin, gold flash, gold | Tin, gold flash, gold |

\* this data is for individual contacts in isolation, when more contacts are used a derating factor must be applied. Due to the multiplicity of connector layouts and cables usable each case needs to be considered individually

\*\* depending on plating used

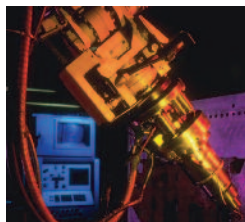
## Applications

Industrial:

- wire to board (PCB) connections
- test equipment
- coin operated machines
- industrial electronics
- robotic systems
- manufacturing equipment
- outdoor electronics
- communication equipment
- ... others

Transportation:

- cabin applications
- cabin & fire wall
- lighting
- cooling & heating systems
- ... others in trucks / busses / Off-road, agricultural and construction vehicles

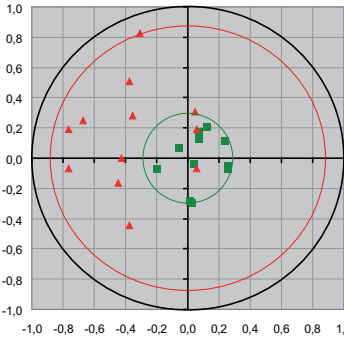


## Features & Benefits

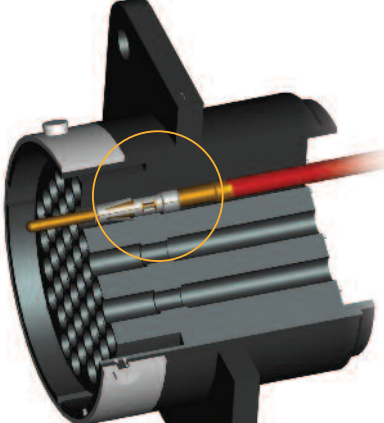
ITT introduces a new design and enhanced version of the well known T2P stamped and formed contact system. New contact features lead to significantly improved performance while the contacts remain fully intermateable and interchangeable to all connectors using T2P contacts. Existing Trident extraction tools will fully support the new contact design. In order to achieve optimum performance in terms of contact fit and alignment, the crimp tool for AWG 14 and AWG 16-18 contacts must be updated.

Along with all Trident products (Ringlock, Neptune, Neptune Metal, Slimline, Snap Together and Multiway) the new contact is used in APD 6/7 way connectors and it is also an interesting choice for other connector solutions.

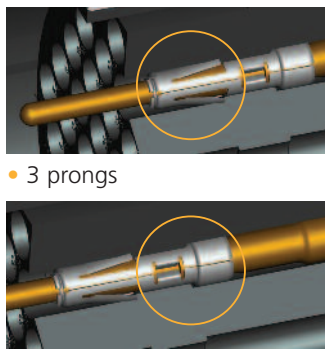
**Trident T2P, Comparison New and Old Contact: Alignment in Cavity, Play of Contact Tip**



- new contact, play of contact tip
- old contact, play of contact tip
- catch range of socket contact
- new contact, extreme positions of contact tip
- ▲ old contact, extreme positions of contact tip



**Optimized alignment thru:**



- 3 prongs
- optimized body shape

**Contact clip with three prongs and optimized body shape**  
 ▶ excellent contact alignment leading to secure connector mating

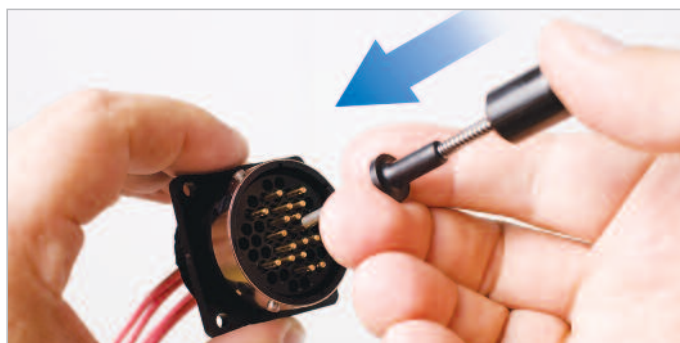


Tin & gold plated versions in standard & high conductivity materials

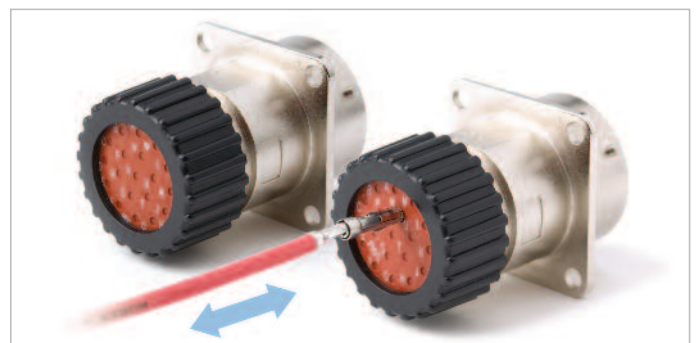
- ▶ up to 200 mating cycles
- ▶ up to 16A current rating

Clip made of stainless steel material

- ▶ reduced insertion forces for ease of assembly
- ▶ higher retention forces for even higher reliability



**Material choice and improved design with three prongs**  
 ▶ smooth and easy disassembly with extraction tool

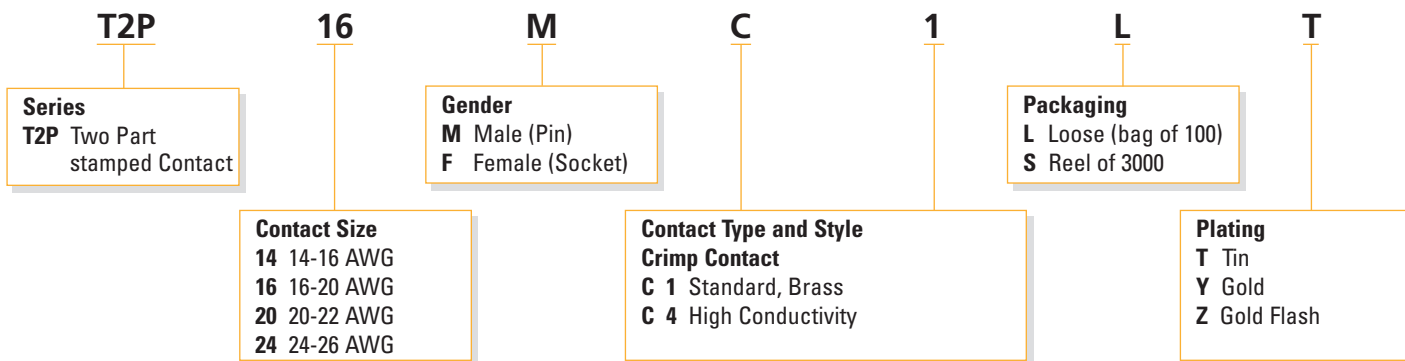


**Stainless steel clip with improved design**  
 ▶ greatly improved capability to replace contacts without the loss of sealing

# Ordering information - T2P contacts



## Overview of available versions – nomenclature:



e.g. T2P20MC1LT = AWG 20-22, pin, standard (13 A), packed in bags of 100 pcs, tin plating

## Part number details – standard contacts:

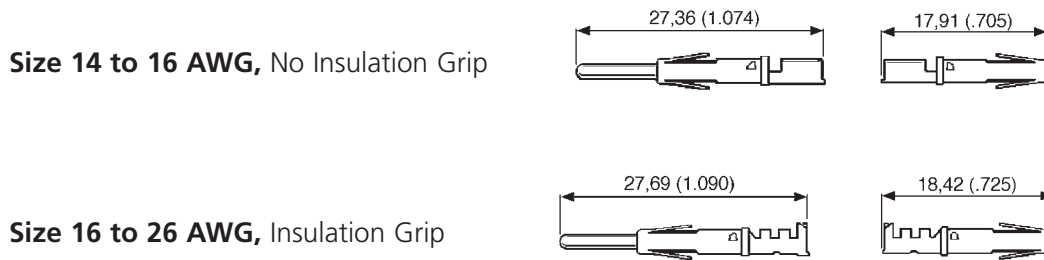
| Wire Range<br>mm <sup>2</sup> | Wire<br>Size | Contact | Part Number<br>Pack (100) |             |                                | Part Number<br>Reeled (3000) |             |                                | Insulation<br>Diameter     | Strip Length           |
|-------------------------------|--------------|---------|---------------------------|-------------|--------------------------------|------------------------------|-------------|--------------------------------|----------------------------|------------------------|
|                               |              |         | Tin Plating               | Gold Flash  | 1 µm (40 µin.)<br>Gold Plating | Tin Plating                  | Gold Flash  | 1 µm (40 µin.)<br>Gold Plating |                            |                        |
| 0,08-0,25                     | 26-24 AWG    | Pin     | 192990-0020               | 192990-0080 | 192900-0448                    | 192990-2510                  | 192990-2650 | 192900-0406                    | 0,89 (.035)-1,58 (.062)    | 3,95 (.155)±0,25(.009) |
| 0,08-0,25                     | 26-24 AWG    | Socket  | 192990-0030               | 192990-0090 | 192900-0452                    | 192990-2550                  | 192990-2690 | 192900-0410                    | 0,89 (.035)-1,58 (.062)    | 3,95 (.155)±0,25(.009) |
| 0,30-0,50                     | 22-20 AWG    | Pin     | 192990-0040               | 192922-1460 | 192900-0447                    | 192990-2500                  | 192990-2640 | 192900-0405                    | 1,17 (.046)-2,08 (.081)    | 3,95 (.155)±0,25(.009) |
| 0,30-0,50                     | 22-20 AWG    | Socket  | 192990-0050               | 192922-1470 | 192900-0451                    | 192990-2540                  | 192990-2680 | 192900-0409                    | 1,17 (.046)-2,08 (.081)    | 3,95 (.155)±0,25(.009) |
| 0,75-1,50                     | 18-16 AWG    | Pin     | 192990-0060               | 192990-0100 | 192900-0446                    | 192990-2490                  | 192990-2630 | 192900-0404                    | 2,00 (.078)-3,00 (.118)    | 3,95 (.155)±0,25(.009) |
| 0,75-1,50                     | 18-16 AWG    | Socket  | 192990-0070               | 192990-0110 | 192900-0450                    | 192990-2530                  | 192990-2670 | 192900-0408                    | 2,00 (.078)-3,00 (.118)    | 3,95 (.155)±0,25(.009) |
| 1,50-2,50                     | 16-14 AWG    | Pin     | 192990-1240               | 192990-1220 | 192900-0445                    | 192990-2480                  | 192990-2620 | 192900-0403                    | Without insulation support | 5,60 (.220)±0,25(.009) |
| 1,50-2,50                     | 16-14 AWG    | Socket  | 192990-1250               | 192990-1230 | 192900-0449                    | 192990-2520                  | 192990-2660 | 192900-0407                    | Without insulation support | 5,60 (.220)±0,25(.009) |

## Part number details – high conductivity contacts:


| Wire Range mm <sup>2</sup> | Wire Size | Contact | Part Number |               | Insulation Diameter        | Strip Length            |
|----------------------------|-----------|---------|-------------|---------------|----------------------------|-------------------------|
|                            |           |         | Pack (100)  | Reeled (3000) |                            |                         |
| 0,08-0,25                  | 26-24 AWG | Pin     | 192900-0122 | 192900-0120   | 0,89 (.035)-1,58 (.062)    | 3,95 (.155)±0,25 (.009) |
| 0,08-0,25                  | 26-24 AWG | Socket  | 192900-0123 | 192900-0121   | 0,89 (.035)-1,58 (.062)    | 3,95 (.155)±0,25 (.009) |
| 0,25-0,50                  | 22-20 AWG | Pin     | 192900-0126 | 192900-0124   | 1,17 (.046)-2,08 (.081)    | 3,95 (.155)±0,25 (.009) |
| 0,25-0,50                  | 22-20 AWG | Socket  | 192900-0127 | 192900-0125   | 1,17 (.046)-2,08 (.081)    | 3,95 (.155)±0,25 (.009) |
| 0,75-1,50                  | 18-16 AWG | Pin     | 192900-0002 | 192900-0000   | 2,00 (.078)-3,00 (.118)    | 3,95 (.155)±0,25 (.009) |
| 0,75-1,50                  | 18-16 AWG | Socket  | 192900-0003 | 192900-0001   | 2,00 (.078)-3,00 (.118)    | 3,95 (.155)±0,25 (.009) |
| 1,50-2,50                  | 16-14 AWG | Pin     | 192900-0005 | 192900-0004   | Without insulation support | 5,60 (.220)±0,25 (.009) |
| 1,50-2,50                  | 16-14 AWG | Socket  | 192900-0007 | 192900-0006   | Without insulation support | 5,60 (.220)±0,25 (.009) |



## Contact dimensions:



## Full range of customer tooling is available

|   | Tool  | Contact cross section                        | Part number  | Part number  |
|---|---|--|--|--|
|   | <p><b>Ratcheted hand tool</b><br/>Single action hand tool, factory calibrated to support all available crimp sizes. Ideal for low volume applications. For detailed crimp specification CAS25047E consult factory.</p>                              | <p>14-16 AWG<br/>16-18 AWG<br/>20-26 AWG</p> | <p>121586-5238<br/>121586-5237<br/>121586-5236</p>                 |  |
|  | <p><b>Contact extraction tool</b><br/>Simple hand tool readily removes contacts during assembly or if replacement of contacts is required.</p>  | <p>All sizes</p>                             | <p>192922-1450</p>   |  |
|  | <p><b>Mini applicator</b><br/>Interchangeable modules that fit into many standard crimping machines. For detailed crimp specification CAS25046E consult factory.</p>  | <p>14-16 AWG<br/>16-18 AWG<br/>20-26 AWG</p> | <p>Schäfer<br/>Consult factory<br/>121586-5141<br/>121586-5142</p> | <p>Mecal<br/>121586-5240<br/>121586-5217<br/>Consult factory</p> |
|  | <p><b>Adjustment Fixture</b><br/>Support tool to verify correct crimp setting of mini applicator tooling. The crimped contact is inserted in the fixture to check the crimp result. For detailed crimp specification CAS25046E consult factory.</p> |  | <p>317-8675-133</p>  |  |



# ITT

## Customer Support Locations

### *CHINA*

Tuopandun Industrial Area, Jinda Cheng,  
Xiner Village, Shajing Town,  
Baoan District, Shenzhen City,  
Guangdong, China 518125  
phone: +86.755.2726.7238  
fax: +86.755.2726.7515

### *GERMANY*

Cannonstrasse 1  
Weinstadt, 71384  
phone: +49.7151.699.0  
fax: +49.7151.699.217

### *FRANCE*

15, Boulevard Robert Thiboust  
Serris, France 77700  
phone: +33.1.60.04.93.93  
fax: +33.1.60.04.93.90

### *HONG KONG*

Units 2405-6, 24/F, ING Tower  
308 Des Voeux Road  
Central Hong Kong  
phone: +852.2732.2720  
fax: +852.2732.2919

### *ITALY*

Corso Europa 41/43  
Lainate (MI), Italy 20020  
phone: +39.02938721  
fax: +39.0293872300

### *JAPAN*

11-3, 5 Chome, Hibarigaoka, Zama-shi  
Kanagawa, Japan 228-0003  
phone: +81.462.57.2010  
fax: +81.462.57.1680

### *UK*

Jays Close, Viables Estate  
Basingstoke, RG22 4BA  
phone: +44.1256.311200  
fax: +44.1256.323356

### *USA*

666 East Dyer Road  
Santa Ana, CA 92705  
toll free: 1.800.854.3028  
phone: +1.714.557.4700  
fax: +1.714.628.2142