

# FCN-724P/725P\*\*\*-AU\*, -723\*\*\*\*/\*

## FCN-720 Series Block Header and Crimp Socket Connectors

### FEATURES

This crimp connector has been designed for wide use, and comes in many shapes and contact arrangements (one and two rows.)

The FCN-720 block headers are matable with the FCN-700/740 sockets, and FCN-720 sockets are lockable with FCN-700 headers when a special cover is used. Female con-

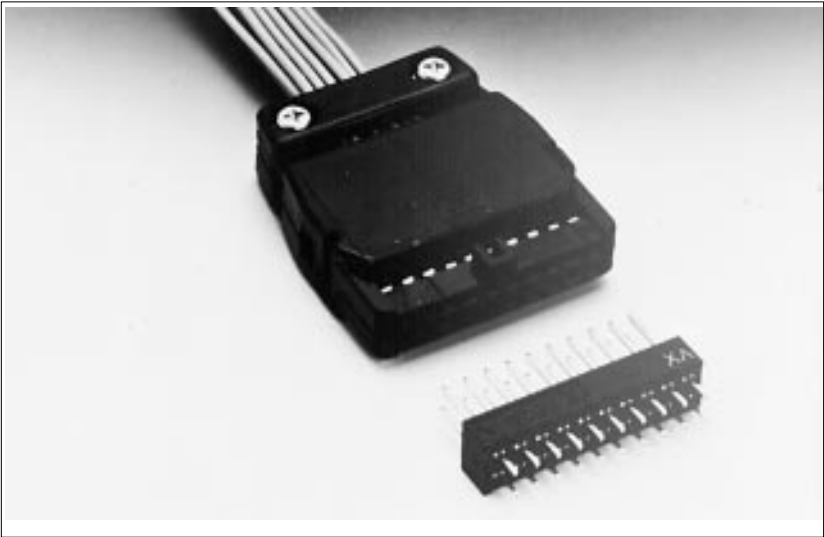
tacts are secured in the housing by a unique internal spring structure. High-pressure contacts are also available that prevent accidental disconnection in applications using only a few contacts. For the W and S type headers, insulation molds can be broken into the necessary size.

### SPECIFICATIONS

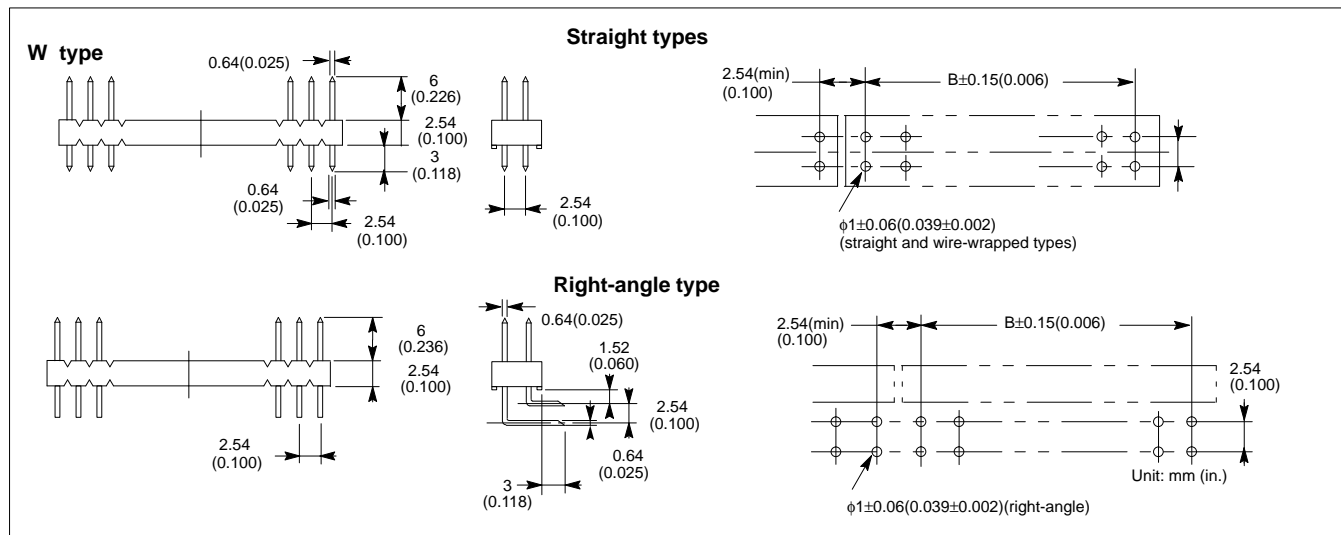
Temperature Range		-55 to +85°C
Current Rating		3 ADC
Voltage Rating		250 VAC
Contact Resistance		20 mΩ max. (6 VDC, 0.3A)
Insulation Resistance		1,000 MΩ min. (500 VDC)
Dielectric Withstand		Voltage 500 VAC for 1 min.
Maximum Insertion Force	Standard contacts High-pressure Contact	1.05 kg (3 contacts) 25.2 kg (72 contacts) 2.1 kg (3 contacts) 50.4 kg (72 contacts)
Minimum Withdrawal Force	Standard contacts High-pressure Contact	0.09 kg (3 contacts) 2.16 kg (72 contacts) 0.18 kg (3 contacts) 4.32 kg (72 contacts)
Applicable Wire		Wire-wrapping: AWG #26 to #32 (solid wire) Crimping: AWG #20 to #32

### MATERIALS

Contact		Copper Alloy
Insulator	Header	Polyester, UL94V-0
	Socket	PPO, UL94V-1
	cover	Nylon, UL94V-2
Plating	Contacts	Gold over palladium over nickel (PAGOS)
	Terminals	Palladium



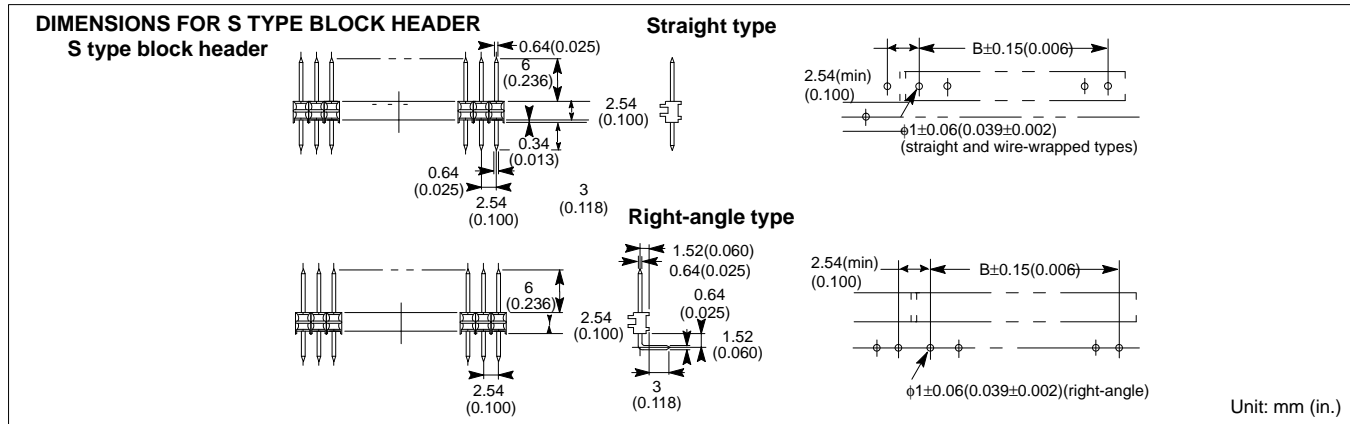
## FCN-724P/725P\*\*\*-AU/W W TYPE BLOCK HEADER



Type No. of Contacts	W Type Header		Dimensions (mm (in.))	
	Straight Type	Right-angle Type	A	B
4	FCN-724P004-AU/W	FCN-725P004-AU/W	5.08(0.200)	2.54(0.100)
6	FCN-724P006-AU/W	FCN-725P006-AU/W	7.62(0.300)	5.08(0.200)
8	FCN-724P008-AU/W	FCN-725P008-AU/W	10.16(0.400)	7.62(0.300)
10	FCN-724P010-AU/W	FCN-725P010-AU/W	12.70(0.500)	10.16(0.400)
12	FCN-724P012-AU/W	FCN-725P012-AU/W	15.24(0.600)	12.70(0.500)
14	FCN-724P014-AU/W	FCN-725P014-AU/W	17.78(0.700)	15.24(0.600)
16	FCN-724P016-AU/W	FCN-725P016-AU/W	20.32(0.800)	17.78(0.700)
18	FCN-724P018-AU/W	FCN-725P018-AU/W	22.86(0.900)	20.32(0.800)
20	FCN-724P020-AU/W	FCN-725P020-AU/W	25.40(1.000)	22.96(0.904)
22	FCN-724P022-AU/W	FCN-725P022-AU/W	27.94(1.100)	25.40(1.000)
24	FCN-724P024-AU/W	FCN-725P024-AU/W	30.48(1.200)	27.94(1.100)
26	FCN-724P026-AU/W	FCN-725P026-AU/W	33.02(1.300)	30.48(1.200)
28	FCN-724P028-AU/W	FCN-725P028-AU/W	35.56(1.400)	33.02(1.300)
30	FCN-724P030-AU/W	FCN-725P030-AU/W	38.10(1.500)	35.56(1.400)
32	FCN-724P032-AU/W	FCN-725P032-AU/W	40.64(1.600)	38.10(1.500)
34	FCN-724P034-AU/W	FCN-725P034-AU/W	43.18(1.700)	43.18(1.700)
36	FCN-724P036-AU/W	FCN-725P036-AU/W	45.72(1.800)	40.64(1.600)
38	FCN-724P038-AU/W	FCN-725P038-AU/W	48.26(1.900)	45.72(1.800)
40	FCN-724P040-AU/W	FCN-725P040-AU/W	50.80(2.000)	48.26(1.900)
42	FCN-724P042-AU/W	FCN-725P042-AU/W	53.34(2.100)	50.80(2.000)
44	FCN-724P044-AU/W	FCN-725P044-AU/W	55.88(2.200)	53.34(2.100)
46	FCN-724P046-AU/W	FCN-725P046-AU/W	58.42(2.300)	55.88(2.200)
48	FCN-724P048-AU/W	FCN-725P048-AU/W	60.96(2.400)	58.42(2.300)
50	FCN-724P050-AU/W	FCN-725P050-AU/W	63.50(2.500)	60.96(2.400)
52	FCN-724P052-AU/W	FCN-725P052-AU/W	66.04(2.600)	63.50(2.500)
54	FCN-724P054-AU/W	FCN-725P054-AU/W	68.58(2.700)	66.04(2.600)
56	FCN-724P056-AU/W	FCN-725P056-AU/W	71.12(2.800)	68.58(2.700)
58	FCN-724P058-AU/W	FCN-725P058-AU/W	73.66(2.900)	71.12(2.800)
60	FCN-724P060-AU/W	FCN-725P060-AU/W	76.20(3.000)	73.66(2.900)
62	FCN-724P062-AU/W	FCN-725P062-AU/W	78.74(3.100)	76.20(3.000)
64	FCN-724P064-AU/W	FCN-725P064-AU/W	81.28(3.200)	78.74(3.100)
66	FCN-724P066-AU/W	FCN-725P066-AU/W	83.82(3.300)	81.28(3.200)
68	FCN-724P068-AU/W	FCN-725P068-AU/W	86.36(3.400)	83.82(3.300)
70	FCN-724P070-AU/W	FCN-725P070-AU/W	88.90(3.500)	86.36(3.400)
72	FCN-724P072-AU/W	FCN-725P072-AU/W	91.44(3.600)	88.90(3.500)

**Note:** These part numbers indicate standard 30 microinch precious metal plating in contact area. Suffix -HN designates 15 micro-inch precious metal plating.

## FCN-724P/725P\*\*\*-AU/S S TYPE BLOCK HEADER



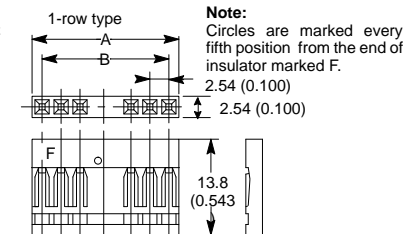
No. of Contacts	Type	S Type Header	S Type Header	Dimensions (mm (in.))	
		Straight Type	Right-angle Type	A	B
2		—	FCN-725P002-AU/S	5.08(0.200)	2.54(0.100)
3		FCN-724P003-AU/S	FCN-725P003-AU/S	7.62(0.300)	5.08(0.200)
4		FCN-724P004-AU/S	FCN-725P004-AU/S	10.16(0.400)	7.62(0.300)
5		FCN-724P005-AU/S	FCN-725P005-AU/S	12.70(0.500)	10.16(0.400)
6		FCN-724P006-AU/S	FCN-725P006-AU/S	15.24(0.600)	12.70(0.500)
7		FCN-724P007-AU/S	FCN-725P007-AU/S	17.78(0.700)	15.24(0.600)
8		FCN-724P008-AU/S	FCN-725P008-AU/S	20.32(0.800)	17.78(0.700)
9		FCN-724P009-AU/S	FCN-725P009-AU/S	22.86(0.900)	20.32(0.800)
10		FCN-724P010-AU/S	FCN-725P010-AU/S	25.40(1.000)	22.86(0.900)
11		FCN-724P011-AU/S	FCN-725P011-AU/S	27.94(1.100)	25.40(1.000)
12		FCN-724P012-AU/S	FCN-725P012-AU/S	30.48(1.200)	27.94(1.100)
13		FCN-724P013-AU/S	FCN-725P013-AU/S	33.02(1.300)	30.48(1.200)
14		FCN-724P014-AU/S	FCN-725P014-AU/S	35.56(1.400)	33.02(1.300)
15		FCN-724P015-AU/S	FCN-725P015-AU/S	38.10(1.500)	35.56(1.400)
16		FCN-724P016-AU/S	FCN-725P016-AU/S	40.64(1.600)	38.10(1.500)
17		FCN-724P017-AU/S	FCN-725P017-AU/S	43.18(1.700)	43.18(1.700)
18		FCN-724P018-AU/S	FCN-725P018-AU/S	45.72(1.800)	43.18(1.700)
19		FCN-724P019-AU/S	FCN-725P019-AU/S	48.26(1.900)	45.72(1.800)
20		FCN-724P020-AU/S	FCN-725P020-AU/S	50.80(2.000)	48.26(1.900)
21		FCN-724P021-AU/S	FCN-725P021-AU/S	53.34(2.100)	50.80(2.000)
22		FCN-724P022-AU/S	FCN-725P022-AU/S	55.88(2.200)	53.34(2.100)
23		FCN-724P023-AU/S	FCN-725P023-AU/S	58.42(2.300)	55.88(2.200)
24		FCN-724P024-AU/S	FCN-725P024-AU/S	60.96(2.400)	58.42(2.300)
25		FCN-724P025-AU/S	FCN-725P025-AU/S	63.50(2.500)	60.96(2.400)
26		FCN-724P026-AU/S	FCN-725P026-AU/S	66.04(2.600)	63.50(2.500)
27		FCN-724P027-AU/S	FCN-725P027-AU/S	68.58(2.700)	66.04(2.600)
28		FCN-724P028-AU/S	FCN-725P028-AU/S	71.12(2.800)	68.58(2.700)
29		FCN-724P029-AU/S	FCN-725P029-AU/S	73.66(2.900)	71.12(2.800)
30		FCN-724P030-AU/S	FCN-725P030-AU/S	76.20(3.000)	73.66(2.900)
31		FCN-724P031-AU/S	FCN-725P031-AU/S	78.74(3.100)	76.20(3.000)
32		FCN-724P032-AU/S	FCN-725P032-AU/S	81.28(3.200)	78.74(3.100)
33		FCN-724P033-AU/S	FCN-725P033-AU/S	83.82(3.300)	81.28(3.200)
34		FCN-724P034-AU/S	FCN-725P034-AU/S	86.36(3.400)	83.82(3.300)
35		FCN-724P035-AU/S	FCN-725P035-AU/S	88.90(3.500)	86.36(3.400)
36		FCN-724P036-AU/S	FCN-725P036-AU/S	91.44(3.600)	88.90(3.500)

**Note:** These part numbers indicate standard 30 microinch precious metal plating in contact area. Suffix -HN designates 15 micro-inch precious metal plating.

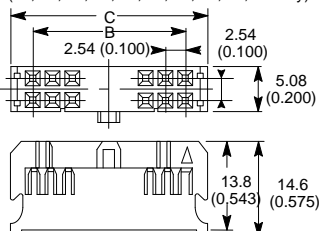
## FCN-723J/723B/723D\*\*\*/\* RECEPTACLE AND CONTACT

### DIMENSIONS

#### Socket and contact

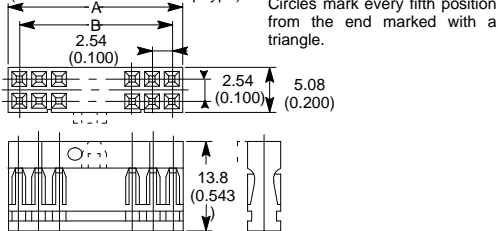


#### Lockable type (FCN-723D) (10, 14, 16, 20, 26, 30, 34, 40, 50, 60 only)

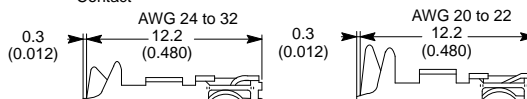


Note:  
Housing: Designate J for standard type, B for bump type (10 to 60 contacts), D for lockable types (10 to 60 contacts).

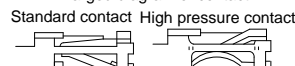
#### 2-row type (dotted line indicates bump type)



#### Contact



#### Enlarged diagram of contact



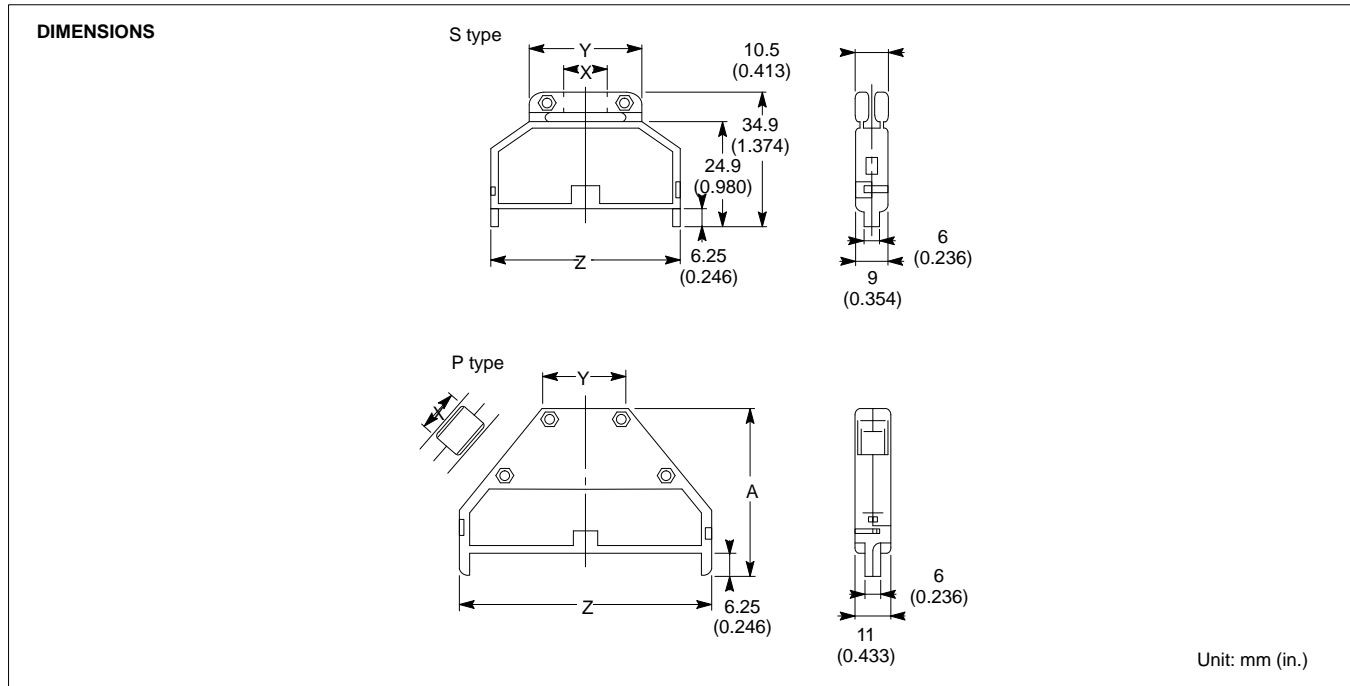
Unit: mm (in.)

Housing: Designate J for standard type, B for bump type (10 to 60 contacts), D for lockable types 10 to 60 contacts in the □

No. of Contacts	1 row	No. of Contacts	2 row	A	B	C	Contacts
2	FCN-723J002/1	4	FCN-723J004/2	5.08(0.200)	2.54(0.100)	—	<b>Wire size:</b> <b>AWG 24 to #32</b> * Standard contacts • Loose piece: FCN-723J-AU/Q (Note 2) FCN-723J-AU/A (Note 3) • Strip form: FCN-723J-AU/R (Note 2) FCN-723J-AU/B (Note 3) (8,000 PCS min./real) * High-pressure contacts • Loose piece: FCN-723J-AU/S (Note 2) FCN-723J-AU/C (Note 3) • Strip form: FCN-723J-AU/T (Note 2) FCN-723J-AU/D (Note 3) (8,000 PCS min./real) <b>Wire size:</b> <b>AWG #20 to #22</b> * Standard contacts • Loose piece: FCN-723J-AU/U (Note 2) FCN-723J-AU/E (Note 3) • Strip form: FCN-723J-AU/V (Note 2) FCN-723J-AU/F (Note 3) (5,000 PCS min./real) * High-pressure contacts • Loose piece: FCN-723J-AU/W (Note 2) FCN-723J-AU/G (Note 3) • Strip form: FCN-723J-AU/X (Note 2) FCN-723J-AU/H (Note 3) (5,000 PCS min./real)
3	FCN-723J003/1	6	FCN-723J006/2	7.62(0.300)	5.08(0.200)	—	
4	FCN-723J004/1	8	FCN-723J008/2	10.16(0.400)	7.62(0.300)	—	
5	FCN-723J005/1	10	FCN-723J010/2	12.70(0.500)	10.16(0.400)	17.30(0.681)	
6	FCN-723J006/1	12	FCN-723J012/2	15.24(0.600)	12.70(0.500)	—	
7	FCN-723J007/1	14	FCN-723J014/2	17.78(0.700)	15.24(0.600)	22.40(0.882)	
8	FCN-723J008/1	16	FCN-723J016/2	20.32(0.800)	17.78(0.700)	24.50(0.965)	
9	FCN-723J009/1	18	FCN-723J018/2	22.86(0.900)	20.32(0.800)	—	
10	FCN-723J010/1	20	FCN-723J020/2	25.40(1.000)	22.86(0.900)	30.00(1.181)	
11	FCN-723J011/1	22	FCN-723J022/2	27.94(1.100)	25.40(1.000)	—	
12	FCN-723J012/1	24	FCN-723J024/2	30.48(1.200)	27.94(1.100)	—	
13	FCN-723J013/1	26	FCN-723J026/2	33.02(1.300)	30.48(1.200)	37.60(1.480)	
14	FCN-723J014/1	28	FCN-723J028/2	35.56(1.400)	33.02(1.300)	—	
15	FCN-723J015/1	30	FCN-723J030/2	38.10(1.500)	35.56(1.400)	47.70(1.681)	
16	FCN-723J016/1	32	FCN-723J032/2	40.64(1.600)	38.10(1.500)	—	
17	FCN-723J017/1	34	FCN-723J034/2	43.18(1.700)	43.18(1.700)	47.80(1.882)	
18	FCN-723J018/1	36	FCN-723J036/2	45.72(1.800)	43.18(1.700)	—	
19	FCN-723J019/1	38	FCN-723J038/2	48.26(1.900)	45.72(1.800)	—	
20	FCN-723J020/1	40	FCN-723J040/2	50.80(2.000)	48.26(1.900)	55.40(2.181)	
21	FCN-723J021/1	42	FCN-723J042/2	53.34(2.100)	50.80(2.000)	—	
22	FCN-723J022/1	44	FCN-723J044/2	55.88(2.200)	53.34(2.100)	—	
23	FCN-723J023/1	46	FCN-723J046/2	58.42(2.300)	55.88(2.200)	—	
24	FCN-723J024/1	48	FCN-723J048/2	60.96(2.400)	58.42(2.300)	—	
25	FCN-723J025/1	50	FCN-723J050/2	63.50(2.500)	60.96(2.400)	68.10(2.681)	
26	FCN-723J026/1	52	FCN-723J052/2	66.04(2.600)	63.50(2.500)	—	
27	FCN-723J027/1	54	FCN-723J054/2	68.58(2.700)	66.04(2.600)	—	
28	FCN-723J028/1	56	FCN-723J056/2	71.12(2.800)	68.58(2.700)	—	
29	FCN-723J029/1	58	FCN-723J058/2	73.66(2.900)	71.12(2.800)	—	
30	FCN-723J030/1	60	FCN-723J060/2	76.20(3.000)	73.66(2.900)	80.80(3.181)	
31	FCN-723J031/1	62	FCN-723J062/2	78.74(3.100)	76.20(3.000)	—	
32	FCN-723J032/1	64	FCN-723J064/2	81.28(3.200)	78.74(3.100)	—	
33	FCN-723J033/1	66	FCN-723J066/2	83.82(3.300)	81.28(3.200)	—	
34	FCN-723J034/1	68	FCN-723J068/2	86.36(3.400)	83.82(3.300)	—	
35	FCN-723J035/1	70	FCN-723J070/2	88.90(3.500)	86.36(3.400)	—	
36	FCN-723J036/1	72	FCN-723J072/2	91.44(3.600)	88.90(3.500)	—	

- Notes: 1. Crimping tools are given as a group later.  
2. Standard PAGOS.  
3. HN contact plating.  
4. For thin wire crimping (AWG #30 to #32), the crimp height must be correctly adjusted for increased reliability. Please contact Fujitsu for further information.

## FCN-720C\*\*\*/2\* COVERS



No. of Contacts	Part Number	X	Y	Z
16	FCN-720C016/2S	9 (0.354)	24.92 (0.961)	24.92 (.961)
20	FCN-720C020/2S	10 (0.394)	27.0 (0.624)	30 (1.181)
26	FCN-720C026/2S	11.0 (0.433)	27.0 (1.063)	37.62 (1.481)
34	FCN-720C034/2S	12 (0.472)	30 (1.181)	47.78 (1.881)

No. of Contacts	Part Number	X	Y	Z	A
34	FCN-720C034/2P	12.5 (0.492)	10.0 (0.394)	47.78 (1.881)	46.3 (1.823)
40	FCN-720C040/2P	13.5 (0.531)	10.0 (0.394)	56.4 (2.181)	46.3 (1.823)
50	FCN-720C050/2P	15.0 (0.591)	20.0 (0.787)	68.1 (2.681)	46.3 (1.823)
60	FCN-720C060/2P	17.5 (0.689)	32.2 (1.268)	80.8 (3.181)	48.3 (1.902)

**Note** : EMI products are also available. A spacer (N630-7008-X103) will be added to the 700 types.  
Key J: Clip type B: Bump type

### SPECIFICATION OF POLARITY TO PREVENT INCORRECT INSERTION (PIN TYPE)

#### • Header

FCN-723P050-AU/0 # □ □  
Basic type Common

Denotes pin number with pin polarity  
For example, 04: Pin 4 is cut or pulled out.

**Note:** The pin under the triangle in both the header and the socket is pin 1.

Example: The standard specifications of pin numbers with polarity are 04 and the last pin number (if the last pin is 50, the specification is 50).

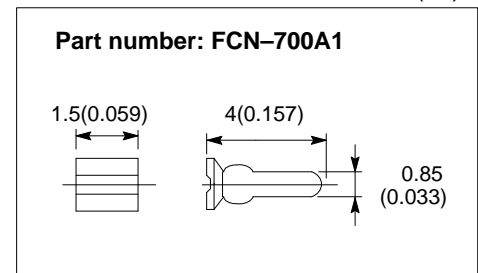
#### • Socket

FCN-723J050/2 # □ □  
Basic type Common

Denotes pin number with pin polarity  
For example, 04: FCN-700A1 plugged into pin 4  
Do not insert the contact into the housing.

#### Polarizing key

Unit: mm (in.)



## CRIMPING TOOLS (FOR FCN-720)

Discrete wires are connected to FCN-720 connectors by crimping. This means that such wires can be selected from several types. Many companies sell crimping tools, but they are not compatible. Semi-automatic crimping machines are also available. Fujitsu's crimping tools can be used easily, even by a beginner. When using the tools, be sure to adjust the crimp height according to the table below. If this is not done properly, wires may loosen or break off.

### PART NUMBERS FOR CRIMPING TOOLS

Wire Gauge (AWG#)	Contact Type		Hand Crimping Tools	Wire Cross-section Area (mm <sup>2</sup> )	Crimp Height (mm (in))	Insulator Diameter (mm (in))	Stripped Length (mm (in))
	Standard Type	High Pressure					
20	FCN-723J-AU/U (Loose piece)	FCN-723J-AU/W (Loose piece)	FCN-723-T 018/H	0.52~0.64	0.75~0.85 (0.030 to 0.033)	1.3~1.6 (0.051 to 0.063)	3.1~3.6 (0.122 to 0.142)
22				0.30~0.40	0.70~0.80 (0.028 to 0.031)		
24	FCN-723J-AU/Q (Loose piece)	FCN-723J-AU/S (Loose piece)	FCN-723T-T007/H FCN-723T T014/H (0.7~1.0 Wires)	0.20~0.24	0.70~0.80 (0.028 to 0.031)	1.1~1.6 (0.043 to 0.063)	
26				0.13~0.16	0.66~0.76 (0.026 to 0.030)		
28				0.088~0.096	0.60~0.68 (0.024 to 0.027)		
30			FCN-723-T-T008/H	0.55~0.060	0.68~0.75 (0.028 to 0.031)	0.7~1.0 (0.028 to 0.039)	
32			FCN-723T (0.7~1.0 Wires)	0.032~0.038	0.66~0.71 (0.026 to 0.028)	0.5~0.6 (0.020 to 0.024)	

Wire Gauge (AWG#)	Contact Type		Hand Crimping Tools		Wire Cross-section Area (mm <sup>2</sup> )	Crimp Height (mm (in))	Insulator Diameter (mm (in))	Stripped Length (mm (in))
	Standard Type	High Pressure	Press	Applicator				
20	FCN-723J-AU/U (Loose piece)	FCN-723J-AU/W (Loose piece)	FCN-M110 -120 (120V) FCN-M110 -220 (220V)	FCN-A118	0.52~0.64	0.75~0.85 (0.030 to 0.033)	1.3~1.7 (0.051 to 0.067)	3.1~3.6 (0.122 to 0.142)
22					0.30~0.40	0.70~0.80 (0.028 to 0.031)		
24	FCN-723J-AU/Q (Loose piece)	FCN-723J-AU/S (Loose piece)		FCN-A107	0.20~0.24	0.70~0.80 (0.028 to 0.031)	0.8~1.6 (0.031 to 0.063)	
26					0.13~0.16	0.66~0.76 (0.026 to 0.030)		
28					0.088~0.096	0.60~0.68 (0.024 to 0.027)		
30				FCN-A108	0.55~0.060	0.68~0.75 (0.028 to 0.031)	0.5~1.3 (0.030 to 0.051)	
32					0.032~0.038	0.66~0.71 (0.026 to 0.028)		



Semi-automatic crimping machines  
(Press and applicator)



Hand crimping tool