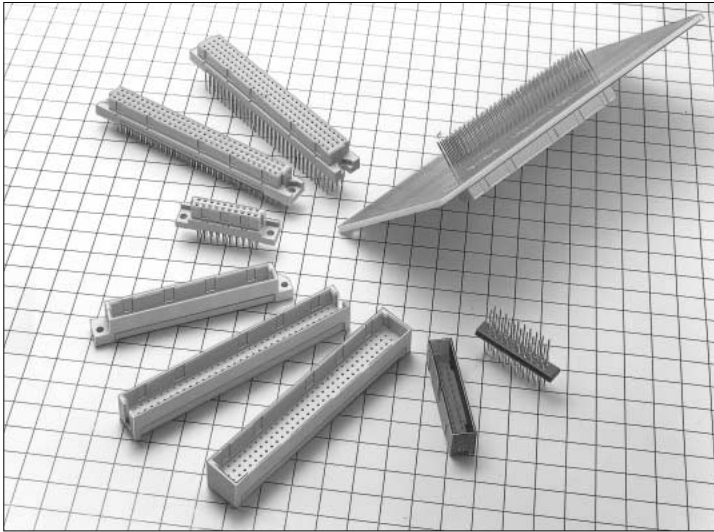


PCN11F Series (Product Compliant with DIN Standard: Solderless Connection Type)



■Features

1. Compliant with the DIN standard

Comply with IEC603-2/DIN41612 standards.

2. Variation in number of contacts

10, 16, 20, 32, 44, 50, 64, 90, 96, 100 and 128 contacts are available.

3. Reliability contact construction

The socket contact is constructed with the high reliability double-sided 2-point contacts.

4. Applicable contact board thickness

The applicable contact board thickness is 2.54mm min.

5. Through-hole diameter variation

φ0.8, φ0.9 and φ1.0 through holes are available.

6. Backplane connection

Connected to the Backplane.

Refer to the fig 1

7. Compatibility with other series

Compatibility with PCN10, 12, and 13 series allows to utilize various application patterns.

8. Press fit machine

Press fit machine is available.

■Application

PBX, control equipment and so on.

Backplane Connection

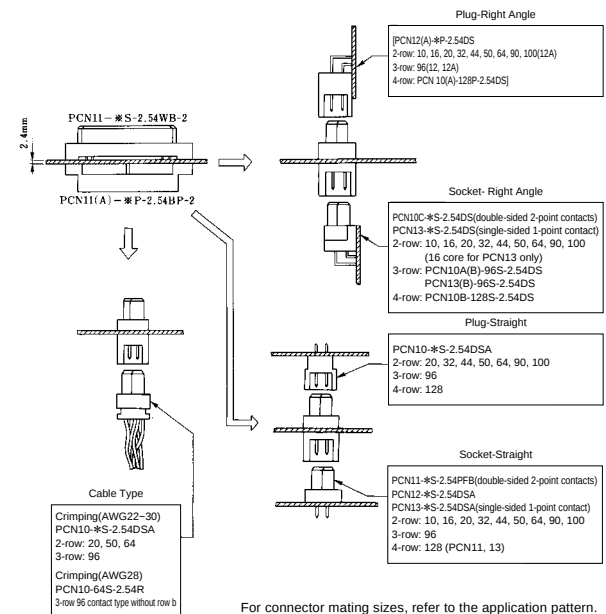


Fig 1

Press fit Machine



■Product Specifications

Rating	Rated Current: 2A Rated Voltage: 300V AC	Operating Temperature Range: -30 ~ +85°C (Note 1) Operating Humidity Range: 40 ~ 80%	Storage Temperature Range: -10 ~ +60°C (Note 2) Operating Humidity Range: 40 ~ 70% (Note 2)
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Item	Specification	Condition
1. Insulation Resistance	10 ⁹ MΩ	Measured at 100V DC
2. Withstand Voltage	Neither short nor breakdown	1000V AC for one minute.
3. Contact Resistance	20mΩ max.	Measured at 0.1A
4. Vibration	Electrical discontinuity, 10μS max.	10~55Hz and single amplitude 0.75mm in 3 directions for 2 hours, respectively
5. Moisture Resistance	Insulation resistance : 10 ⁹ MΩ min.	Exposed to temperature 40±2°C and humidity 90~95% for 96 hours
6. Temperature Cycle	No defects such as crack and breakage occur on every area.	(-65°C : 30 minutes → 15 ~ 35°C: 5 minutes max. → 125°C : 30 minutes → 15 ~ 35°C: 5 minutes max.) 5 cycles
7. Operating Life	Contact resistance : 20mΩ max.	500 cycles
8. Resistance to Soldering heat	No resin area fusion to degrade performance	Soldering iron temperature: 300°C for 3 seconds

NOTE 1 : Temperature rise included when energized.

NOTE 2 : This storage indicates a long-term storage state for the unused product before the board mounted.

The operating temperature range is applied to the non-energized state after the board mounted and the temporary storage state for transportation.

NOTE 3 : The above standard represents this series. Individual formal agreement should be based on the "Specification".

■ Material

●Housing, Contact Board and Key Header

Parts	Material	Finish	Remarks
Insulator	PBT		
Contact	Copper alloy	Contact area: Gold plating Remainder: Gold plating	_____

●Receptacle, Backplane Housing

Parts	Material	Finish	Remarks
Insulator	PBT	Beige	UL94V-0
Contact	Copper alloy	PFB Contact area: Gold plating Remainder: Solder plating WB Contact area: Gold plating Remainder: Gold flash plating Post area: Gold plating	_____

■Ordering Information

Please determine the specific product. If needed, please select and order the product No. as listed on catalog page A80~A100.

●Housing

PCN 11 A - ※ P - 2.54 H 2
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series name	: PCN
② Series No.	: 11
③ Mounting hole type	No symbol : With Mounting hole A : Without mounting hole
④ Number of contacts	: 20, 32, 44, 50, 64, 90, 96, 100
⑤ Opening type	P : Male connector
⑥ Contact pitch	: 2.54mm
⑦ H : Housing	
⑧ Board thickness	2 : 2.4mm

●Contact Board

PCN 11 - ※ P - 2.54 WA - 2
 ① ② ③ ④ ⑤ ⑥ ⑦

① Series name	: PCN
② Series No.	: 11
③ Number of contacts	: 20, 32, 44, 50, 64, 90, 96, 100
④ Opening type	P : Male connector
⑤ Contact pitch	: 2.54mm
⑥ Contact type	WA : Wrapping Backplane (φ0.8) WB : Wrapping Backplane (φ0.9) WC : Wrapping Backplane (φ1.0)
⑦ Board thickness	2 : 2.4mm

●Key Header (Correspond to Backplane system)

PCN 11 - ※ P - 2.54 KH
 ① ② ③ ④ ⑤ ⑥

① Series name	: PCN
② Series No.	: 11
③ Number of contacts	: 10, 14, 16, 20, 26, 30, 34, 40, 50, 64, 96
④ Opening type	P : Male connector
⑤ Contact pitch	: 2.54mm
⑥ KH : Key header	

●Receptacle

PCN 11 - ※ S - 2.54 PFB - 2
 ① ② ③ ④ ⑤ ⑥ ⑦

① Series name	: PCN
② Series No.	: 11
③ Number of contacts	: 10, 16, 20, 32, 44, 50, 64, 90, 96, 100, 128
④ Opening type	S : Female connector
⑤ Contact pitch	: 2.54mm
⑥ Contact type	PFB : Short type (φ0.9) WB : Wrapping Backplane (φ0.9)
⑦ Board thickness	2 : 2.4mm

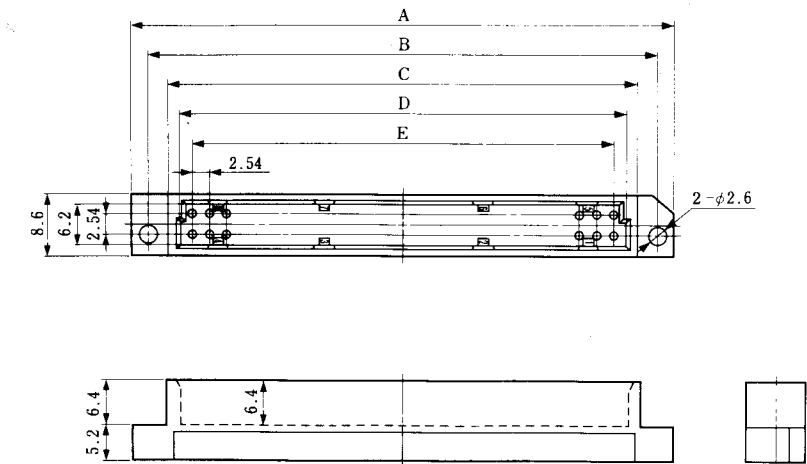
●Backplane Housing

PCN 11 A - ※ P - 2.54 BP - 2
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series name	: PCN
② Series No.	: 11
③ Mounting hole type	No symbol : With mounting hole A : Without mounting hole
④ Number of contacts	: 10, 16, 20, 32, 44, 50, 64, 90, 96, 100, 128
⑤ Opening type	P : Male connector
⑥ Contact pitch	: 2.54mm
⑦ BP : Backplane housing	(H : 128 contacts only)
⑧ Board thickness	2 : 2.4mm

■2 Row Backplane (Board thickness: 2.54mm)

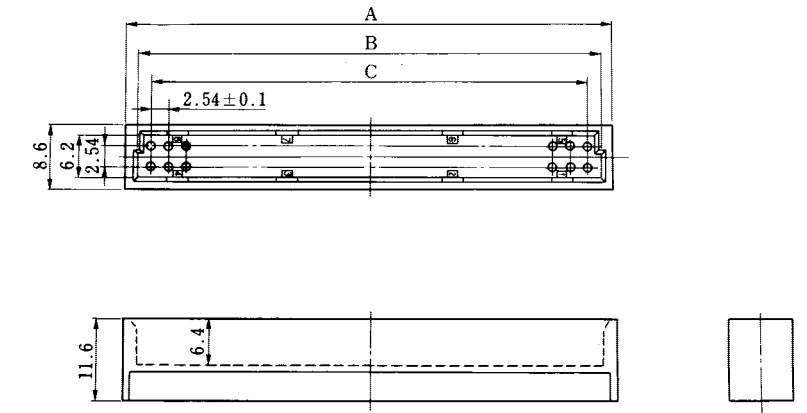
●Housing With mounting hole



Unit:mm

Product No.	HRS No.	Number of Contacts	A	B	C	D	E
PCN11- 20P-2.54H-2	CL583-1050-2	20	43.3	38.1	32.1	29.47	22.86
PCN11- 32P-2.54H-2	CL583-1051-5	32	58.54	53.34	47.34	44.71	38.1
PCN11- 44P-2.54H-2	CL583-1052-8	44	73.78	68.58	62.58	59.95	53.34
PCN11- 50P-2.54H-2	CL583-1053-0	50	81.4	76.2	70.2	67.57	60.96
PCN11- 64P-2.54H-2	CL583-1054-3	64	99.18	93.98	87.98	85.35	78.74
PCN11- 90P-2.54H-2	CL583-1055-6	90	132.2	127	121	118.37	111.76
PCN11-100P-2.54H-2	CL583-1056-9	100	144.9	139.7	133.7	131.07	124.46

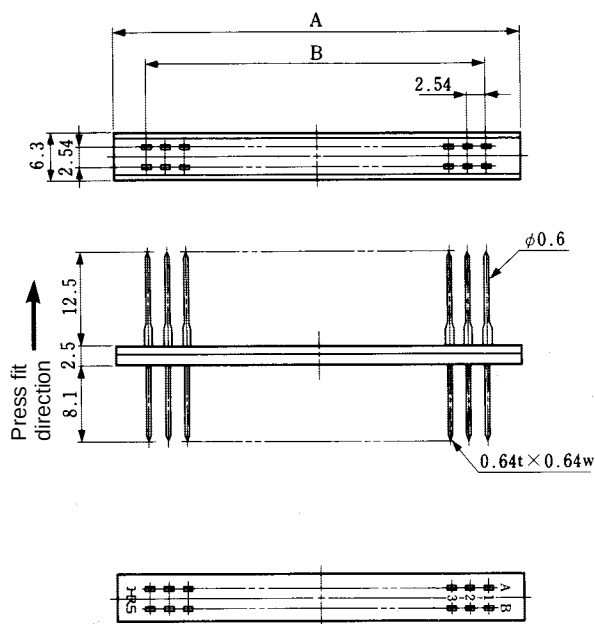
●Housing Without mounting hole



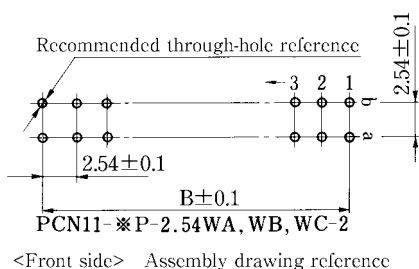
Unit:mm

Product No.	HRS No.	Number of Contacts	A	B	C
PCN11A- 20P-2.54H-2	CL583-1057-1	20	32.1	29.47	22.86
PCN11A- 32P-2.54H-2	CL583-1058-4	32	47.34	44.71	38.1
PCN11A- 44P-2.54H-2	CL583-1059-7	44	62.58	59.95	53.34
PCN11A- 50P-2.54H-2	CL583-1060-6	50	70.2	67.57	60.96
PCN11A- 64P-2.54H-2	CL583-1061-9	64	87.98	85.35	78.74
PCN11A- 90P-2.54H-2	CL583-1062-1	90	121	118.37	111.76
PCN11A-100P-2.54H-2	CL583-1063-4	100	133.7	131.07	124.46

●Contact Board
(Board thickness: 2.4mm)



◆PCB Footprints



WA(φ0.8 through-hole)

Product No.	HRS No.	Number of Contacts	A	B
PCN11- 20P-2.54WA-2	CL583-1011-0	20	32.06	22.86
PCN11- 32P-2.54WA-2	CL583-1012-3	32	47.3	38.1
PCN11- 44P-2.54WA-2	CL583-1013-6	44	62.54	53.34
PCN11- 50P-2.54WA-2	CL583-1014-9	50	70.16	60.96
PCN11- 64P-2.54WA-2	CL583-1015-1	64	87.94	78.74
PCN11- 90P-2.54WA-2	CL583-1016-4	90	120.96	111.76
PCN11-100P-2.54WA-2	CL583-1017-7	100	133.66	124.46

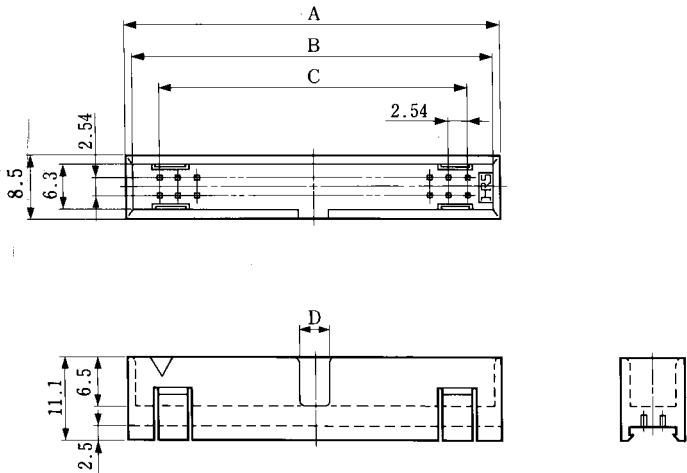
WC(φ1.0 through-hole)

Product No.	HRS No.	Number of Contacts	A	B
PCN11- 20P-2.54WC-2	CL583-1174-5	20	32.06	22.86
PCN11- 32P-2.54WC-2	CL583-1175-8	32	47.3	38.1
PCN11- 44P-2.54WC-2	CL583-1176-0	44	62.54	53.34
PCN11- 50P-2.54WC-2	CL583-1177-3	50	70.16	60.96
PCN11- 64P-2.54WC-2	CL583-1178-6	64	87.94	78.74
PCN11- 90P-2.54WC-2	CL583-1179-9	90	120.96	111.76
PCN11-100P-2.54WC-2	CL583-1180-8	100	133.66	124.46

WB(φ0.9 through-hole)

Product No.	HRS No.	Number of Contacts	A	B
PCN11- 20P-2.54WB-2	CL583-1043-7	20	32.06	22.86
PCN11- 32P-2.54WB-2	CL583-1044-0	32	47.3	38.1
PCN11- 44P-2.54WB-2	CL583-1045-2	44	62.54	53.34
PCN11- 50P-2.54WB-2	CL583-1046-5	50	70.16	60.96
PCN11- 64P-2.54WB-2	CL583-1047-8	64	87.94	78.74
PCN11- 90P-2.54WB-2	CL583-1048-0	90	120.96	111.76
PCN11-100P-2.54WB-2	CL583-1049-3	100	133.66	124.46

●Key Header
(Board thickness: 2.4mm)



Unit:mm

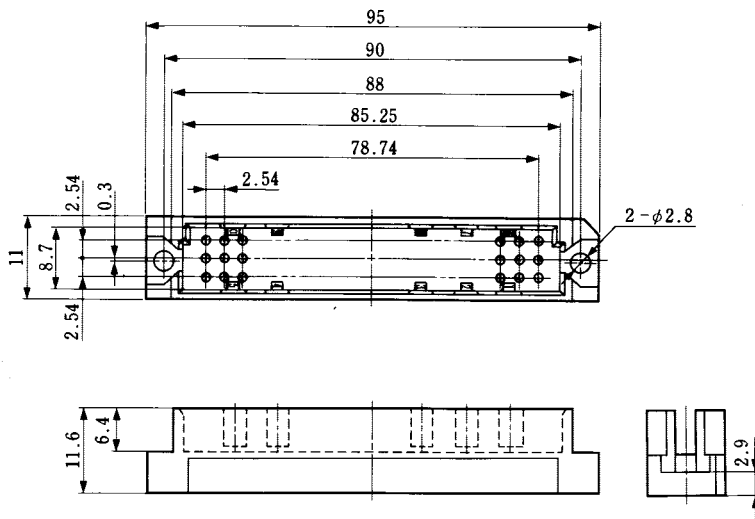
Product No.	HRS No.	Number of Contacts	A	B	C	D
PCN11 -10P-2.54KH	CL583-1000-4	10	19.36	17.5	10.16	4.1
PCN11 -14P-2.54KH	CL583-1001-7	14	24.44	22.58	15.24	4.1
PCN11 -16P-2.54KH	CL583-1002-0	16	26.98	25.12	17.78	4.1
PCN11 -20P-2.54KH	CL583-1003-2	20	32.06	30.2	22.86	4.1
PCN11 -26P-2.54KH	CL583-1004-5	26	39.66	37.8	30.48	4.1
PCN11 -30P-2.54KH	CL583-1005-8	30	44.76	42.9	35.56	4.1
PCN11 -34P-2.54KH	CL583-1006-0	34	49.86	48	40.64	4.1
PCN11 -40P-2.54KH	CL583-1007-3	40	57.46	55.6	48.26	4.1
PCN11 -50P-2.54KH	CL583-1008-6	50	70.16	68.3	60.96	26.96
PCN11A-50P-2.54KH	CL583-1034-6	50	70.16	68.3	60.96	4.1
PCN11 -60P-2.54KH	CL583-1009-9	60	82.86	81	73.66	26.96
PCN11A-60P-2.54KH	CL583-1035-9	60	82.86	81	73.66	4.1
PCN11 -64P-2.54KH	CL583-1010-8	64	87.96	86.1	78.74	26.96
PCN11A-64P-2.54KH	CL583-1036-1	64	87.96	86.1	78.74	4.1

<Connectors to correspond to PCN11(A)-*P-2.54KH are HIF3BA-*D-2.54R, HIF3BA-*D-2.54C and HIF3C-*D-2.54C.>

■3 Row Backplane (Board thickness: 2.54mm)

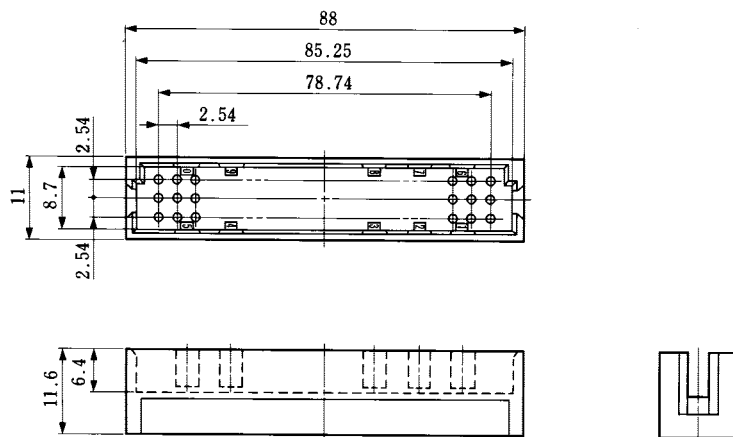
●Housing (With mounting hole)

PCN11-96P-2.54H-2
CL583-1032-0

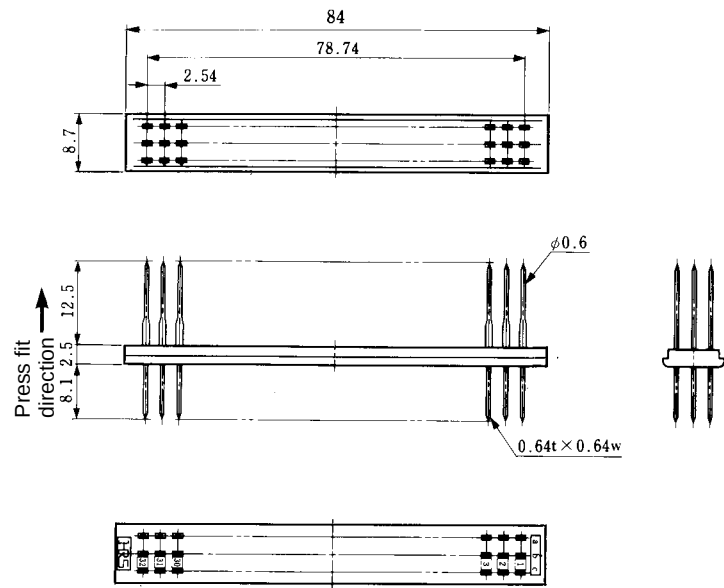
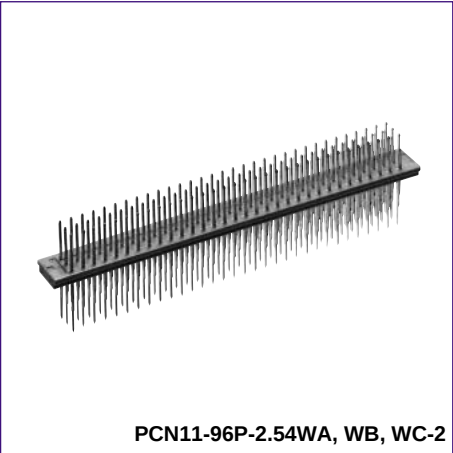


●Housing (Without mounting hole)

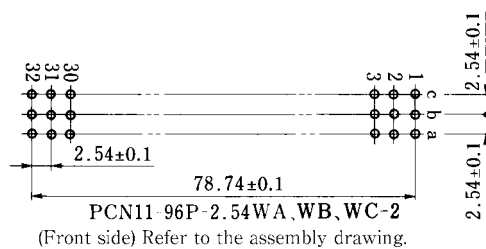
PCN11A-96P-2.54H-2
CL583-1033-3



●Contact Board



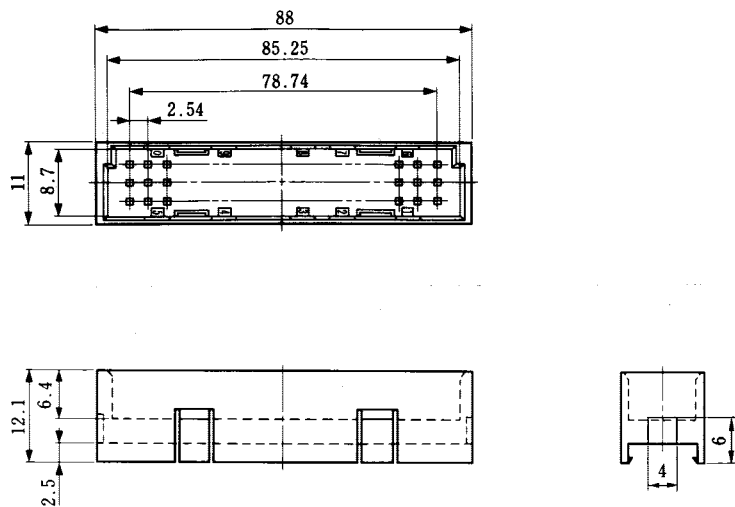
◆PCB Footprints



Product No.	HRS No.	
PCN11-96P-2.54WA-2	CL583-1030-5	$\phi 0.8$ through-hole
PCN11-96P-2.54WB-2	CL583-1064-7	$\phi 0.9$ through-hole
PCN11-96P-2.54WC-2	CL583-1181-0	$\phi 1.0$ through-hole

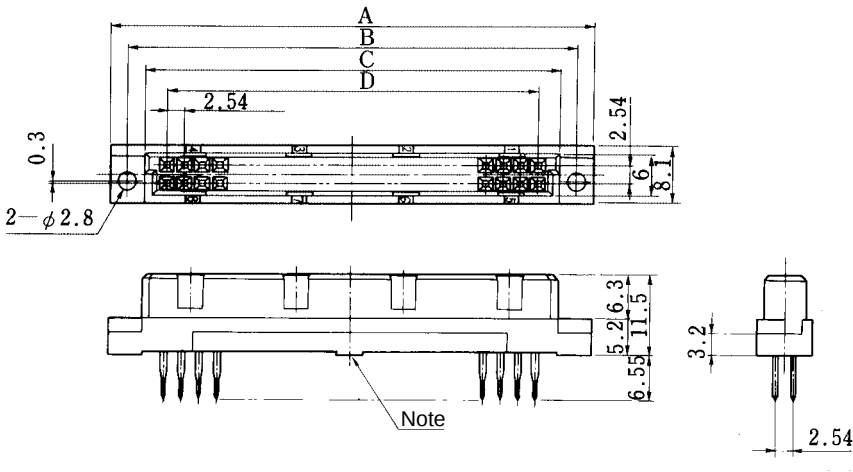
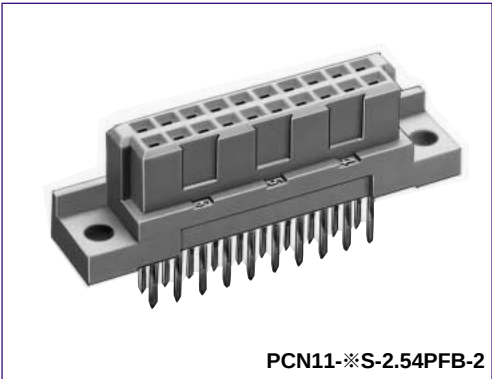
●Key header

PCN11-96P-2.54KH
CL583-1031-8

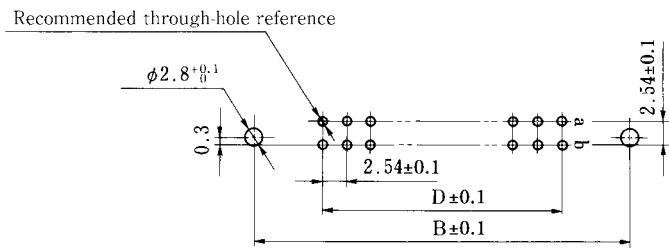


<Connectors to correspond to PCN11-96P-2.54KH are PCN10-64S-2.54R, PCN10-96S-2.54C.>

■Receptacle: 2 Row Short Type



◆PCB Footprints

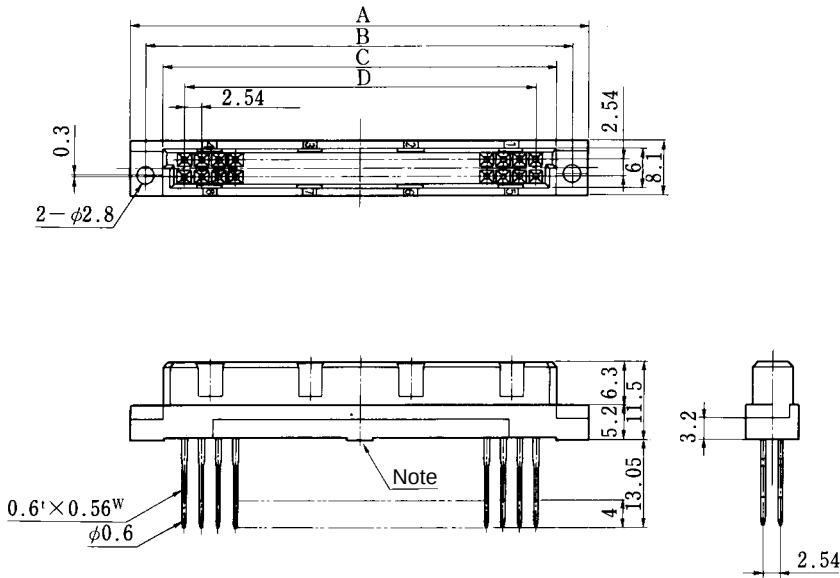


Unit:mm

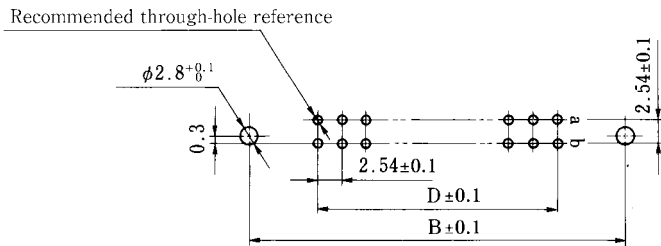
Product No.	HRS No.	Number of Contacts	A	B	C	D
PCN11- 10S-2.54PFB-2	CL583-1109-3	10	26.42	21.42	16.42	10.16
PCN11- 16S-2.54PFB-2	CL583-1110-2	16	34.04	29.04	24.04	17.78
PCN11- 20S-2.54PFB-2	CL583-1111-5	20	39.12	34.12	29.12	22.86
PCN11- 32S-2.54PFB-2	CL583-1112-8	32	54.36	49.36	44.36	38.1
PCN11- 44S-2.54PFB-2	CL583-1113-0	44	69.6	64.6	59.6	53.34
PCN11- 50S-2.54PFB-2	CL583-1114-3	50	77.22	72.22	67.22	60.96
PCN11- 64S-2.54PFB-2	CL583-1115-6	64	95	90	85	78.74
PCN11- 90S-2.54PFB-2	CL583-1116-9	90	128.02	123.02	118.02	111.76
PCN11-100S-2.54PFB-2	CL583-1117-1	100	140.72	135.72	130.72	124.46

NOTE: With stand off for 64, 90, 100 contacts products

■Receptacle: 2 Row Wrapping Backplane Type



◆PCB Footprints



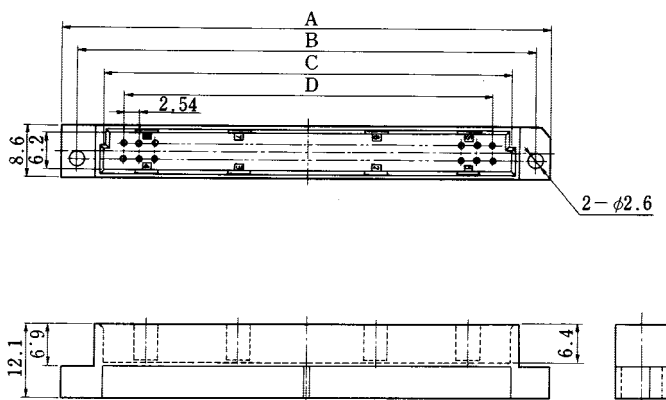
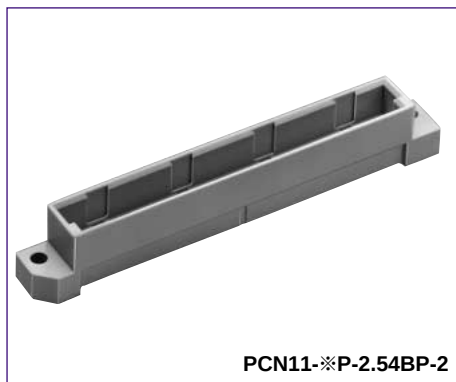
Unit:mm

Product No.	HRS No.	Number of Contacts	A	B	C	D
PCN11-10S-2.54WB-2	CL583-1076-6	10	26.42	21.42	16.42	10.16
PCN11-16S-2.54WB-2	CL583-1077-9	16	34.04	29.04	24.04	17.78
PCN11-20S-2.54WB-2	CL583-1078-1	20	39.12	34.12	29.12	22.86
PCN11-32S-2.54WB-2	CL583-1079-4	32	54.36	49.36	44.36	38.1
PCN11-44S-2.54WB-2	CL583-1080-3	44	69.6	64.6	59.6	53.34
PCN11-50S-2.54WB-2	CL583-1081-6	50	77.22	72.22	67.22	60.96
PCN11-64S-2.54WB-2	CL583-1082-9	64	95	90	85	78.74
PCN11-90S-2.54WB-2	CL583-1083-1	90	128.02	123.02	118.02	111.76
PCN11-100S-2.54WB-2	CL583-1084-4	100	140.72	135.72	130.72	124.46

NOTE: With stand off for 64, 90, 100 contacts

■Receptacle : 3 Row Backplane Type (t=2.4mm board)

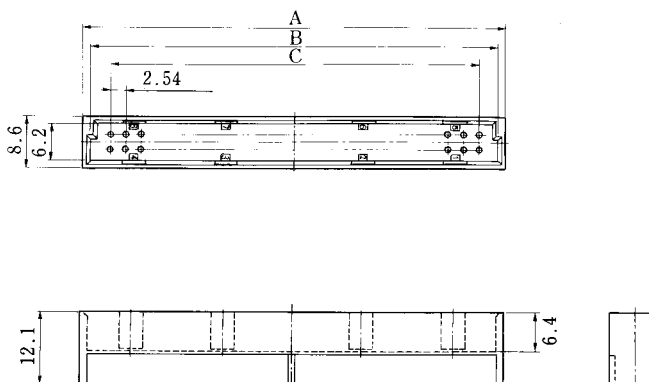
●Housing (With Mounting hole)



Unit:mm

Product No.	HRS No.	Number of Contacts	A	B	C	D
PCN11- 10P-2.54BP-2	CL583-1131-2	10	30.6	25.4	16.77	10.16
PCN11- 16P-2.54BP-2	CL583-1132-5	16	38.22	33.02	24.39	17.78
PCN11- 20P-2.54BP-2	CL583-1133-8	20	43.3	38.1	29.47	22.86
PCN11- 32P-2.54BP-2	CL583-1134-0	32	58.54	53.34	44.71	38.1
PCN11- 44P-2.54BP-2	CL583-1135-3	44	73.78	68.58	59.95	53.34
PCN11- 50P-2.54BP-2	CL583-1136-6	50	81.4	76.2	67.57	60.96
PCN11- 64P-2.54BP-2	CL583-1137-9	64	99.18	93.98	85.35	78.74
PCN11- 90P-2.54BP-2	CL583-1138-1	90	132.2	127	118.37	111.76
PCN11-100P-2.54BP-2	CL583-1140-3	100	144.9	139.7	131.07	124.46

●Housing (Without mounting hole)

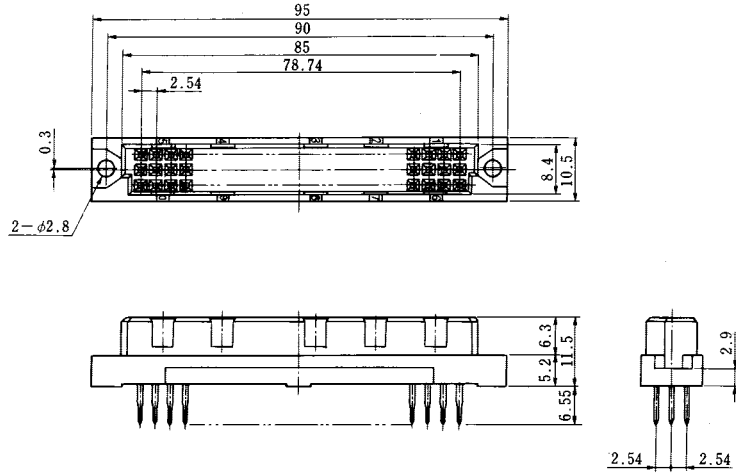
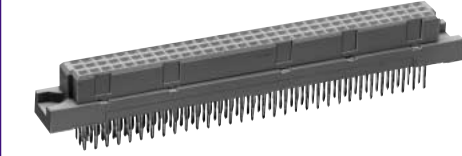


Unit:mm

Product No.	HRS No.	Number of Contacts	A	B	C
PCN11A-10P-2.54BP-2	CL583-1141-6	10	19.4	16.77	10.16
PCN11A-16P-2.54BP-2	CL583-1142-9	16	27.02	24.39	17.78
PCN11A-20P-2.54BP-2	CL583-1143-1	20	32.1	29.47	22.86
PCN11A-32P-2.54BP-2	CL583-1144-4	32	47.34	44.71	38.1
PCN11A-44P-2.54BP-2	CL583-1145-7	44	62.58	59.95	53.34
PCN11A-50P-2.54BP-2	CL583-1146-0	50	70.2	67.57	60.96
PCN11A-64P-2.54BP-2	CL583-1147-2	64	87.98	85.35	78.74
PCN11A-90P-2.54BP-2	CL583-1148-5	90	121	118.37	111.76
PCN11A-100P-2.54BP-2	CL583-1150-7	100	133.7	131.07	124.46

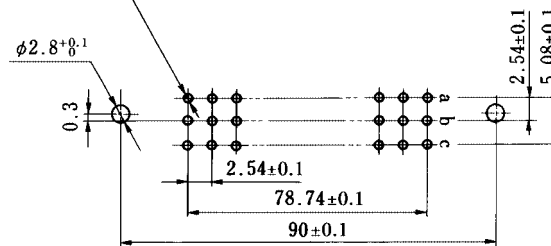
■Receptacle: 3 Row Short Type

PCN11-96S-2.54PFB-2
CL583-1118-4



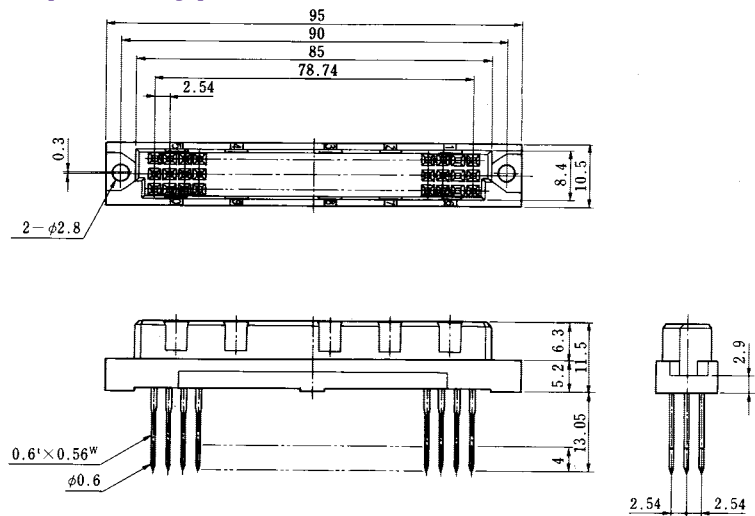
◆PCB Footprints

Recommended through-hole reference



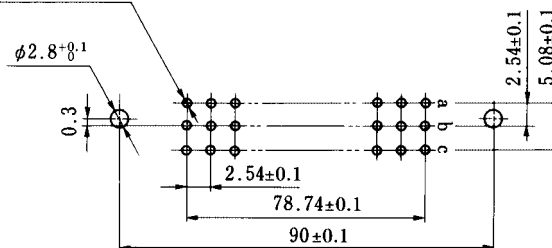
■Receptacle: 3 Row Wrapping Backplane Type

PCN11-96S-2.54WB-2
CL583-1085-7



◆PCB Footprints

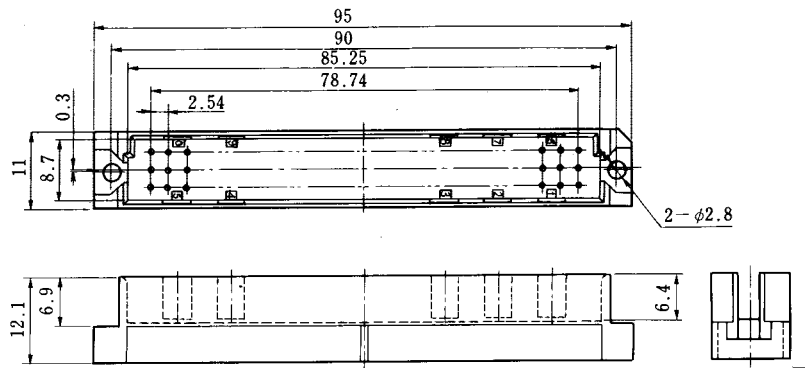
Recommended through-hole reference



■Receptacle: 3 Row Backplane Type (t=2.45 board)

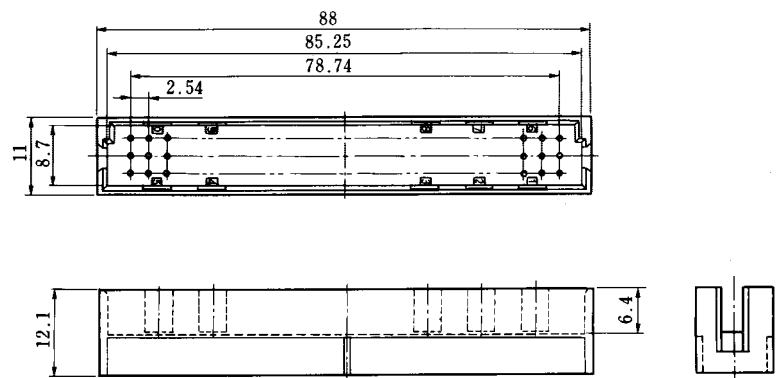
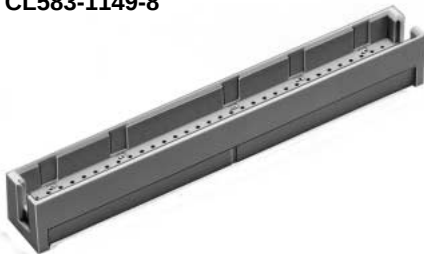
●Housing (With Mounting hole)

PCN11-96P-2.54BP-2
CL583-1139-4



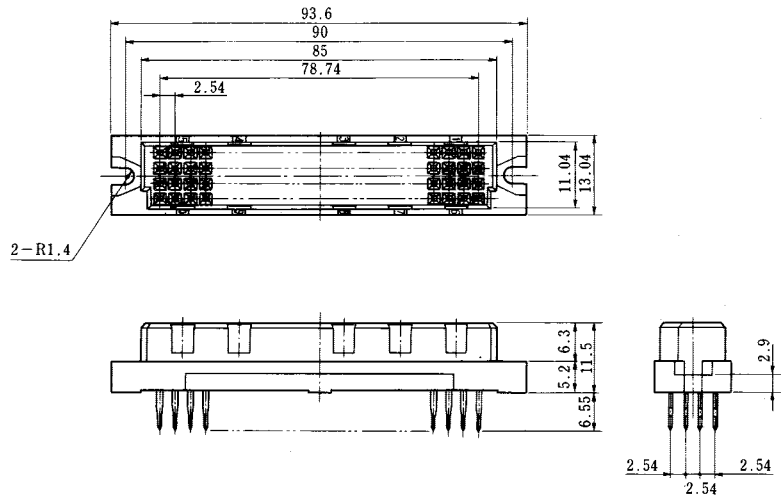
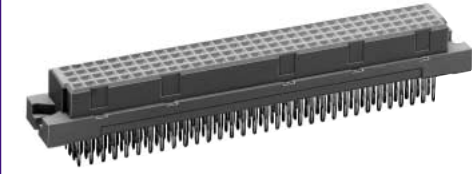
●Housing (Without mounting hole)

PCN11A-96P-2.54BP-2
CL583-1149-8



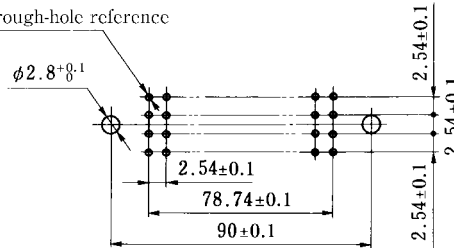
■Receptacle: 3 Row Short Type

PCN11-128S-2.54PFB-2
CL583-1119-7



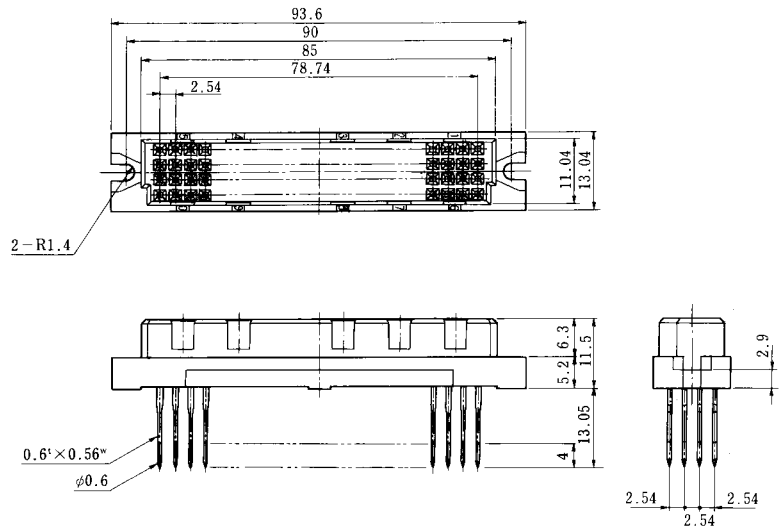
◆PCB Footprints

Recommended through-hole reference



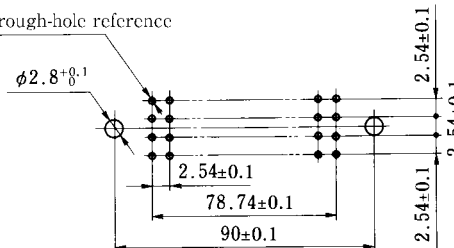
■Receptacle: 4 Row Wrapping Backplane Type

PCN11-128S-2.54WB-2
CL583-1086-0



◆PCB Footprints

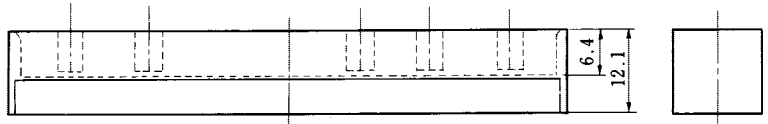
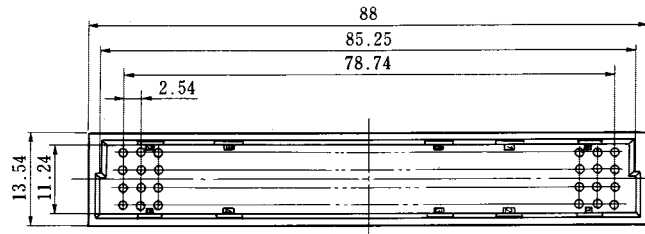
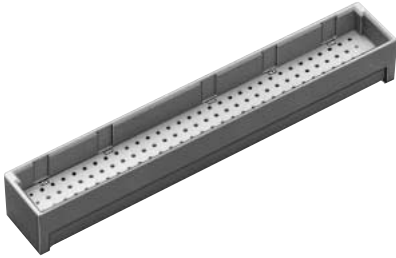
Recommended through-hole reference



■ Receptacle: 3 Row Backplane Type (t=2.45 board)

●Housing Without mounting hole

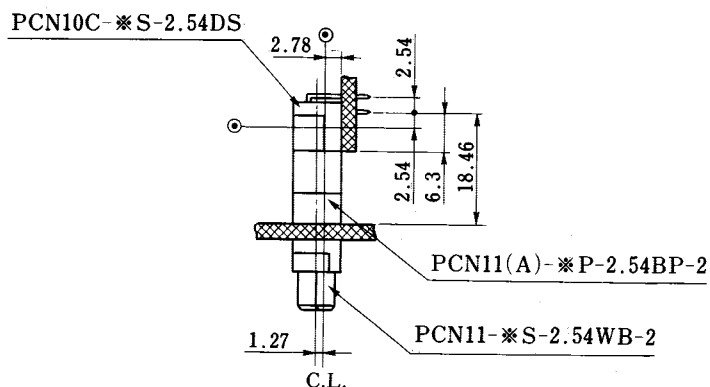
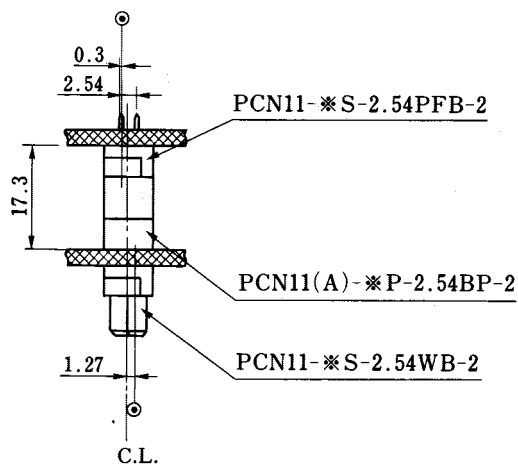
PCN11A-128P-2.54H-2
CL583-1151-0



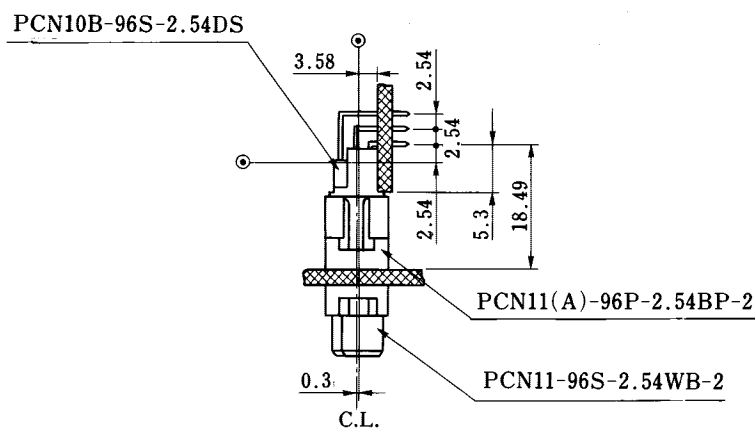
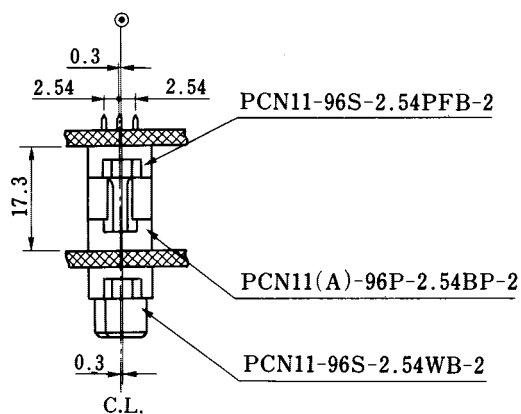
◆ Application

● 2-row type

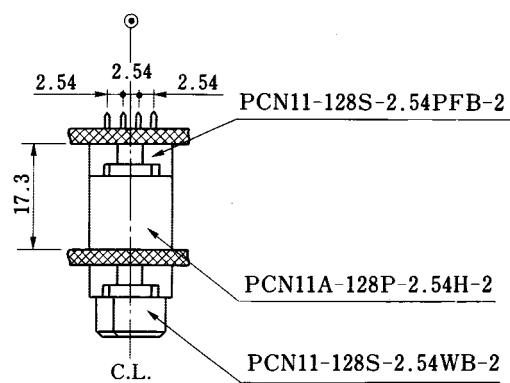
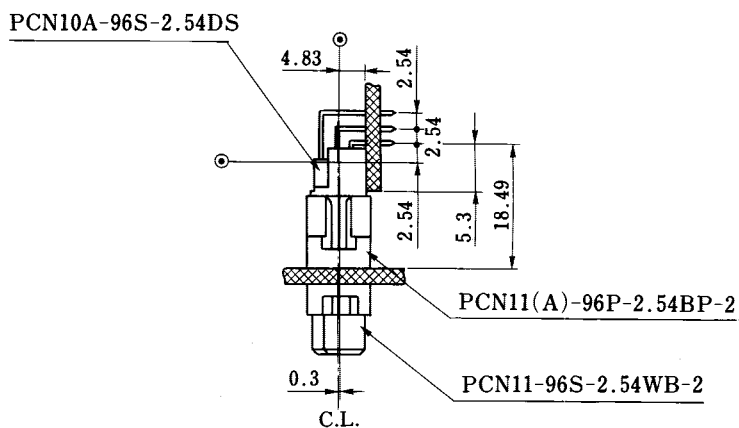
● Mounting hole center
C.L. Center line



● 3 Row Type



● 4-row type



For other combination application patterns,
refer to the PCN10 Series catalog.

◆Recommendation for Press fit Board Assembly

If boards are furnished from the users, HIROSE will assemble the connectors.

Please confirm following requirements.

①Board size: 600 x 600mm max.

②Board through-hole pitch

The board punching bench is designed in the 2.54mm pitch grid. Set the through-hole pitch to pitch (connector side) size to 2.54 x n.

③Connector punching surface indication

For indication on the connector punching surface, mark "FRONT" or "F", and "BACK" or "B" on the reverse side in order to clearly identify the front and rear sides. In addition, the punching direction should be clearly marked.

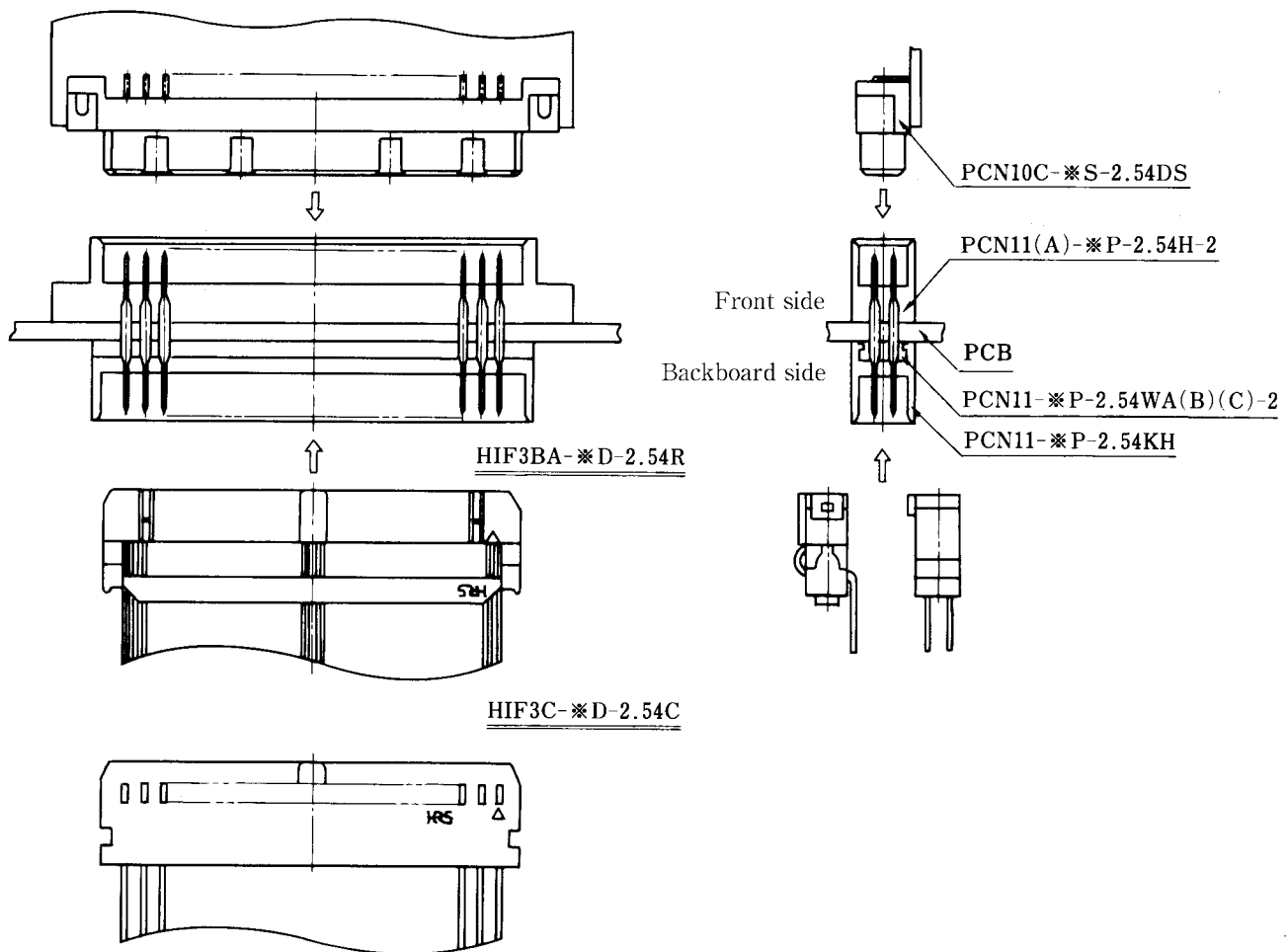
④Clearly indicate the board No. and marking position.

⑤Clearly indicate board mounting hole positions and hole diameters.

In addition, we provide the press fit board assembly from the both sides, For further information, consult HRS company.

◆Assembly Drawing

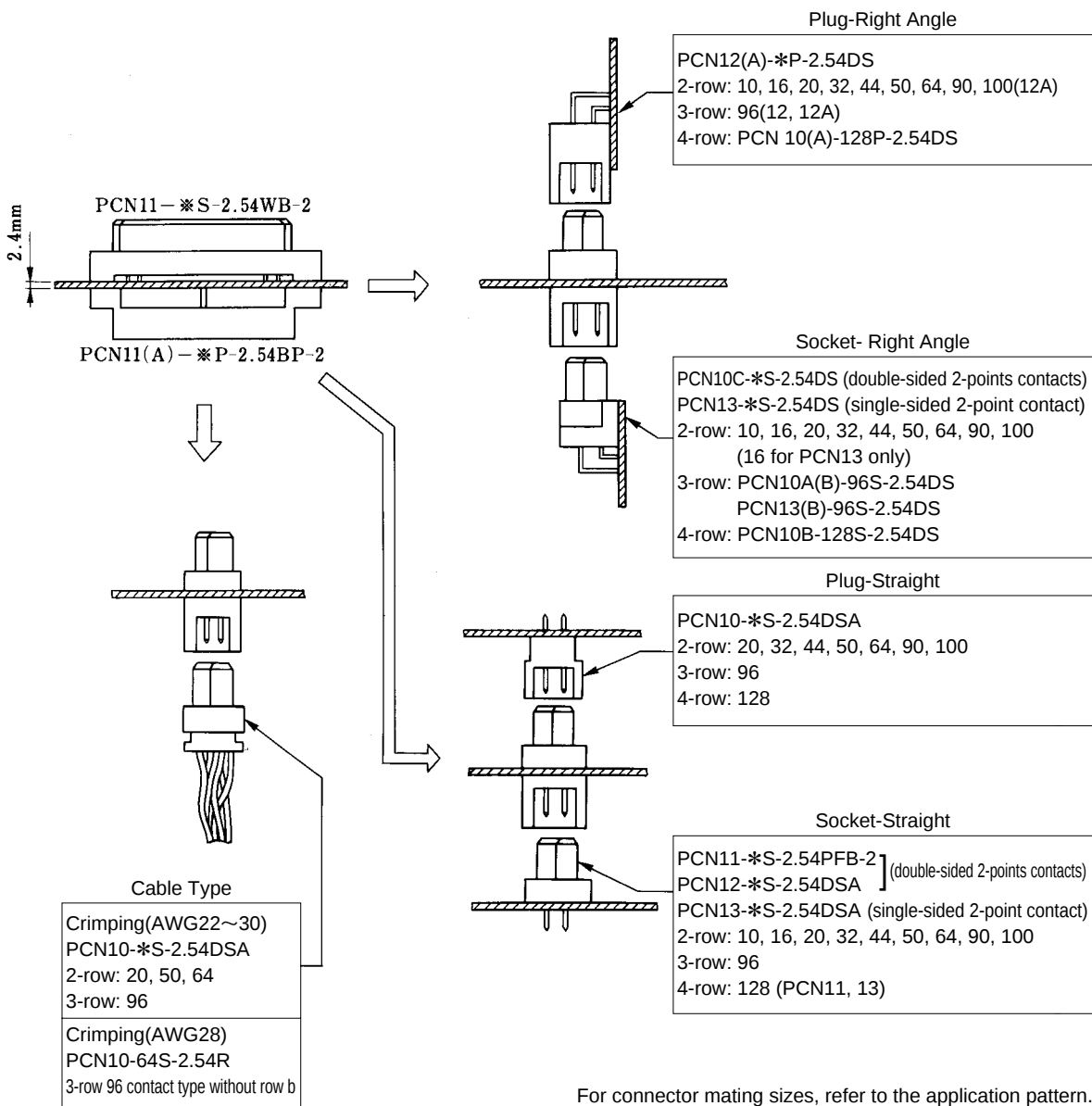
●PCN11



◆ Assembly Drawing

● PCN11 Socket Type

- Combination with PCN10, 12 and 13 can be selected alternatively.
- In connection with the backplane, various assemblies are available. (2.4mm board)



■Recommended Press fit Through-hole

(1) $\phi 0.8$

Drill dia. $\phi 0.9 \pm 0.025$

Finish dia. $\phi 0.8 \pm 0.08$

Copper plating $20\mu\text{m}$ min.

Solder plating $5\sim 10\mu\text{m}$

(2) $\phi 0.9$

Drill dia. $\phi 1.0 \pm 0.025$

Finish dia. $\phi 0.9 \pm 0.08$

Copper plating $20\mu\text{m}$ min.

Solder plating $5\sim 10\mu\text{m}$

(3) $\phi 1.0$

Drill dia. $\phi 1.1 \pm 0.025$

Finish dia. $\phi 1.0 \pm 0.08$

Copper plating $20\mu\text{m}$ min.

Solder plating $5\sim 10\mu\text{m}$

■Applicable Board Material and Board Thickness

● $t=2.4\text{mm}$ (Board thickness tolerance: $\pm 0.2\text{mm}$)

●Material: FR-4, G-10, polyamid

◆Press fit machine

●Features

- By changing the board bed and punch tooling, various connectors can be press fitted.
- The easy height adjustment mechanism allows to obtain a proper pressure height to the board thickness.
- By programming the pre-inserted connector, continuous press-insertion services can proceed.

Mechanical size	(Width) 1330 x (depth) 1600 x (height) 2000mm
Weight	1000kg approx.
Drive source	200V AC Air supply source: normally $5\text{kg}/\text{cm}^2$
Press pressure source	Hydraulic output :5t max.
Board size	600 x 800 mm max.



◆Press fit Repair Tool

The following tools are used to repair the press fit connector housing and contact.

●Tool to Remove Housing

This tool is used to remove the connector from the board.

Product No.	Applicable Product
PCN11-※S-HP	PCN11-※S-2.54PFB-2
	PCN11-※S-2.54WB-2

※indicates the number of contacts.



●Tool to Remove Contact

After the housing is removed from the board, this tool is used to remove every contact from the board.

Product No.	Applicable Product
PCN11S-PFB-2-CP	PCN11-※S-2.54PFB-2
PCN11S-WB-2-CP	PCN11-※S-2.54WB-2

※indicates the number of contacts.

