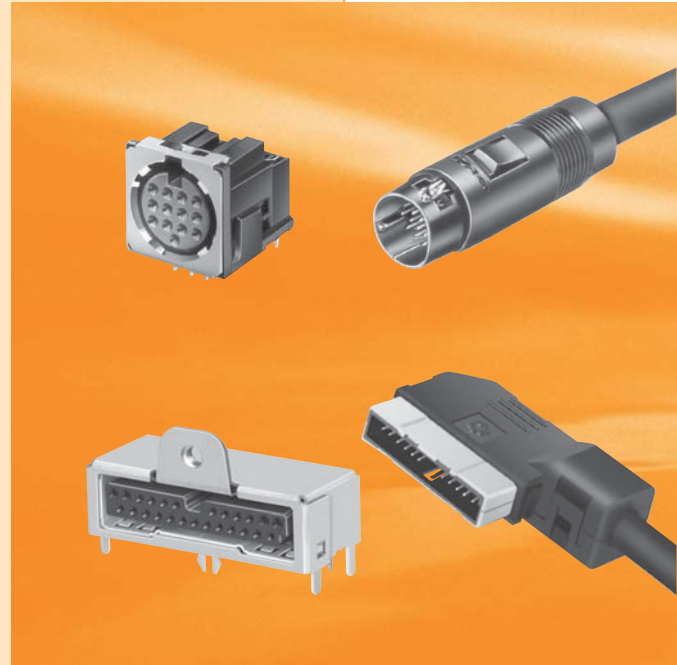


# Circular & Rectangular Multi-Pole Connectors



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## Multi-Pole Circular Connectors Specifications Table

Number of Poles	Rating	Insulation Resistance	Dielectric Strength	Contact Resistance	Insertion Force	Withdrawal Force
13P	2A 12V DC max.	50M $\Omega$ min. at 250V DC	250V AC at 1 minute	50m $\Omega$ max.	29N max.	4.9N to 20N
20P	3A 16V DC max. (Contact No,1 to 3) 2A 12V DC max. (Contact No,4 to 20)	50M $\Omega$ min. at 250V DC	250V AC at 1 minute	50m $\Omega$ max.	TCS5762 49N max. other 29N max.	TCS5762 0.98N to 49N max. other 0.98N to 29N max.

		Receptacle (Socket)			Mate Plug		
Number of Poles	Locking Type	Model No.	Type	Mounting Style	Model No.	Type	Connection Style
13P	Locking	TCS5037	Right Angle Receptacle	DIP	TCP4307	Straight Plug	Crimping
		TCS5046					
		TCS5072					
		TCS5091					
		TCS5092					
		TCS5095					
		TCS5108					
		TCS5113					
		TCS5115					
		TCS5116					
		TCS5130					
		TCS9337	In-Line Socket	Crimping	TCP9386	Right Angle Plug	
		TCS9386					
20P	Locking	TCS5751	Right Angle Receptacle	DIP	TCP5761	Right Angle Plug	Crimping
		TCS5771					
		TCS5781					
		TCS5761	In-Line Socket	Crimping	TCP5771	Straight Plug	
		TCS5752					
		TCS5772	Right Angle Receptacle	DIP	TCP5762	Right Angle Plug	
		TCS5782					
		TCS5762	In-Line Socket	Crimping	TCP5772	Straight Plug	
		TCS5753					
		TCS5773	Right Angle Receptacle	DIP	TCP5763	Right Angle Plug	
		TCS5783					
		TCS5763	In-Line Socket	Crimping	TCP5773	Straight Plug	

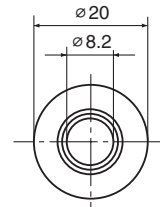
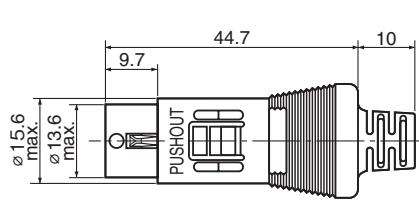
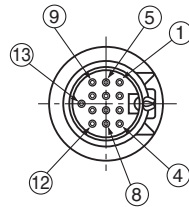
Note: Sockets with cable or plugs are always along with cord.  
 They can not be sold without cord.

**TCP9386**

Assembly Type Straight Plug



**TCP9386-310015**



Contact Pins Model No.	Plating	Cords No.
TCP4200-15-022	Gold Plating	AWG #30 to #26
TCP4200-15-010	Silver Plating	AWG #30 to #26
TCP4200-16-022	Gold Plating	AWG #24 to #22
TCP4200-16-010	Silver Plating	AWG #24 to #22

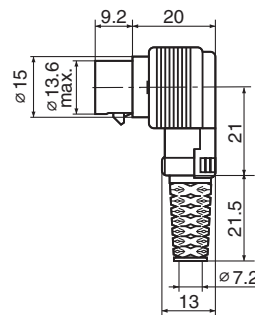
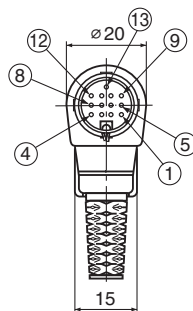
※Contact pins are not included.

**TCP4307**

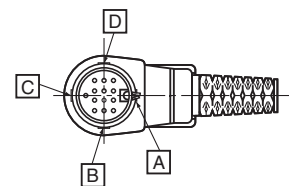
Assembly Type Right Angle Plug



**TCP4307-55-1115**



Locking Lever Position



Locking Position	Model No.
A or B	TCP4307-55-1115
C or D	TCS4307-56-1115

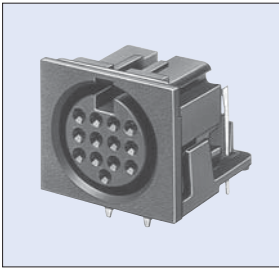
Contact Pins Model No.	Plating	Cords No.
TCP4200-15-022	Gold Plating	AWG #30 to #26
TCP4200-15-010	Silver Plating	AWG #30 to #26
TCP4200-16-022	Gold Plating	AWG #24 to #22
TCP4200-16-010	Silver Plating	AWG #24 to #22

※Contact pins are not included.

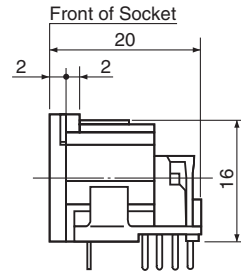
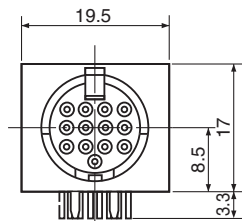
※It is possible a locking lever position to provide at intervals of 45 degrees.

**TCS5046**

Receptacle



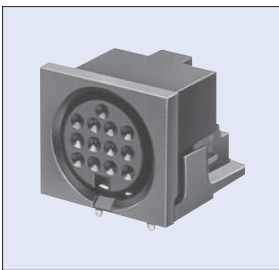
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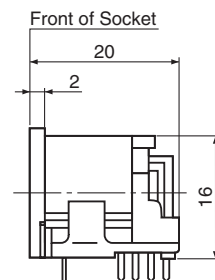
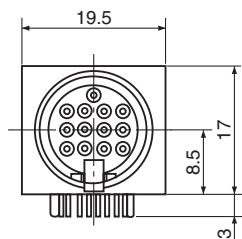
Contact Arrangement		
Recommended PCB Hole Layout (Bottom View)		
Model No.	TCS5046-3140177	TCS5046-3141577

**TCS5095**

Receptacle



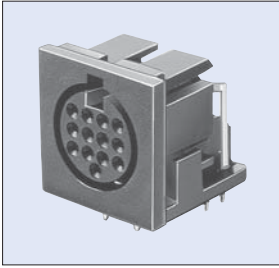
**TCS5095-1141577**



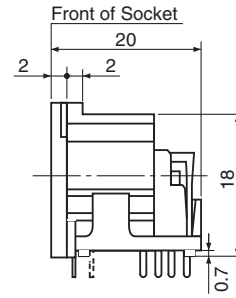
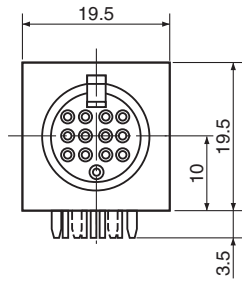
Contact Arrangement	
Recommended PCB Hole Layout (Bottom View)	
Model No.	TCS5095-1141577

**TCS5072**

Receptacle



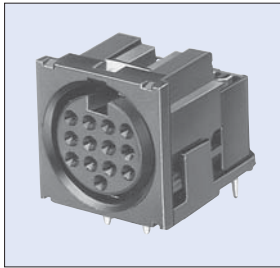
**TCS5072-1040577**



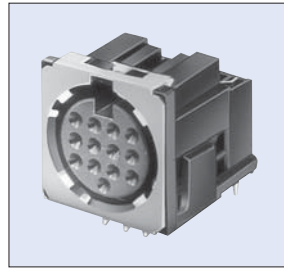
Contact Arrangement		
Recommended PCB Hole Layout (Bottom View)		
Model No.	TCS5072-1040577	TCS5072-1041577

**TCS5115**

Receptacle

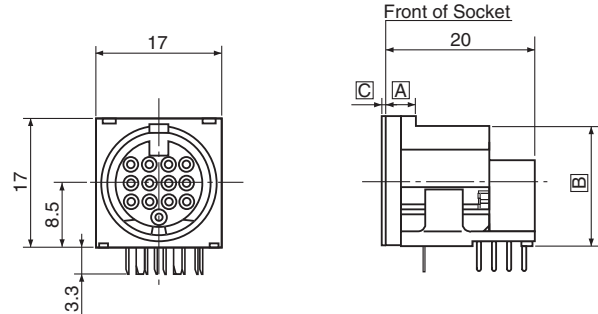


TCS5115-0141577



TCS5116

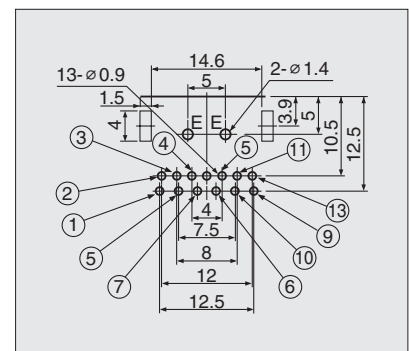
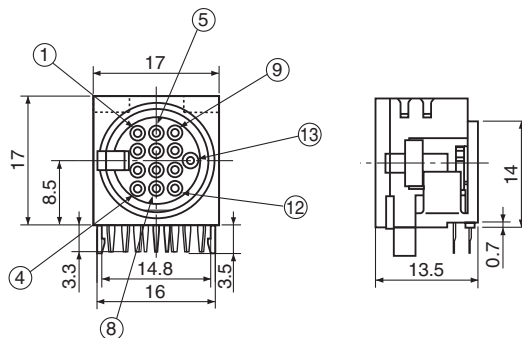
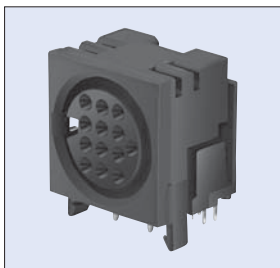
TCS5108, 5113/ See table.



Contact Arrangement	(A) Position	(B) Position	(C) Position	
Recommended PCB Hole Layout (Bottom View)	Front of Socket 	Front of Socket 	Front of Socket 	
	Fig.1	Fig.2	Fig.3	
Dimensions	A	4	3	3
	B	16	15.8	15.8
Without $\square$ hole $\square$ C=0	TCS5115-0141577	TCS5108-0141177	TCS5113-0141177	
With $\square$ hole $\square$ C=0.2	TCS5116-0141577 (EMI)	Need Consultation (EMI)	Need Consultation (EMI)	

**TCS5130**

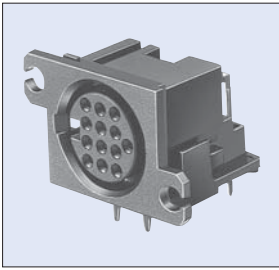
Receptacle



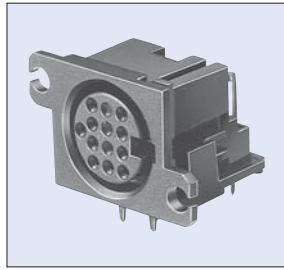
Hole Layout (Bottom View)

**TCS5091/TCS5092**

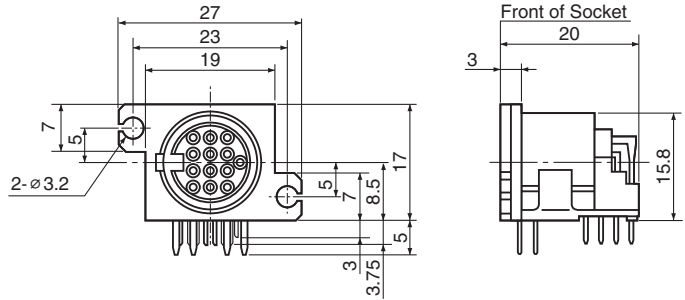
Receptacle



**TCS5091-1141177**



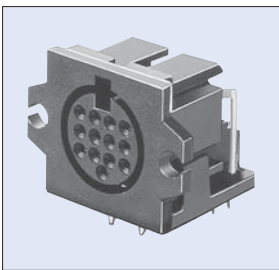
**TCS5092-1141177**



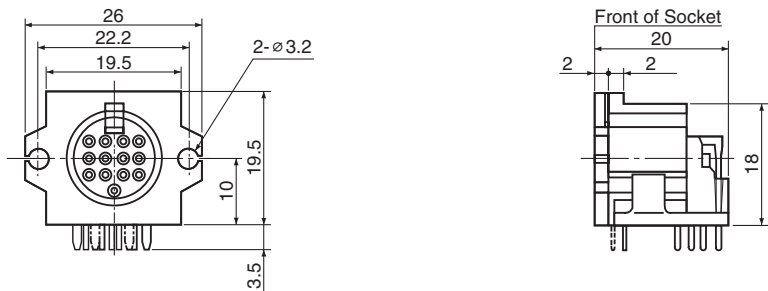
Contact Arrangement				
Recommended PCB Hole Layout (Bottom View)				
Model No.	TCS5091-1140177	TCS5092-1140177	TCS5091-1141177	TCS5092-1141177

**TCS5037**

Receptacle



**TCS5037-0140177**



Recommended PCB Hole Layout (Bottom View)		
Model No.	TCS5037-0140177	TCS5037-0141177

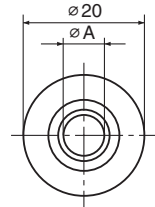
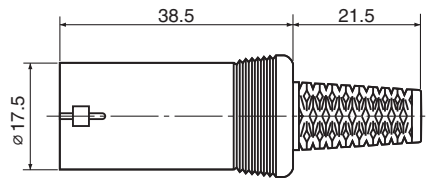
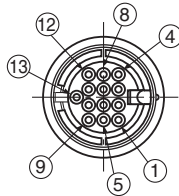


**TCS9337**

Assembly Type In-Line Socket



**TCS9337-712015**



Model No.	∅ A
TCS9337-612015	6.2mm
TCS9337-712015	7.2mm

Contacts Model No.	Plating	Cords No.
TCS9330-05-010	Silver Plating	AWG #30 to #26
TCS9330-10-010	Silver Plating	AWG #24 to #20

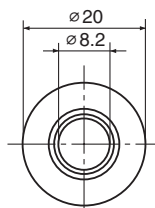
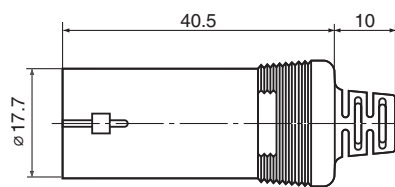
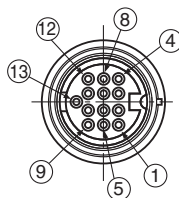
※Contacts are not included.

**TCS9386**

Assembly Type In-Line Socket



**TCS9386-510015**



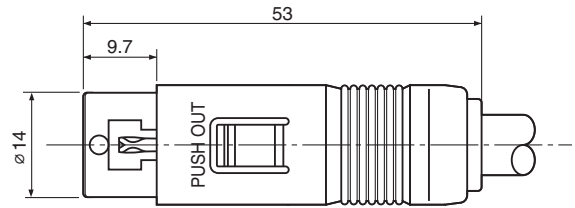
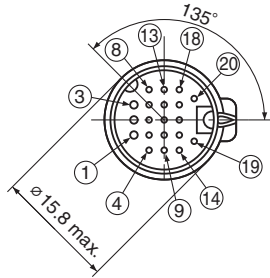
Contacts Model No.	Plating	Cords No.
TCS9330-05-010	Silver Plating	AWG #30 to #26
TCS9330-10-010	Silver Plating	AWG #24 to #20

※Contacts are not included.

**TCP5772**

Assembly Type Straight Plug

TCP5771、5773 / See table.

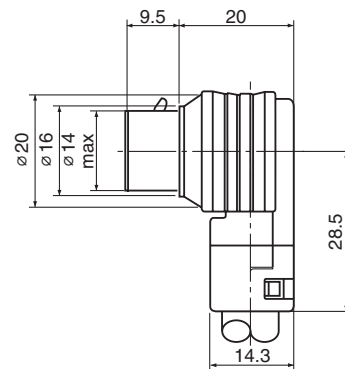
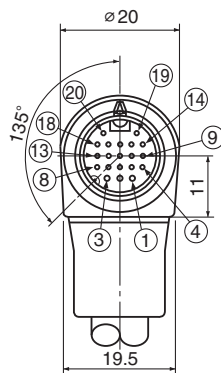
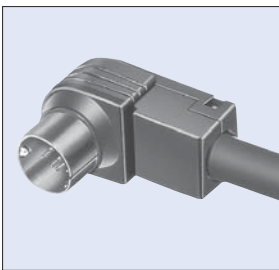


	(A) Position	(B) Position	(C) Position
Faulty Insertion Prevention Key Position			
Model No.	TCP5771-910105	TCP5772-910105	TCP5773-910105

**TCP5762**

Assembly Type Right Angle Plug

TCP5761、5763/ See table.



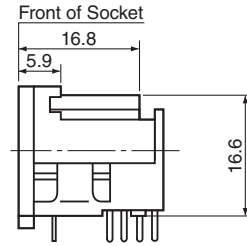
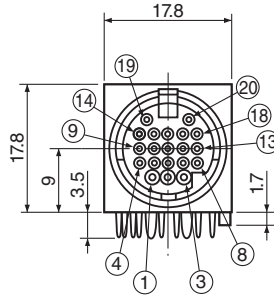
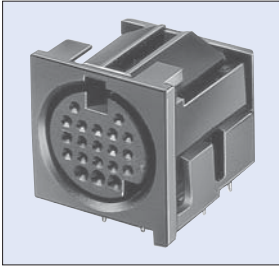
※(It is possible a pulling cord direction with a locking position to provide at intervals of 45 degrees.)

	(A) Position	(B) Position	(C) Position
Faulty Insertion Prevention Key Position			
Model No.	TCP5761-910105	TCP5762-910105	TCP5763-910105

**TCS5752**

Receptacle

TCS5751、5753 / See table.

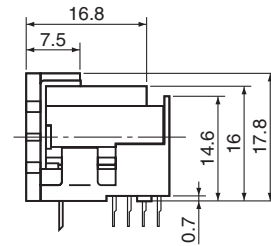
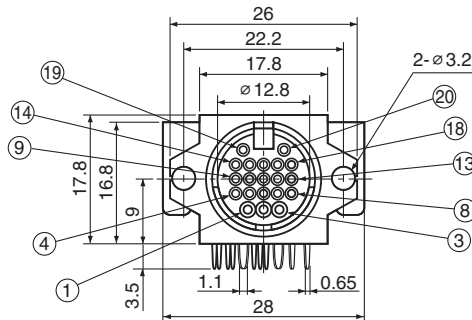
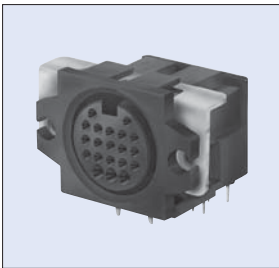


Faulty Insertion Prevention Key Position	(A) Position	(B) Position Key Position	(C) Position Key Position
Recommended PCB Hole Layout (Bottom View)	<p>Fig.1</p>	<p>Fig.2</p>	<p>Fig.3</p>
Model No.	TCS5751-0141577	TCS5752-0141577	TCS5753-0141577

**TCS5771**

Receptacle

TCS5772、5773 / See table.

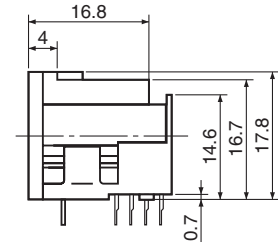
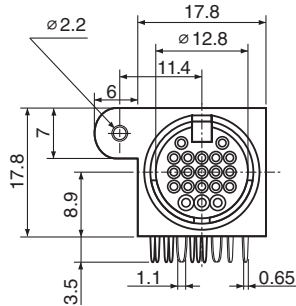
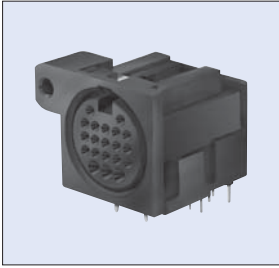


Faulty Insertion Prevention Key Position	(A) Position	(B) Position Key Position	(C) Position Key Position
Recommended PCB Hole Layout (Bottom View)	<p>Fig.1</p>	<p>Fig.2</p>	<p>Fig.3</p>
Model No.	TCS5771-0141577	TCS5772-0141577	TCS5773-0141577

**TCS5781**

Receptacle

TCS5782、5783 / See table.

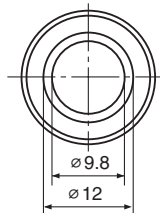
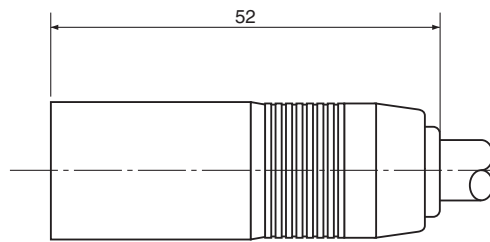
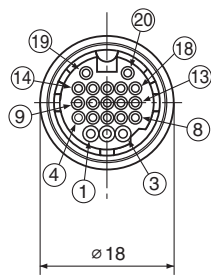


Faulty Insertion Prevention Key Position	(A) Position	(B) Position Key Position	(C) Position Key Position
Recommended PCB Hole Layout (Bottom View)	<p>Fig.1</p>	<p>Fig.2</p>	<p>Fig.3</p>
Model No.	TCS5781-0141577	TCS5782-0141577	TCS5783-0141577

**TCS5762**

Assembly Type In-Line Socket

TCS5761、5763/ See table.



Faulty Insertion Prevention Key Position	(A) Position	(B) Position Key Position	(C) Position Key Position
Model No.	TCS5761-910105	TCS5762-910105	TCS5763-910105

## Multi-Pole Rectangular Connectors Specifications Table

Number of Poles	Rating	Insulation Resistance	Dielectric Strength	Contact Resistance	Insertion Force	Withdrawal Force	Model No.
17P	3A 12V DC max.	50MΩ min. (250V DC)	250V AC (for 1 min)	Pin to Contact 30mΩ max. Plug Cover to Socket Cover 50mΩ max.	50N max.	5 to 50N	TCX3236 TCX3239
20P	Contact No.1 & 20 2A 12V DC max. Contact No.2 to 19 1A 12V DC max.	50MΩ min. (250V DC)	250V AC (for 1 min)	Pin to Contact 30mΩ max. Plug Cover to Socket Cover 60mΩ max.	29N max.	25N max.	TCX3110 TCX3111 TCX3112
21P	3A 12V DC max.	50MΩ min. (250V DC)	250V AC (for 1 min)	Pin to Contact 30mΩ max. Plug Cover to Socket Cover 50mΩ max.	50N max.	5 to 50N	TCX3173 TCX3174 TCX3175 TCX3213
25P	Contact No.1,3,23,25 3A 12V DC max. Contact No.2,4 to 22,24 1A 12V DC max.	50MΩ min. (250V DC)	250V AC (for 1 min)	Pin to Contact 30mΩ max. Plug Cover to Earth 50mΩ max.	49N max.	0.98 to 49N	TCX3115 TCX3116 TCX3117 TCX3135 TCX3137 TCX3138

## Multi-Pole Rectangular Connectors Product Lineup

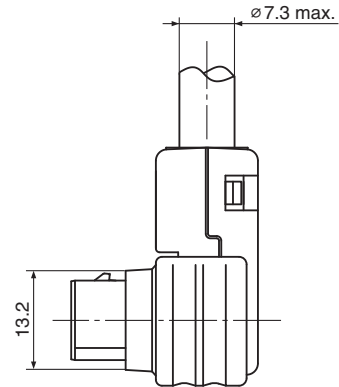
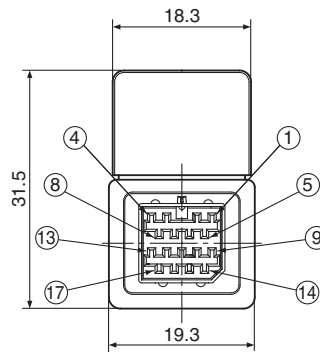
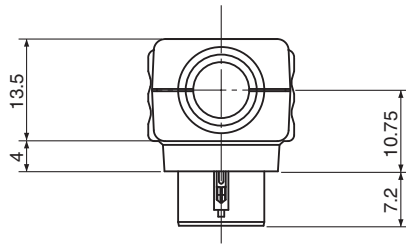
		Receptacle (Socket)			Mate Plug		
Number of Poles	Locking Type	Model No.	Type	Mounting Style	Model No.	Type	Connection Style
17P	Locking	TCX3236	Right Angle Receptacle	DIP	TCX3239	Right Angle Sockets with Cable	Crimping
20P	Non Locking	TCX3111	Board to Board Socket	SMT	TCX3110	Board to Board Plug	SMT
	Locking	TCX3112	Straight Sockets with Cable	Soldering			
21P	Locking	TCX3173	Right Angle Receptacle	DIP	TCX3174	Right Angle Plug with Cable	Crimping
		TCX3175	In-Line Socket	Soldering			
25P	Locking	TCX3115	Right Angle Receptacle	DIP	TCX3116	Straight Plug	Crimping
		TCX3137	Right Angle Receptacle	DIP	TCX3138	Straight Plug	
		TCX3117	Straight Sockets with Cable	Crimping	TCX3135	Right Angle Plug	

Note: Sockets with cable or plugs are always awlong with cord.

They can not be sold without cord.

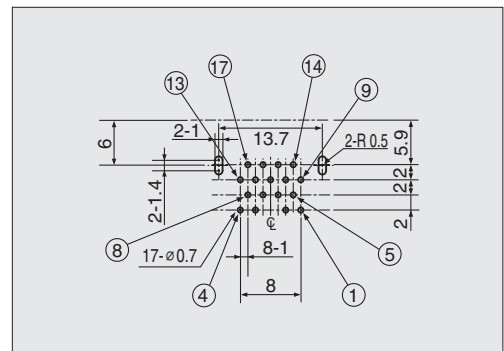
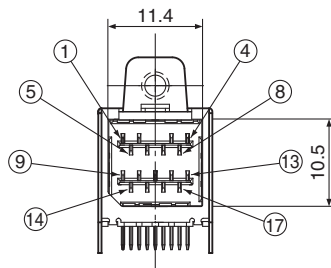
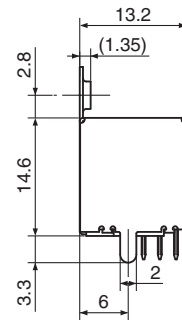
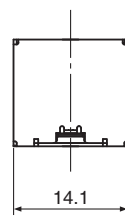
**TCX3239**

Assembly Type Right Angle Plug



**TCX3236**

DIP Receptacle



Hole Layout  
(Bottom View)

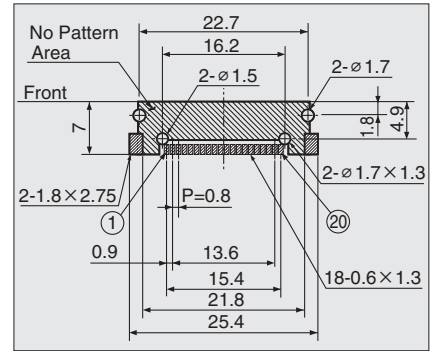
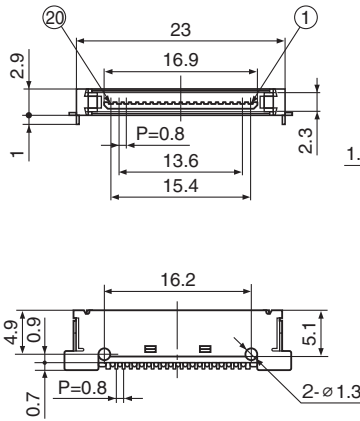
**TCX3110**

SMT Board to Board Plug



**TCX3110-010177**

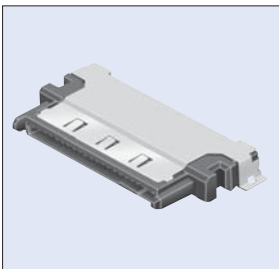
**Non Locking & Locking**



PCB Layout  
(Top View)

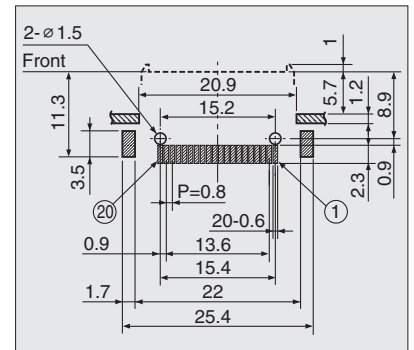
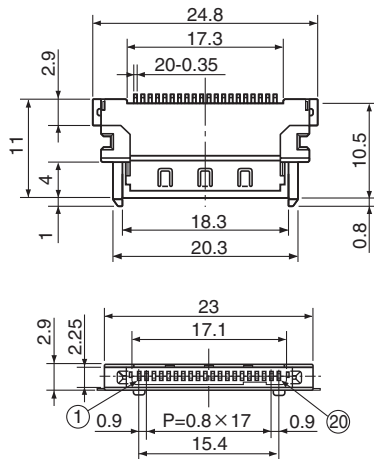
**TCX3111**

SMT Board to Board Socket



**TCX3111-010177**

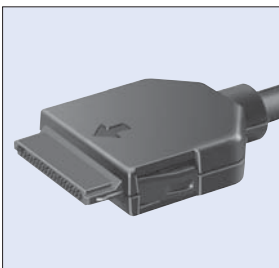
**Non Locking**



PCB Layout  
(Top View)

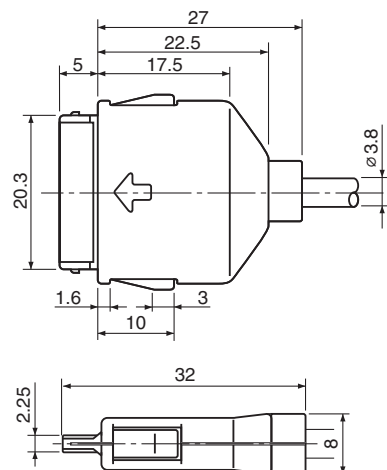
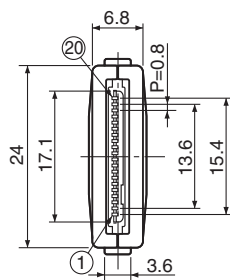
**TCX3112**

Assembly Type Straight Socket with Cable



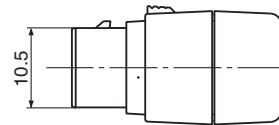
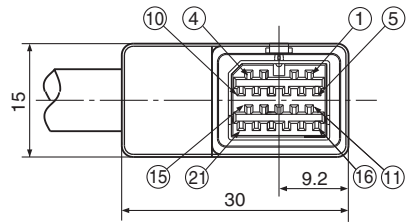
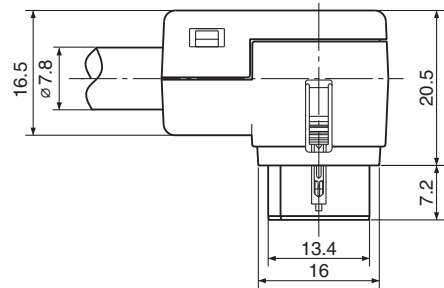
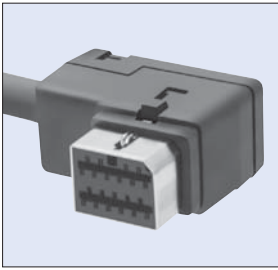
**TCX3112-010177**

**Locking**



**TCX3174**

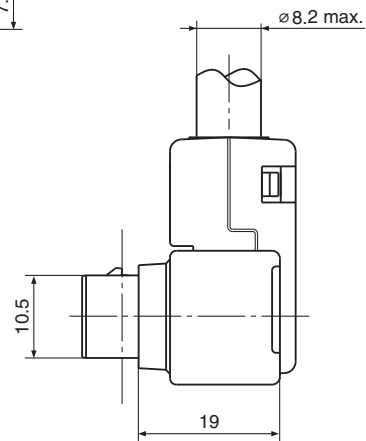
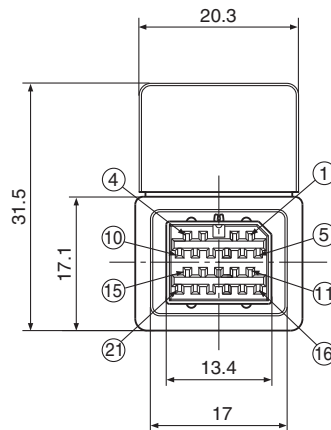
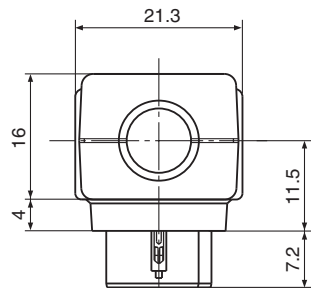
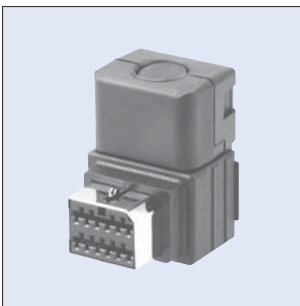
Assembly Type Right Angle Plug with Cable



Faulty Insertion Prevention Key Position		
Model No.	TCX3174-01WA	TCX3174-11WA

**TCX3213**

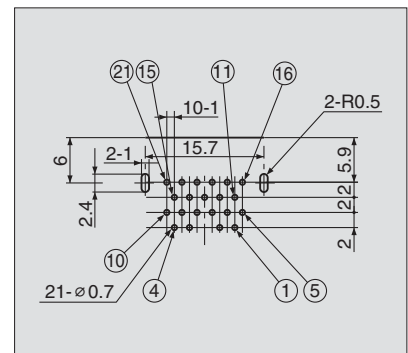
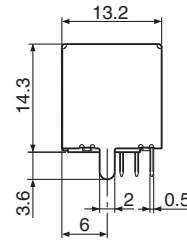
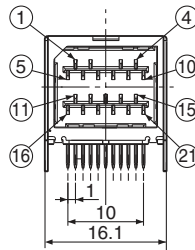
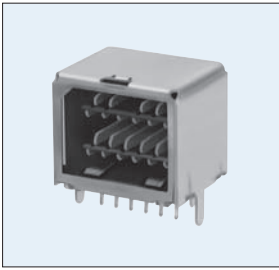
Assembly Type Right Angle Plug with Cable





**TCX3173**

DIP Receptacle

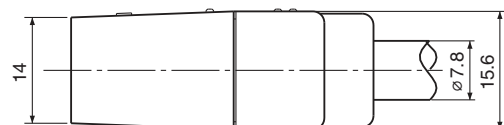
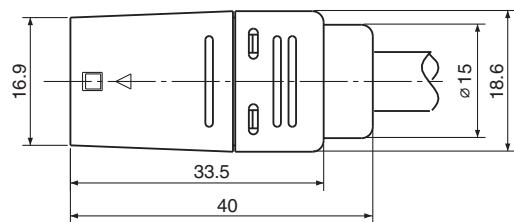
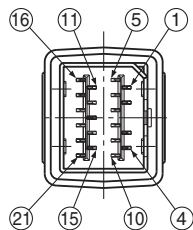


Hole Layout  
(Top View)

Faulty Insertion Prevention Key Position		
Model No.	TCX3173-010100	TCX3173-110100

**TCX3175**

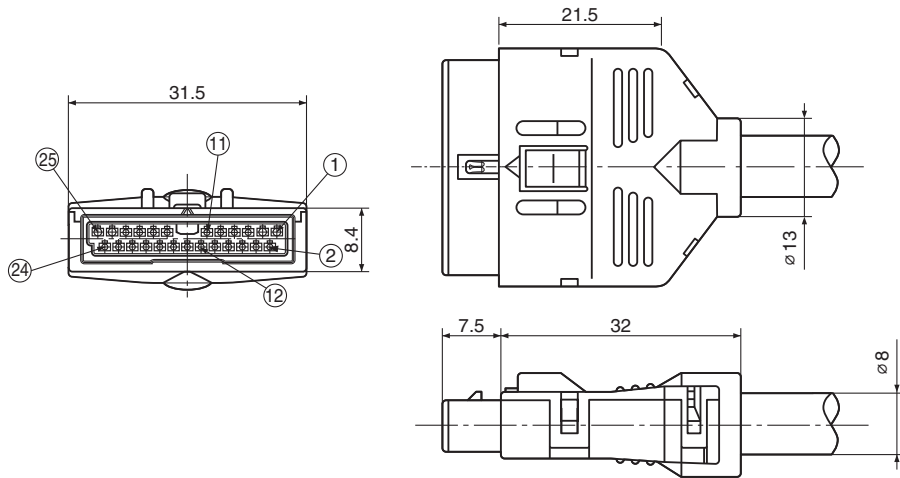
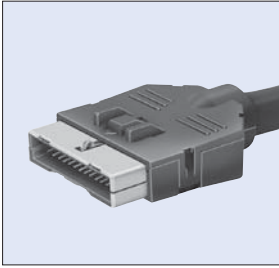
Assembly Type In-Line Socket



Faulty Insertion Prevention Key Position		
Model No.	TCX3175-01WA	TCX3175-11WA

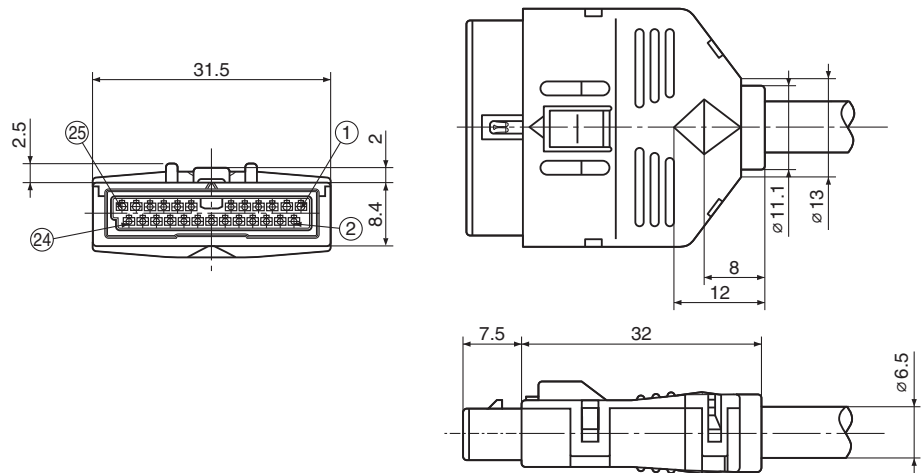
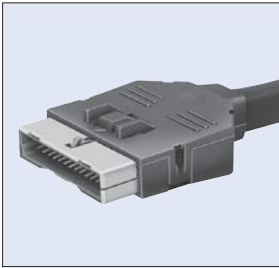
**TCX3116**

Assembly Type Straight Plug



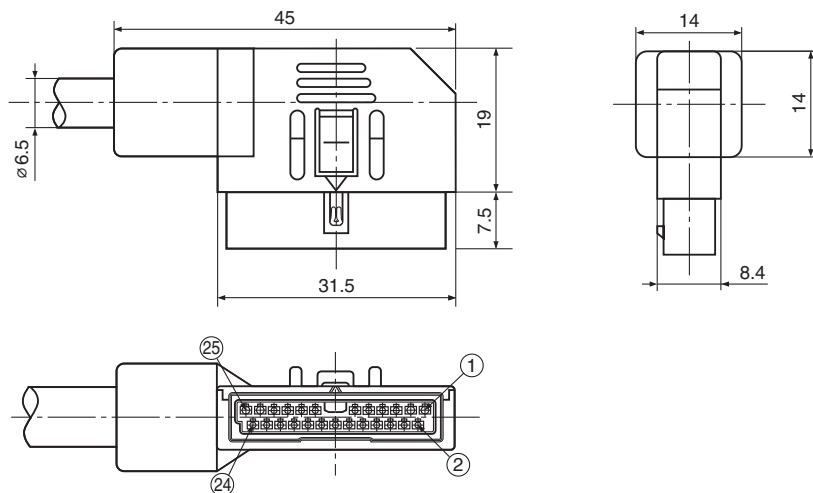
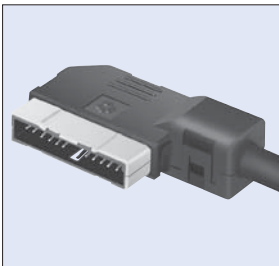
**TCX3138**

Assembly Type Straight Plug



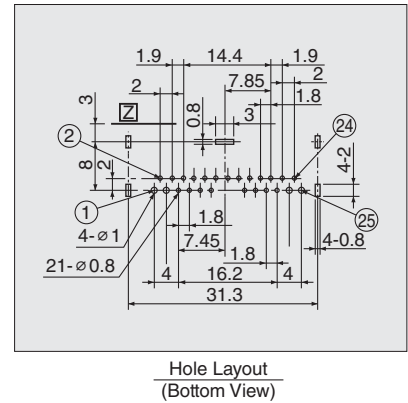
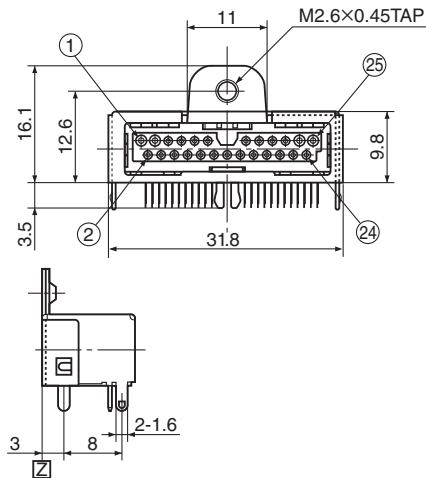
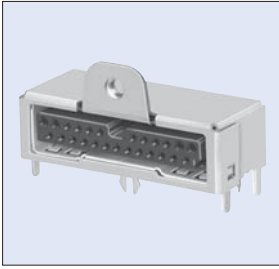
**TCX3135**

Assembly Type Right Angle Plug



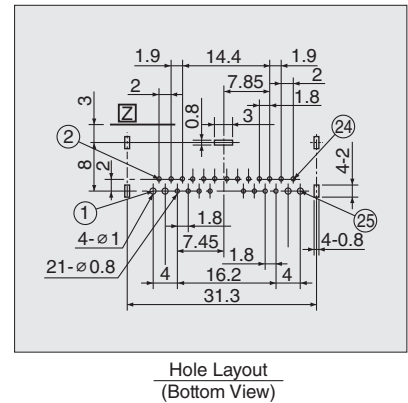
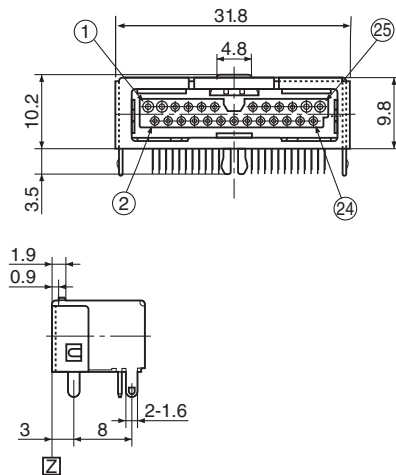
**TCX3115**

DIP Receptacle



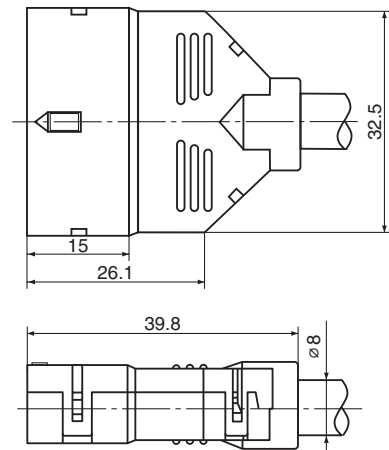
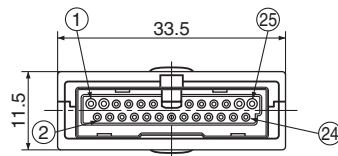
**TCX3137**

DIP Receptacle



**TCX3117**

Assembly Type Straight Socket with Cable



Model No. Table

Model No.	Page	TCS5091	7	TCS5763	11	TCX3116	17
TCP4307	3	TCS5092	7	TCS5771	10	TCX3117	18
TCP5761	9	TCS5095	4	TCS5772	10	TCX3135	17
TCP5762	9	TCS5108	6	TCS5773	10	TCX3137	18
TCP5763	9	TCS5113	6	TCS5781	11	TCX3138	17
TCP5771	9	TCS5115	6	TCS5782	11	TCX3173	16
TCP5772	9	TCS5116	6	TCS5783	11	TCX3174	15
TCP5773	9	TCS5130	6	TCS9337	8	TCX3175	16
TCP9386	3	TCS5751	10	TCS9386	8	TCX3213	15
TCS5037	7	TCS5752	10	TCX3110	14	TCX3236	13
TCS5046	4	TCS5753	10	TCX3111	14	TCX3239	13
TCS5072	5	TCS5761	11	TCX3112	14		
		TCS5762	11	TCX3115	18		



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