

# 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

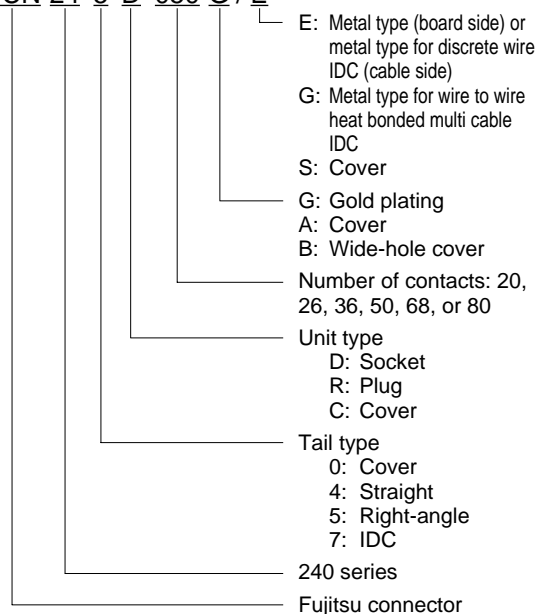
Item	Specifications
Operating temperature range	-55°C to +85°C
Current rating	DC 1 A
Voltage rating	AC 240 V
Contact resistance	50 mΩ max. (DC 20 mV, 10 mA)
Insulation resistance	1,000 MΩ min. (DC 500 V)
Dielectric withstand voltage	AC 750 V for 1 minute
Applicable wire	AWG #28 and #30 stranded wires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

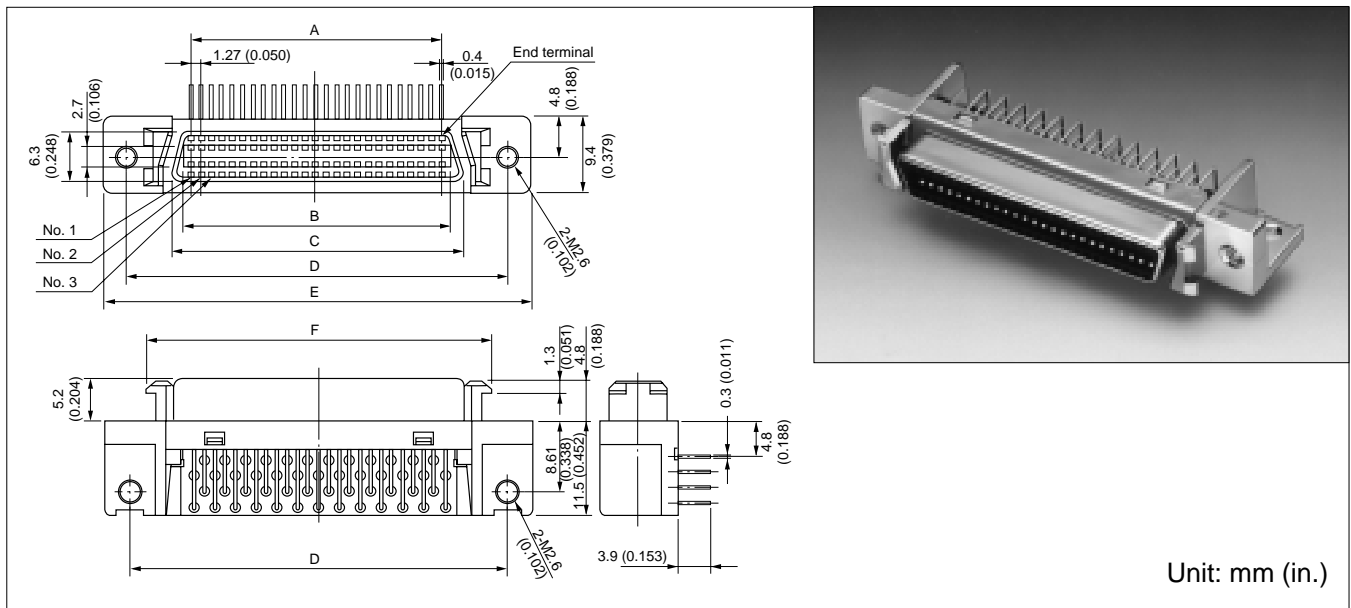
FCN-24 5 D 050-G / E



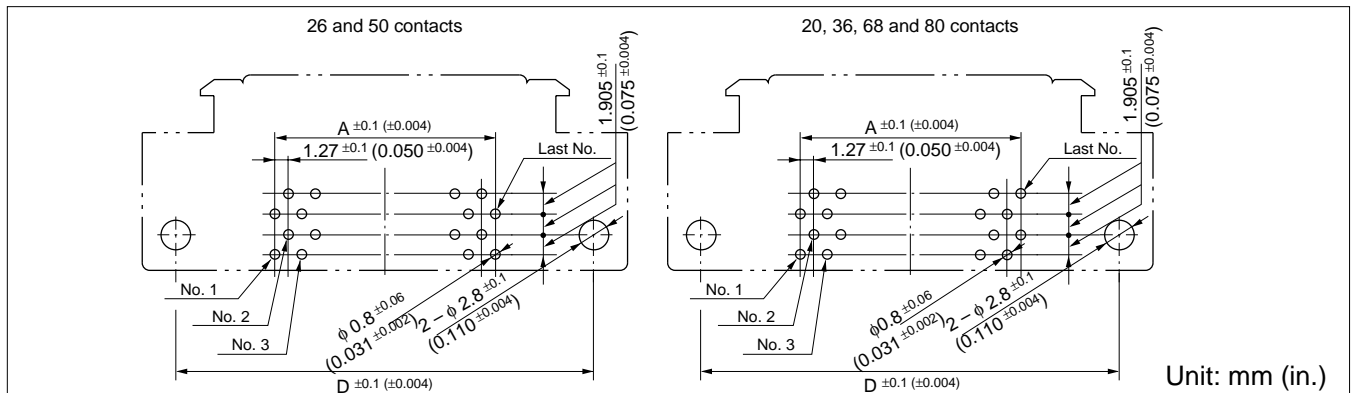


## RIGHT-ANGLE SOCKET [METAL SHELL]

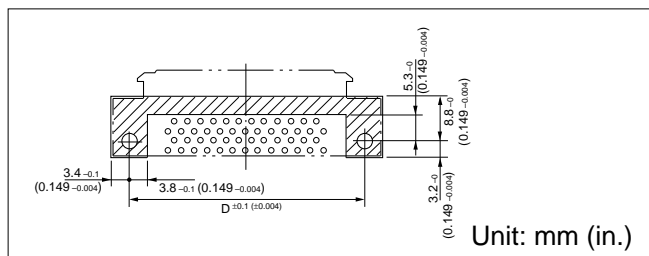
### ■ DIMENSIONS



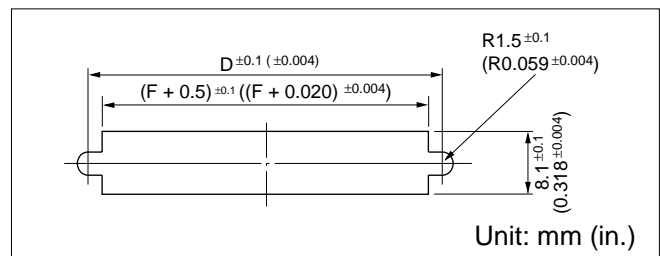
### ■ MOUNTING HOLE LAYOUT (COMPONENT SIDE)



### ■ PATTERN INHIBITED AREAS



### ■ RECOMMENDED PANEL DIMENSIONS



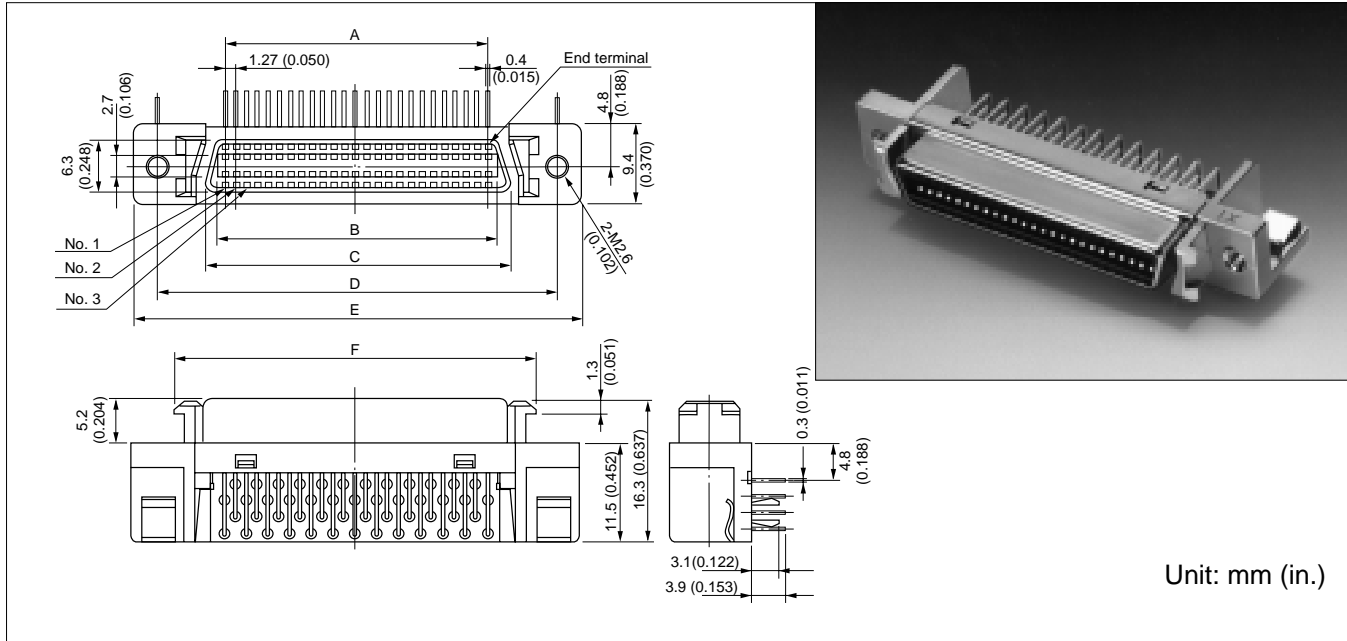
### ■ PART NUMBERS AND DIMENSIONS

Unit: mm (in.)

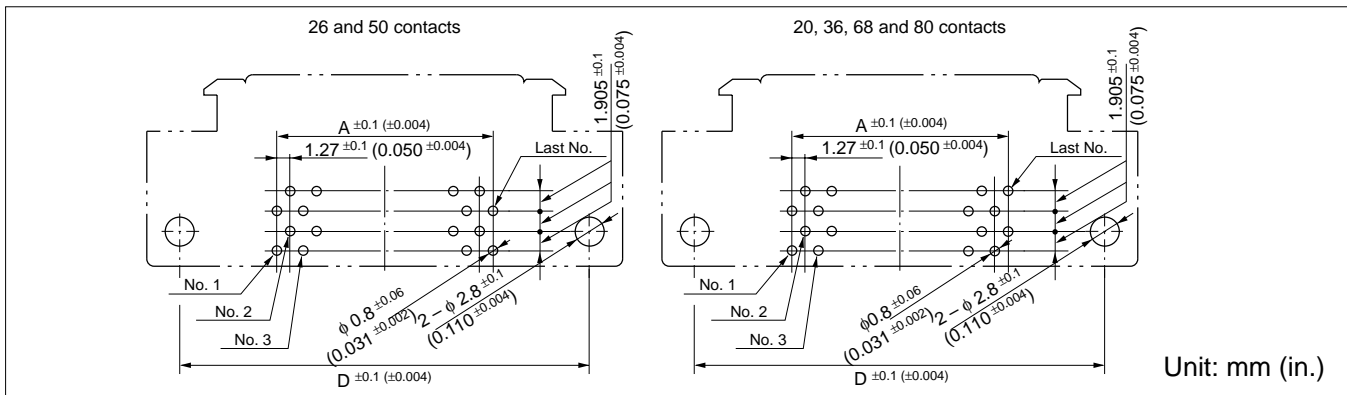
Number of contacts	Part number	A	B	C	D	E	F
20	FCN-245D020-G/E	11.43 (0.450)	13.45 (0.529)	16.45 (0.647)	27.45 (1.080)	33.35 (1.312)	23.30 (0.917)
26	FCN-245D026-G/E	15.24 (0.600)	17.26 (0.679)	20.26 (0.797)	31.26 (1.231)	37.16 (1.462)	27.11 (1.067)
36	FCN-245D036-G/E	21.59 (0.850)	23.61 (0.929)	26.61 (1.047)	37.61 (1.480)	43.51 (1.712)	33.46 (1.317)
50	FCN-245D050-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-245D068-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-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)

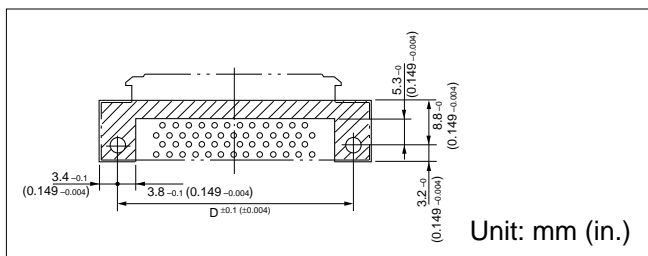
### ■ DIMENSIONS



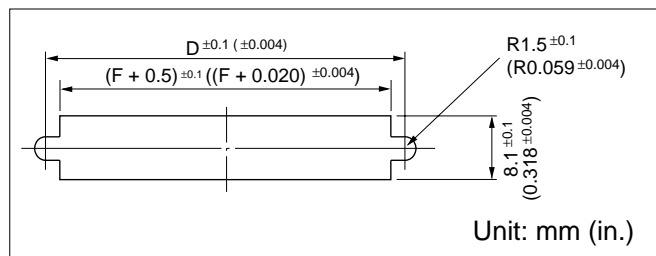
### ■ MOUNTING HOLE LAYOUT (COMPONENT SIDE)



### ■ PATTERN INHIBITED AREAS



### ■ RECOMMENDED PANEL DIMENSIONS



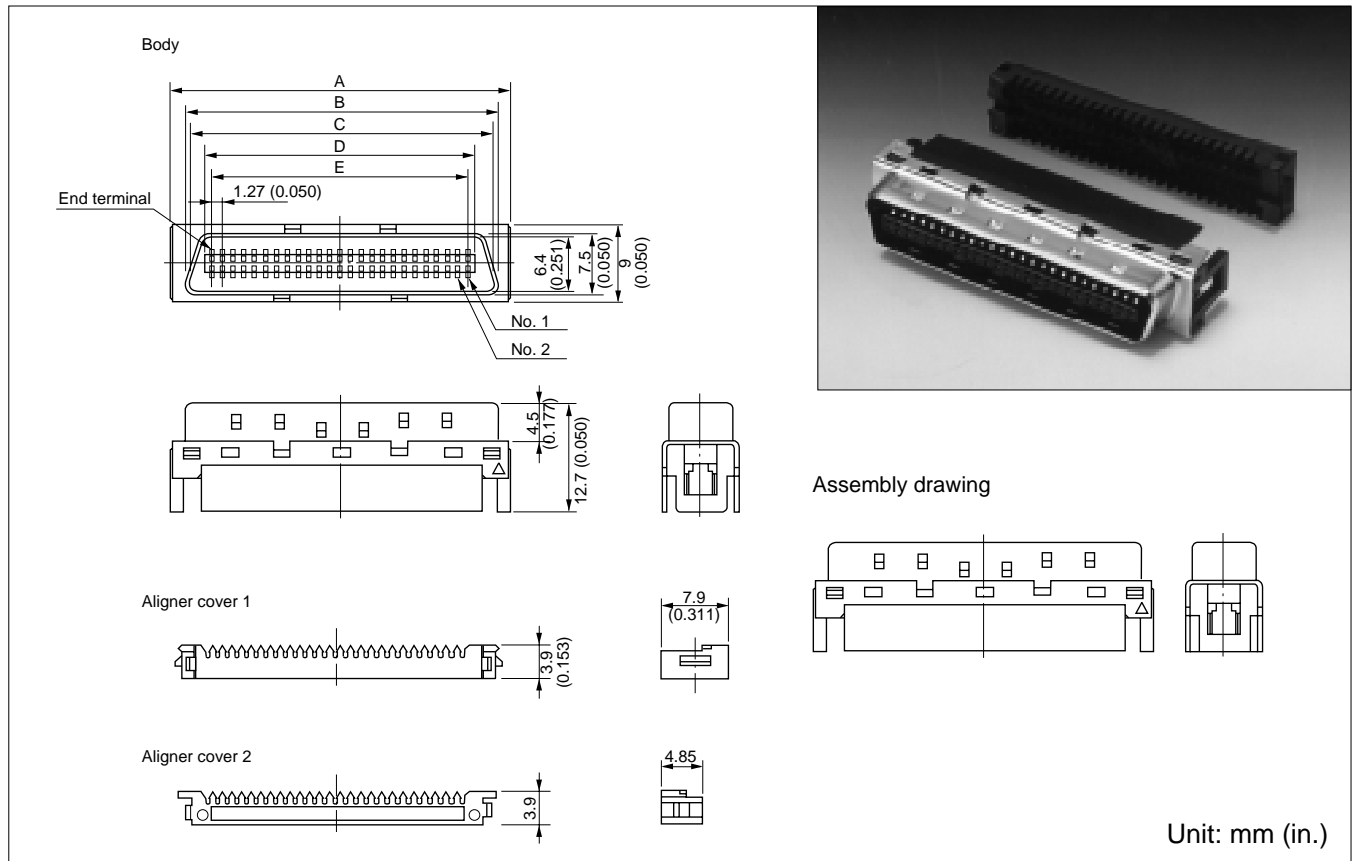
### ■ PART NUMBERS AND DIMENSIONS

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)
50	FCN-245D050-G/H	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-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

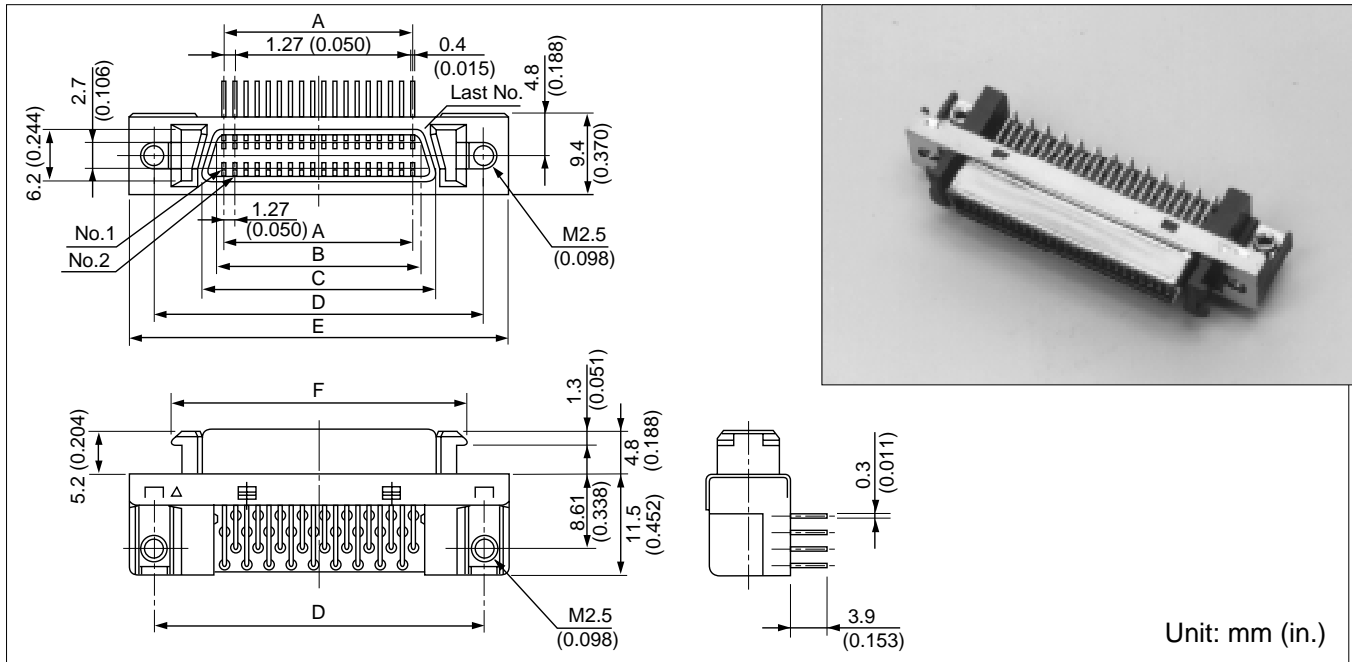
Unit: mm (in.)

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)

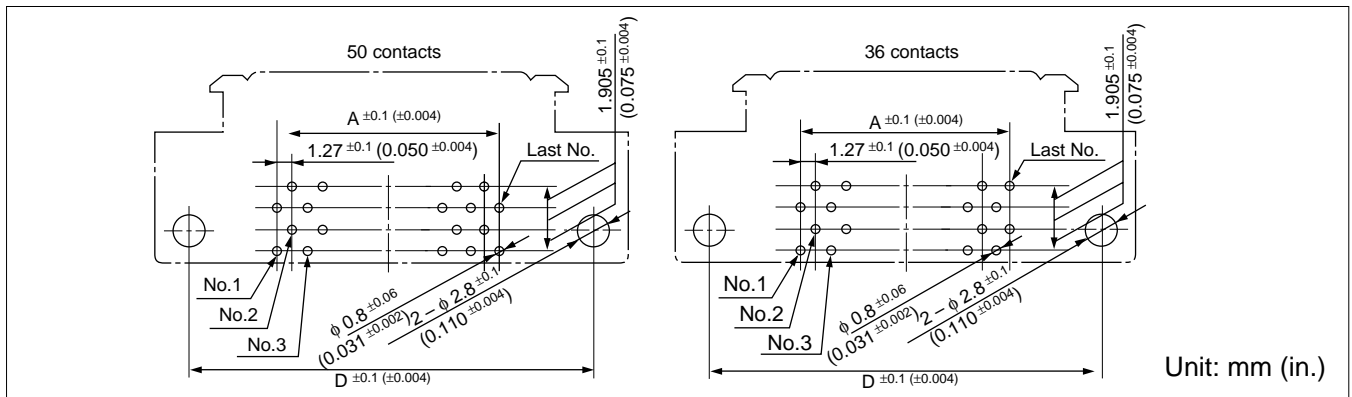
50-contact connectors for IDC of wires with φ0.8 mm (0.031 in.) to φ0.88 mm (0.035 in.) insulation diameter are also available. Specify a part number by replacing -G/E at the end with -G/F.

## RIGHT-ANGLE SOCKET [LIGHTWEIGHT TYPE]

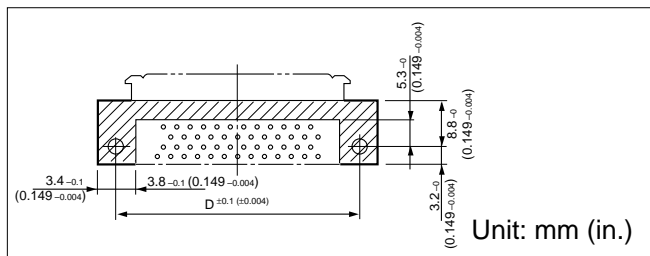
### ■ DIMENSIONS



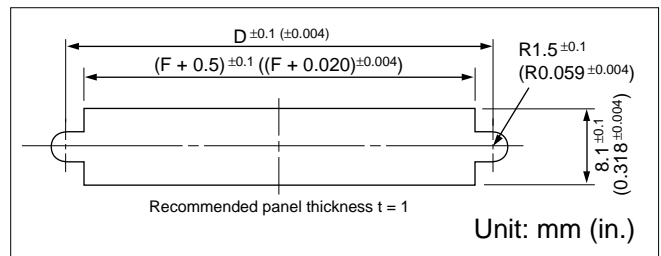
### ■ MOUNTING HOLE LAYOUT (COMPONENT SIDE)



### ■ PATTERN INHIBITED AREAS



### ■ RECOMMENDED PANEL DIMENSIONS



### ■ PART NUMBERS AND DIMENSIONS

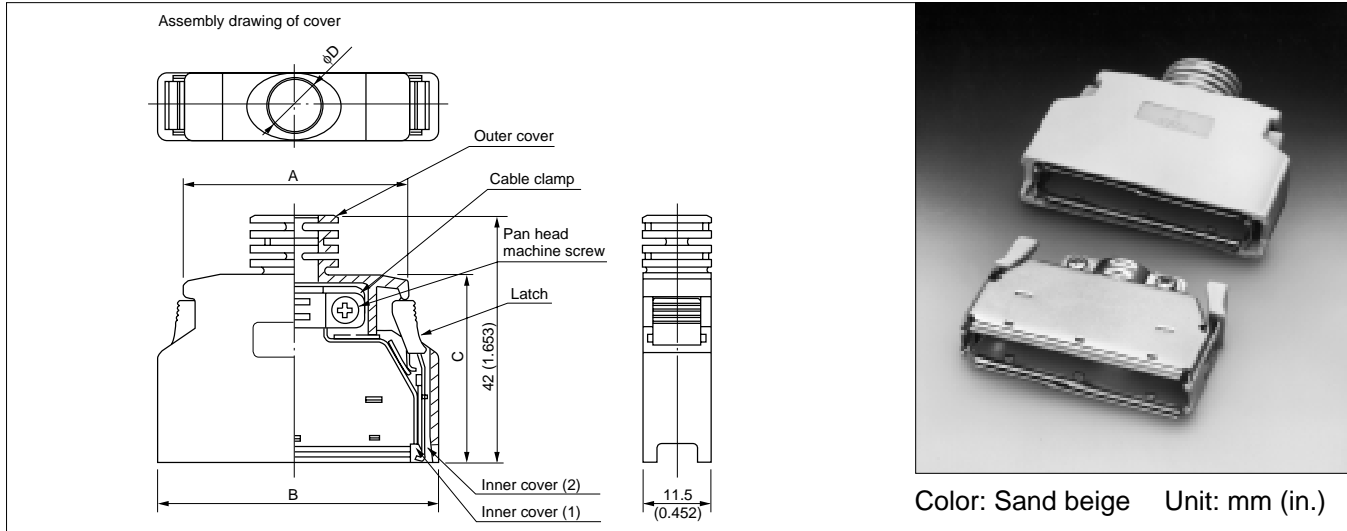
Unit: mm (in.)

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)

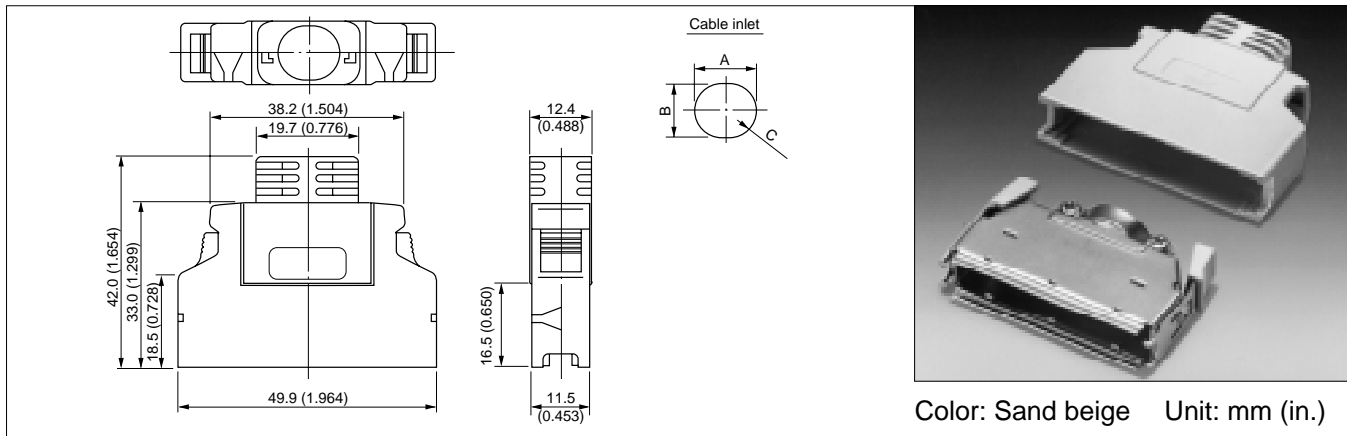
\*: The standard color of the EMI/ESD resistant covers is sand beige, but black, ivory, and art gray are also available. Specify a part number as follows:

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.

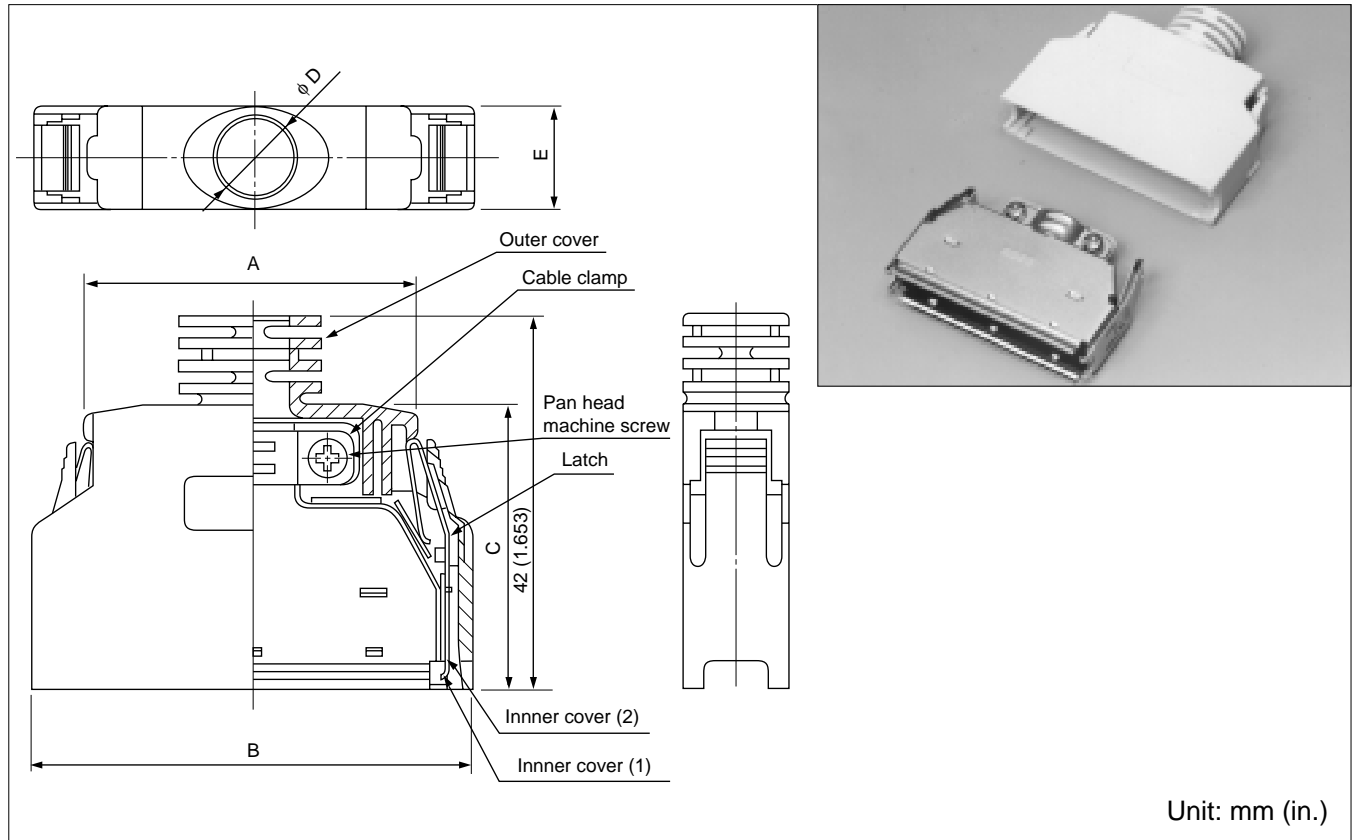
Art gray: FCN-240C□□□-Δ/S-A0.

□□□: 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)

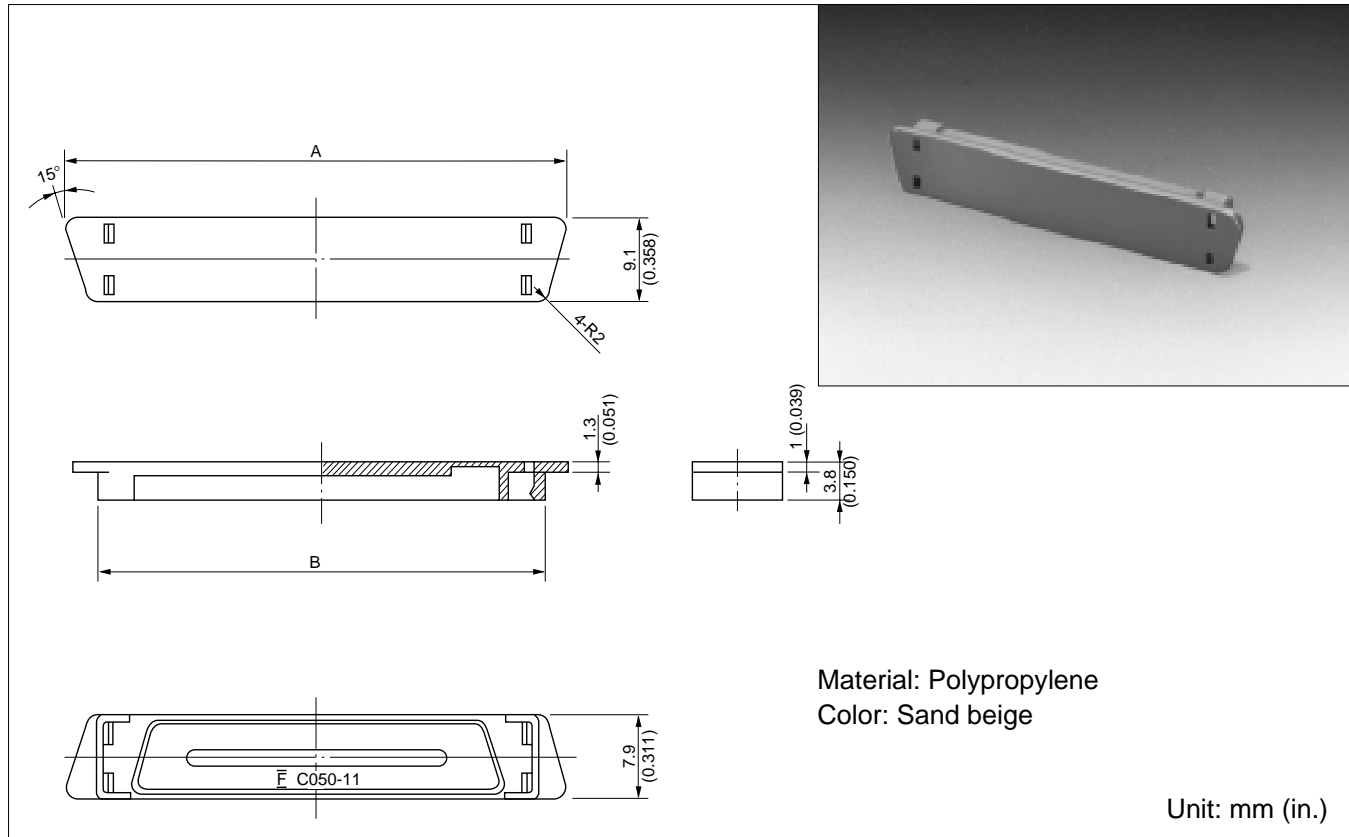


# 240R Series

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

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

### ■ DIMENSIONS

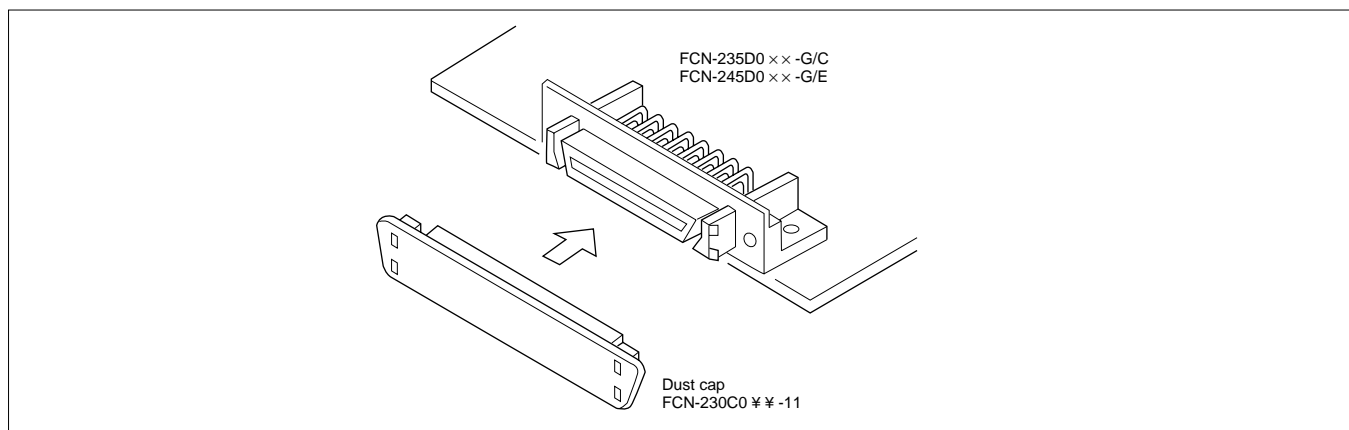


### ■ PART NUMBERS AND DIMENSIONS

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

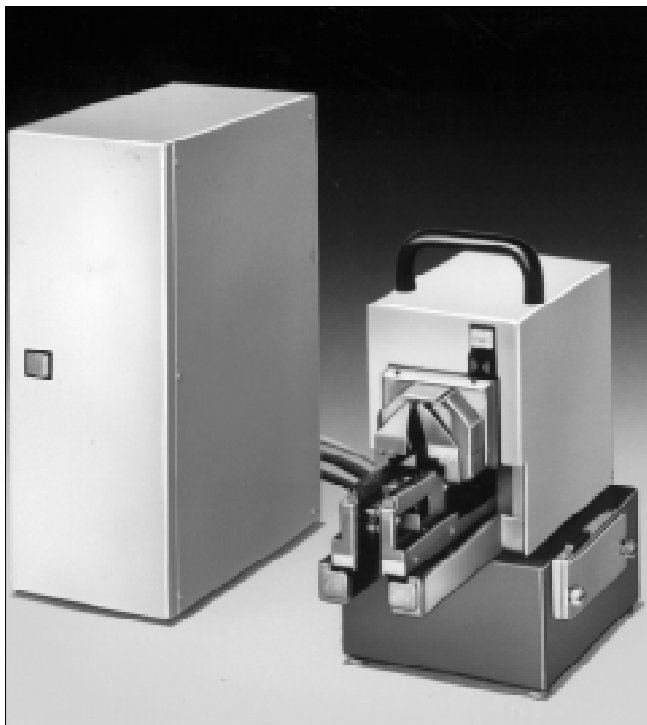
### 1. Cable Aligner

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

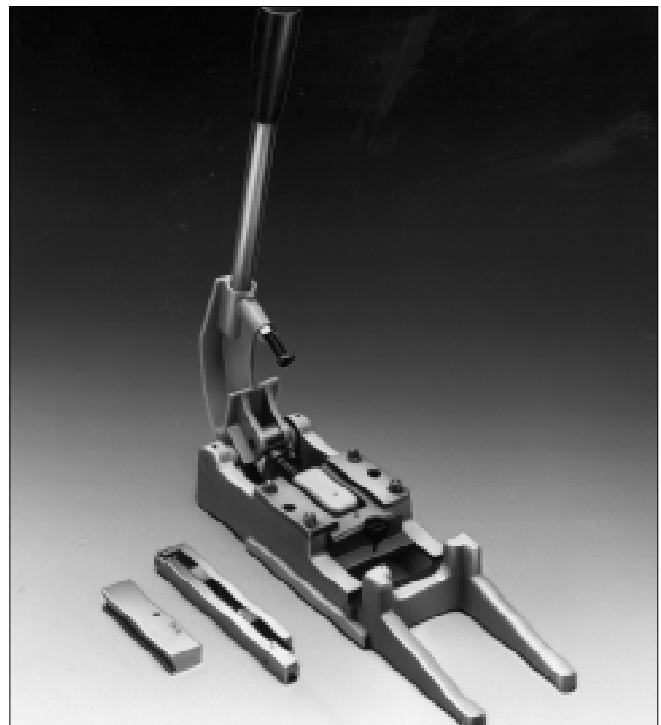
xxx indicates the number of contacts.

### 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



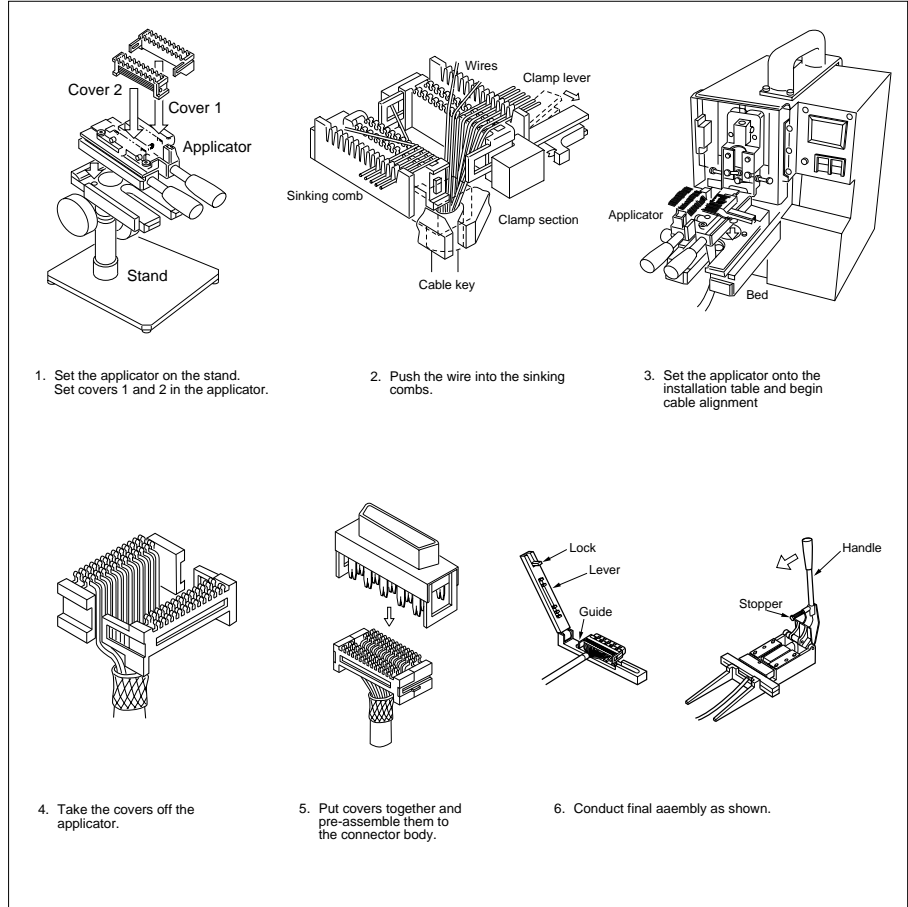
• Cable aligner



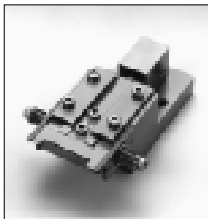
• Insulation displacement connection (IDC) tool

# 240R Series

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



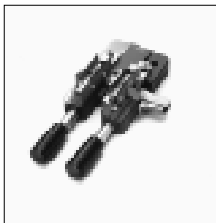
Head (FCN-H550-1/A)



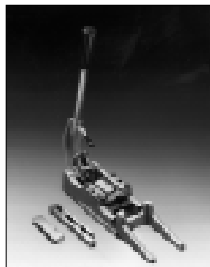
Stand (FCN-D550)



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)

© 2007 Fujitsu Components America, Inc. All rights reserved. All trademarks or registered trademarks are the property of their respective owners. Fujitsu Components America, Inc. or its affiliates do not warrant that the content of the datasheet is error free. In a continuing effort to improve our products, Fujitsu Components America, Inc. or its affiliates reserve the right to change specifications/datasheets without prior notice. Rev. November 2, 2007.