

# FOR BOARD-TO-CABLE CONNECTION

## 240R SERIES

### ■ FEATURES

- 1.27 mm (0.050 in.) pitch contact arrangement enables high-density mounting.
- Bellows contacts ensure stable contact preventing pins from bending. The bellows contacts also have excellent stability with repeated insertion and extraction.
- Cables and connectors are assembled by discrete wire IDC.
- Connectors on the cable side provide superb EMI shielding/ESD protection with an inner-metal and outer-plastic dual cover.
- Conforms to IEEE 1284.C Interface
- Tails are spaced in a four-row staggered arrangement (2.54 mm × 1.905 mm) (0.100 in. × 0.075 in.) for easy PC board design.



### ■ SPECIFICATIONS

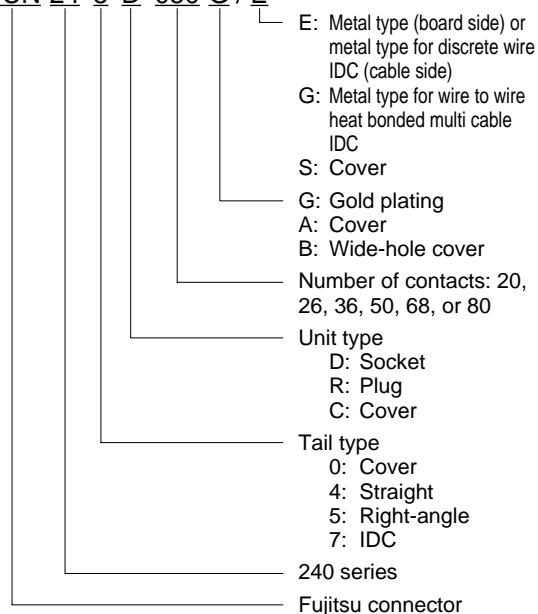
Item	Specifications
Operating temperature range	-55°C to +85°C
Current rating	DC 1 A
Voltage rating	AC 240 V
Contact resistance	50 mΩ max. (DC 20 mV, 10 mA)
Insulation resistance	1,000 MΩ min. (DC 500 V)
Dielectric withstand voltage	AC 750 V for 1 minute
Applicable wire	AWG #28 and #30 stranded wires with φ0.5 to 0.65 mm (0.020 to 0.026 in.) insulation diameter

### ■ MATERIALS

Item	Materials	
Insulator	Polyester (UL94V-0)	
Conductor	Copper alloy	
Plating	Contact	Gold plating
	Terminal	Palladium plating

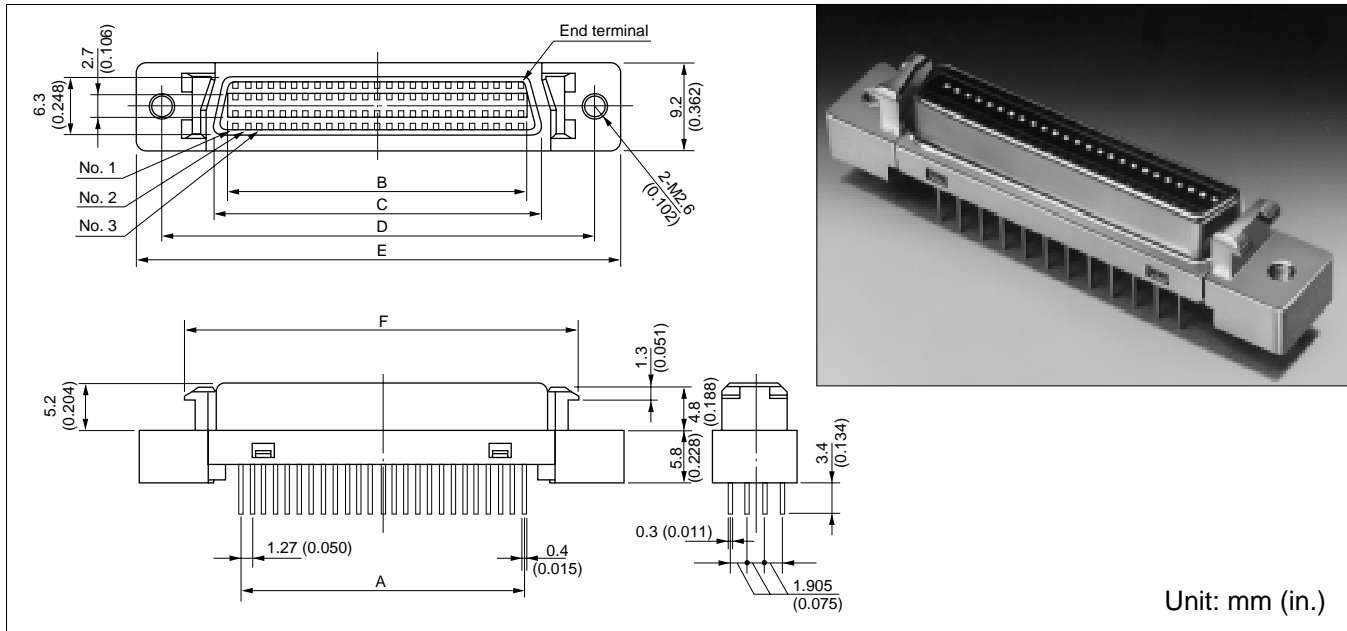
### ■ ORDERING CODE

FCN-24 5 D 050-G / E

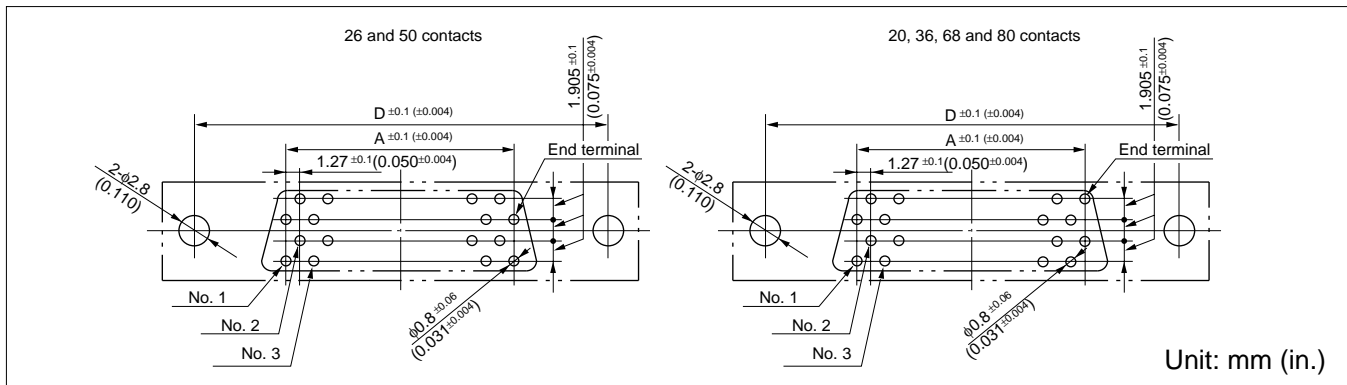


## STRAIGHT SOCKET

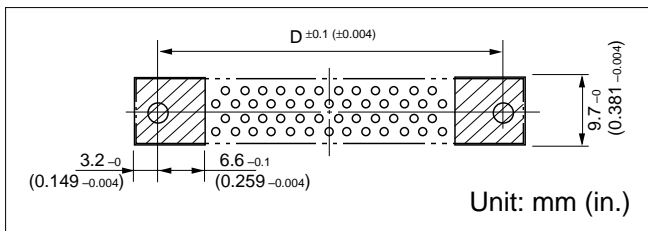
### ■ DIMENSIONS



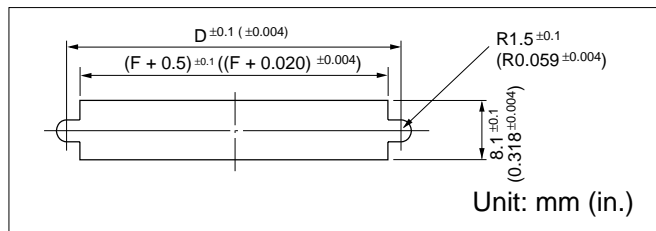
### ■ MOUNTING HOLE LAYOUT (COMPONENT SIDE)



### ■ PATTERN INHIBITED AREAS



### ■ RECOMMENDED PANEL DIMENSIONS



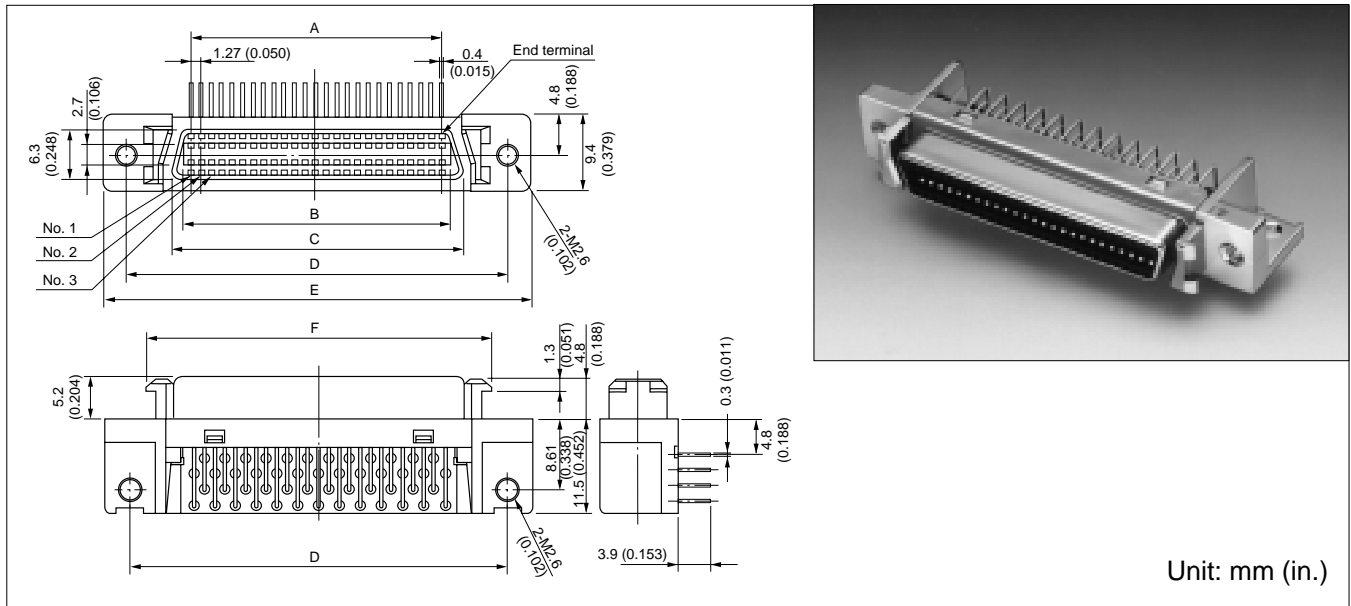
### ■ PART NUMBERS AND DIMENSIONS

Unit: mm (in.)

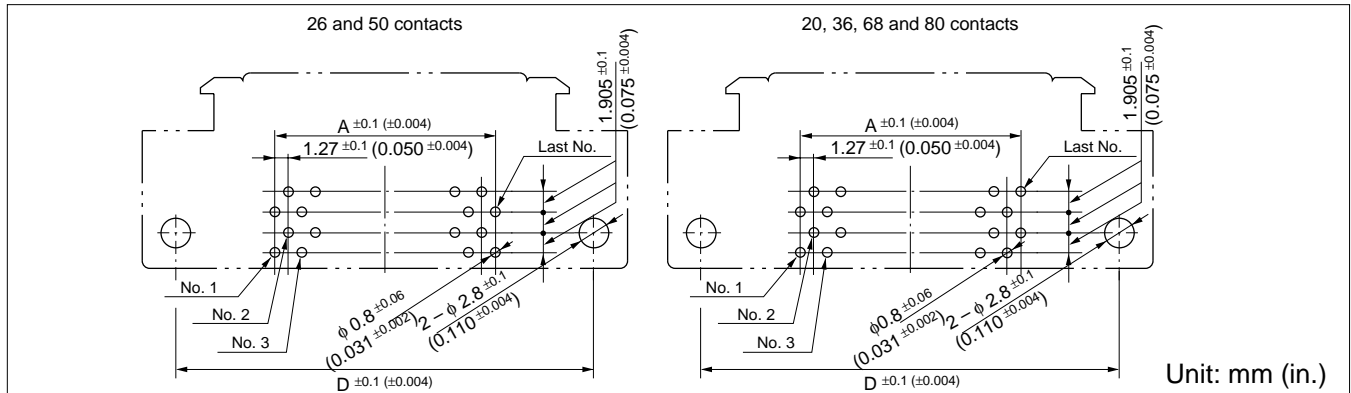
Number of contacts	Part number	A	B	C	D	E	F
20	FCN-244D020-G/E	11.43 (0.450)	13.45 (0.529)	16.45 (0.647)	27.45 (1.080)	33.35 (1.312)	23.30 (0.917)
26	FCN-244D026-G/E	15.24 (0.600)	17.26 (0.679)	20.26 (0.797)	31.26 (1.231)	37.16 (1.462)	27.11 (1.067)
36	FCN-244D036-G/E	21.59 (0.850)	23.61 (0.929)	26.61 (1.047)	37.61 (1.480)	43.51 (1.712)	33.46 (1.317)
50	FCN-244D050-G/E	30.48 (1.200)	32.50 (1.279)	35.50 (1.397)	46.50 (1.830)	52.40 (2.062)	42.35 (1.667)
68	FCN-244D068-G/E	41.91 (1.650)	43.93 (1.729)	46.93 (1.847)	57.93 (2.280)	63.83 (2.512)	53.78 (2.117)
80	FCN-244D080-G/E	49.53 (1.950)	51.55 (2.029)	54.55 (2.147)	65.55 (2.580)	71.45 (2.812)	61.40 (2.417)

## RIGHT-ANGLE SOCKET [METAL SHELL]

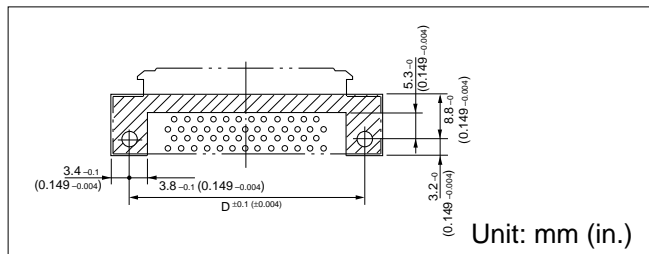
### ■ DIMENSIONS



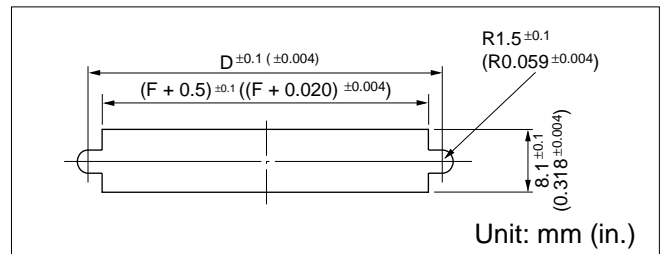
### ■ MOUNTING HOLE LAYOUT (COMPONENT SIDE)



### ■ PATTERN INHIBITED AREAS



### ■ RECOMMENDED PANEL DIMENSIONS



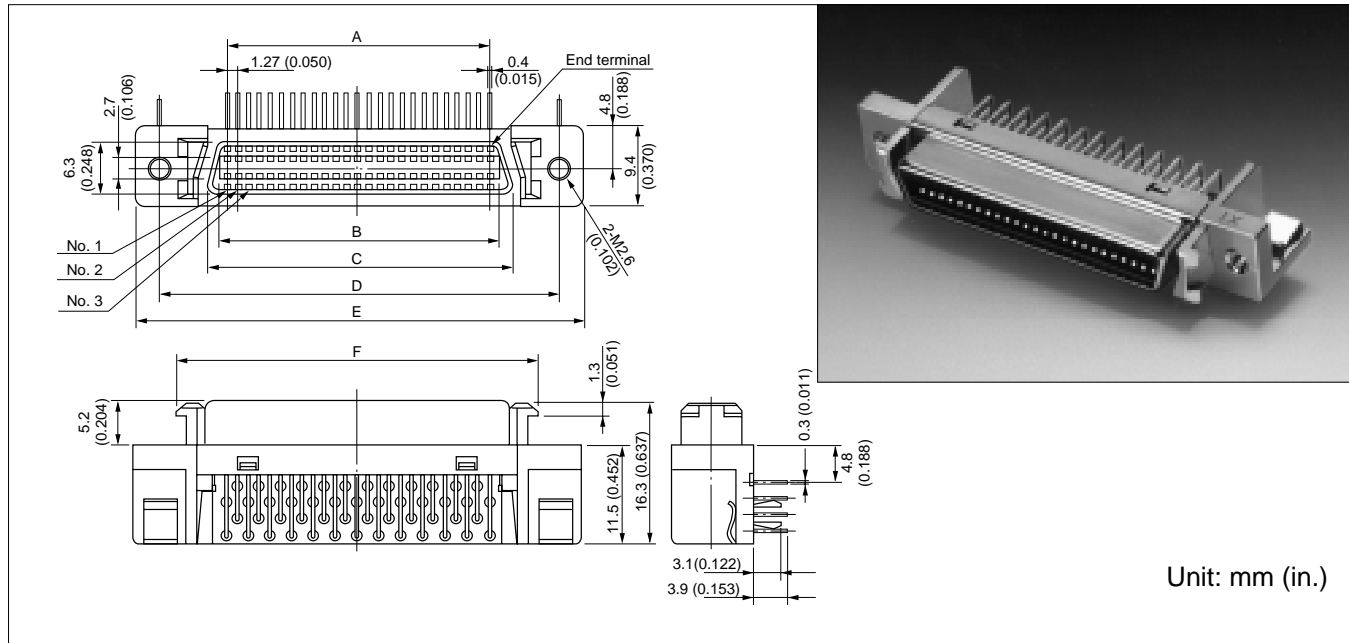
### ■ PART NUMBERS AND DIMENSIONS

Unit: mm (in.)

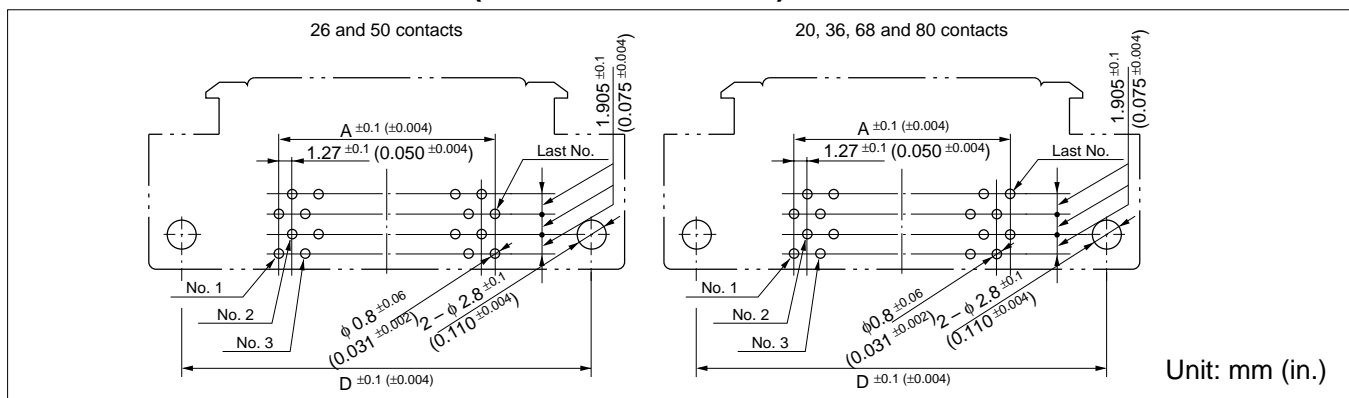
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80	FCN-245D080-G/E	49.53 (1.950)	51.55 (2.029)	54.55 (2.147)	65.55 (2.580)	71.45 (2.812)	61.40 (2.417)

## RIGHT-ANGLE SOCKET [METAL SHELL] (WITH BOARDLOCKS)

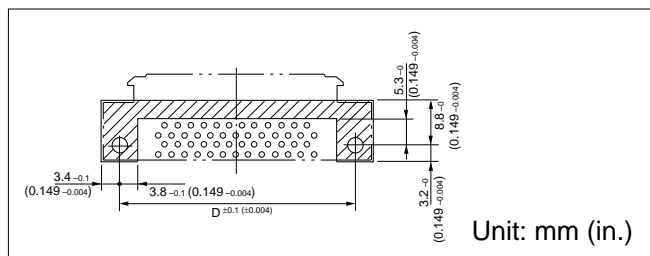
### ■ DIMENSIONS



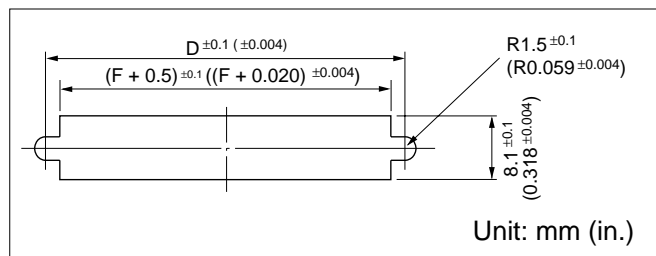
### ■ MOUNTING HOLE LAYOUT (COMPONENT SIDE)



### ■ PATTERN INHIBITED AREAS



### ■ RECOMMENDED PANEL DIMENSIONS



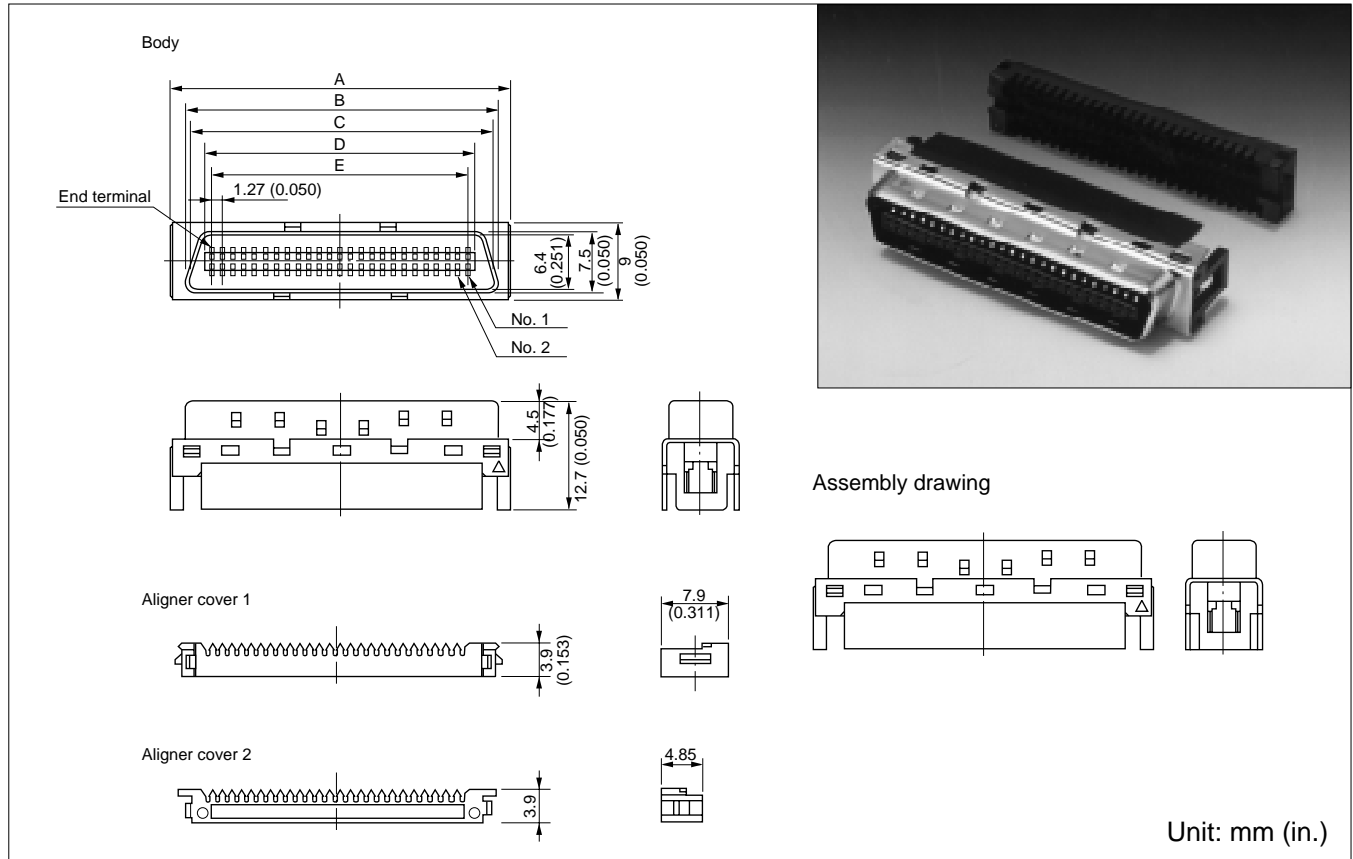
### ■ PART NUMBERS AND DIMENSIONS

Unit: mm (in.)

Number of contacts	Part number	A	B	C	D	E	F
20	FCN-245D020-G/H	11.43 (0.450)	13.45 (0.529)	16.45 (0.647)	27.45 (1.080)	33.35 (1.312)	23.30 (0.917)
26	FCN-245D026-G/H	15.24 (0.600)	17.26 (0.679)	20.26 (0.797)	31.26 (1.231)	37.16 (1.462)	27.11 (1.067)
36	FCN-245D036-G/H	21.59 (0.850)	23.61 (0.929)	26.61 (1.047)	37.61 (1.480)	43.51 (1.712)	33.46 (1.317)
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68	FCN-245D068-G/H	41.91 (1.650)	43.93 (1.729)	46.93 (1.847)	57.93 (2.280)	63.83 (2.512)	53.78 (2.117)
80	FCN-245D080-G/H	49.53 (1.950)	51.55 (2.029)	54.55 (2.147)	65.55 (2.580)	71.45 (2.812)	61.40 (2.417)

## INSULATION DISPLACEMENT CONNECTION (IDC) PLUG

### ■ DIMENSIONS



### ■ PART NUMBERS AND DIMENSIONS

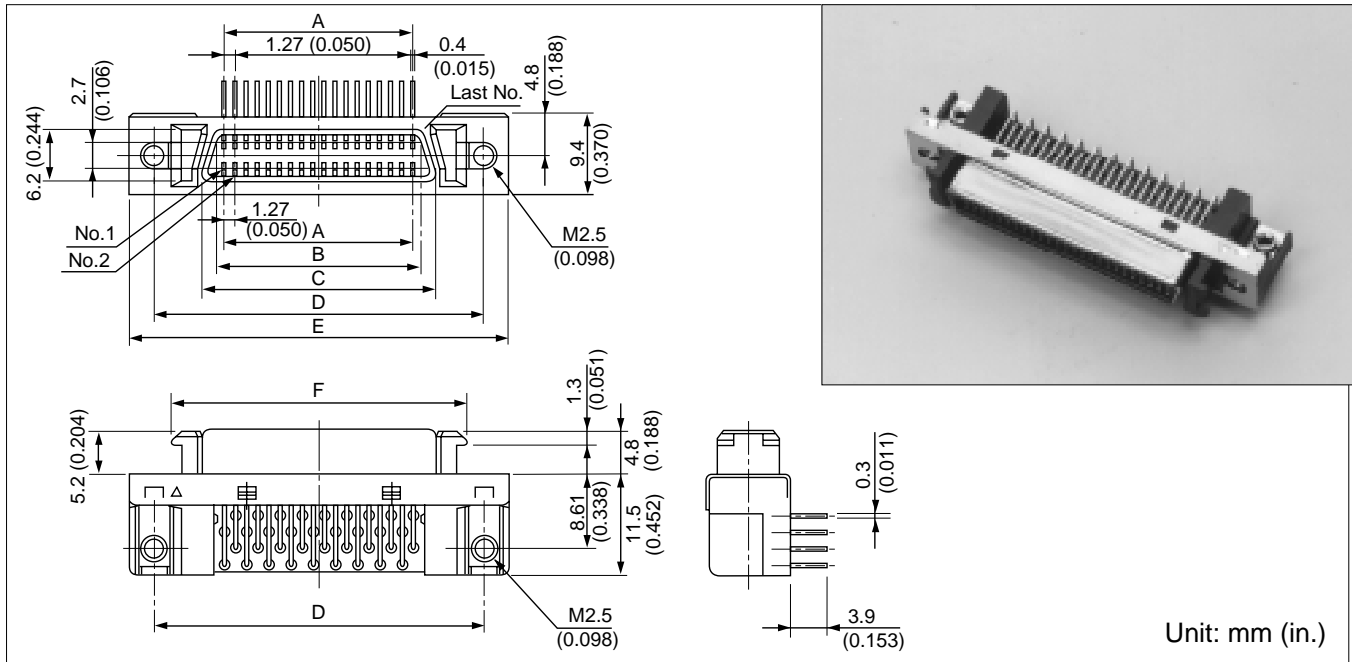
Unit: mm (in.)

Number of contacts	Insulation diameter of applicable wire	Part number	A	B	C	D	E
20	φ0.5 to 0.65 mm	FCN-247R020-G/E	21.24 (0.836)	17.55 (0.690)	16.55 (0.651)	13.25 (0.521)	11.43 (0.450)
26	φ0.5 to 0.65 mm	FCN-247R026-G/E	25.05 (0.986)	21.36 (0.840)	20.36 (0.801)	17.06 (0.671)	15.24 (0.600)
36	φ0.5 to 0.65 mm	FCN-247R036-G/E	31.40 (1.236)	27.71 (1.090)	26.71 (1.051)	23.41 (0.921)	21.59 (0.850)
50	φ0.5 to 0.65 mm	FCN-247R050-G/E	40.29 (1.586)	36.60 (1.440)	35.60 (1.401)	32.30 (1.271)	30.48 (1.200)
68	φ0.5 to 0.65 mm	FCN-247R068-G/E	51.72 (2.036)	48.03 (1.890)	47.03 (1.851)	43.73 (1.721)	41.91 (1.650)
80	φ0.5 to 0.65 mm	FCN-247R080-G/E	59.34 (2.336)	55.65 (2.190)	54.65 (2.151)	51.35 (2.021)	49.53 (1.950)

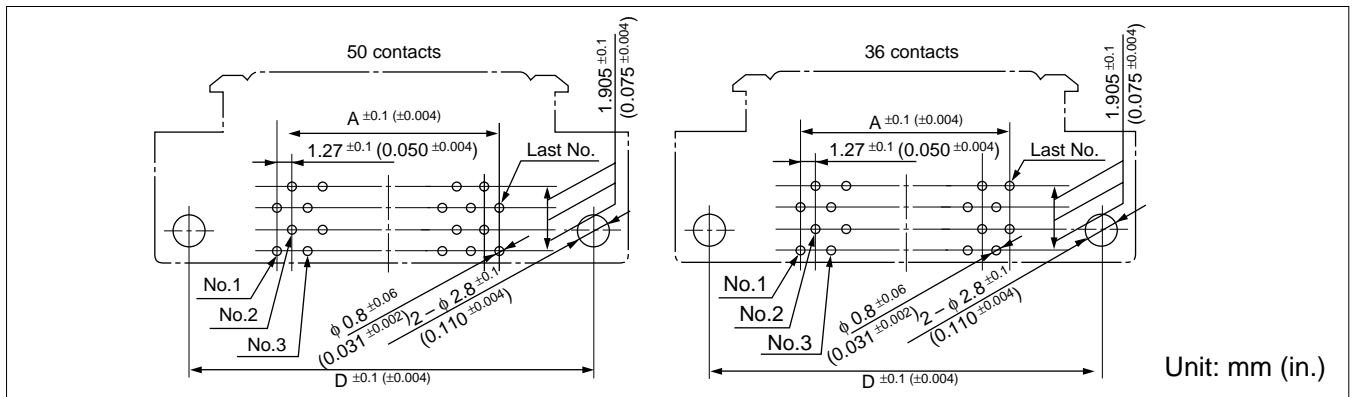
50-contact connectors for IDC of wires with φ0.8 mm (0.031 in.) to φ0.88 mm (0.035 in.) insulation diameter are also available. Specify a part number by replacing -G/E at the end with -G/F.

## RIGHT-ANGLE SOCKET [LIGHTWEIGHT TYPE]

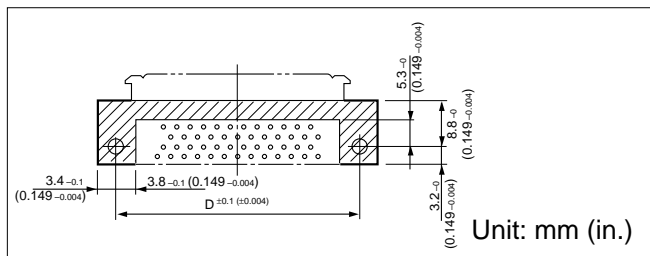
### ■ DIMENSIONS



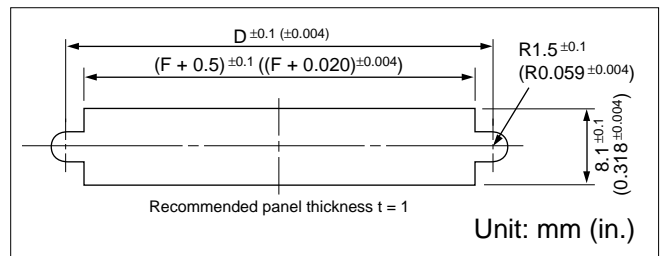
### ■ MOUNTING HOLE LAYOUT (COMPONENT SIDE)



### ■ PATTERN INHIBITED AREAS



### ■ RECOMMENDED PANEL DIMENSIONS



### ■ PART NUMBERS AND DIMENSIONS

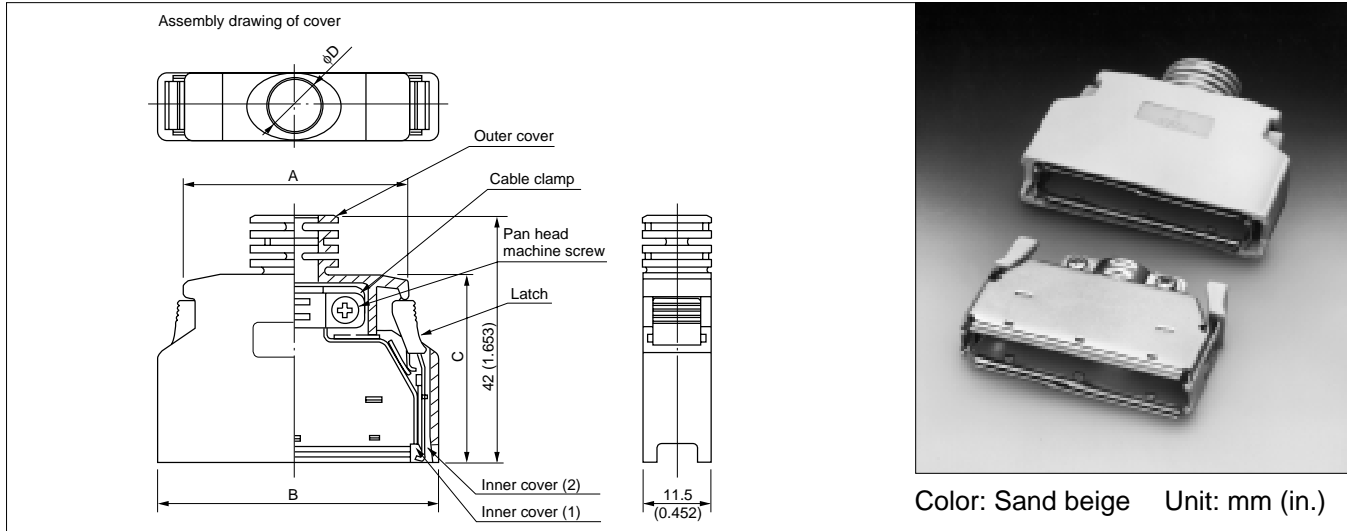
Unit: mm (in.)

Number of contacts	Part number	A	B	C	D	E	F
36	FCN-245D036-L/L	21.59 (0.850)	23.61 (0.929)	26.61 (1.047)	37.61 (1.480)	43.51 (1.712)	33.46 (1.317)
50	FCN-245D050-L/L	30.48 (1.200)	32.50 (1.279)	35.50 (1.397)	46.50 (1.830)	52.40 (2.062)	42.35 (1.667)

\* This socket is 40% lighter than a socket with die cast shell.

## EMI/ESD RESISTANT COVER

### ■ DIMENSIONS



### ■ PART NUMBERS AND DIMENSIONS

Unit: mm (in.)

Number of contacts	Part number	A	B	C	D
20	FCN-240C020-A/S	19.95 (0.785)	29.65 (1.167)	34.50 (1.358)	6.8 (0.268)
26	FCN-240C026-A/S	23.76 (0.935)	33.46 (1.317)	38.31 (1.508)	7.1 (0.280)
36	FCN-240C036-A/S	30.11 (1.185)	39.81 (1.507)	32.00 (1.259)	8.2 (0.323)
50	FCN-240C050-A/S	39.00 (1.535)	48.70 (1.917)	32.00 (1.259)	9.0 (0.354)
	FCN-240C050-E/S				9.8 (0.386)
68	FCN-240C068-A/S	50.43 (1.985)	60.13 (2.367)	32.00 (1.259)	9.1 (0.358)
80	FCN-240C080-A/S	58.05 (2.285)	67.75 (2.667)	32.00 (1.259)	9.7 (0.382)

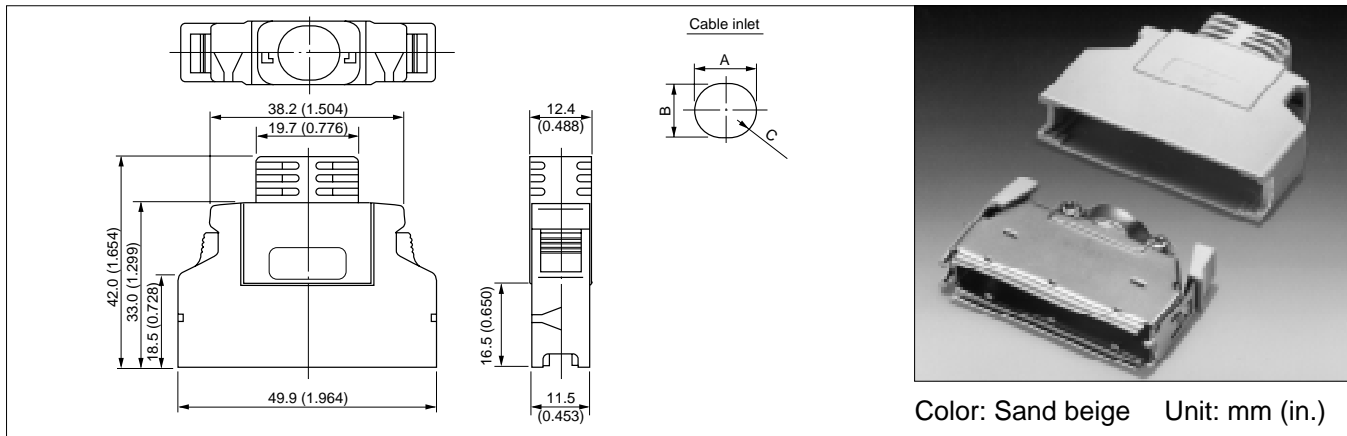
\*: The standard color of the EMI/ESD resistant covers is sand beige, but black, ivory, and art gray are also available. Specify a part number as follows:

Black: FCN-240C□□□-Δ/S-K0. Ivory: FCN-240C□□□-Δ/S-C0. Art gray: FCN-240C□□□-Δ/S-A0.

□□□: Number of contacts. Δ: Cover type.

## WIDE-HOLE COVER FOR SCSI CABLES

### ■ DIMENSIONS



### ■ PART NUMBERS AND DIMENSIONS

Part number	Cable inlet	
	A × B	C
FCN-240C050-B/S	12.45 × 11.00	R5.5
FCN-240C050-D/S	11.05 × 9.40	R4.7

\*: The standard color of the EMI/ESD resistant covers is sand beige, but black, ivory, and art gray are also available. Specify a part number as follows:

Black: FCN-240C□□□-Δ/S-K0. Ivory: FCN-240C□□□-Δ/S-C0.

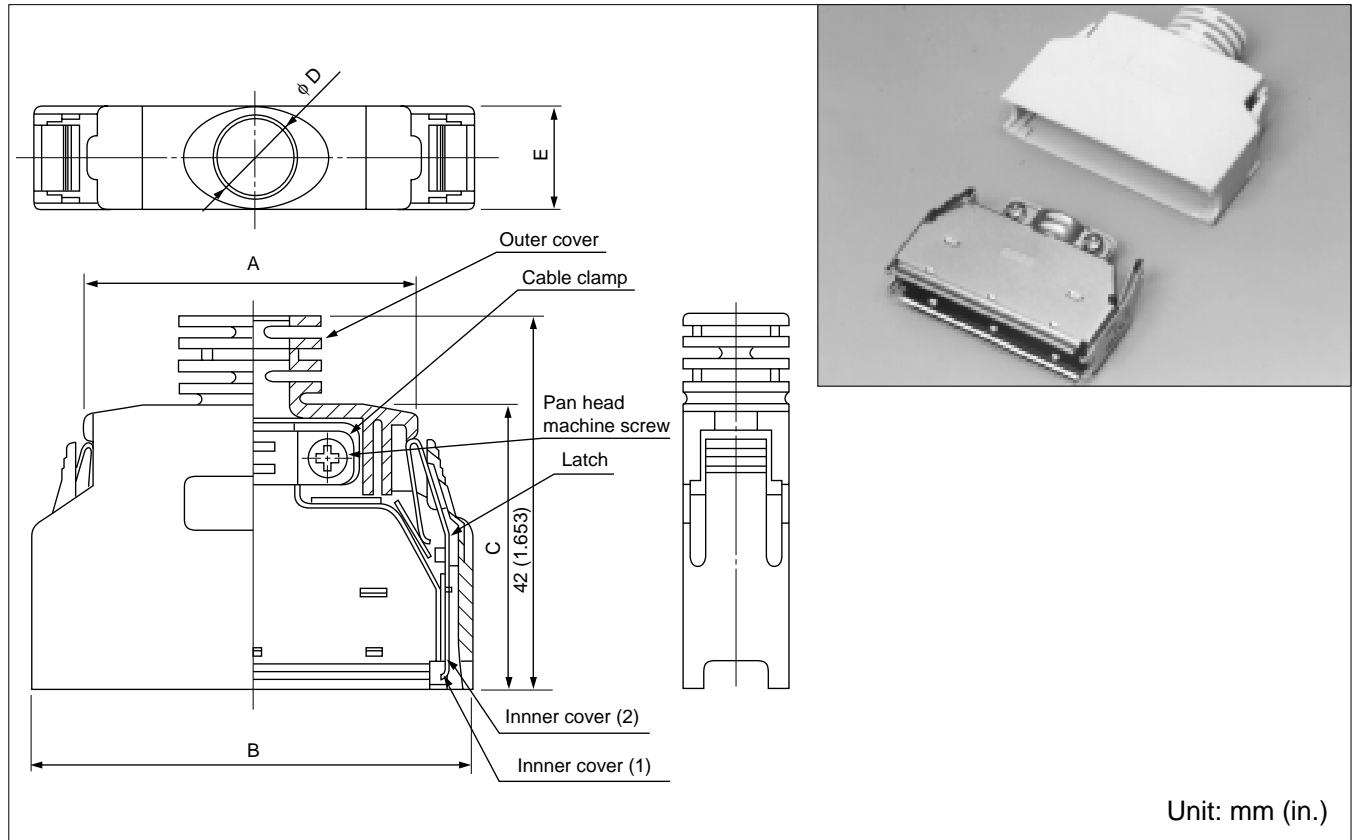
Art gray: FCN-240C□□□-Δ/S-A0.

□□□: Number of contacts. Δ: Cover type.

# 240R Series

## EMI/ESD RESISTANT COVER, LATCH-ON-HOOD TYPE

### ■ DIMENSIONS



Unit: mm (in.)

### ■ PART NUMBERS AND DIMENSIONS

Unit: mm (in.)

Number of contacts	Part number	A	B	C	D	E
36	FCN-240C036-A/SC	29.11 (1.146)	39.81 (1.567)	32.00 (1.259)	8.2 (0.223)	11.5 (0.223)
50	FCN-240C050-A/SC	38.00 (1.496)	48.70 (1.917)	32.00 (1.259)	9.0 (0.223)	11.5 (0.223)
	FCN-240C050-E/SC				9.8 (0.223)	11.4 (0.223)

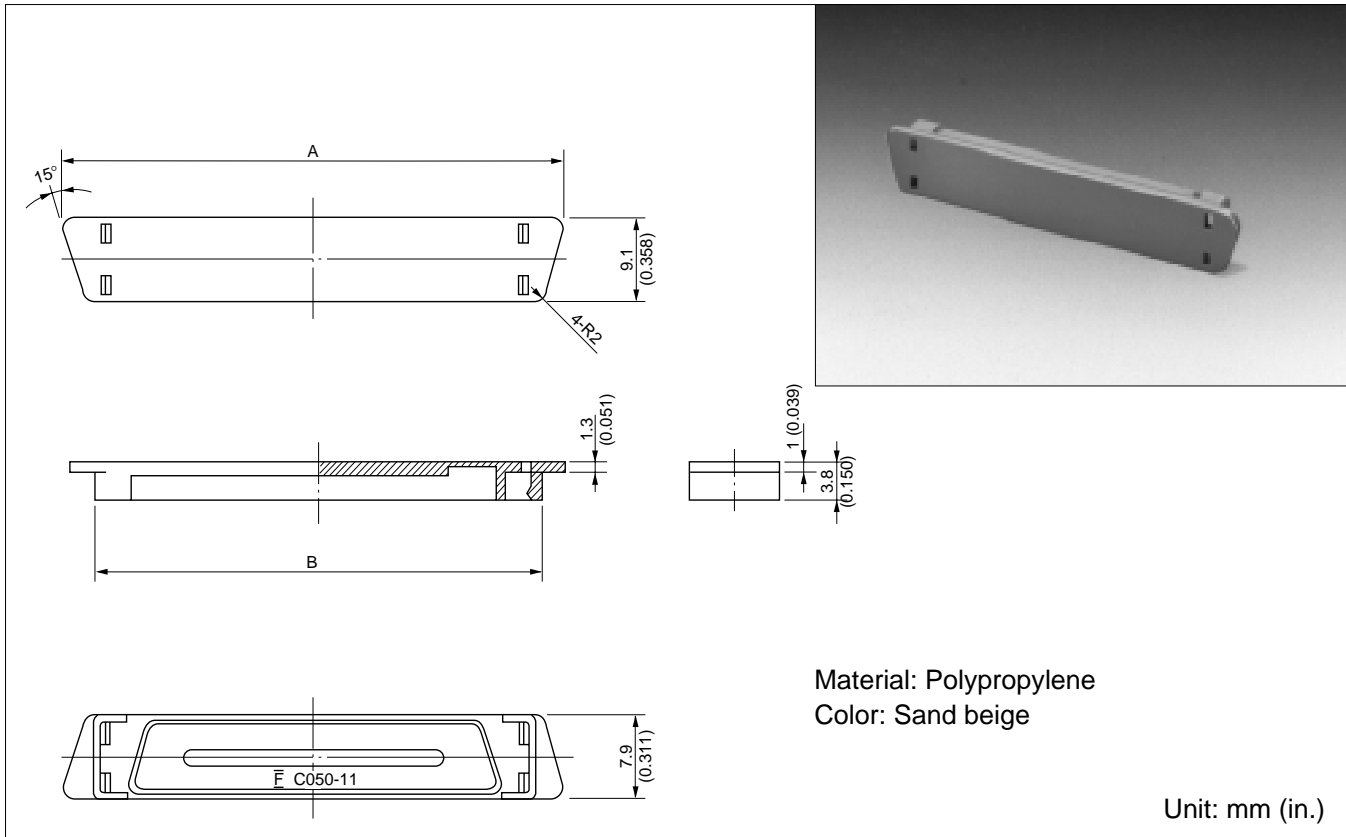


# 240R Series

## ACCESSORY (DUST CAP FOR SOCKET) (230R SERIES AND 240R SERIES)

Used to prevent dust from entering the contact section of a plug connector.

### ■ DIMENSIONS

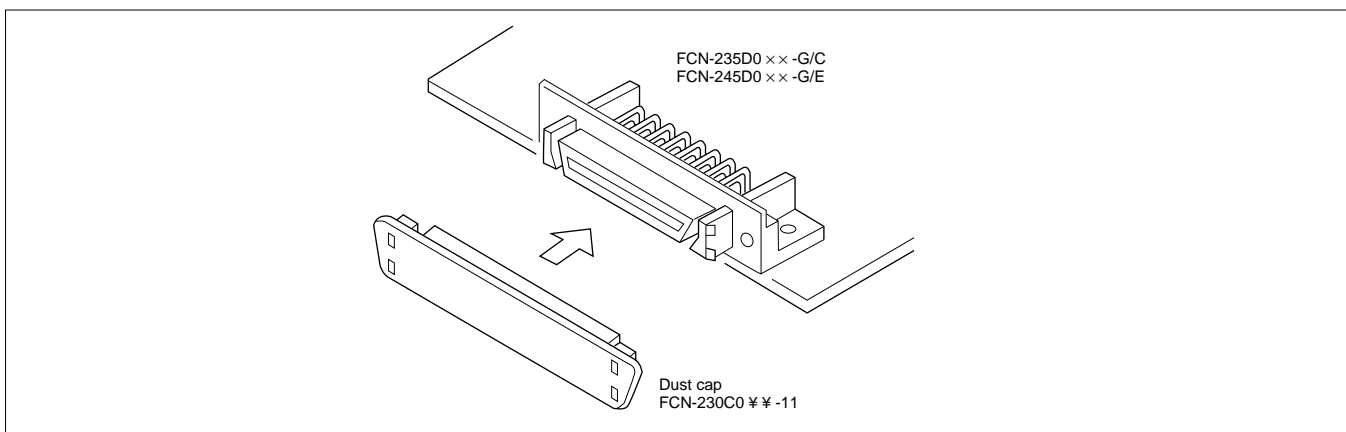


### ■ PART NUMBERS AND DIMENSIONS

Unit: mm (in.)

Number of contacts	Part number	A	B
28	FCN-230C028-11	35.7 (1.406)	30.1 (1.185)
36	FCN-230C036-11	40.8 (1.606)	35.2 (1.386)
50	FCN-230C050-11	49.7 (1.957)	44.1 (1.736)
68	FCN-230C068-11	61.1 (2.406)	55.5 (2.185)

### ■ APPLICATIONS



## CABLE ASSEMBLY TOOLS

The following tools are needed to assemble FCN-230/230R/240/240R series connectors.

- Cable aligner (semiautomatic cable aligner or hand tool)
- IDC tool

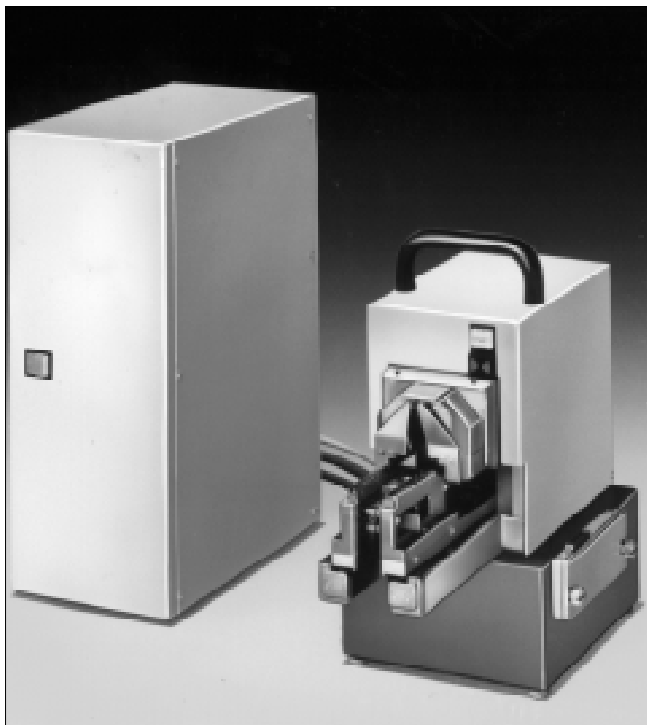
### 1. Cable Aligner

Item	Semiautomatic cable aligner			Hand tool
	Body/Controller	Bed	Adaptor	
FCN-237J	FCN-M561-A/C	FCN-P560-2/A	FCN-K560-A-xxx	FCN-237T-T062/H
FCN-237R			FCN-K560-R-xxx	
FCN-247J			FCN-K560-K-xxx	
FCN-247R		FCN-P560-2/J	FCN-K560-J-xxx	FCN-247T-T061/H

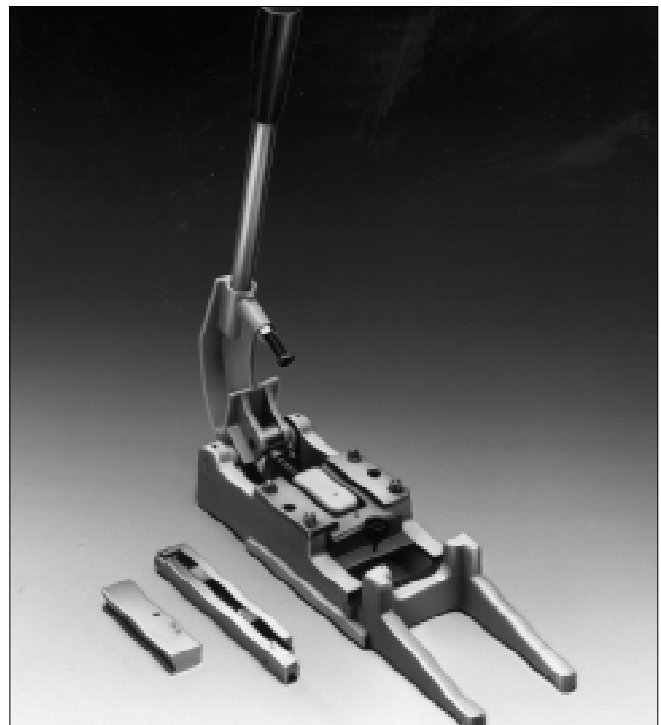
xxx indicates the number of contacts.

### 2. Insulation Displacement Connection (IDC) tool

Item	Hand press	Head/Table
FCN-237J	FCN-237T-T109/H	FCN-237T-T064/H
FCN-237R		FCN-237T-T067/H
FCN-237D		FCN-237T-T075/H
FCN-247J		FCN-247T-T066/H
FCN-247R		FCN-247T-T068/H
FCN-247D		FCN-247T-T077/H



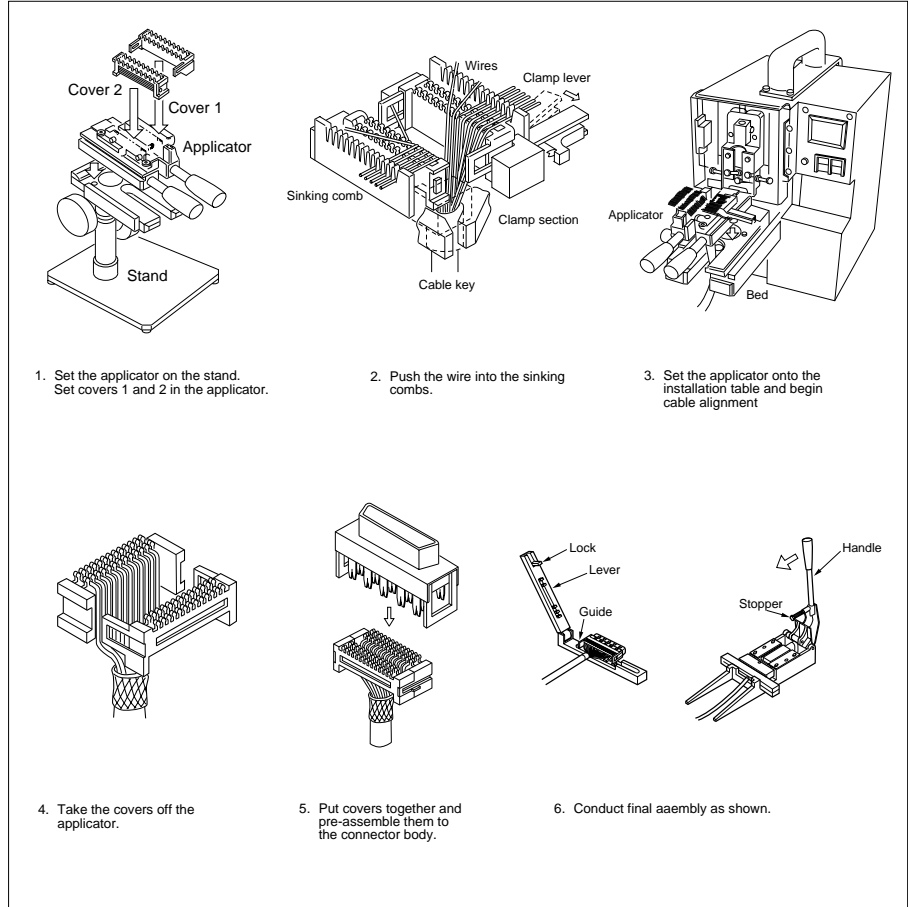
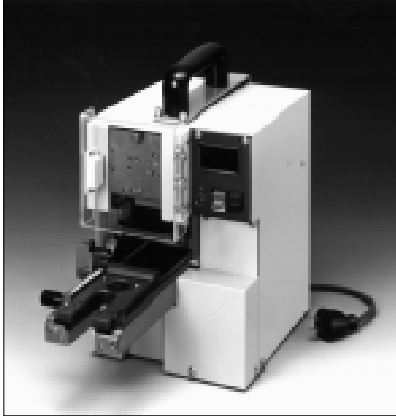
• Cable aligner



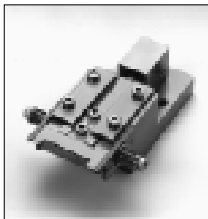
• Insulation displacement connection (IDC) tool

# 240R Series

**Semi-Automatic Tools  
Cable Aligning Machine  
Main Body (FCN-M551-120, FCN-M551-220)**



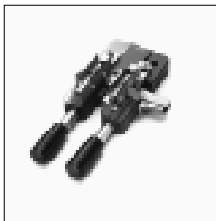
Head (FCN-H550-1/A)



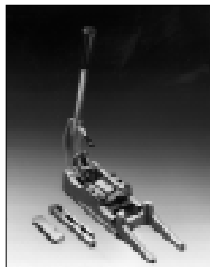
Stand (FCN-D550)



Applicator (FCN-A550-1/A-xxx)



IDC Tool (FCN-237T-T109/H,  
FCN-237T-T067/H locator)



## FCN-240R SERIES IDC ROUND-CABLE CONNECTORS

SOCKET: FCN-247R\*\*\*-G/E (\*\*\*: 020, 026, 036, 050, 068, 080)

Pos No.	Applied Wire (wire Dia.: mm)	Connector Part number	Cable Aligner		IDC Tool
			Hand Tool	Semi-Auto	
20   68	#28 to #30 (0.5 to 0.65)	FCN-247R020-G/E   FCN-247R080-G/E	FCN-247T-T061/H	(See below*)	HAND PRESS: FCN-237T-T109/H HEAD & Locator: FCN-237T-T067/H

Semi-automatic-Medium Level  
Body: :FCN-M551-120  
Head Assembly: :FCN-H550  
Applicator: :FCN-A550-1/J-\*\*\*(\*\*\*: 020, 028, 036, 050, 068, 080)  
Stand: :FCN-D550

## Fujitsu Components International Headquarter Offices

### Japan

Fujitsu Component Limited  
Gotanda-Chuo Building  
3-5, Higashigotanda 2-chome, Shinagawa-ku  
Tokyo 141-0022, Japan  
Tel: (81-3) 5449-7010  
Fax: (81-3) 5449-2626  
Email: [promothq@fcl.fujitsu.com](mailto:promothq@fcl.fujitsu.com)  
Web: [www.fcl.fujitsu.com](http://www.fcl.fujitsu.com)

### North and South America

Fujitsu Components America, Inc.  
250 E. Caribbean Drive  
Sunnyvale, CA 94089 U.S.A.  
Tel: (1-408) 745-4900  
Fax: (1-408) 745-4970  
Email: [components@us.fujitsu.com](mailto:components@us.fujitsu.com)  
Web: <http://us.fujitsu.com/components>

### Europe

Fujitsu Components Europe B.V.  
Diamantlaan 25  
2132 WV Hoofddorp  
Netherlands  
Tel: (31-23) 5560910  
Fax: (31-23) 5560950  
Email: [info@fceu.fujitsu.com](mailto:info@fceu.fujitsu.com)  
Web: [emea.fujitsu.com/components](http://emea.fujitsu.com/components)

### Asia Pacific

Fujitsu Components Asia Ltd.  
102E Pasir Panjang Road  
#01-01 Citilink Warehouse Complex  
Singapore 118529  
Tel: (65) 6375-8560  
Fax: (65) 6273-3021  
Email: [fcal@fcal.fujitsu.com](mailto:fcal@fcal.fujitsu.com)  
[www.fcal.fujitsu.com](http://www.fcal.fujitsu.com)

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