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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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cannon

Trident Series



ITT

ENGINEERED FOR LIFE

We Connect

When it matters most

For more than a century, ITT Cannon has developed innovative interconnect solutions for the world's harshest environments. With facilities in the United States, Germany, Italy, Mexico, China and Japan, each with its unique strengths, we offer our customers interconnect solutions that are truly Engineered for Life.

In addition to this truly global footprint, we offer highly specialized, segmented industry expertise. We have a proven track record as an industry leader in harsh-environment applications. This has equipped us with the knowledge needed to continue to produce the most resilient, reliable connectors for our customers' most challenging conditions.

Interconnect solutions for the harshest environments.

The ITT Cannon difference

- Global capabilities & local support
- Proven application expertise
- A century of interconnect leadership
- A committed innovator & business partner

The logo for Cannon, featuring the word "cannon" in a lowercase, sans-serif font. The letter "o" is replaced by a stylized icon of a gun barrel with a muzzle flash.

About ITT

ITT is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for the energy, transportation and industrial markets. Building on its heritage of innovation, ITT partners with its customers to deliver enduring solutions to the key industries that underpin our modern way of life. Founded in 1920, ITT is headquartered in White Plains, N.Y., with employees in more than 35 countries and sales in a total of approximately 125 countries. For more information, visit www.itt.com.





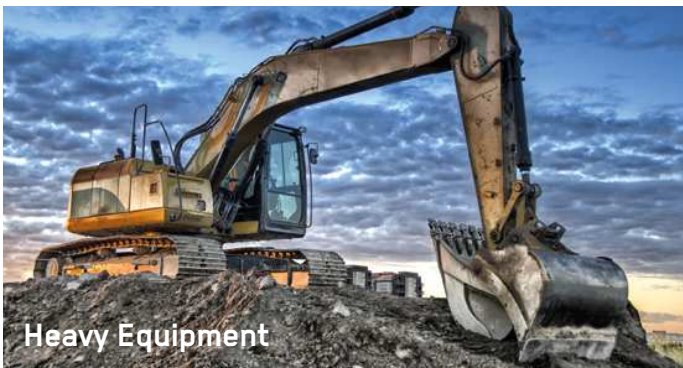
Industrial / Instrumentation



Defense Vehicles



Medical



Heavy Equipment



Rail



Oil & Gas



Commercial & Military Aerospace

Our connector portfolio remains the most extensive in the industry.

Offering a reliable and cost effective range of interconnect solutions.

Additional interconnect solutions utilizing the trusted and proven Trident contact system



ITT Cannon's Trident T2P and T3P contact technology is an extremely reliable and effective solution for harsh environment interconnects. In addition to the extensive Trident range, this contact technology is used in a number of ITT Cannon and Veam connector series including:



CTC Series

This cost-effective, footprint minimized solution for harsh environment vehicle wiring applications is available in 8 to 24-way layouts. Extremely simple to install and maintain it delivers an IP69K sealing without the need for wedge locks or blind seals.



APD Series

This full-plastic, proven bayonet series with IP69K sealing and color and mechanical coding is an ideal solution for multiple harsh transportation and industrial environments that require high sealing grades.



VRPC Series

This full plastic rectangular sealed connector series for multiple transport and industrial applications is extremely durable, small and light weight and meets stringent NFF fire and smoke resistance standards for Rail.

Cannon’s Trident Connector System is a versatile range of electrical connectors based on a standard contact design. These contacts are fully interchangeable throughout the Trident Connector System. The connector options include low cost rectangulars, rack and panel, industrial grade circulars, harsh environment circulars and shielded circulars.

Description

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	Snap Together		Flame Retardant	Rack and Panel	Circular			
	Rectangular	Slimline	Rectangular	Multiway	Ringlock	Neptune	Neptune Metal (TNM)	High Voltage (THV)
								
Operating Voltage ¹	Up to 250 V ac rms	Up to 250 V ac rms	Up to 250 V ac rms	*	Up to 250 V ac rms Up to 380 V ac rms (7 position connector only)	Up to 250 V ac rms	Up to 250 V ac rms	Up to 500 V ac rms
Current Rating ²	Up to 13 A	Up to 10 A	Up to 13 A	Up to 13 A	Up to 13 A Up to 16 A with High Conductivity Contacts	Up to 13 A Up to 16 A with High Conductivity Contacts Up to 30 A with Power Contacts	Up to 13 A Up to 16 A with High Conductivity Contacts Up to 30 A with Power Contacts Up to 40 A with D Sub Contacts	Up to 34 A with Power Contacts
Operating Temperature	-55°C to +105°C (-67°F to +221°F) (from -40°C, -40°F for PCB versions)	-55°C to +105°C (-67°F to +221°F) (from -40°C, -40°F for PCB versions)	-55°C to +105°C (-67°F to +221°F)	-55°C to +125°C (-67°F to +257°F) (to +105°C, 221°F with Plastic Hood)	-55°C to +105°C (-67°F to +221°F)	-55°C to +105°C (-67°F to +221°F)	-55°C to +105°C (-67°F to +221°F)	-40°C to +125°C (-40°F to +257°F)
Insulation Resistance	5000 MΩ at 500 V dc	5000 MΩ at 500 V dc	5000 MΩ at 500 V dc	5000 MΩ at 500 V dc	5000 MΩ at 500 V dc	5000 MΩ at 500 V dc	5000 MΩ at 500 V dc	5000 MΩ at 500 V dc
Durability ³	Up to 500 Mating Cycles	Up to 500 Mating Cycles	Up to 500 Mating Cycles	Up to 500 Mating Cycles	Up to 500 Mating Cycles	Up to 500 Mating Cycles	Up to 200 Mating Cycles	Up to 200 Mating Cycles
Environmental Sealing	-	-	-	-	Up to IP65	Up to IP67	Up to IP67	Up to IP67
Flammability	UL 94 V-0	UL 94 V-0	I2/F2 according to NFF 16-101 (fire & smoke standards) UL 94 V-0	UL 94 V-0 UL 94 V-1 with Plastic Hoods	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Insulator	Black Nylon	Black Nylon	Gray Nylon	Glass-Filled Phenolic	Black Nylon	Black Nylon	Black Nylon	Orange Nylon
Coupling Ring	-	-	-	-	Nickel Plated Brass	Nickel Plated Brass	Nickel Plated Brass	Nickel Plated Brass
Layouts	2, 3, 4, 6, 12, 24, 36	3, 4, 6, 9, 10	2, 3, 4, 6, 12, 24, 36	14, 20, 26, 34, 50, 75	4, 7, 8, 12, 19, 23, 28, 35, 48	12+0, 19+0 13+2, 20+4, 28+4, 48+0, 19+12 **	4+0, 8+0, 12+0, 3+3, 4+3, 0+4, 19+0 **	4
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* For details please consult the factory

** Signal + Power contacts

1 Depends on contacts used, layout, and degree of pollution

2 Depends on number and type of contacts used

3 Depends on plating and type of contacts used



These are low installed cost connectors rated for up to 13 A and 250 V ac. They are typically used for circuit board and internal wiring applications. Snap Together connectors facilitate easy assembly and removal of equipment such as motors, fans, transformers, etc. All Snap Together - Rectangular connectors are RoHS Compliant.

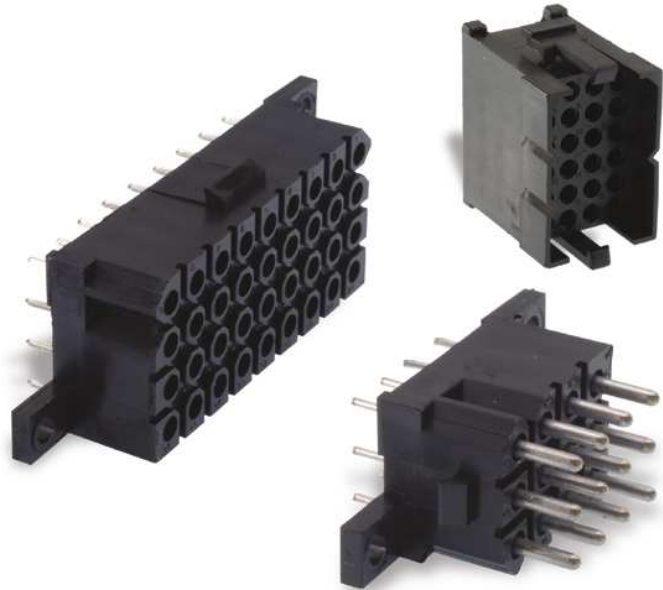


Applications:

- Vehicle Dashboards.
- Circuit board connections.
- Internal connections.

Product Features

- Easy cost effective installation.
- Integrally molded latches and connector polarization.
- Recognized under the component program of UL Inc.
- Inter-connector discrimination facilities available.
- Accepts formed (stamped) or machined contacts, see page 64.



Performance Specifications

Materials and Finishes

Insulator	Black Nylon, UL 94 V-0
------------------	------------------------

Operating Voltage ¹	Up to 250 V ac rms
Contact Current Rating ²	Up to 13 A
Operating Temperature	-55°C to +105°C (-67°F to +221°F) for free Plug and Receptacles -40°C to +105°C (-40°F to +221°F) for PCB Mounted Receptacles
Insulation Resistance	5000MΩ min. at 500 V dc
Durability ³	Up to 500 Mating Cycles
Connector Latching Force	150 N min. with latches engaged
Panel Retention Force	500 N min.
Flammability	UL 94 V-0

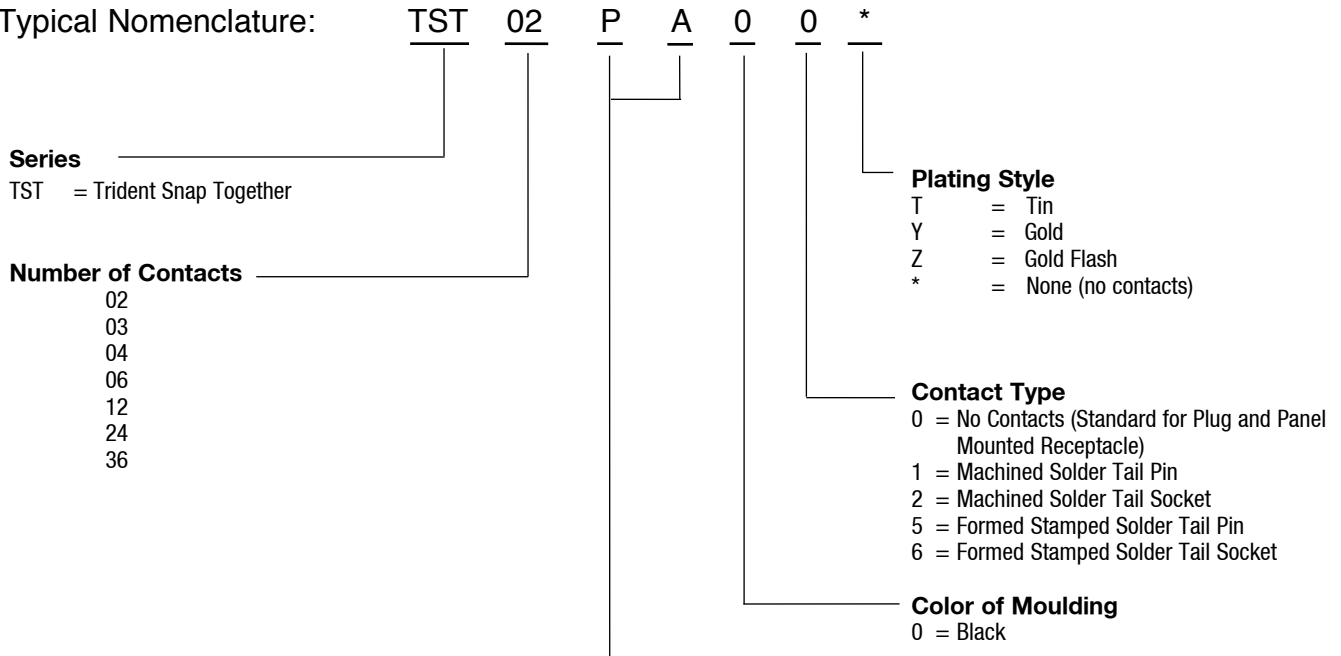
¹ Depends on contacts used, layout, and degree of pollution

² Depends on number and type of contacts used

³ Depends on plating and type of contacts used

How to Order

Typical Nomenclature:



Type	
PA	Plug; Free
RB	Receptacle; For PCB, with Mounting Lugs
RA	Receptacle; Panel Mounting (delivered without any contacts)
RR	Receptacle, For PCB, 90° Right Angle Mounting (only for 12 position connectors with machined contacts)
AS	Accessory; Receptacle Shroud
AH	Accessory; Plug Strain Relief Hood

Test Specifications

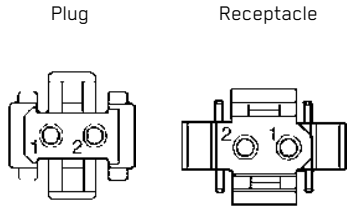
The table below summarizes the results of key tests. Data is applicable to standard connectors with standard contacts. Variations may affect this data, so please consult factory for further information on your requirements.

Test	Method	Criteria of Acceptance
Dielectric Withstanding Voltage	2000 V ac	No breakdown
Thermal Shock	-55°C to +125°C (-67°F to +257°F), 5 cycles	No physical damage
Physical Shock	50 g's peak, 3 axes, 11 millisecond duration half-sine pulse	No physical damage. No loss of continuity >1 sec
Vibration	10 g's peak, 10-500 Hz, 9 hours	No physical damage, No loss of continuity >1 sec
Durability	500 cycles of mating and unmating, 500 mating cycles max	No mechanical or electrical defects
Salt Spray	48 hours	Shall be capable of mating and unmating and meet contact resistance requirements
High Temperature Endurance	1000 hours at 125°C (+257°F)	Insulation Resistance > 100 MΩ
Humidity Steady State	RH 90-95%, 40°C (+104°F), 504 hours	Insulation Resistance > 100 MΩ
Moisture Resistance	10 Cycles	Insulation Resistance > 100 MΩ

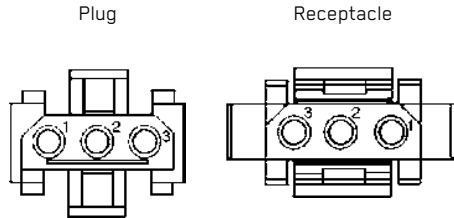


Contact Cavity Arrangements – Mating Face View

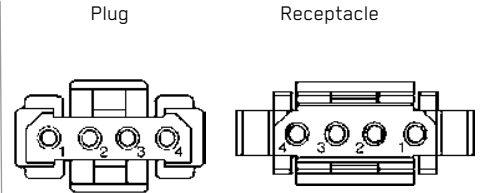
2-way



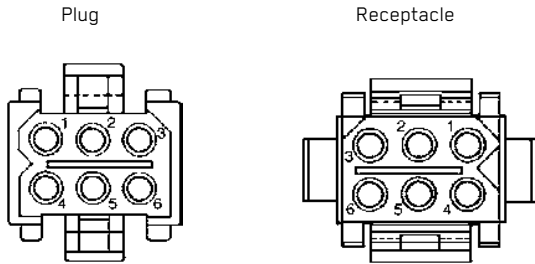
3-way



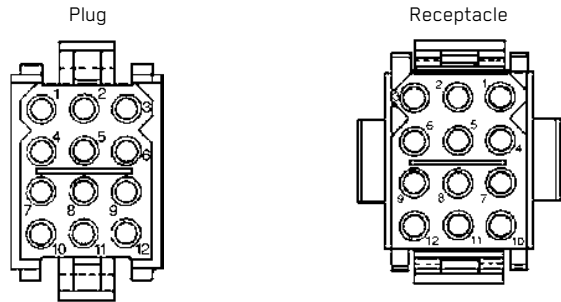
4-way



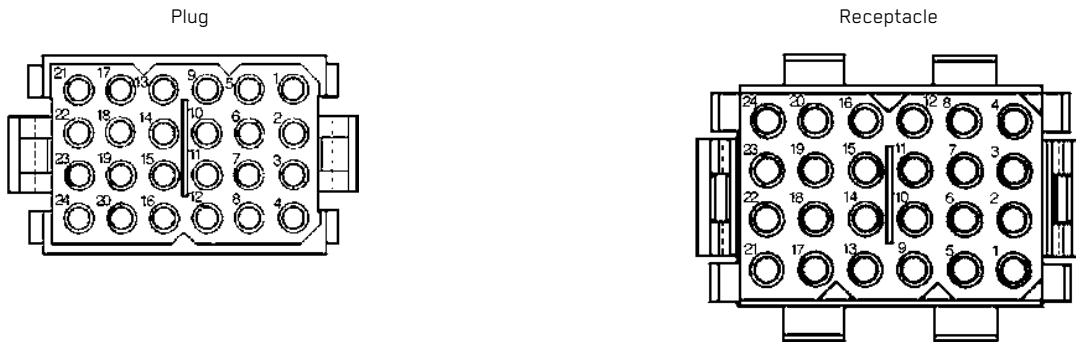
6-way



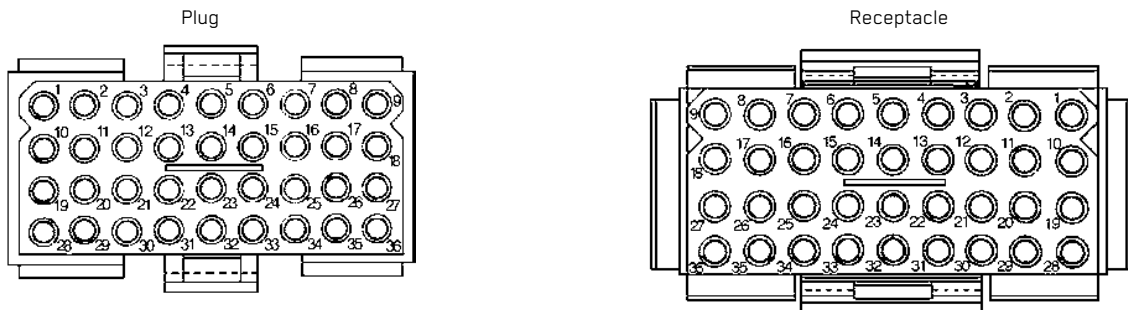
12-way



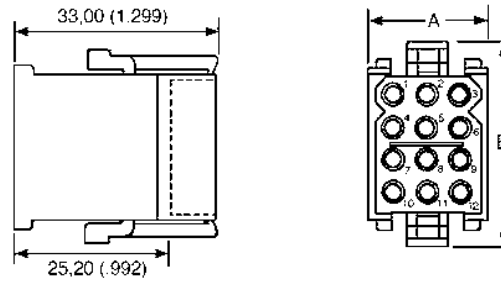
24-way



36-way



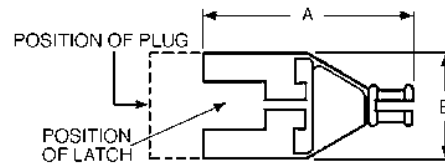
Dimensions shown in mm (inch)
 Specifications and dimensions subject to change



Free Plug

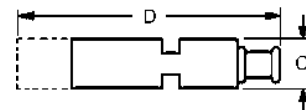
- Accepts Pin or Socket contacts.
- Contacts to be ordered separately, see page 64.
- Mates with panel mounted receptacles, see page 11.
- Mates with PCB mounted receptacles, see pages 12-13.
- Connector Discriminating (Keying) Pins available, see page 73.

Number of Contacts	Pack of 100 Part Number	Nomenclature	Dimensions (max.)	
			A	B
2	192990-0350	TST02PA00	15,50 (.610)	17,00 (.669)
3	192923-5920	TST03PA00	19,00 (.748)	17,00 (.669)
4	192990-0370	TST04PA00	24,00 (.944)	17,00 (.669)
6	192923-5930	TST06PA00	19,00 (.748)	22,00 (.866)
12	192923-5940	TST12PA00	19,00 (.748)	32,00 (1.259)
24	192923-5950	TST24PA00	24,00 (.944)	42,00 (1.653)
36	192923-5960	TST36PA00	49,50 (1.948)	32,00 (1.259)



Accessory – Plug Strain Relief Hood

- Provides strain relief and wire protection.
- Secure with a tie-wrap (customer supplies tie-wrap).



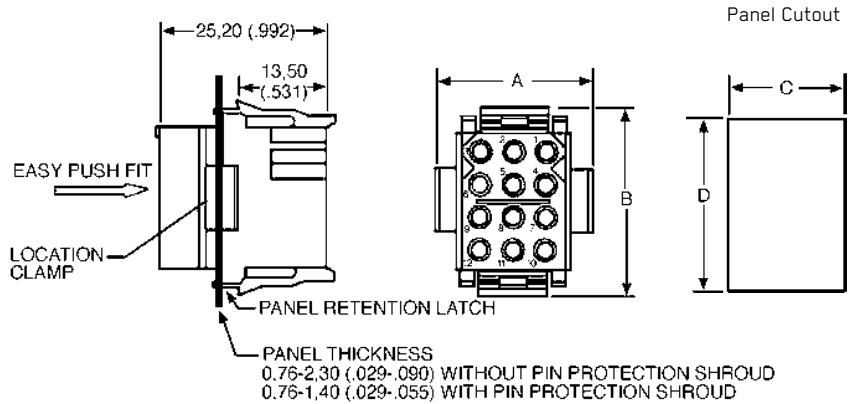
Number of Contacts	Pack of 100 Part Number	Nomenclature	Wire Bundle Dia.	Dimensions (max.)			
				A	B	C	D
2	192990-0460	TST02AH00	2,30-8,30 (.090-.326)	46,20 (1.818)	16,10 (.633)	11,00 (.433)	56,50 (2.224)
3	192990-0470	TST03AH00	2,30-8,30 (.090-.326)	46,20 (1.818)	18,60 (.732)	11,00 (.433)	56,50 (2.224)
4	192990-0480	TST04AH00	3,00-10,00 (.118-.393)	46,20 (1.818)	23,70 (.933)	11,00 (.433)	56,50 (2.224)
6	192923-5970	TST06AH00	2,30-8,30 (.090-.326)	46,20 (1.818)	19,00 (.748)	16,40 (.645)	56,50 (2.224)
12	192923-5980	TST12AH00	3,00-10,00 (.118-.393)	45,50 (1.791)	19,00 (.748)	26,40 (1.039)	55,80 (2.196)
24	192923-5990	TST24AH00	4,60-12,70 (.181-.500)	51,00 (2.007)	24,10 (.948)	36,80 (1.448)	60,30 (2.374)
36	192923-6000	TST36AH00	7,00-15,90 (.275-.625)	57,50 (2.263)	49,50 (1.948)	26,40 (1.039)	68,00 (2.677)



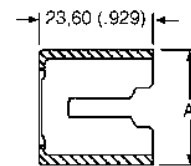
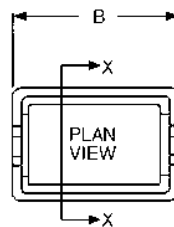


Receptacle – Panel Mounted

- Accepts Pin or Socket contacts.
- Contacts to be ordered separately, see page 64.
- Mates with Free Plugs, see page 10.
- Connector Discriminating (Keying) Pins available, see page 73.



Number of Contacts	Pack of 100		Dimensions			
	Part Number	Nomenclature	A	B	C ±0,13 (.005)	D ±0,13 (.005)
2	192990-0360	TST02RA00	19,00 (.748)	14,00 (.551)	11,50 (.452)	11,60 (.456)
3	192923-6010	TST03RA00	24,00 (.944)	14,00 (.551)	16,50 (.649)	11,60 (.456)
4	192990-0380	TST04RA00	29,00 (1.141)	14,00 (.551)	21,70 (.854)	11,60 (.456)
6	192923-6020	TST06RA00	24,00 (.944)	19,00 (.748)	16,50 (.649)	16,70 (.657)
12	192923-6030	TST12RA00	24,00 (.944)	29,00 (1.141)	16,70 (.657)	26,70 (1.051)
24	192923-6040	TST24RA00	29,00 (1.141)	39,00 (1.535)	21,80 (.858)	36,90 (1.452)
36	192923-6050	TST36RA00	54,20 (2.133)	29,00 (1.141)	46,70 (1.838)	26,40 (1.039)



Section X-X

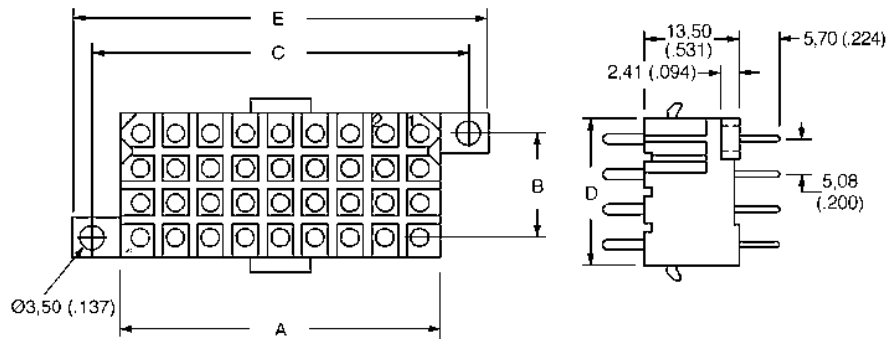
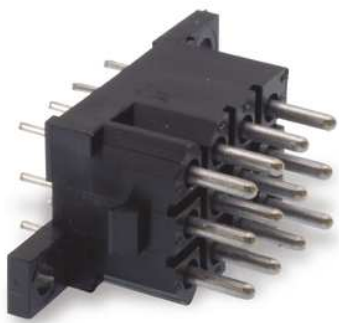
Accessory – Protection Shrouds for Receptacles with Pin Contacts

- Provides protection for panel mounted receptacles with pin contacts.
- Shrouds can be fitted onto panels up to 1,40 (.055) thick.

Number of Contacts	Pack of 100		Dimensions	
	Part Number	Nomenclature	A	B
3	192990-0400	TST03AS00	23,50 (.925)	19,05 (.748)
4	192991-0668	TST04AS00	28,60 (1.126)	19,05 (.748)
6	192990-0420	TST06AS00	23,50 (.925)	24,13 (.948)
12	192990-0430	TST12AS00	23,60 (.929)	34,20 (1.346)
24	192990-0440	TST24AS00	29,70 (1.169)	44,40 (1.748)
36	192990-0450	TST36AS00	54,40 (2.141)	34,00 (1.338)

Dimensions shown in mm (inch)
Specifications and dimensions subject to change

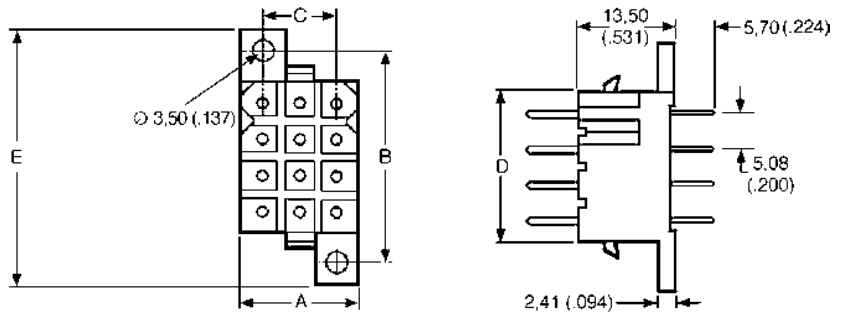
Figure 1



Receptacle –
PCB Mounted
with Pin Contacts

- Mates with Free Plug, see page 10.
- Integrally molded flanges.
- Contacts are on a 5,08 (.200) grid, symmetrical on center lines.
- Recommended PCB hole Ø1,15 (.045).
- Connector Discriminating Caps available, see page 73.

Figure 2



Pack of 100

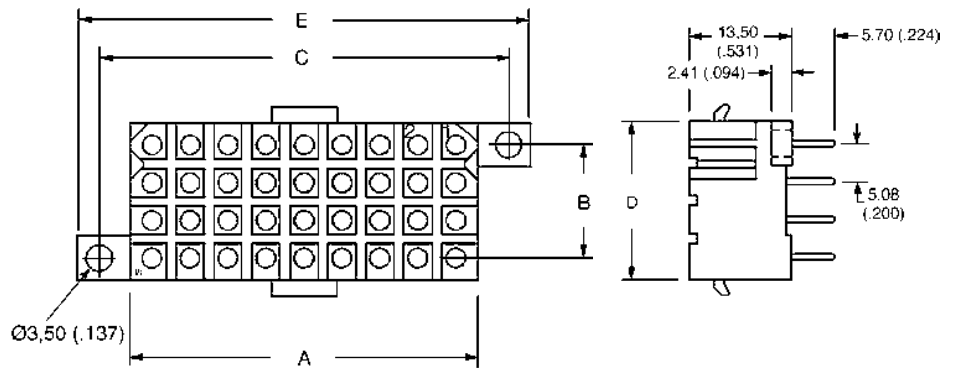
Number of Contacts	Plating	Formed (Stamped)		Machined		Figure	Dimensions				
		Part Number	Nomenclature	Part Number	Nomenclature		A	B ±0,08 (.003)	C ±0,08 (.003)	D	E
2	Gold*	192900-0411	TST02RB05Y	192991-0270	TST02RB01Z	1	11,13 (.438)	N/A	19,13 (.753)	6,00 (.236)	25,00 (.984)
2	Tin	192990-3230	TST02RB05T	192991-0271	TST02RB01T	1	11,13 (.438)	N/A	19,13 (.753)	6,00 (.236)	25,00 (.984)
3	Gold*	192900-0412	TST03RB05Y	192991-0278	TST03RB01Z	2	16,21 (.638)	14,05 (.553)	10,24 (.403)	6,00 (.236)	20,10 (.791)
3	Tin	192990-3240	TST03RB05T	192991-0279	TST03RB01T	2	16,21 (.638)	14,05 (.553)	10,24 (.403)	6,00 (.236)	20,10 (.791)
4	Gold*	192900-0413	TST04RB05Y	192991-0286	TST04RB01Z	2	21,30 (.838)	14,05 (.553)	15,32 (.603)	6,00 (.236)	20,10 (.791)
4	Tin	192990-3250	TST04RB05T	192991-0287	TST04RB01T	2	21,30 (.838)	14,05 (.553)	15,32 (.603)	6,00 (.236)	20,10 (.791)
6	Gold*	192900-0414	TST06RB05Y	192991-0294	TST06RB01Z	2	16,20 (.637)	19,12 (.752)	10,23 (.402)	11,00 (.433)	26,00 (1.023)
6	Tin	192990-3260	TST06RB05T	192991-0295	TST06RB01T	2	16,20 (.637)	19,12 (.752)	10,23 (.402)	11,00 (.433)	26,00 (1.023)
12	Gold*	192900-0415	TST12RB05Y	192991-0302	TST12RB01Z	2	16,20 (.637)	29,30 (1.153)	10,26 (.404)	21,20 (.834)	35,20 (1.385)
12	Tin	192990-3270	TST12RB05T	192991-0303	TST12RB01T	2	16,20 (.637)	29,30 (1.153)	10,26 (.404)	21,20 (.834)	35,20 (1.385)
24	Gold*	192900-0416	TST24RB05Y	192991-0310	TST24RB01Z	2	21,30 (.838)	39,37 (1.550)	15,32 (.603)	31,30 (1.232)	45,60 (1.795)
24	Tin	192990-3280	TST24RB05T	192991-0311	TST24RB01T	2	21,30 (.838)	39,37 (1.550)	15,32 (.603)	31,30 (1.232)	45,60 (1.795)
36	Gold*	192900-0417	TST36RB05Y	192991-0402	TST36RB01Z	1	46,60 (1.834)	15,24 (.600)	54,64 (2.151)	21,20 (.834)	60,50 (2.382)
36	Tin	192990-3290	TST36RB05T	192991-0403	TST36RB01T	1	46,60 (1.834)	15,24 (.600)	54,64 (2.151)	21,20 (.834)	60,50 (2.382)

* Gold plating for Formed (Stamped) Contacts is 0,75 µm (30 µ in.) min gold. Gold plating for Machined Contacts is gold flash.





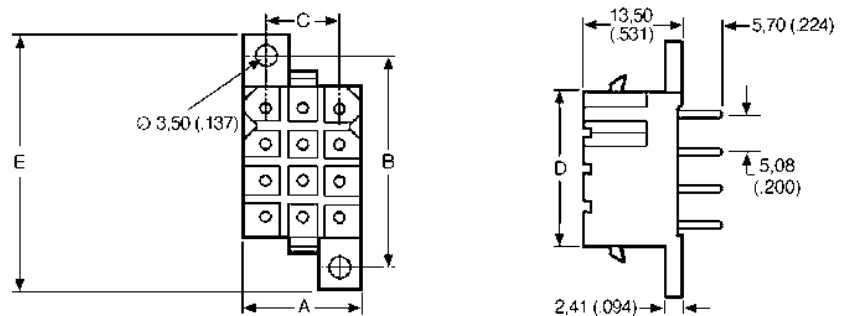
Figure 1



Receptacle –
PCB Mounted
with Socket Contacts

- Mates with Free Plug, see page 10.
- Integrally molded flanges.
- Contacts are on a 5,08 (.200) grid, symmetrical on center lines.
- Recommended PCB hole Ø 1,15 (.045).
- Connector Discriminating Pegs available, see page 73.

Figure 2



Pack of 100

Number of Contacts	Formed (Stamped)		Machined		Figure	Dimensions					
	Plating	Part Number	Nomenclature	Part Number		Nomenclature	A	B ±0,08 (.003)	C ±0,08 (.003)	D	E
2	Gold*	192900-0418	TST02RB06Y	192991-0213	TST02RB02Z	1	11,13 (.438)	N/A	19,13 (.753)	6,00 (.236)	25,00 (.984)
2	Tin	192990-3300	TST02RB06T	192991-0214	TST02RB02T	1	11,13 (.438)	N/A	19,13 (.753)	6,00 (.236)	25,00 (.984)
3	Gold*	192900-0419	TST03RB06Y	192991-0221	TST03RB02Z	2	16,21 (.638)	14,05 (.553)	10,24 (.403)	6,00 (.236)	20,10 (.791)
3	Tin	192990-3310	TST03RB06T	192991-0222	TST03RB02T	2	16,21 (.638)	14,05 (.553)	10,24 (.403)	6,00 (.236)	20,10 (.791)
4	Gold*	192900-0420	TST04RB06Y	192991-0229	TST04RB02Z	2	21,30 (.838)	14,05 (.553)	15,32 (.603)	6,00 (.236)	20,10 (.791)
4	Tin	192990-3320	TST04RB06T	192991-0230	TST04RB02T	2	21,30 (.838)	14,05 (.553)	15,32 (.603)	6,00 (.236)	20,10 (.791)
6	Gold*	192900-0421	TST06RB06Y	192991-0237	TST06RB02Z	2	16,20 (.637)	19,12 (.752)	10,23 (.402)	11,00 (.433)	26,00 (1.023)
6	Tin	192990-3330	TST06RB06T	192991-0238	TST06RB02T	2	16,20 (.637)	19,12 (.752)	10,23 (.402)	11,00 (.433)	26,00 (1.023)
12	Gold*	192900-0422	TST12RB06Y	192991-0245	TST12RB02Z	2	16,20 (.637)	29,30 (1.153)	10,26 (.404)	21,20 (.834)	35,20 (1.385)
12	Tin	192990-3340	TST12RB06T	192991-0246	TST12RB02T	2	16,20 (.637)	29,30 (1.153)	10,26 (.404)	21,20 (.834)	35,20 (1.385)
24	Gold*	192900-0423	TST24RB06Y	192991-0253	TST24RB02Z	2	21,30 (.838)	39,37 (1.550)	15,32 (.603)	31,30 (1.232)	45,60 (1.795)
24	Tin	192990-3350	TST24RB06T	192991-0254	TST24RB02T	2	21,30 (.838)	39,37 (1.550)	15,32 (.603)	31,30 (1.232)	45,60 (1.795)
36	Gold*	192900-0424	TST36RB06Y	192991-0261	TST36RB02Z	1	46,60 (1.834)	15,24 (.600)	54,64 (2.151)	21,20 (.834)	60,50 (2.382)
36	Tin	192990-3360	TST36RB06T	192991-0262	TST36RB02T	1	46,60 (1.834)	15,24 (.600)	54,64 (2.151)	21,20 (.834)	60,50 (2.382)

* Gold plating for Formed (Stamped) Contacts is 0,75 µm (30 µ in.) min gold. Gold plating for Machined Contacts is gold flash.

This connector series is compliant to railway standards. The material properties are I2/F2 according to NFF 16-101 & NFF 16-102. These are low installed cost connectors rated for up to 13 A and 250 V ac. They are typically used for circuit board and internal wiring applications. All flame retardant connectors are RoHS Compliant.

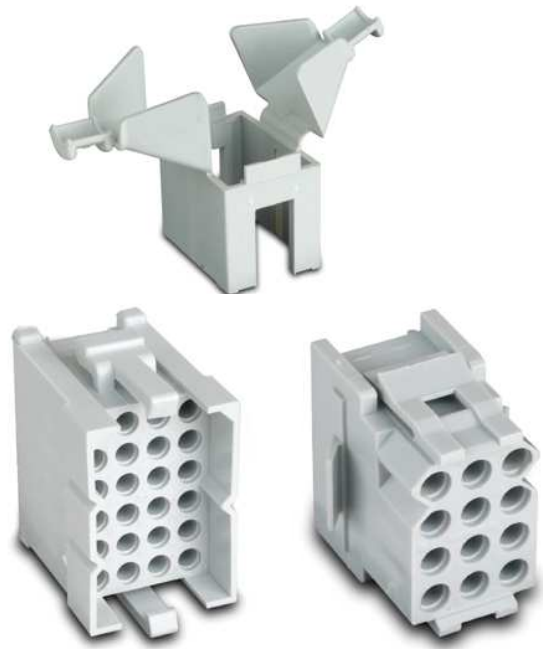


Applications:

- Vehicle Dashboards.
- Circuit board connections.
- Internal connections.
- Railway.
- Lighting.
- Cabin Applications.
- Control Consoles.

Product Features

- Material properties I2/F2 according to NFF 16-101 & NFF 16-102
- Easy cost effective installation.
- Integrally molded latches and connector polarization.
- Accepts formed (stamped) or machined contacts, see page 64.



Performance Specifications

Materials and Finishes

Insulator	Gray Nylon
------------------	------------

Operating Voltage ¹	Up to 250 V ac rms
Contact Current Rating ²	Up to 13 A
Operating Temperature	-55°C to +105°C (-67°F to +221°F) for free Plug and Receptacles
Insulation Resistance	5000MΩ min. at 500 V dc
Durability ³	Up to 500 Mating Cycles
Connector Latching Force	150 N min. with latches engaged
Panel Retention Force	500 N min.
Flammability	UL 94 V-0

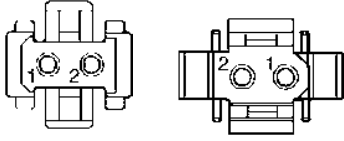
¹ Depends on contacts used, layout, and degree of pollution

² Depends on number and type of contacts used

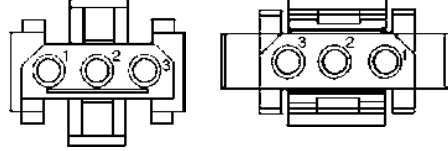
³ Depends on plating and type of contacts used

Contact Cavity Arrangements – Mating Face View

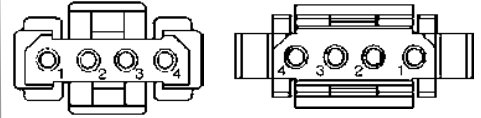
2-way



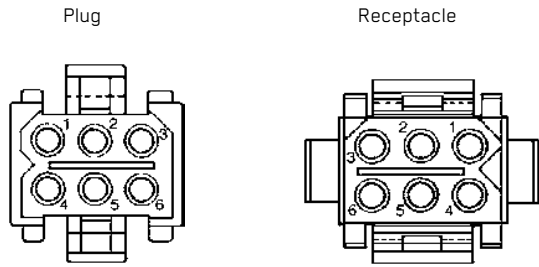
3-way



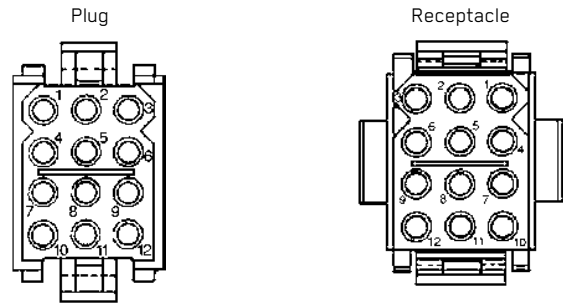
4-way



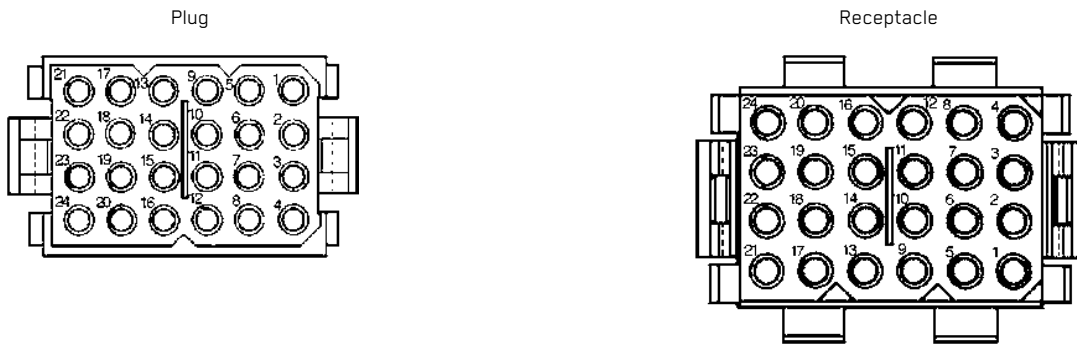
6-way



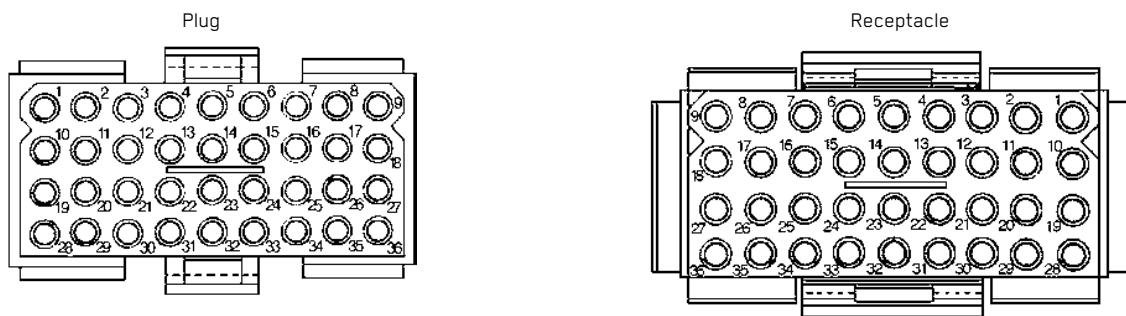
12-way

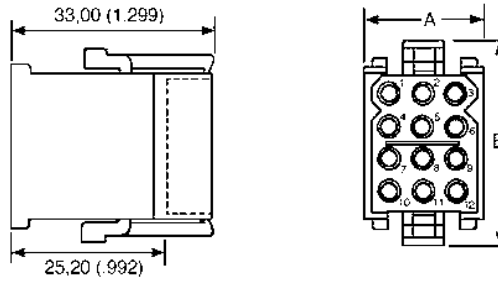


24-way



36-way

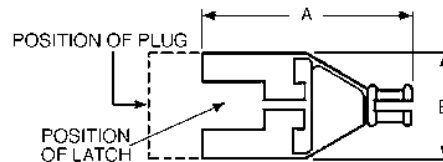




Free Plug

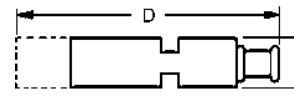
- Accepts Pin or Socket contacts.
- Contacts to be ordered separately, see page 64.
- Mates with panel mounted receptacles, see page 17.
- Connector Discriminating (Keying) Pins available, see page 72.

Number of Contacts	Pack of 100		Dimensions (max.)	
	Part Number	Nomenclature	A	B
2	121587-0010	TFR02PA10	15,50 (.610)	17,00 (.669)
3	121587-0011	TFR03PA10	19,00 (.748)	17,00 (.669)
4	121587-0012	TFR04PA10	24,00 (.944)	17,00 (.669)
6	121587-0013	TFR06PA10	19,00 (.748)	22,00 (.866)
12	121587-0014	TFR12PA10	19,00 (.748)	32,00 (1.259)
24	121587-0015	TFR24PA10	24,00 (.944)	42,00 (1.653)
36	121587-0016	TFR36PA10	49,50 (1.948)	32,00 (1.259)



Accessory – Plug Strain Relief Hood

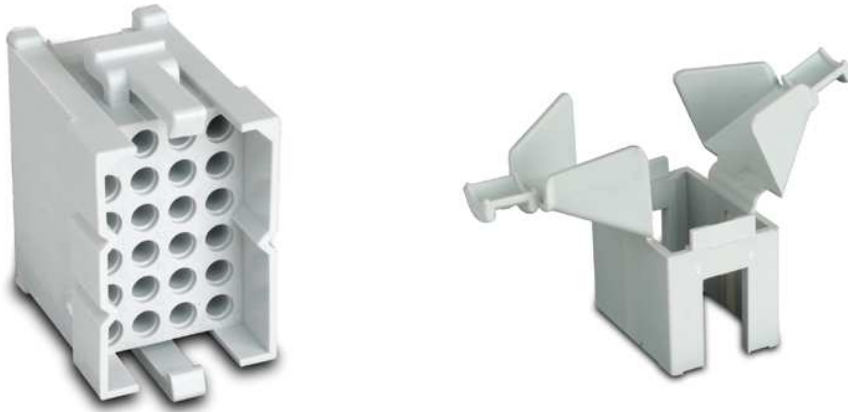
- Provides strain relief and wire protection.
- Secure with a tie-wrap (customer supplies tie-wrap).



Number of Contacts	Pack of 100			Dimensions (max.)			
	Part Number	Nomenclature	Wire Bundle Dia.	A	B	C	D
2	121587-0020	TFR02AH10	2,30-8,30 (.090-.326)	46,20 (1.818)	16,10 (.633)	11,00 (.433)	56,50 (2.224)
3	121587-0021	TFR03AH10	2,30-8,30 (.090-.326)	46,20 (1.818)	18,60 (.732)	11,00 (.433)	56,50 (2.224)
4	121587-0022	TFR04AH10	3,00-10,00 (.118-.393)	46,20 (1.818)	23,70 (.933)	11,00 (.433)	56,50 (2.224)
6	121587-0023	TFR06AH10	2,30-8,30 (.090-.326)	46,20 (1.818)	19,00 (.748)	16,40 (.645)	56,50 (2.224)
12	121587-0024	TFR12AH10	3,00-10,00 (.118-.393)	45,50 (1.791)	19,00 (.748)	26,40 (1.039)	55,80 (2.196)
24	121587-0025	TFR24AH10	4,60-12,70 (.181-.500)	51,00 (2.007)	24,10 (.948)	36,80 (1.448)	60,30 (2.374)
36	121587-0026	TFR36AH10	7,00-15,90 (.275-.625)	57,50 (2.263)	49,50 (1.948)	26,40 (1.039)	68,00 (2.677)



Dimensions shown in mm (inch)
Specifications and dimensions subject to change



Kit –
Plug and Strain Relief Hood

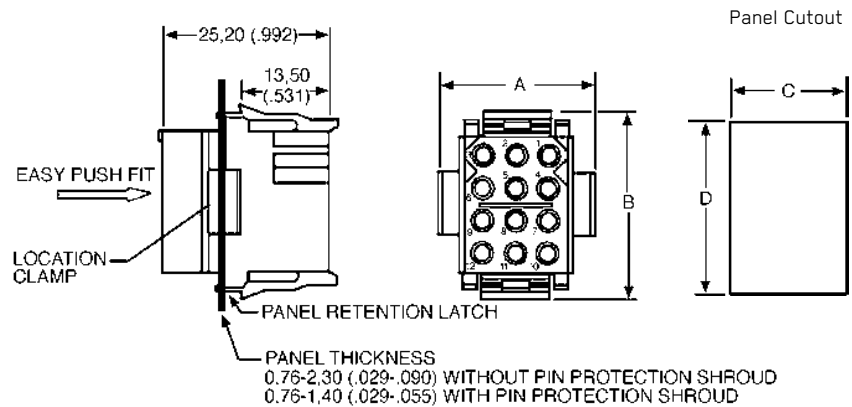
- Provides protection for panel mounted receptacles with pin contacts.
- Shrouds can be fitted onto panels up to 1,40 (.055) thick.

Number of Contacts	Pack of 100	
	Part Number	Nomenclature
2	121587-0040	TFR02PH10
3	121587-0041	TFR03PH10
4	121587-0042	TFR04PH10
6	121587-0043	TFR06PH10
12	121587-0044	TFR12PH10
24	121587-0045	TFR24PH10
36	121587-0046	TFR36PH10



Receptacle –
Panel Mounted

- Accepts Pin or Socket contacts.
- Contacts to be ordered separately, see page 64.
- Mates with Free Plugs, see page 16.
- Connector Discriminating (Keying) Pins available, see page 72.



Number of Contacts	Pack of 100		Dimensions			
	Part Number	Nomenclature	A	B	C ±0,13 (.005)	D ±0,13 (.005)
2	121587-0030	TFR02RA10	19,00 (.748)	14,00 (.551)	11,50 (.452)	11,60 (.456)
3	121587-0031	TFR03RA10	24,00 (.944)	14,00 (.551)	16,50 (.649)	11,60 (.456)
4	121587-0032	TFR04RA10	29,00 (1.141)	14,00 (.551)	21,70 (.854)	11,60 (.456)
6	121587-0033	TFR06RA10	24,00 (.944)	19,00 (.748)	16,50 (.649)	16,70 (.657)
12	121587-0034	TFR12RA10	24,00 (.944)	29,00 (1.141)	16,70 (.657)	26,70 (1.051)
24	121587-0035	TFR24RA10	29,00 (1.141)	39,00 (1.535)	21,80 (.858)	36,90 (1.452)
36	121587-0036	TFR36RA10	54,20 (2.133)	29,00 (1.141)	46,70 (1.838)	26,40 (1.039)

Dimensions shown in mm (inch)
Specifications and dimensions subject to change

The Slimline offers a low profile connector system that is well suited for circuit board applications. The precision machined contacts are ideal for power and sensitive signals. All Snap Together - Slimline connectors are RoHS Compliant.



Applications:

- Junction Boxes.
- Communications equipment.
- Test equipment.
- Instrumentation.



Product Features

- Less than 10,00 (.393) width on PC board.
- Pin headers pre-loaded with straight or 90° machined solder tail pins.
- Mating plug accepts all Trident signal crimp socket contacts, see page 64.
- Plugs have integrally molded quick connect/disconnect latches.
- Five single row contact arrangements available.
- Recognized under the component program of UL Inc.
- Gold plated version available with earth pin capability.
- 10 A per circuit.

Performance Specifications

Operating Voltage ¹	Up to 250 V ac rms
Contact Current Rating ²	Up to 10 A
Operating Temperature	-55°C to +105°C (-67°F to +221°F) for free Plug & Receptacles -40°C to +105°C (-40°F to +221°F) for PCB Mounted Receptacles
Insulation Resistance	5000MΩ min. at 500 V dc
Durability ³	Up to 500 Mating Cycles
Connector Latching Force	150 N min. with latches engaged
Panel Retention Force	500 N min.
Flammability	UL 94 V-0

Materials and Finishes

Insulator	Black Nylon, UL 94 V-0
------------------	------------------------

¹ Depends on contacts used, layout, and degree of pollution

² Depends on number and type of contacts used

³ Depends on plating and type of contacts used

Test Specifications

The table below summarizes the results of key tests. Data is applicable to standard connectors with standard contacts. Variations may affect this data, so please consult factory for further information on your requirements.

Test	Method	Criteria of Acceptance
Dielectric Withstanding Voltage	2000 V ac	No breakdown
Thermal Shock	-55°C to +125°C (-67°F to +257°F), 5 cycles	No physical damage
Physical Shock	50 g's peak, 3 axes, 11 millisecond duration half-sine pulse	No physical damage. No loss of continuity >1 sec
Vibration	10 g's peak, 10-500 Hz, 9 hours	No physical damage, No loss of continuity >1 sec
Durability 500 cycles of mating and unmating, 500 mating cycles max	No mechanical or electrical defects	
Salt Spray	48 hours and meet contact resistance requirements	Shall be capable of mating and unmating
High Temperature Endurance	1000 hours at 125°C (+257°F)	Insulation Resistance > 100 MΩ
Humidity Steady State	RH 90-95%, 40°C (+125°F), 504 hours	Insulation Resistance > 100 MΩ
Moisture Resistance	10 Cycles	Insulation Resistance > 100 MΩ



Dimensions shown in mm (inch)
Specifications and dimensions subject to change

How to Order

Typical Nomenclature:

TST 03 P F 0 0 *

Series

TST = Trident Snap Together

Number of Contacts

- 03
- 04
- 06
- 09
- 10

Plating Style

- * = None (Plug only)
- T = Tin
- Y = 0,4 µm Gold overall

Contact Type

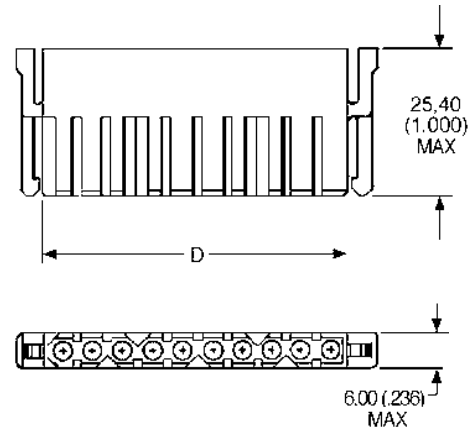
- 0 = No Contacts (Standard for Plug and Panel Mounted Receptacle)
- 1 = Machined Solder Tail Pin
- 2 = Machined Solder Tail Socket
- 5 = Formed Stamped Solder Tail Pin
- 6 = Formed Stamped Solder Tail Socket

Color of Moulding

- 0 = Black

Variant

RD	PCB Receptacle; Straight Contacts
RE	PCB Receptacle; 90° Contacts
PF	Plug

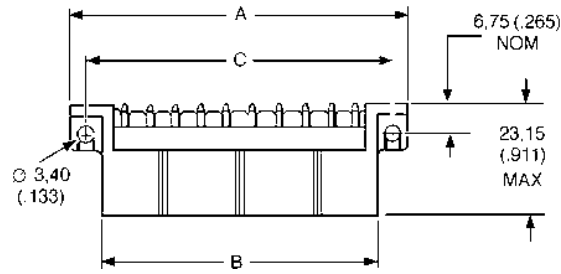
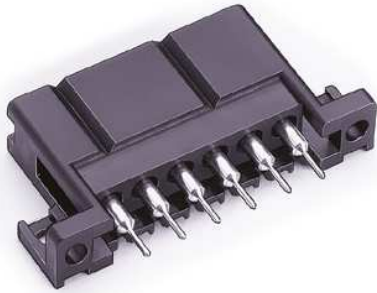


Plug Connector

- Socket contacts must be ordered separately for the plug connectors, see page 64.

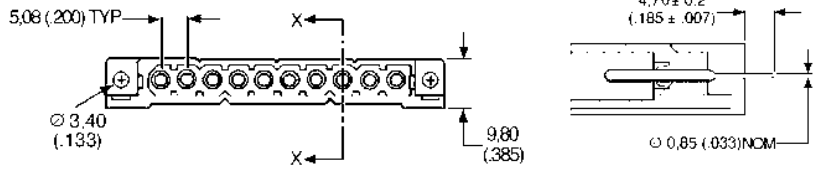
Number of Contacts	Pack of 100			D max.
	Part Number	Nomenclature		
3	192990-0960*	TST03PF00		16,10 (.633)
4	192990-0970	TST04PF00		21,20 (.834)
6	192990-0980	TST06PF00		31,40 (1.236)
9	192990-0990	TST09PF00		46,60 (1.834)
10	192990-1000	TST10PF00		51,60 (2.031)

*Available in gray (material properties I2/F2 according to NFF 16-101 & NFF 16-102), part number: 192990-0965.



Receptacle with Straight Pin Contacts

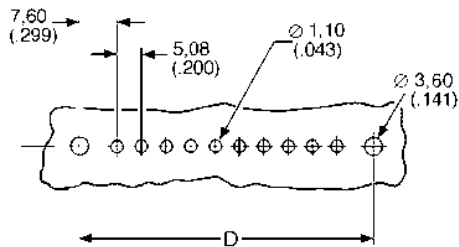
- For gold plated versions extended earth pins are available in any one or two positions. Contact your local Cannon Sales Office for further details.



Pack of 100

Number of Contacts	Gold Plated Version 0,4 μm (16 μin.) min. Gold		Tin Plated Version		Dimensions (max.)		
	Part Number	Nomenclature	Part Number	Nomenclature	A	B	C
3	192991-0337	TST03RD01Y	192991-0316	TST03RD01T	31,40 (1.236)	19,40 (.763)	25,50 (1.003)
4	192991-0347	TST04RD01Y	192991-0318	TST04RD01T	36,50 (1.437)	14,50 (.964)	30,60 (1.204)
6	192991-0342	TST06RD01Y	192991-0320	TST06RD01T	46,70 (1.838)	34,70 (1.366)	40,70 (1.602)
9	192991-0536	TST09RD01Y	192991-0322	TST09RD01T	61,90 (2.437)	49,90 (1.964)	56,00 (2.204)
10	192991-0354	TST10RD01Y	192991-0324	TST10RD01T	67,00 (2.637)	55,00 (2.165)	61,10 (2.405)

PCB Layout



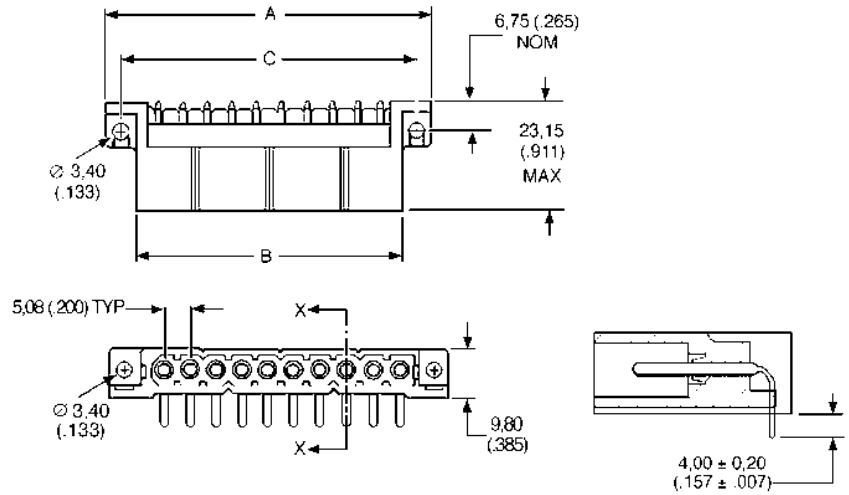
Number of Contacts	D max.
3	25,50 (1.003)
4	30,60 (1.204)
6	40,70 (1.602)
9	56,00 (2.204)
10	61,10 (2.405)





Receptacle with 90° Pin Contacts

- For gold plated versions extended earth pins are available in any one or two positions. Contact your local Cannon Sales Office for further details.

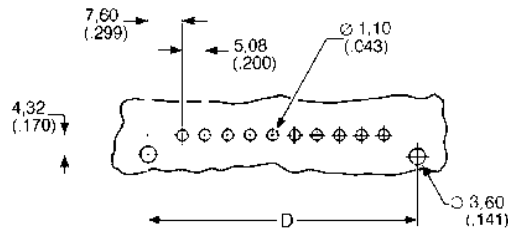


Pack of 100

Number of Contacts	Gold Plated Version 0,4 μm (16 μin.) min. Gold		Tin Plated Version		Dimensions (max.)		
	Part Number	Nomenclature	Part Number	Nomenclature	A	B	C
3	192991-0532*	TST03RE01Y	192991-0317	TST03RE01T	31,40 (1.236)	19,40 (.763)	25,50 (1.003)
4	192991-0533	TST04RE01Y	192991-0319	TST04RE01T	36,50 (1.437)	14,50 (.964)	30,60 (1.204)
6	192991-0534	TST06RE01Y	192991-0321	TST06RE01T	46,70 (1.838)	34,70 (1.366)	40,70 (1.602)
9	192991-0535	TST09RE01Y	192991-0323	TST09RE01T	61,90 (2.437)	49,90 (1.964)	56,00 (2.204)
10	192991-0538	TST10RE01Y	192991-0325	TST10RE01T	67,00 (2.637)	55,00 (2.165)	61,10 (2.405)

*Available in gray (material properties I2/F2 according to NFF 16-101 & NFF 16-102), part number: 192991-0539.

PCB Layout



Number of Contacts	D max.
3	25,50 (1.003)
4	30,60 (1.204)
6	40,70 (1.602)
9	56,00 (2.204)
10	61,10 (2.405)

The Multiway Range has six contact cavity arrangements available and offers an extremely reliable, robust and versatile connector system, in which any of the Trident signal contacts can be used. All Multi Rack & Panel connectors are RoHS Compliant.



Applications:

- Inflight entertainment systems.
- Railway applications.
- Test measurement equipment.



Product Features

- Fully tested to MIL-STD-202 and now IEC 512.
- Wide range of accessories, jacking and mounting hardware.
- Polarizing between connectors available, by contact position, use of shrouds or additional guide pin and socket sets.
- Recognized under the component program of CSA.
- Complete range of contact options available, see page 64.

Performance Specifications

Temperature Range	-55°C to +125°C (-67°F to +257°F) Plastic Hood assemblies limited to 105°C to (221°F)
Test Voltage	2000 V ac rms for 60 seconds
Insulation Resistance	5000MΩ min. at 500 V dc
Durability ¹	Up to 500 Mating Cycles
Flammability	UL 94 V-0 (Insulators), UL 94 V-1 (Plastic Hoods)
Rated Current	Dependent on choice of contact and application (usually limited by cable bundle factor)

Materials and Finishes

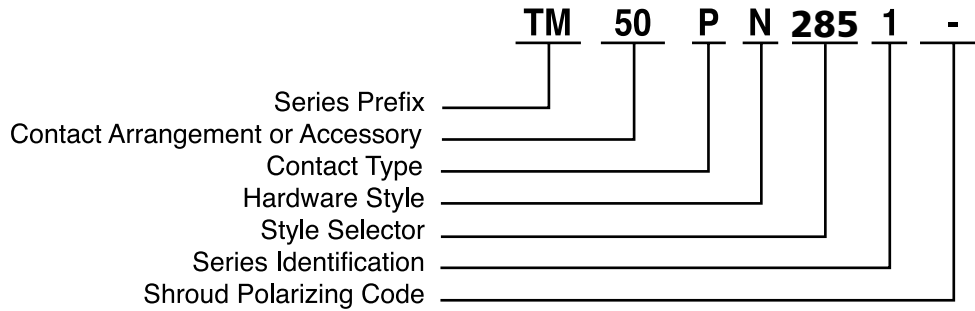
Insulator	Glass-Filled Phenolic
Intermating Hardware	Brass and Stainless Steel
Jackscrew Knobs	Thermoplastic
Cable Clamps	Stainless Steel
Pin Protection Shrouds, 14-34-way	Anodized Aluminum
Pin Protection Shrouds, 50 & 75-way	Stainless Steel
Formed Hoods	Anodized Aluminum
Plastic Hoods	Unfilled Thermoplastic - PPO
Die Cast Hoods	Gray Painted Zinc Alloy

¹ Depends on plating and type of contacts used

Test Data

Test Description	IEC Test	Military Standard	Test Method
Test Voltage	512-2 Test 4a	MIL-STD-202	301
Insulation Resistance	512-2 Test 3a	MIL-STD-202	302
Vibration	512-4 Test 6d	MIL-STD-202	204, Condition A
Shock	512-4 Test 6c	MIL-STD-202	213
Humidity	512-6 Test 11c	MIL-STD-202	103, Condition C
Corrosion (Salt Spray)	512-6 Test 11f	MIL-STD-202	101, Condition B
Dry Heat	512-6 Test 11i	MIL-STD-202	108A, Condition D

How to Order



Series Prefix
TM – Trident Multiway

Contact Arrangement
See Page 24

Contact Type
P – Plug
R – Receptacle

Hardware Style
N – Normal Hardware
R – Reversed Hardware

Style Selector
See Hardware Selection Guide,
page 25.

Series Identification
1 – For all items in this publication

Shroud Polarizing Code
leave blank, if not required.
Contact Cannon for other options.

*For more information, please
 contact your local ITT Cannon sales office.*

Style Selector – Hardware Selection Guide

Plain, No Accessories



Note: Shown without Pin Protection Shroud.

Plastic Hood



Die-Cast Hood



Note: Shown with Heavy Duty Jackscrew

Jackscrews available on 34-way only.

	Rotating Jackscrews or Fixed Jackposts	Guide Pins & Sockets
No Shrouds	007	001
Shrouds	207	201

Note:

1. Connectors with Jackscrews will not mate with connectors with Guide Pins or Sockets.
2. Normal Hardware: Plugs have rotating jackscrews, receptacles have fixed jackposts.
3. Reversed Hardware: Receptacles have rotating jackscrews, plugs have fixed jackposts.

	Rotating Jackscrews or Fixed Jackposts	Guide Pins & Sockets
No Shrouds	155 (34-way only)	159 (14, 20, 26 & 34-way only)
Shrouds	255 (34-way only)	285 (14, 20, 26 & 34-way only)

Note:

1. Connectors with Jackscrews will not mate with connectors with Guide Pins or Sockets.
2. Normal Hardware: Plugs have rotating jackscrews, receptacles have fixed jackposts.
3. Reversed Hardware: Receptacles have rotating jackscrews, plugs have fixed jackposts.

	Rotating Jackscrews or Fixed Jackposts	Guide Pins & Sockets
No Shrouds	157 (50 & 75-way only)	185
Shrouds	257 (50 & 75-way only)	285

Note:

1. Connectors with Jackscrews will not mate with connectors with Guide Pins or Sockets.
2. Normal Hardware: Plugs have rotating jackscrews, receptacles have fixed jackposts.
3. Reversed Hardware: Receptacles have rotating jackscrews, plugs have fixed jackposts.

Straight Cable Clamp



	Rotating Jackscrews or Fixed Jackposts	Guide Pins & Sockets
No Shrouds	118	180
Shrouds	218	280

Note:

1. Connectors with Jackscrews will not mate with connectors with Guide Pins or Sockets.
2. Normal Hardware: Plugs have rotating jackscrews, receptacles have fixed jackposts.
3. Reversed Hardware: Receptacles have rotating jackscrews, plugs have fixed jackposts.

90° Cable Clamp



	Standard Cable Exit to Left	
	Rotating Jackscrews or Fixed Jackposts	Guide Pins & Sockets
No Shrouds	138	136
Shrouds	238	236

Note:

1. Connectors with Jackscrews will not mate with connectors with Guide Pins or Sockets.
2. Normal Hardware: Plugs have rotating jackscrews, receptacles have fixed jackposts.
3. Reversed Hardware: Receptacles have rotating jackscrews, plugs have fixed jackposts.

	Reversed Cable Exit to Right	
	Rotating Jackscrews or Fixed Jackposts	Guide Pins & Sockets
No Shrouds	118	180
Shrouds	218	280