

PC BOARD MOUNTING CONNECTORS

720 SERIES (CRIMP TYPE CONNECTORS)

■ FEATURES

The 720 series connectors (crimp connector) are designed for a wide range of uses, and come in many shapes, two contact arrangements (one and two rows), and various pin types. The 720 series headers can be mated with 700 and 740 series sockets, and are lockable when a special cover is used. Female contacts are secured in the housing by a unique internal spring structure. High-pressure contacts are also available which prevent accidental disconnection in applications that use only a few contacts.

For W and S type headers, insulation molds can be cut to the necessary size.

■ SPECIFICATIONS

Item		Specification
Operating temperature range		−55°C to +85°C
Current rating		DC 3 A
Voltage rating		AC 250 V
Contact resistance		20 mΩ max. (DC 6 V, 0.1 A)
Insulation resistance		1000 MΩ max. (DC 500 V)
Dielectric strength		AC 500 V for 1 minute
Insertion force	Standard contacts	1.05 kg max. (3 pins), 25.2 kg max. (72 pins)
	High-pressure contacts	2.1 kg max. (3 pins), 50.4 kg max. (72 pins)
Withdrawal force	Standard contacts	0.09 kg min. (3 pins), 2.16 kg min. (72 pins)
	High-pressure contacts	0.18 kg min. (3 pins), 4.32 kg min. (72 pins)
Applicable wire		Wire-wrap: AWG #26 to #30 (solid) Crimping: AWG #20 to #32
Applicable PC board (standard)		1.6 mm (0.062 in.)

Note: For thin wire crimping, the crimp height must be adjusted for increased reliability. Please contact us for further information.



■ MATERIALS

Item		Materials
Insulating material	Header	Polyester (UL94V-0)
	Socket	PPO (UL94V-1)
	Cover	Nylon 6 (UL94V-2)
Conductor		Copper alloy
Plating	Contact	Gold
	Terminal	Palladium

Note: Tin-plated connectors are also available for 8- to 34-pin types.

■ MATERIALS (SMT CONNECTOR)

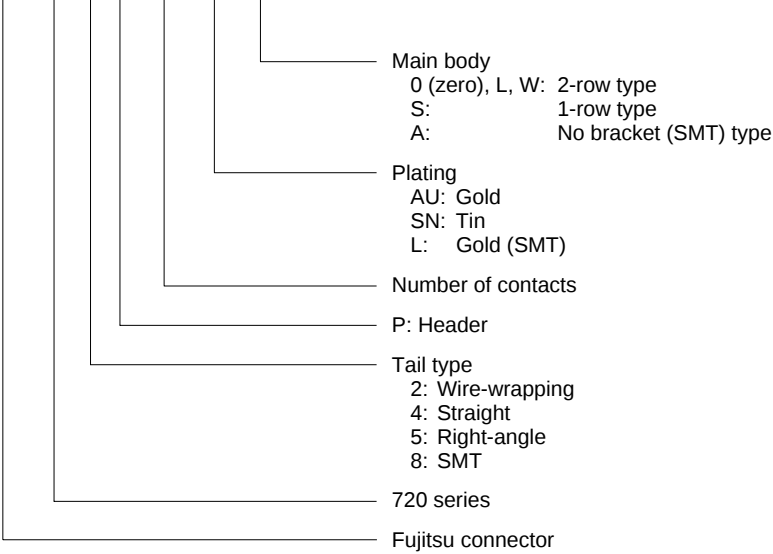
Item		Materials
Insulating material		66 Nylon (UL94V-0)
Conductor		Copper alloy
Plating	Contact	Gold
	Terminal	Palladium

720 Series (Crimp Type Connectors)

■ ORDERING CODE

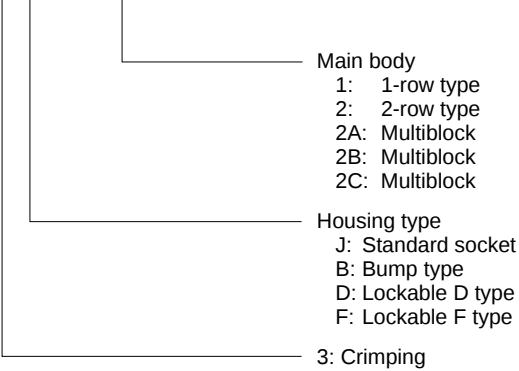
1. Header

FCN-72 4 P 050-AU / 0



2. Housing

FCN-723 J 050 / 2



720 Series (Crimp Type Connectors)

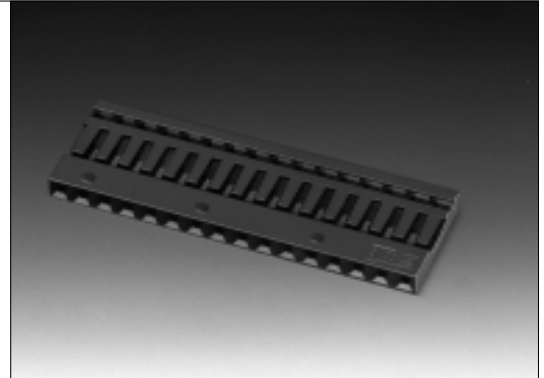
■ APPLICATION EXAMPLE



720 Series (Crimp Type Connectors)

CRIMP SOCKET HOUSING (1-ROW TYPE)

■ DIMENSIONS



Note: Circles are marked every fifth position from the end marked with a triangle.

Unit: mm (in.)

■ PART NUMBERS AND DIMENSIONS

Number of contacts	Part number	Dimensions: mm (in.)	
		A	B
2	FCN-723J002/1	5.08 (0.200)	2.54 (0.100)
3	FCN-723J003/1	7.62 (0.300)	5.08 (0.200)
4	FCN-723J004/1	10.16 (0.400)	7.62 (0.300)
5*	FCN-723J005/1	12.70 (0.500)	10.16 (0.400)
6	FCN-723J006/1	15.24 (0.600)	12.70 (0.500)
7	FCN-723J007/1	17.78 (0.700)	15.24 (0.600)
8	FCN-723J008/1	20.32 (0.800)	17.78 (0.700)
9	FCN-723J009/1	22.86 (0.900)	20.32 (0.800)
10*	FCN-723J010/1	25.40 (1.000)	22.86 (0.900)
11	FCN-723J011/1	27.94 (1.100)	25.40 (1.000)
12	FCN-723J012/1	30.48 (1.200)	27.94 (1.100)
13	FCN-723J013/1	33.02 (1.300)	30.48 (1.200)
14	FCN-723J014/1	35.56 (1.400)	33.02 (1.300)
15*	FCN-723J015/1	38.10 (1.500)	35.56 (1.400)
16	FCN-723J016/1	40.64 (1.600)	38.10 (1.500)
17	FCN-723J017/1	43.18 (1.700)	40.64 (1.600)
18	FCN-723J018/1	45.72 (1.800)	43.18 (1.700)
19	FCN-723J019/1	48.26 (1.900)	45.72 (1.800)
20*	FCN-723J020/1	50.80 (2.000)	48.26 (1.900)
21	FCN-723J021/1	53.34 (2.100)	50.80 (2.000)
22	FCN-723J022/1	55.88 (2.200)	53.34 (2.100)
23	FCN-723J023/1	58.42 (2.300)	55.88 (2.200)
24	FCN-723J024/1	60.96 (2.400)	58.42 (2.300)
25*	FCN-723J025/1	63.50 (2.500)	60.96 (2.400)
26	FCN-723J026/1	66.04 (2.600)	63.50 (2.500)
27	FCN-723J027/1	68.58 (2.700)	66.04 (2.600)
28	FCN-723J028/1	71.12 (2.800)	68.58 (2.700)
29	FCN-723J029/1	73.66 (2.900)	71.12 (2.800)
30*	FCN-723J030/1	76.20 (3.000)	73.66 (2.900)
31	FCN-723J031/1	78.74 (3.100)	76.20 (3.000)
32	FCN-723J032/1	81.28 (3.200)	78.74 (3.100)
33	FCN-723J033/1	83.82 (3.300)	81.28 (3.200)
34	FCN-723J034/1	86.36 (3.400)	83.82 (3.300)
35	FCN-723J035/1	88.90 (3.500)	86.36 (3.400)
36*	FCN-723J036/1	91.44 (3.600)	88.90 (3.500)

Note: Standard headers are indicated by numbers starting with * for the number of contacts.

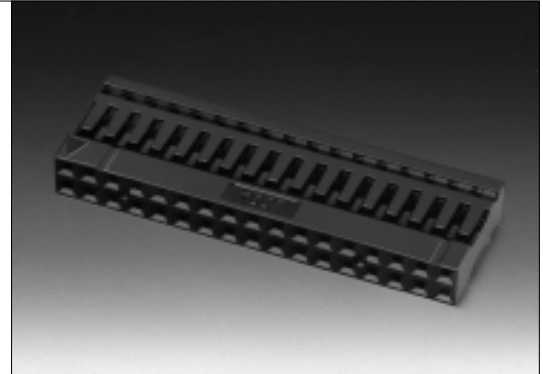
■ REMARKS

- A polarizing key can be used to prevent incorrect insertion.
Part number of the polarizing key
FCN-700A1

720 Series (Crimp Type Connectors)

CRIMP SOCKET HOUSING (2-ROW TYPE)

■ DIMENSIONS



Note: Circles are marked every fifth position from the end marked with a triangle.

Unit: mm (in.)

■ PART NUMBERS AND DIMENSIONS

Number of contacts	Part number	Dimensions: mm (in.)	
		A	B
4	FCN-723J004/2	5.08 (0.200)	2.54 (0.100)
6*	FCN-723J006/2	7.62 (0.300)	5.08 (0.200)
8	FCN-723J008/2	10.16 (0.400)	7.62 (0.300)
10*	FCN-723J010/2	12.70 (0.500)	10.16 (0.400)
12	FCN-723J012/2	15.24 (0.600)	12.70 (0.500)
14*	FCN-723J014/2	17.78 (0.700)	15.24 (0.600)
16*	FCN-723J016/2	20.32 (0.800)	17.78 (0.700)
18	FCN-723J018/2	22.86 (0.900)	20.32 (0.800)
20*	FCN-723J020/2	25.40 (1.000)	22.86 (0.900)
22	FCN-723J022/2	27.94 (1.100)	25.40 (1.000)
24	FCN-723J024/2	30.48 (1.200)	27.94 (1.100)
26*	FCN-723J026/2	33.02 (1.300)	30.48 (1.200)
28	FCN-723J028/2	35.56 (1.400)	33.02 (1.300)
30*	FCN-723J030/2	38.10 (1.500)	35.56 (1.400)
32	FCN-723J032/2	40.64 (1.600)	38.10 (1.500)
34*	FCN-723J034/2	43.18 (1.700)	40.64 (1.600)
36	FCN-723J036/2	45.72 (1.800)	43.18 (1.700)
38	FCN-723J038/2	48.26 (1.900)	45.72 (1.800)
40*	FCN-723J040/2	50.80 (2.000)	48.26 (1.900)
42	FCN-723J042/2	53.34 (2.100)	50.80 (2.000)
44	FCN-723J044/2	55.88 (2.200)	53.34 (2.100)
46	FCN-723J046/2	58.42 (2.300)	55.88 (2.200)
48	FCN-723J048/2	60.96 (2.400)	58.42 (2.300)
50*	FCN-723J050/2	63.50 (2.500)	60.96 (2.400)
52	FCN-723J052/2	66.04 (2.600)	63.50 (2.500)
54	FCN-723J054/2	68.58 (2.700)	66.04 (2.600)
56	FCN-723J056/2	71.12 (2.800)	68.58 (2.700)
58	FCN-723J058/2	73.66 (2.900)	71.12 (2.800)
60*	FCN-723J060/2	76.20 (3.000)	73.66 (2.900)
62	FCN-723J062/2	78.74 (3.100)	76.20 (3.000)
64	FCN-723J064/2	81.28 (3.200)	78.74 (3.100)
66	FCN-723J066/2	83.82 (3.300)	81.28 (3.200)
68	FCN-723J068/2	86.36 (3.400)	83.82 (3.300)
70	FCN-723J070/2	88.90 (3.500)	86.36 (3.400)
72	FCN-723J072/2	91.44 (3.600)	88.90 (3.500)

Note: Standard headers are indicated by numbers starting with * for the number of contacts.

■ REMARKS

- A cover may be used.
Part numbers for the cover:
FCN-720C /2S
FCN-720C /2P
- A polarizing key can be used to prevent incorrect insertion.
Part number of the polarizing key:
FCN-700A1

720 Series (Crimp Type Connectors)

CRIMP SOCKET HOUSING (2-ROW, BUMP TYPE)

■ DIMENSIONS



Note: Circles are marked every fifth position from the end marked with a triangle.

Unit: mm (in.)

■ PART NUMBERS AND DIMENSIONS

Number of contacts	Part number	Dimensions: mm (in.)	
		A	B
10	FCN-723B010/2	12.70 (0.500)	10.16 (0.400)
14	FCN-723B014/2	17.78 (0.700)	15.24 (0.600)
16	FCN-723B016/2	20.32 (0.800)	17.78 (0.700)
20	FCN-723B020/2	25.40 (1.000)	22.86 (0.900)
26	FCN-723B026/2	33.02 (1.300)	30.48 (1.200)
30	FCN-723B030/2	38.10 (1.500)	35.56 (1.400)
34	FCN-723B034/2	43.18 (1.700)	40.64 (1.600)
40	FCN-723B040/2	50.80 (2.000)	48.26 (1.900)
50	FCN-723B050/2	63.50 (2.500)	60.96 (2.400)
60	FCN-723B060/2	76.20 (3.000)	73.66 (2.900)

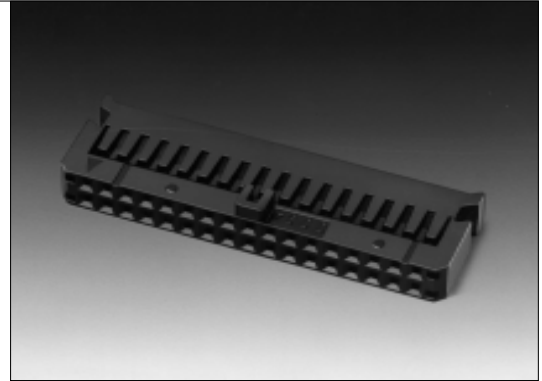
■ REMARKS

- A cover may be used.
Part numbers for the cover:
FCN-720C /2S (for 16-, 20-, 26-, 34-, and 50-contact types)
FCN-720C /2P (for 34-, 40-, 50-, and 60-contact types)
FCN-720C /2E (for 20-, 26-, 34-, 40-, 50-, and 60-contact types)

720 Series (Crimp Type Connectors)

CRIMP SOCKET HOUSING (2-ROW, LOCKABLE D TYPE)

■ DIMENSIONS



Unit: mm (in.)

■ PART NUMBERS AND DIMENSIONS

Number of contacts	Part number	Dimensions: mm (in.)	
		A	B
10	FCN-723D010/2	17.30 (0.681)	10.16 (0.400)
14	FCN-723D014/2	22.40 (0.881)	15.24 (0.600)
16	FCN-723D016/2	24.90 (0.980)	17.78 (0.700)
20	FCN-723D020/2	30.00 (1.181)	22.86 (0.900)
26	FCN-723D026/2	37.66 (1.482)	30.48 (1.200)
30	FCN-723D030/2	42.70 (1.681)	35.56 (1.400)
34	FCN-723D034/2	47.80 (1.881)	40.64 (1.600)
40	FCN-723D040/2	55.40 (2.181)	48.26 (1.900)
50	FCN-723D050/2	68.10 (2.681)	60.96 (2.400)
60	FCN-723D060/2	88.80 (3.496)	73.66 (2.900)

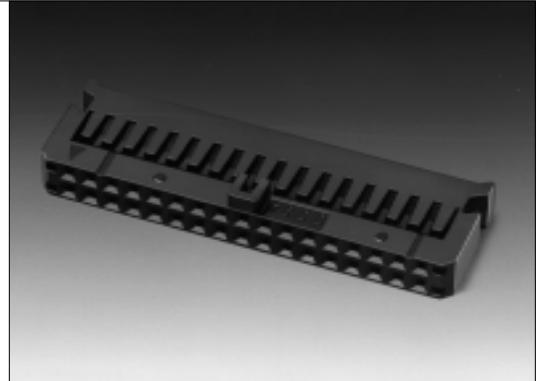
■ REMARKS

- Mating connector
700 series headers (with M or S hook) may be mated.
Example: FCN-705Q050-AU/M, FCN-705Q050-AU/N

720 Series (Crimp Type Connectors)

CRIMP SOCKET HOUSING CONFORMING TO MIL (2-ROW, LOCKABLE F TYPE)

■ DIMENSIONS



Unit: mm (in.)

■ PART NUMBERS AND DIMENSIONS

Number of contacts	Part number	Dimensions: mm (in.)	
		A	B
10	FCN-723F010/2	17.30 (0.681)	10.16 (0.400)
14	FCN-723F014/2	22.40 (0.881)	15.24 (0.600)
16	FCN-723F016/2	24.90 (0.980)	17.78 (0.700)
20	FCN-723F020/2	30.00 (1.181)	22.86 (0.900)
26	FCN-723F026/2	37.66 (1.482)	30.48 (1.200)
30	FCN-723F030/2	42.70 (1.681)	35.56 (1.400)
34	FCN-723F034/2	47.80 (1.881)	40.64 (1.600)
40	FCN-723F040/2	55.40 (2.181)	48.26 (1.900)
50	FCN-723F050/2	68.10 (2.681)	60.96 (2.400)
60	FCN-723F060/2	88.80 (3.496)	73.66 (2.900)

■ REMARKS

- Mating connector
600 series headers (with M latch) can be connected.
Example: FCN-605Q050-G/M

720 Series (Crimp Type Connectors)

CRIMP CONTACT

■ DIMENSIONS

1. Parts in bulk

Tool: Hand crimping tool

Standard contact	High pressure contact



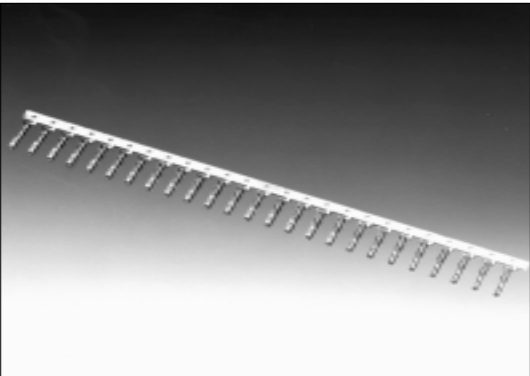
Wire gauge (AWG#)	Applied contact	
	Standard type	High pressure
#20	FCN-723J-AU/U	FCN-723J-AU/W
#22		
#24	FCN-723J-AU/Q	FCN-723J-AU/S
#26		
#28		
#30		
#32		

Unit: mm (in.)

2. Parts in strips

Tool: Semiautomatic crimping tool

• FCN-723J-AU/R • FCN-723J-AU/T	• FCN-723J-AU/V • FCN-723V-AU/X



Wire gauge (AWG#)	Applied contact	
	Standard type	High pressure
#20	FCN-723J-AU/V	FCN-723J-AU/X
#22		
#24		
#26	FCN-723J-AU/R	FCN-723J-AU/T
#28		
#30		
#32		

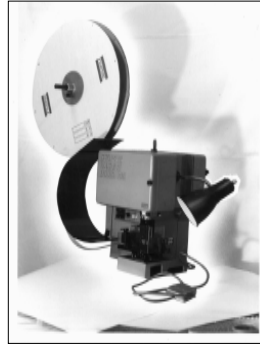
Unit: mm (in.)

720 Series (Crimp Type Connectors)

CRIMPING TOOLS

■ NOTES ON USING CRIMPING TOOLS

- Always use the crimping tools specified by Fujitsu.
- When using the tools, be sure to adjust the crimp height according to the table below.



Semiautomatic crimping tool



Hand crimping tool

■ HAND CRIMPING TOOL

Wire gauge (AWG#)	Wire cross-sectional area (mm (in.))	Crimp height (mm (in.))	Insulator diameter (mm (in.))	Hand crimping tool	Contact type		Stripped length (mm (in.))
					Standard type	High pressure	
#20	0.52 to 0.64 (0.0205 to .0251)	0.75 to 0.85 (0.029 to 0.033)	φ1.3 to φ1.8 (0.051 to 0.071)	FCN-723T-T018/H	FCN-723J-AU/U	FCN-723J-AU/W	3.1 to 3.6 (0.122 to 0.141)
#22	0.30 to 0.40 (0.0118 to 0.0157)	0.70 to 0.80 (.027 to .031)					
#24	0.20 to 0.24 (0.0079 to 0.0094)	0.70 to 0.80 (.027 to .031)	φ1.1 to φ1.6 (0.043 to 0.063)	FCN-723T-T007/H	FCN-723J-AU/Q	FCN-723J-AU/S	
#26	0.13 to 0.16 (0.0051 to 0.0063)	0.66 to 0.76 (.026 to .030)					
#28	0.088 to 0.096 (0.0035 to 0.0038)	0.60 to 0.68 (.024 to .027)					
#30	0.055 to 0.060 (0.0022 to 0.0029)	0.68 to 0.75 (.027 to .029)	φ0.7 to φ1.0 (0.028 to 0.039)	FCN-723T-T008/H (FCN-723T-T015/H)			
#32	0.032 to 0.038 (0.0013 to 0.0015)	0.66 to 0.71 (.026 to .028)	φ0.5 to φ0.6 (0.020 to 0.024)				

Note: Also, hand tool is available that can crimp two wires (AWG #30 φ0.5 mm) on one contact.

Part Number: FCN-723T-T014/H, Applicable contact: FCN-723J-Au/Q or S

■ SEMIAUTOMATIC CRIMPING TOOL

Wire gauge (AWG#)	Wire cross-sectional area (mm (in.))	Crimp height (mm (in.))	Insulator diameter (mm (in.))	Semiautomatic crimping tool		Contact type		Stripped length (mm (in.))
				Press	Applicator	Standard type	High pressure	
#20	0.52 to 0.64 (0.0205 to .0251)	0.75 to 0.85 (0.029 to 0.033)	φ1.3 to φ1.7 (0.051 to 0.070)	FCN-M100	FCN-A118	FCN-723J-AU/V	FCN-723J-AU/X	3.1 to 3.6 (0.122 to 0.141)
#22	0.30 to 0.40 (0.0118 to 0.0157)	0.70 to 0.80 (.027 to .031)						
#24	0.20 to 0.24 (0.0079 to 0.0094)	0.70 to 0.80 (.027 to .031)	φ0.8 to φ1.6 (0.031 to 0.063)		FCN-A107	FCN-723J-AU/R	FCN-723J-AU/T	
#26	0.13 to 0.16 (0.0051 to 0.0063)	0.66 to 0.76 (.026 to .030)						
#28	0.088 to 0.096 (0.0035 to 0.0038)	0.60 to 0.68 (.024 to .027)						
#30	0.055 to 0.060 (0.0022 to 0.0029)	0.68 to 0.75 (.027 to .029)	φ0.5 to φ1.3 (0.020 to 0.051)		FCN-A108			
#32	0.032 to 0.038 (0.0013 to 0.0015)	0.66 to 0.71 (.026 to .028)						

Note: FCN-M100 conventional 3-ton press is also available. Contact us.

■ UNITS OF ORDERING PARTS IN STRIPS

Part number	Units of order
FCN-723J-AU/V	5,000
FCN-723J-AU/R	8,000
FCN-723J-AU/X	5,000
FCN-723J-AU/T	8,000

720 Series (Crimp Type Connectors)

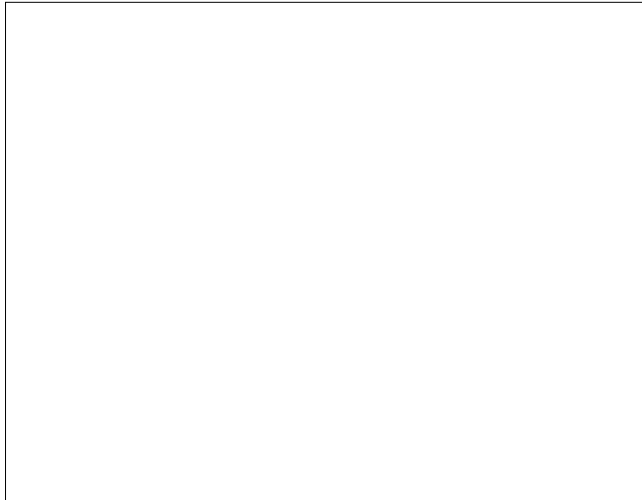
COVER S TYPE (MOLD TYPE)

■ DIMENSIONS

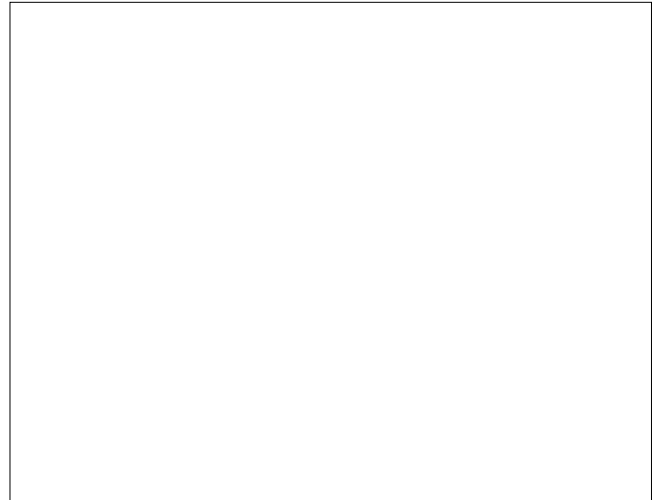


Unit: mm (in.)

■ EXPLODED VIEW



■ APPLICATION EXAMPLE



■ PART NUMBERS AND DIMENSIONS

Number of contacts	Part number	Dimensions: mm (in.)			
		X	Y	Z	Maximum cable outer diameter
16	FCN-720C016/2S	9.0 (0.354)	24.92 (0.981)	24.92 (0.981)	7 (0.272)
20	FCN-720C020/2S	10.0 (0.394)	24.0 (0.944)	30.0 (1.181)	8 (0.314)
26	FCN-720C026/2S	11.0 (0.433)	27.0 (1.063)	37.62 (1.481)	9 (0.354)
34	FCN-720C034/2S	12.0 (0.472)	30.0 (1.181)	47.78 (1.881)	10 (0.433)
50	FCN-720C050/2S	14.0 (0.551)	32.0 (1.260)	68.1 (2.680)	12 (0.472)

■ REMARKS

- Mating housing
FCN-723J /2
FCN-723B /2
: Number of contacts
- Mating connector
700 series headers (with M latch) can be connected.
Example: FCN-705Q050-AU/M

720 Series (Crimp Type Connectors)

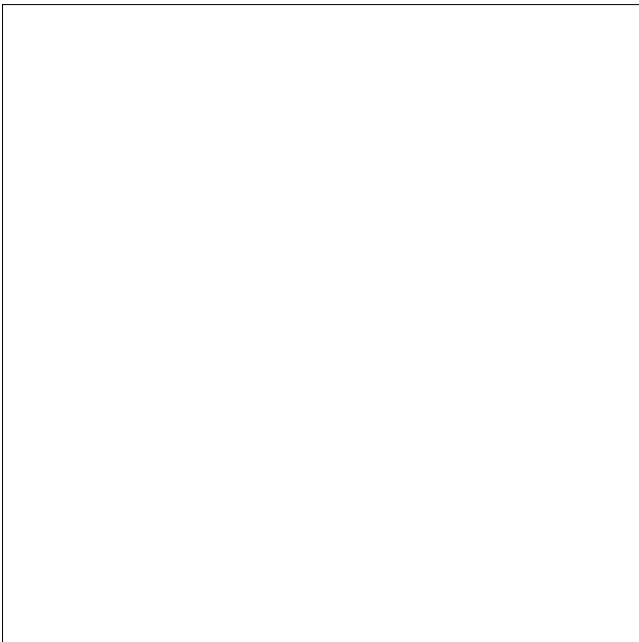
COVER P TYPE (MOLD TYPE)

■ DIMENSIONS

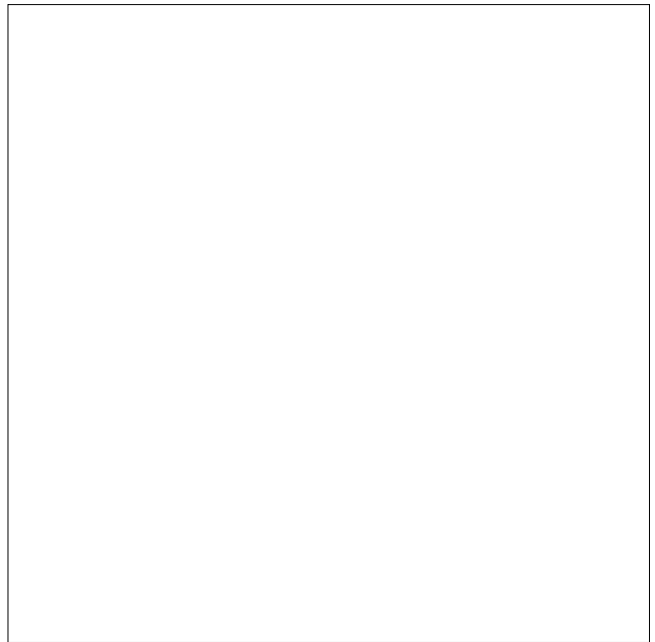


Unit: mm (in.)

■ EXPLODED VIEW



■ APPLICATION EXAMPLE



■ PART NUMBERS AND DIMENSIONS

Number of contacts	Part number	Dimensions: mm (in.)					Maximum cable outer diameter
		X	Y	Z	A		
34	FCN-720C034/2P	12.5 (.492)	10.0 (.394)	47.78 (1.88)	46.3 (1.82)		10 (0.393)
40	FCN-720C040/2P	13.5 (.531)	10.0 (.394)	55.4 (2.18)	46.3 (1.82)		11 (0.433)
50	FCN-720C050/2P	15.0 (.590)	20.0 (.789)	68.1 (2.68)	46.3 (1.82)		13 (0.512)
60	FCN-720C060/2P	17.5 (.689)	32.2 (1.27)	80.8 (3.18)	48.3 (1.90)		14 (0.551)

■ REMARKS

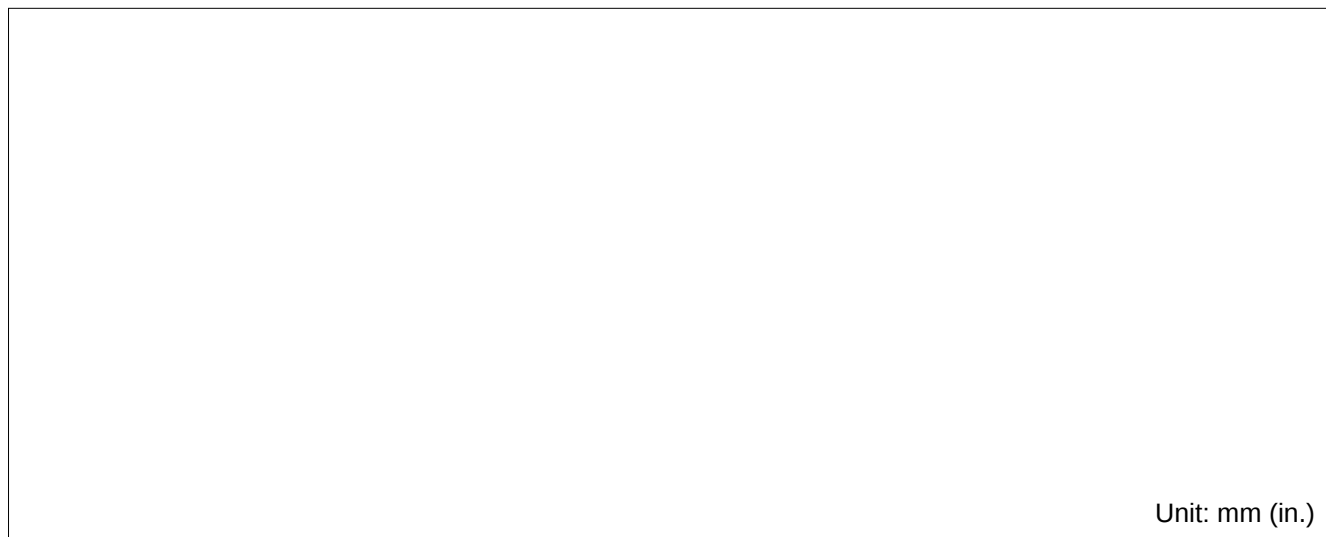
- Mating housing
FCN-723J /2
FCN-723B /2
: Number of contacts
- Mating connector
700 series headers (with M latch) can be connected.
Example: FCN-705Q050-AU/M

720 Series (Crimp Type Connectors)

POLARIZING KEY

■ DIMENSIONS

Part number: FCN-700A1



Unit: mm (in.)

■ SPECIFICATION OF POLARITY TO PREVENT INCORRECT INSERTION

	Header	Socket
Polarization	Do one of the following: (1) Cut the contact of a specified pin. (2) Pull out a specified pin.	Plug in a polarizing key in a specified position.
Specification	Specify a two-digit pin number with polarity at the end of the part number. Example: When specifying pin No. 4 FCN-725P050-AU/0#04	Specify a two-digit pin number with polarity at the end of the part number. Example: When specifying pin No. 4 FCN-723J050-AU/2#04

Note: The standard specification is #04 or the end pin number (if the end pin is 50, the specification is #50).

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720 Series (Crimp Type Connectors)

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