

FOR BOARD-TO-CABLE CONNECTION

230 SERIES (GENERAL-PURPOSE TYPE)

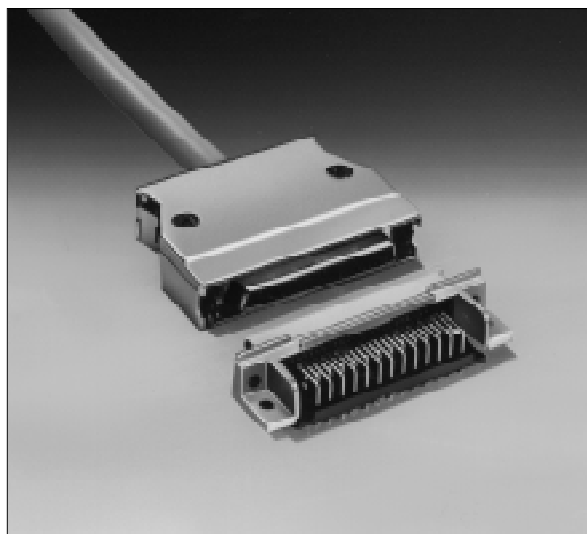
DISCONTINUED

■ FEATURES

- 1.27 mm (0.050 in.) pitch contact arrangement in two rows enables high-density mounting.
- Connectors with 20 to 80 contacts are available for various purposes.
- Various types of board-to-cable connection can be performed.
- Discrete-wire (AWG #28, #30) I/O cables can be assembled by IDC or soldering. Metal covers completely protect sockets from EMI.
- 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.
- Insulation is UL-approved (94V-0) and is washable.

■ SPECIFICATIONS

| Item | Specifications | | | | | |
|--------------------------------|--|-----|------|------|-----|-----|
| Operating temperature range | -55°C to +105°C | | | | | |
| Current rating | DC 1 A | | | | | |
| Voltage rating | AC 240 V | | | | | |
| Contact resistance | 30 mΩ max. (DC 6 V, 0.1 A) | | | | | |
| Insulation resistance | 1000 MΩ min. (DC 500 V) | | | | | |
| Dielectric withstand voltage | AC 750 V for 1 minute | | | | | |
| Insertion force [kg max.] | Number of contacts | 20 | 28 | 36 | 50 | 68 |
| | Force | 5.5 | 6.0 | 6.5 | 8.0 | 9.0 |
| Withdrawal force [kg min.] | Number of contacts | 20 | 28 | 36 | 50 | 68 |
| | Force | 0.8 | 1.12 | 1.44 | 2.0 | 2.3 |
| Applicable PC board (standard) | 1.6 mm (0.063 in.) thick | | | | | |
| Applicable wire (standard) | IDC: AWG #28 and #30 with ϕ 0.5 to 0.88 mm (0.019 to 0.035 in.) insulation diameter. The applicable wires depend on the number of contacts. See the descriptions of IDC sockets and metal covers. Soldering: AWG #26 max. (reference) | | | | | |



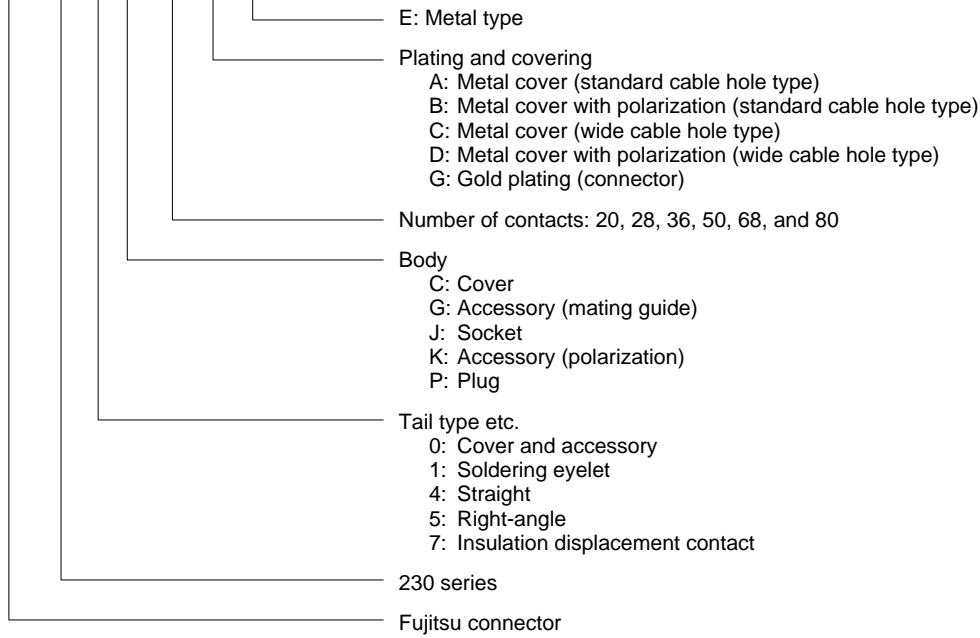
■ MATERIALS

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

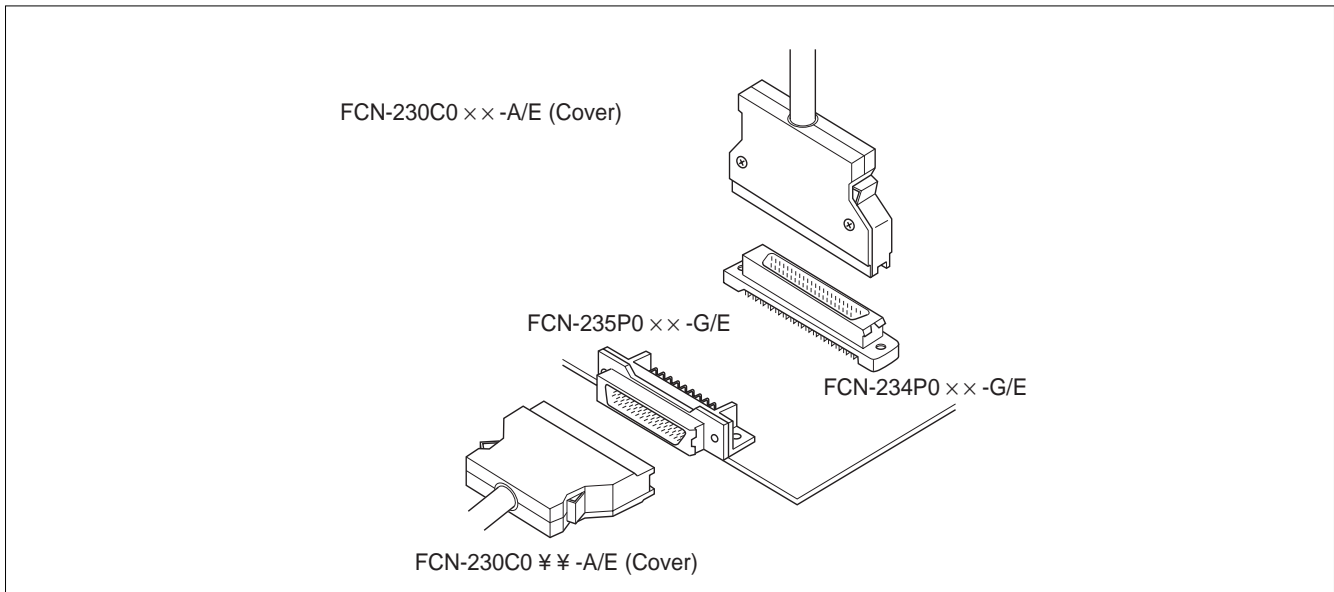
230 Series (General-Purpose Type)

■ ORDERING CODE

FCN-23 4 P 050-G / E



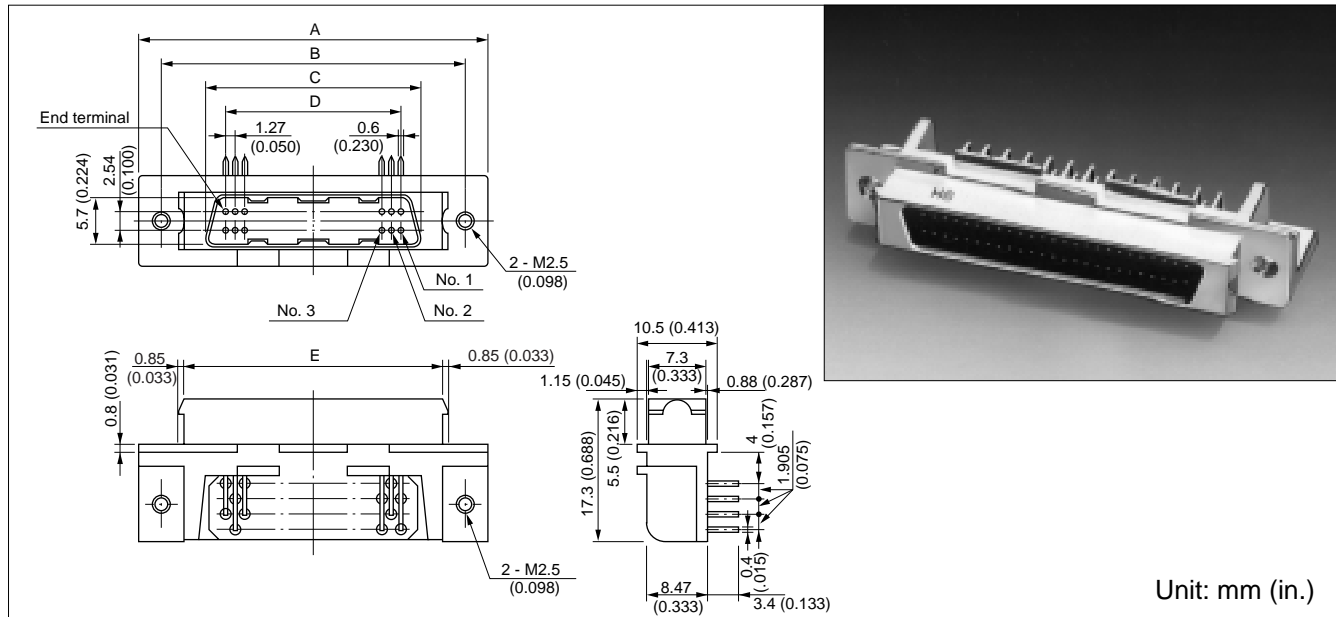
■ APPLICATIONS



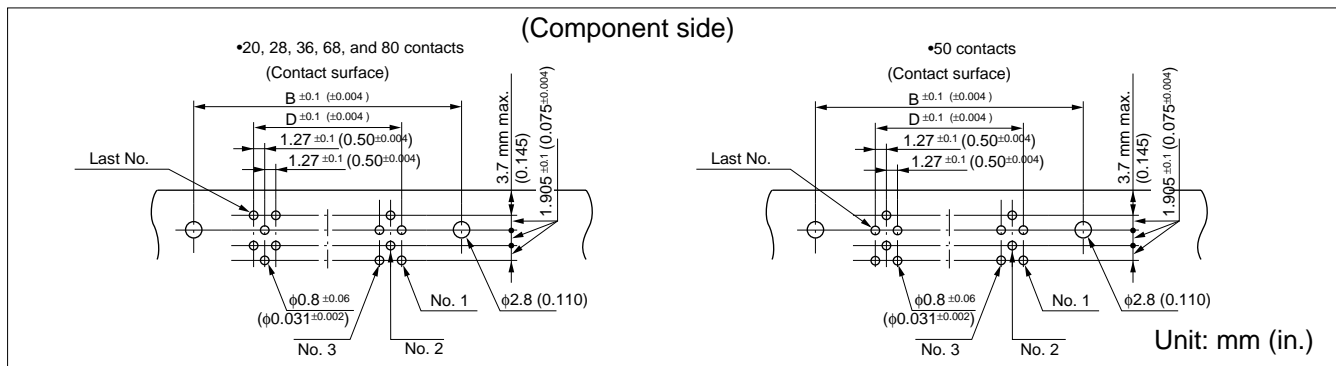
230 Series (General-Purpose Type)

RIGHT-ANGLE PLUG

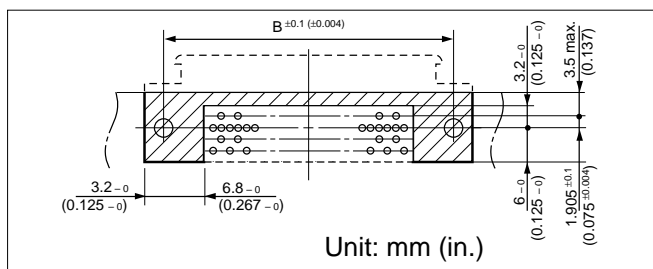
■ DIMENSIONS



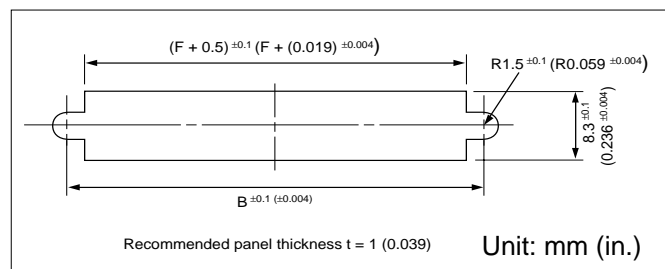
■ MOUNTING HOLE LAYOUT



■ PATTERN INHIBITED AREAS



■ RECOMMENDED PANEL DIMENSIONS



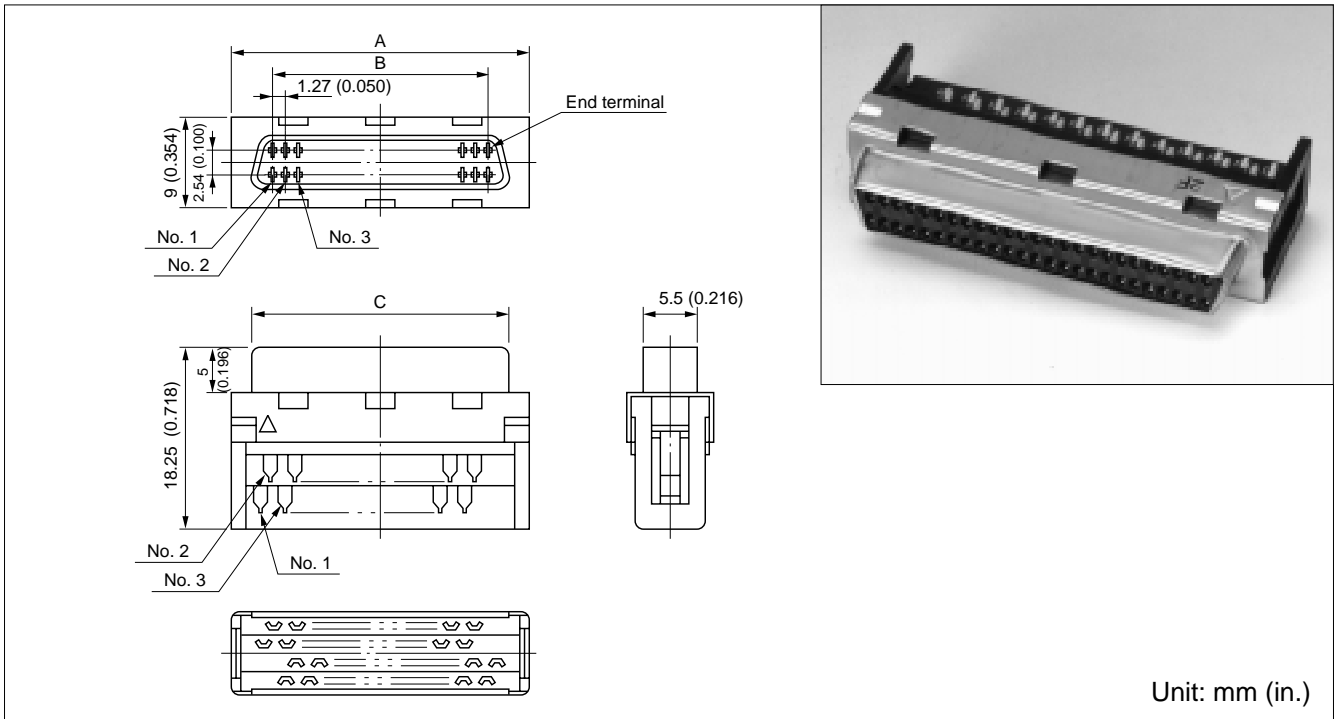
■ PART NUMBERS AND DIMENSIONS

| Number of contacts | Part number | Dimensions: mm (in.) | | | | | |
|--------------------|-----------------|----------------------|---------------|---------------|---------------|---------------|---------------|
| | | A | B | C | D | E | F |
| 28 | FCN-235P028-G/E | 38.48 (1.514) | 32.48 (1.278) | 20.88 (0.822) | 16.51 (0.650) | 26.68 (1.050) | 28.38 (1.117) |
| 36 | FCN-235P036-G/E | 43.56 (1.714) | 37.56 (1.478) | 25.96 (1.022) | 21.59 (0.850) | 31.76 (1.250) | 33.46 (1.317) |
| 50 | FCN-235P050-G/E | 52.45 (2.064) | 46.45 (1.828) | 34.85 (1.372) | 30.48 (1.200) | 40.65 (1.600) | 42.35 (1.607) |
| 68 | FCN-235P068-G/E | 63.88 (2.514) | 57.88 (2.278) | 46.28 (1.822) | 41.91 (1.650) | 52.08 (2.050) | 53.78 (2.117) |
| 80 | FCN-235P080-G/E | 71.50 (2.814) | 65.50 (2.587) | 53.90 (2.122) | 49.53 (1.950) | 59.70 (2.350) | 61.40 (2.417) |

230 Series (General-Purpose Type)

SOLDERING EYELET SOCKET

■ DIMENSIONS



■ PART NUMBERS AND DIMENSIONS

| Number of contacts | Part number | Dimensions: mm (in.) | | |
|--------------------|-----------------|----------------------|---------------|---------------|
| | | A | B | C |
| 20 | FCN-231J020-G/E | 19.25 (0.757) | 11.43 (0.450) | 15.60 (0.614) |
| 28 | FCN-231J028-G/E | 24.33 (0.957) | 16.51 (0.650) | 20.68 (0.814) |
| 36 | FCN-231J036-G/E | 29.41 (1.157) | 21.59 (0.850) | 25.76 (1.014) |
| 50 | FCN-231J050-G/E | 38.30 (1.507) | 30.48 (1.200) | 34.65 (1.364) |
| 68 | FCN-231J068-G/E | 49.73 (1.957) | 41.91 (1.650) | 46.08 (1.814) |

■ CONNECTOR COVER

FCN-230C□□□-A/E

FCN-230C□□□-B/E

FCN-230C□□□-C/E

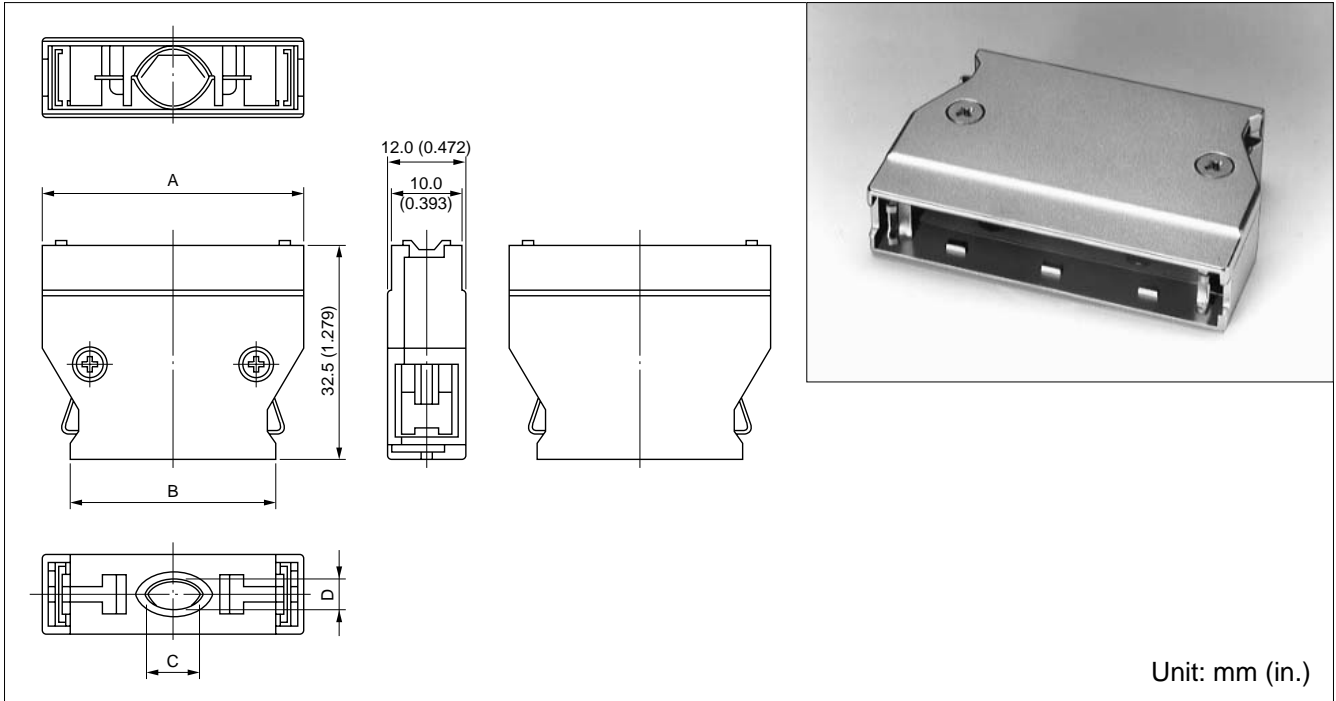
FCN-230C□□□-D/E

□□□: Number of contacts

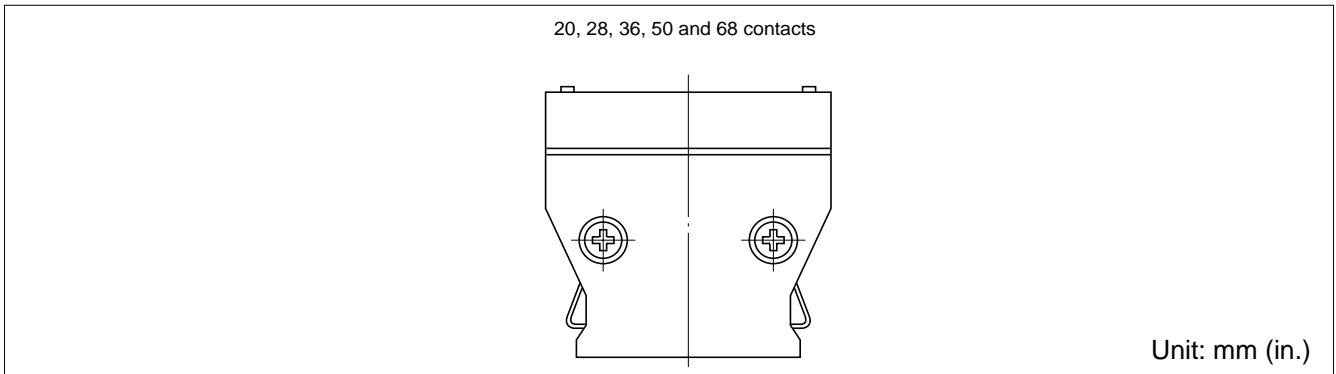
230 Series (General-Purpose Type)

METAL COVER [230 SERIES (GENERAL-PURPOSE), 230R SERIES (CONFORMING TO SCSI) AND 240 SERIES (GENERAL-PURPOSE)]

■ DIMENSIONS



■ SHAPE DEPENDING ON THE NUMBER OF CONTACTS



■ PART NUMBERS AND DIMENSIONS

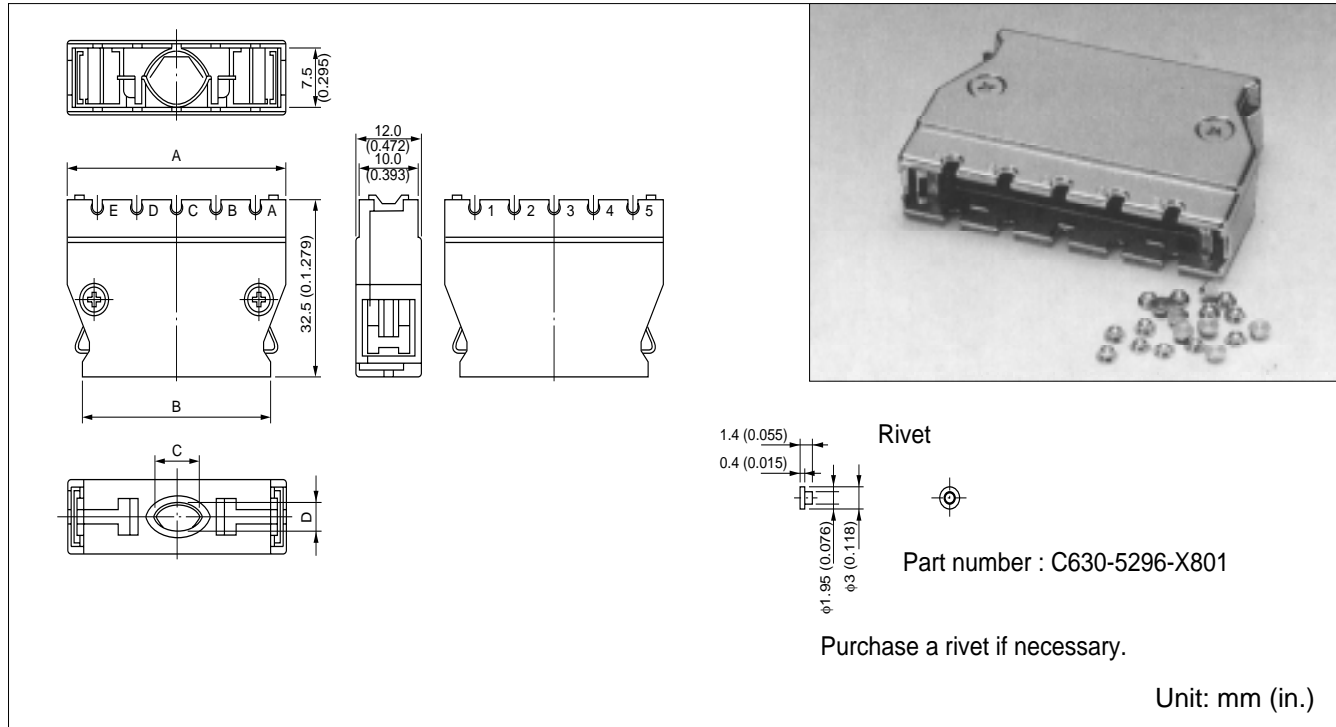
| Number of contacts | Part number | Dimensions: mm (in.) | | |
|--------------------|-----------------|----------------------|---------------|----------------------------|
| | | A | B | C × D |
| 20 | FCN-230C020-A/E | 28.95 (1.139) | 21.15 (0.852) | 6.5 × 4.5 (0.255 × 0.177) |
| | FCN-230C020-C/E | | | 8.5 × 8.2 (0.334 × 0.322) |
| 28 | FCN-230C028-A/E | 34.30 (1.350) | 26.23 (1.032) | 6.5 × 6.0 (0.255 × 0.236) |
| | FCN-230C028-C/E | | | 7.2 × 8.5 (0.283 × 0.334) |
| 36 | FCN-230C036-A/E | 39.11 (1.539) | 31.31 (1.232) | 9.5 × 8.0 (0.374 × 0.314) |
| | FCN-230C036-C/E | | | 9.0 × 10.0 (0.354 × 0.393) |
| 50 | FCN-230C050-A/E | 48.00 (1.899) | 40.20 (1.582) | 8.5 × 7.0 (0.334 × 0.275) |
| | FCN-230C050-C/E | | | 10.0 × 9.7 (0.393 × 0.381) |
| 68 | FCN-230C068-A/E | 59.43 (2.339) | 51.63 (2.032) | 9.0 × 8.0 (0.354 × 0.314) |
| | FCN-230C068-C/E | | | 10.0 × 9.0 (0.393 × 0.354) |

230 Series (General-Purpose Type)

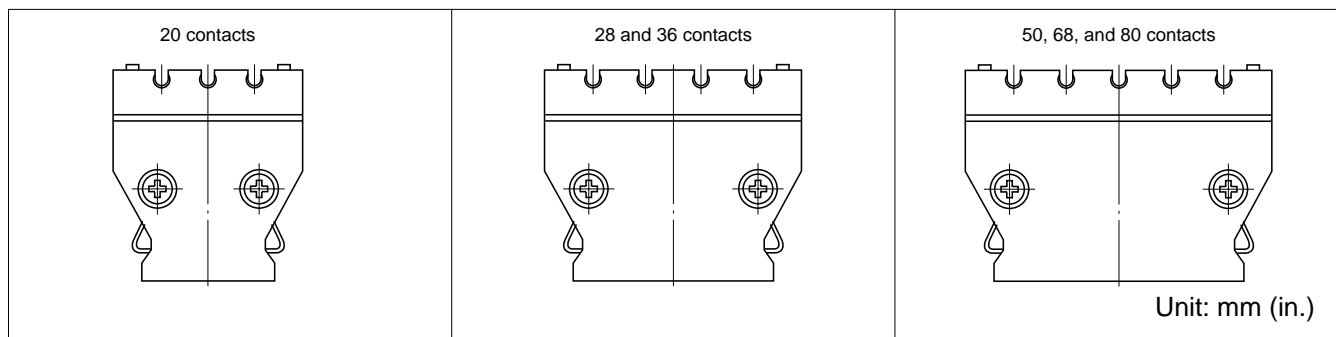
METAL COVER WITH POLARIZATION [230 SERIES (GENERAL-PURPOSE) AND 240 SERIES (GENERAL-PURPOSE)]

This metal cover prevents a connector from being incorrectly inserted when two or more connectors with the same number of contacts are mounted on a PC board. Use the metal cover together with the polarization guide.

■ DIMENSIONS



■ SHAPES OF MAIN BODY DEPENDING ON THE NUMBER OF CONTACTS

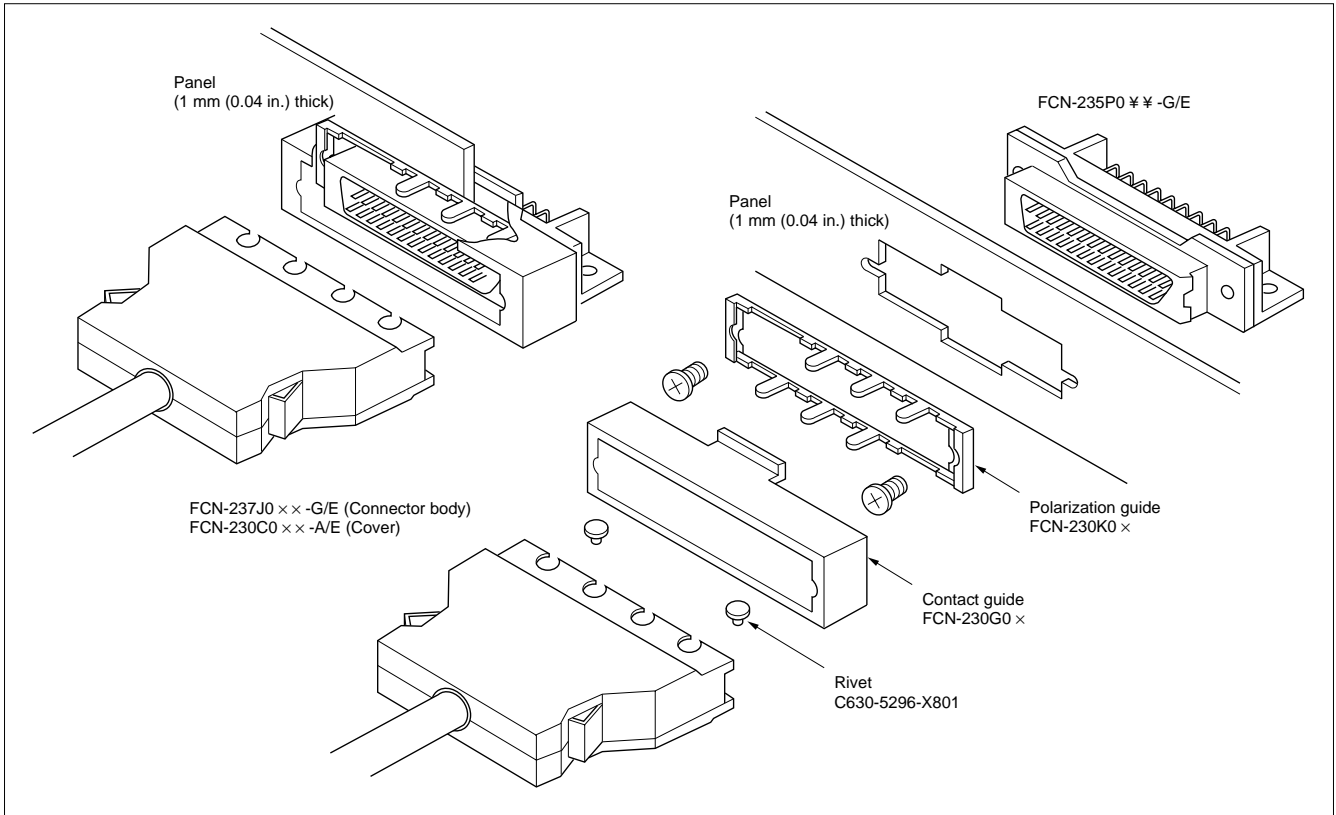


■ PART NUMBERS AND DIMENSIONS

| Number of contacts | Part number | Dimensions: mm (in.) | | |
|--------------------|-----------------|----------------------|---------------|-----------------------------|
| | | A | B | C × D |
| 20 | FCN-230C020-B/E | 28.95 (1.139) | 21.15 (0.852) | 6.5 × 4.5 (0.255 × 0.177) |
| 28 | FCN-230C028-B/E | 34.03 (1.339) | 26.23 (1.032) | 6.5 × 6.0 (0.255 × 0.236) |
| 36 | FCN-230C036-B/E | 39.11 (1.539) | 31.31 (1.232) | 9.5 × 8.0 (0.374 × 0.314) |
| | FCN-230C036-D/E | | | 10.0 × 9.0 (0.393 × 0.354) |
| 50 | FCN-230C050-B/E | 48.00 (1.899) | 40.20 (1.582) | 8.5 × 7.0 (0.334 × 0.275) |
| | FCN-230C050-D/E | | | 14.7 × 10.4 (0.578 × 0.409) |
| 68 | FCN-230C068-B/E | 59.43 (2.339) | 51.63 (2.032) | 9.0 × 8.0 (0.354 × 0.314) |
| | FCN-230C068-D/E | | | 14.7 × 10.4 (0.578 × 0.409) |
| 80 | FCN-230C080-D/E | 67.05 (2.639) | 59.25 (2.322) | 9.0 × 10.0 (0.354 × 0.393) |

230 Series (General-Purpose Type)

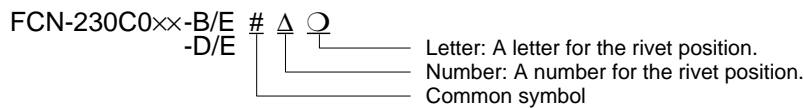
■ APPLICATIONS



■ PART NUMBERING FOR POLARIZATION COVER VARIATIONS (WITH RIVETS)

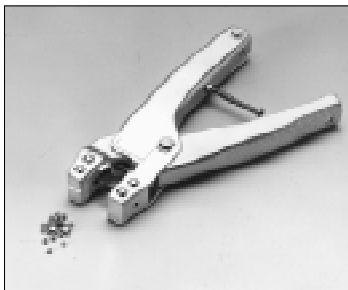
When specifying the positions of rivets for polarization, specify the part number as follows:

Part number for polarization: Specify # Δ ○ at the end of the part number.



Example: FCN-230C036 -B/E #2C
-D/E

#2C indicates that rivets (C630-5296-X801) are placed at positions 2 and C on the cover with a riveting tool (FCN-230T-T001/H).



Riveting tool
(FCN-230T-T001/H)



FCN-230C0xx-B/E #2C
-D/E

Standard specifications of rivet positions for polarization

| | | | | |
|-------------|----|----|----|----|
| 20 contacts | 1B | 1C | 2A | 3A |
| 28 contacts | 1D | 2C | 3B | 4A |
| 36 contacts | 1D | 2C | 3B | 4A |
| 50 contacts | 1E | 2D | 4B | 5A |
| 68 contacts | 1E | 2D | 4B | 5A |

230 Series (General-Purpose Type)

ACCESSORY (DUST CAP FOR PLUG) [230 SERIES (GENERAL-PURPOSE) AND 240 SERIES (GENERAL-PURPOSE)]

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

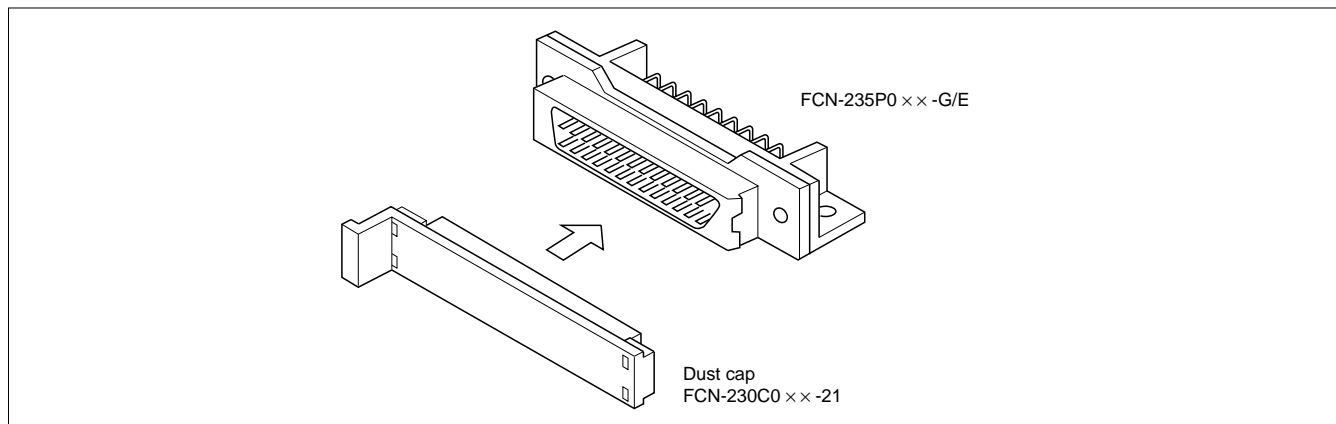
■ DIMENSIONS



■ PART NUMBERS AND DIMENSIONS

| Number of contacts | Part number | Dimensions: mm (in.) | | |
|--------------------|----------------|----------------------|---------------|---------------|
| | | A | B | C |
| 20 | FCN-230C020-21 | 15.60 (0.614) | 25.50 (1.003) | 10.00 (0.393) |
| 28 | FCN-230C028-21 | 20.68 (0.814) | 30.58 (1.203) | 10.00 (0.393) |
| 36 | FCN-230C036-21 | 25.76 (1.014) | 35.66 (1.403) | 10.00 (0.393) |
| 50 | FCN-230C050-21 | 34.65 (1.364) | 44.55 (1.753) | 15.00 (0.590) |
| 68 | FCN-230C068-21 | 46.08 (1.814) | 55.98 (2.203) | 20.00 (0.787) |

■ APPLICATIONS



230 Series (General-Purpose Type)

CABLE ASSEMBLY TOOLS

The following tools are needed to assemble connectors.

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

The tools shown below can also be used for the 230R/240/240R series.

1. Cable Aligner

| Part number | Semiautomatic cable aligner | | | Hand tool |
|-------------|-----------------------------|--------------|----------------|-----------------|
| | Body/Controller | Bed | Adaptor | |
| FCN-237J | FCN-M562-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

| Part number | 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

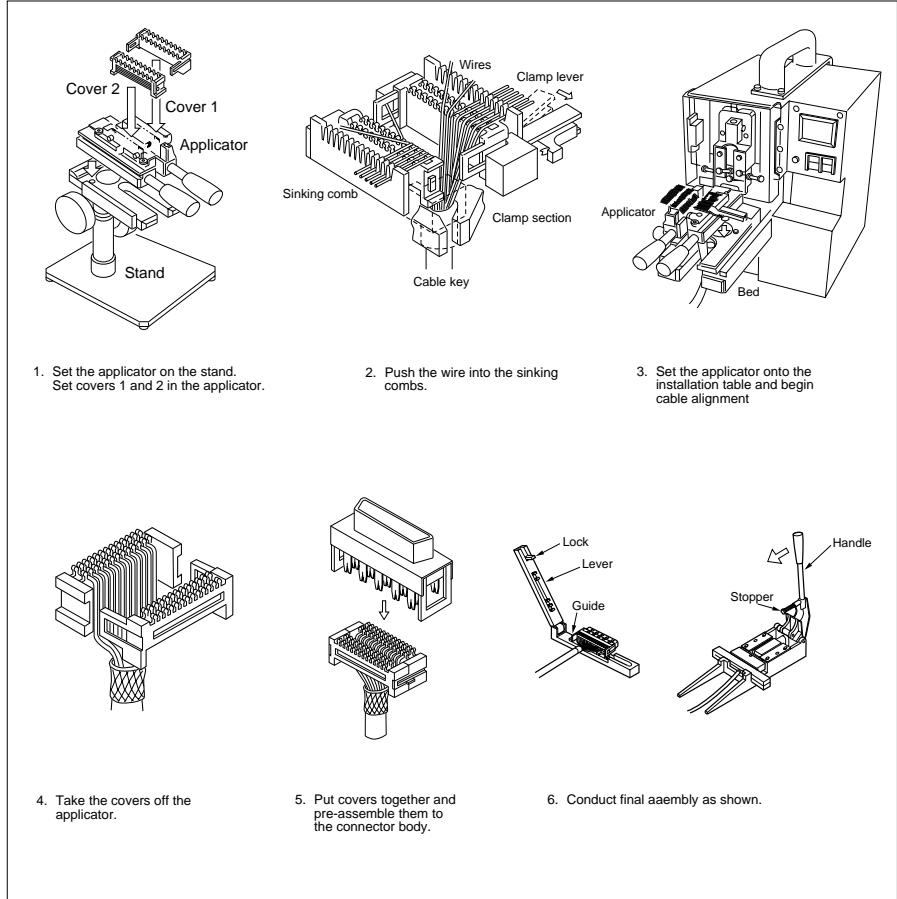


• Insulation displacement contact (IDC) tool

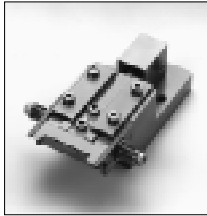
230 Series (General-Purpose Type)

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)



SOCKET: FCN-237J***-G/E (***: 020, 028, 036, 050, 068, 080)

| Pos No. | Applied Wire (wire Dia.: mm [in.]) | Connector Part number | Cable Aligner | | IDC Tool |
|---------------|--|---|---|--------------|--|
| | | | Hand Tool | Semi-Auto | |
| 20 68 | #28 to #30 (0.5 to 0.65) | FCN-237R020-G/E FCN-237J080-G/E | FCN-237T-T062/H FCN-237T-T043/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/A-***(***: 020, 028, 036, 050, 068, 080)
 Stand: :FCN-D550

230 Series (General-Purpose Type)

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
Web: 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
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
Web: 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
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.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.