

Multi-Pole circular Connectors

Specifications Table 1

Product List 2

13P Quick Locking Type..... 3 to 7

20P Quick Locking Type..... 8 to 10

Multi-Pole Circular Connectors Specifications Table

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

Multi-Pole Circular Connectors Product List

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

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

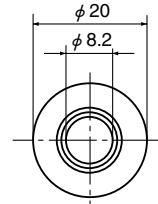
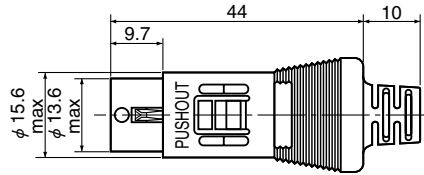
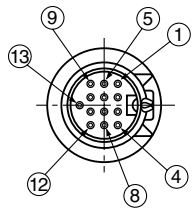
Circular [13P] Quick Locking Type

Unit:mm

13Pin

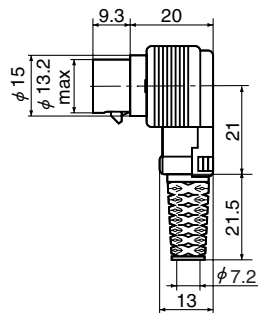
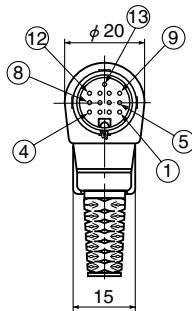
Plug Model No.	Mate Receptacle (Socket) Model No.				
TCP9386	TCS5046 (P.4)	TCS5108 (P.5)	TCS5116 (P.5)	TCS5092 (P.6)	TCS9386 (P.7)
	TCS5072 (P.4)	TCS5113 (P.5)	TCS5130 (P.5)	TCS5037 (P.6)	
TCP4307	TCS5095 (P.4)	TCS5115 (P.5)	TCS5091 (P.6)	TCS9337 (P.7)	

TCP9386-310015 Assembly Type Straight Plug

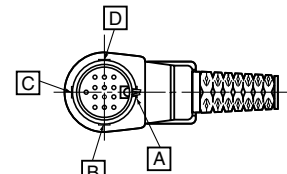


	Model No.	Plating	Cords No.
Contacts Pin	TCP4200-15-022	Gold Plating	AWG # 30~ # 24
	TCP4200-15-010	Silver Plating	AWG # 30~ # 24
	TCP4200-16-022	Gold Plating	AWG # 24~ # 22
	TCP4200-16-010	Silver Plating	AWG # 24~ # 22

TCP4307-55-1115 Assembly Type Right Angle Plug



Locking Lever Position



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

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

	Model No.	Plating	Cords No.
Contacts Pin	TCP4200-15-022	Gold Plating	AWG # 30~ # 24
	TCP4200-15-010	Silver Plating	AWG # 30~ # 24
	TCP4200-16-022	Gold Plating	AWG # 24~ # 22
	TCP4200-16-010	Silver Plating	AWG # 24~ # 22

13Pin

Receptacle Model No.	Mate Plug Model No.
TCS5046	TCP9386 (P.3)
TCS5095	TCP4307 (P.3)
TCS5072	

TCS5046-3140177 Right Angle Receptacle

TCS5095-1141577 Right Angle Receptacle

TCS5072-1040577 Right Angle Receptacle

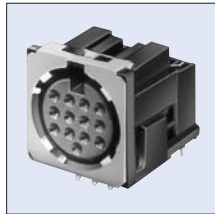
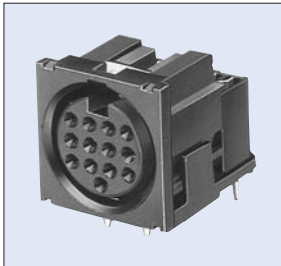
Contact Arrangement			
Recommended PCB Layout (BOTTOM VIEW)			
Model No.	TCS5046-3140177 TCS5072-1040577	TCS5046-3141577 TCS5072-1041577	TCS5095-1141577

13Pin

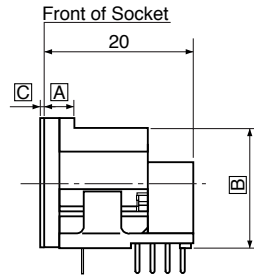
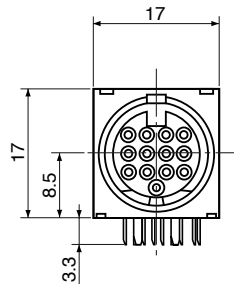
Receptacle Model No.		Mate Plug Model No.
TCS5108	TCS5116	TCP9386 (P.3)
TCS5115	TCS5130	TCP4307 (P.3)
TCS5113		

TCS5115-0141577

Right Angle Receptacle



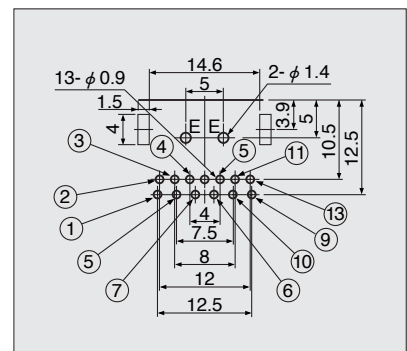
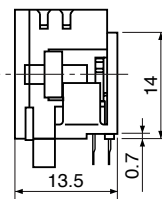
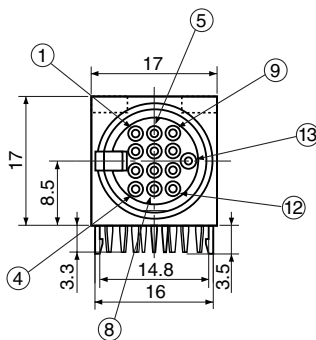
TCS5116
EMI Proof



	(A) Position	(B) Position	(C) Position
Contact Arrangement			
Recommended PCB Layout (BOTTOM VIEW)	<p>Fig.1</p>	<p>Fig.2</p>	<p>Fig.3</p>
Dimensions	A: 4 B: 16	3 15.8	3 15.8
Without \square hole \square = 0	TCS5115-0141577	TCS5108-0141177	TCS5113-0141177
With \square hole \square = 0.2	TCS5116-0141577 (EMI)	Need Consultation (EMI)	Need Consultation (EMI)

TCS5130

ライトアングルレセプタクル / Right Angle Receptacle

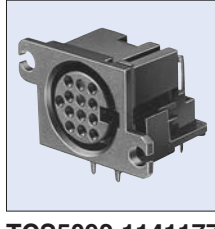
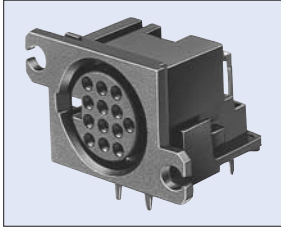


PCB Layout
(Bottom View)

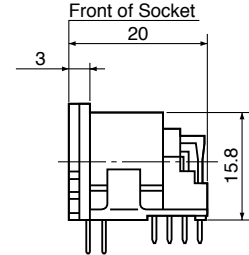
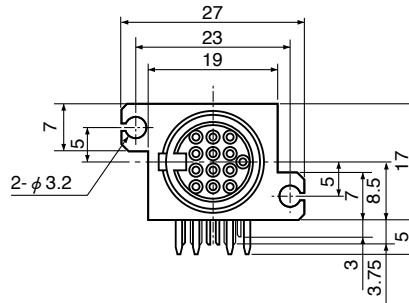
13Pin

Receptacle Model No.	Mate Plug Model No.
TCS5091	TCP9386 (P.3)
TCS5092	TCP4307 (P.3)
TCS5037	

TCS5091-1141177 Right Angle Receptacle

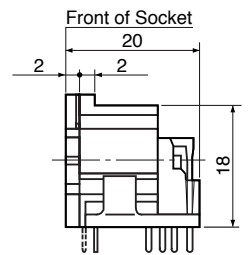
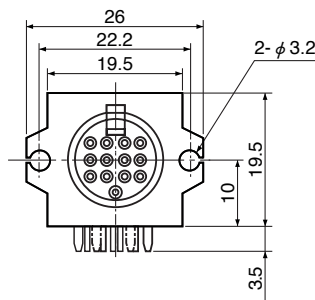
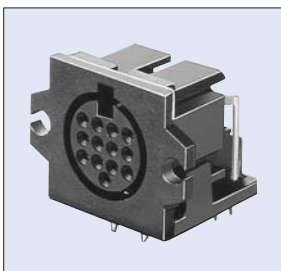


TCS5092-1141177



Contact Arrangement				
Recommended PCB Layout (BOTTM VIEW)				
Model No.	TCS5091-1140177	TCS5092-1140177	TCS5091-1141177	TCS5092-1141177

TCS5037-0140177 Right Angle Receptacle

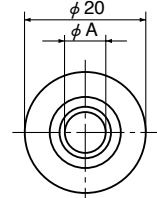
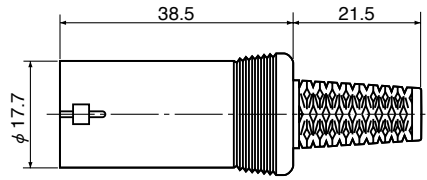
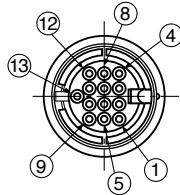


Recommended PCB Layout (BOTTM VIEW)		
Model No.	TCS5037-0140177	TCS5037-0141177

13Pin

Socket Model No.	Mate Plug Model No.
TCS9337	TCP9386 (P.3)
TCS9386	TCP4307 (P.3)

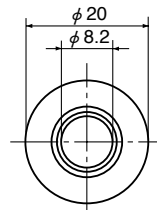
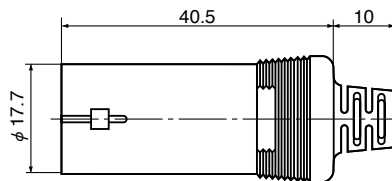
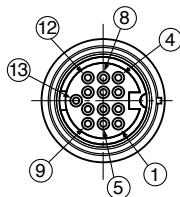
TCS9337-712015 Assembly Type In-Line Socket



Model No.	ϕA
TCS9337-612015	6.2mm
TCS9337-712015	7.2mm

	Model No.	Plating	Cords No.
Contacts	TCS9330-05-142	Gold Plating	AWG # 30 to # 26
	TCS9330-05-010	Silver Plating	AWG # 30 to # 26
	TCS9330-10-142	Gold Plating	AWG # 24 to # 20
	TCS9330-10-010	Silver Plating	AWG # 24 to # 20

TCS9386-510015 Assembly Type In-Line Socket



	Model No.	Plating	Cords No.
Contacts	TCS9330-05-142	Gold Plating	AWG # 30 to # 26
	TCS9330-05-010	Silver Plating	AWG # 30 to # 26
	TCS9330-10-142	Gold Plating	AWG # 24 to # 20
	TCS9330-10-010	Silver Plating	AWG # 24 to # 20

Circular [20P] Quick Locking Type

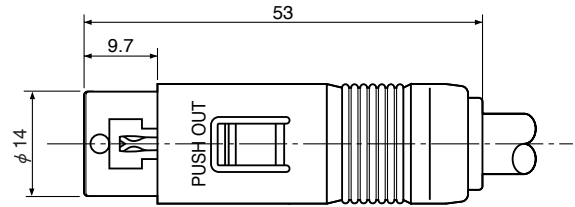
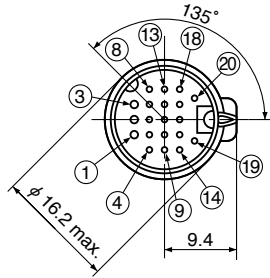
Unit:mm

20Pin

Plug Model No.		Mate Receptacle Model No.			
TCP5771	TCP5761	TCS5751 (P.9)	TCS5771 (P.9)	TCS5781 (P.9)	TCS5761 (P.10)
TCP5772	TCP5762	TCS5752 (P.9)	TCS5772 (P.9)	TCS5782 (P.9)	TCS5762 (P.10)
TCP5773	TCP5763	TCS5753 (P.9)	TCS5773 (P.9)	TCS5783 (P.9)	TCS5763 (P.10)

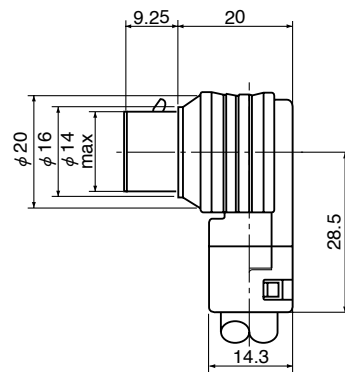
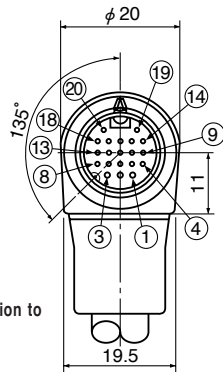
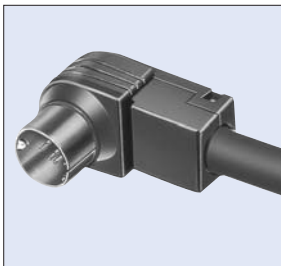
TCP5772

Assembly Type Straight Plug



TCP5762

Assembly Type Right Angle Plug



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

20P Connectors Cross Reference Table

Faulty Insertion Prevention Key Position	(A) Position	(B) Position	(C) Position
Straight Plug	TCP5771-910105	TCP5772-910105	TCP5773-910105
Right Angle Plug	TCP5761-910105	TCP5762-910105	TCP5763-910105

Mate Socket Model No.

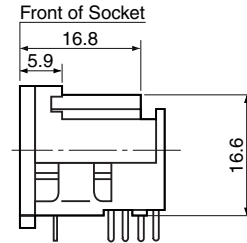
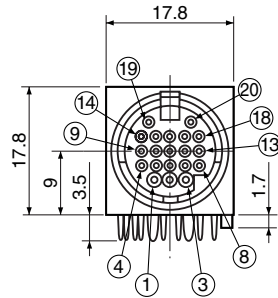
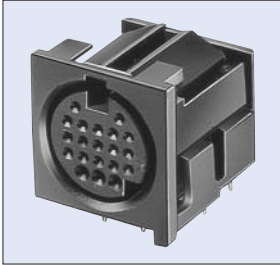
Faulty Insertion Prevention Key Position	(A) Position	(B) Position	(C) Position
Right Angle Socket	TCS5751-0141577 (P.9)	TCS5752-0141577 (P.9)	TCS5753-0141577 (P.9)
Right Angle Socket	TCS5771-0141577 (P.9)	TCS5772-0141577 (P.9)	TCS5773-0141577 (P.9)
Right Angle Socket	TCS5781-0141577 (P.9)	TCS5782-0141577 (P.9)	TCS5783-0141577 (P.9)
In-Line Socket	TCS5761-910105 (P.10)	TCS5762-910105 (P.10)	TCS5763-910105 (P.10)

20Pin

Receptacle Model No.			Mate Plug Model No.	
TCS5751	TCS5771	TCS5781	TCS5771 (P.8)	TCS5761 (P.8)
TCS5752	TCS5772	TCS5782	TCS5772 (P.8)	TCS5762 (P.8)
TCS5753	TCS5773	TCS5783	TCS5773 (P.8)	TCS5763 (P.8)

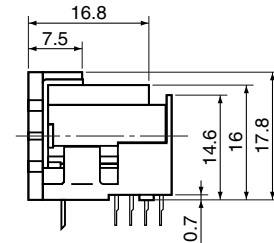
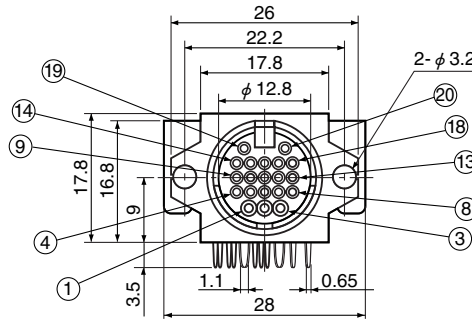
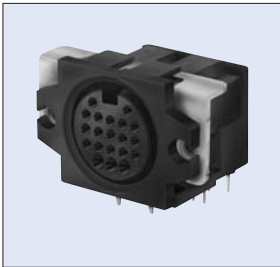
TCS5752

Right Angle Receptacle



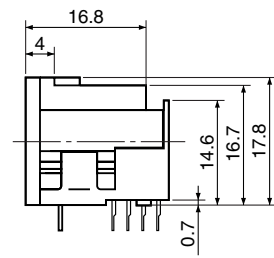
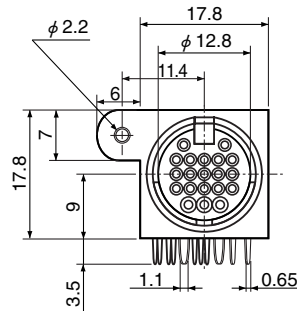
TCS5771

Right Angle Receptacle



TCS5781

Right Angle Receptacle



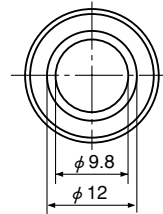
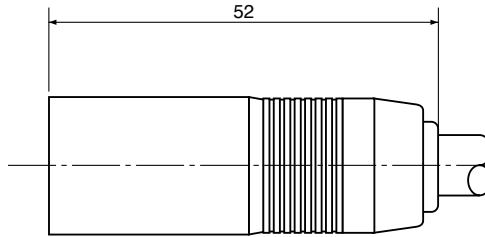
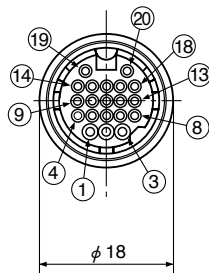
	(A) Position	(B) Position	(C) Position
Faulty Insertion Prevention Key Position			
Recommended PCB Layout (Mottom View)	<p>Fig.1</p>	<p>Fig.2</p>	<p>Fig.3</p>
Model No.	TCS5751-0141577	TCS5752-0141577	TCS5753-0141577
	TCS5771-0141577	TCS5772-0141577	TCS5773-0141577
	TCS5781-0141577	TCS5782-0141577	TCS5783-0141577

20Pin

Socket Model No.	Mate Receptacle Model No.	
TCS5761	TCP5771 (P.8)	TCP5761 (P.8)
TCS5762	TCP5772 (P.8)	TCP5762 (P.8)
TCS5763	TCP5773 (P.8)	TCP5763 (P.8)

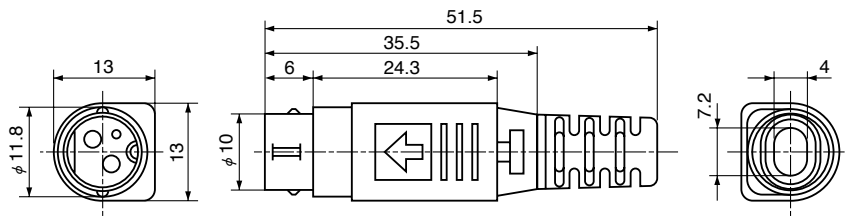
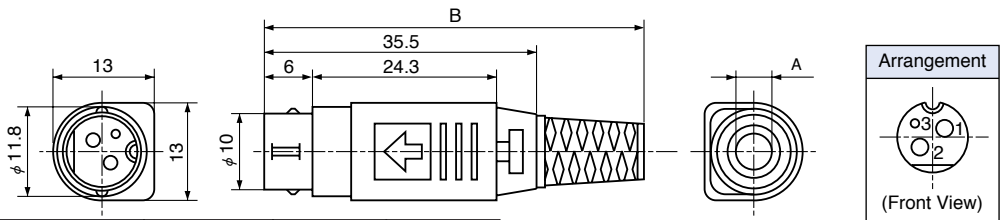
TCS5762

Assembly Type In-Line Socket

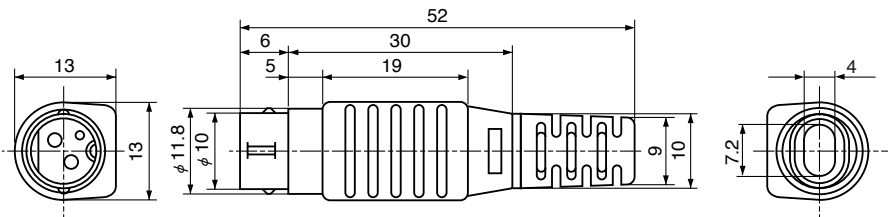
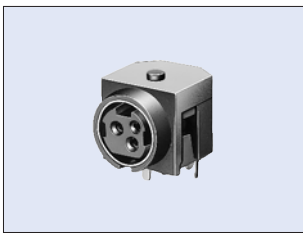
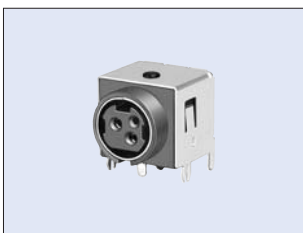
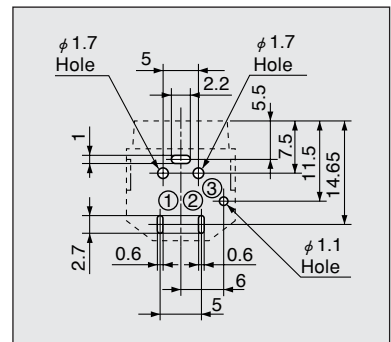
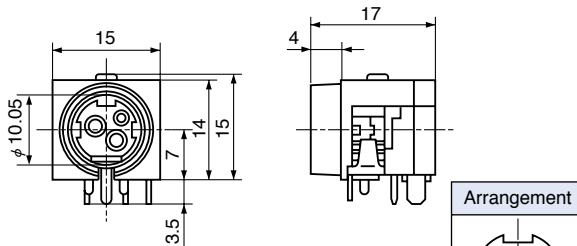
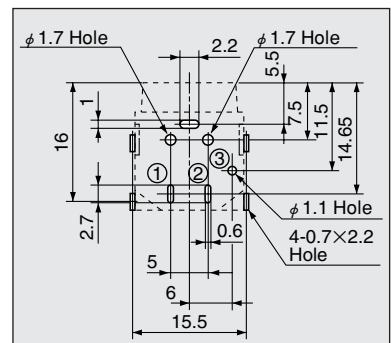
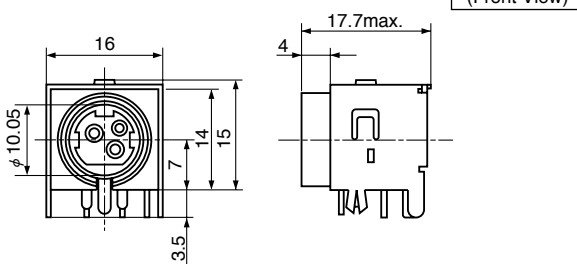


Faulty Insertion Prevention Key Position	(A) Position	(B) Position	(C) Position
Model No.	TCS5761-910105	TCS5762-910105	TCS5763-910105

TCP8927 / TCP8935
Plug

**TCP8927-531167
Quick Lock Type**

**TCP8927-631167
Quick Lock Type**


Model No.	Cable Diameter	A	B
TCP8927-631167	φ 4.8	φ 5.2	49.5
TCP8927-831167	φ 5.5	φ 5.9	50.0

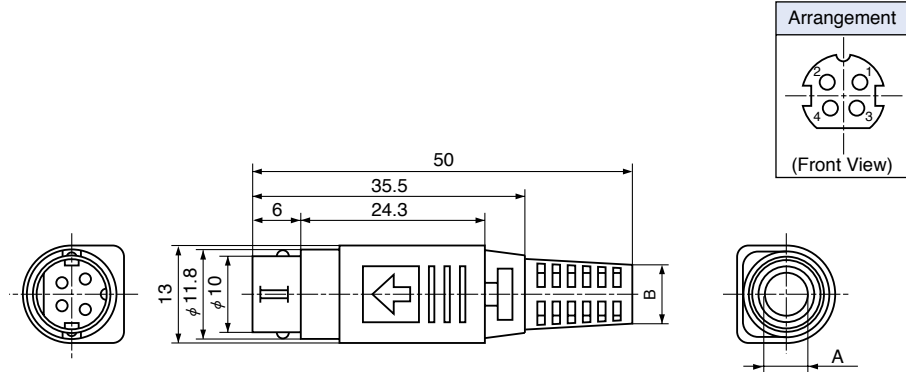

**TCP8935-531167
Half Lock Type**

TCS7960
Socket H=14.0 mm

TCS7960-5320177

TCS7960-4320177

**Hole Layout
(Bottom View)**

TCP8941

Plug



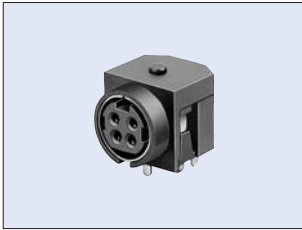
TCP8941-341167
Quick Lock Type



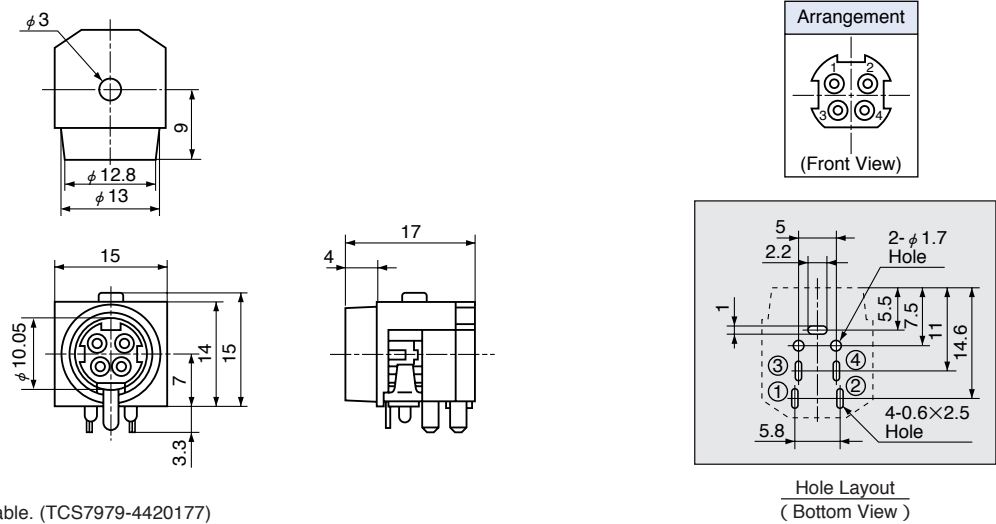
Model No.	Cable Diameter	A	B
TCP8941-641167	φ 4.8	φ 5.2	φ 7.0
TCP8941-841167	φ 5.5	φ 5.9	φ 7.7
TCP8941-341167	φ 6.0	φ 6.4	φ 8.2

TCS7979

Socket



TCS7979-5420177



Supporting plate model is also available. (TCS7979-4420177)

Rating	3P	Pin Nos. 1 & 2	7.5 A 20 V DC max.
		Pin No. 3	1 A 20 V DC max.
	4P	Pin Nos. 1 ~ 4	7.5 A 20 V DC max.
Insulation Resistance			50 MΩ min. at 250 V DC
Dielectric Strength			250 V AC / 1 minute
Contact Resistance	3P	Pin Nos. 1 & 2	30 mΩ max.
		Pin No. 3	50 mΩ max.
	4P	Pin Nos. 1 ~ 4	30 mΩ max.
Insertion Force			49 N max.
Withdrawal Force			0.98 N to 49 N

- Applicable wire size:
 3P Pin Nos. 1 & 2 : AWG #18 max.
 Pin No. 3 : AWG #24 max.
 4P Pin Nos. 1 ~ 4 : AWG #18 max.
- Connections to pin: Soldering method.
- UL-approved material (94 V-0) is used for the insulation material.
- Parts not assembled, are sold in sets.
 For the package style, refer to the authorized drawing.