

# PC BOARD CONNECTORS

## 740 SERIES

### ■ FEATURES

- Various types of headers are available: one side shrouded, both sides shrouded, with simplified latch, and box type.
- The connector having a simplified latch prevents the connector from working loose because of vibration.
- The mini header has a clip to prevent incorrect insertion.
- A 740 series connector with a power terminal (2 in 1) for SCSI/IDE interface unit connections is also available.

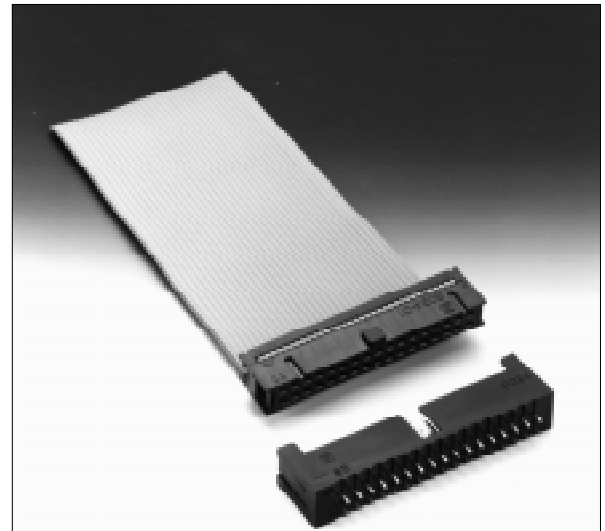
### ■ SPECIFICATIONS

#### 1. Standard type

| Item                           | Specification  |
|--------------------------------|--|
| Operating temperature range    | -55°C to +105°C  |
| Current rating                 | DC 1 A   |
| Voltage rating                 | AC 250 V   |
| Contact resistance             | 15 mΩ max. (DC 6 V, 0.1 A)   |
| Insulation resistance          | 1000 MΩ min. (DC 500 V)  |
| Dielectric strength            | AC 500 V for 1 minute  |
| Insertion force                | 3.5 kg max. (10 pins), 10.5 kg max. (30 pins)                                  |
| Withdrawal force               | 0.25 kg min. (10 pins), 1.0 kg min. (30 pins)                                  |
| Applicable wire                | Flat cable: 1.27 mm (0.050 in.) pitch<br>AWG #28 (stranded) or AWG #30 (solid) |
| Applicable PC board (standard) | 1.6 mm   |

#### 2. Power connector integrated type

| Item                           | Specification  |
|--------------------------------|--|
| Operating temperature range    | -55°C to +105°C  |
| Current rating                 | DC 1 A (signal pin)<br>DC 5 A (power pin)  |
| Voltage rating                 | AC 250 V   |
| Contact resistance             | 15 mΩ max. (signal pin, DC 6 V, 0.1 A)<br>10 mΩ max. (power pin, DC 6 V, 0.3 A)  |
| Insulation resistance          | 1000 MΩ min. (DC 500 V)  |
| Dielectric strength            | AC 500 V for 1 minute (signal pin)<br>AC 1000 V for 1 minute (power pin)   |
| Insertion force                | 50-contact signal pin: 17.5 kg max.<br>40-contact signal pin: 14.0 kg max.<br>Power pin (reference value): 8.8 kg max. |
| Withdrawal force               | 50-contact signal pin: 2.0 kg max.<br>40-contact signal pin: 1.5 kg max.<br>Power pin (reference value): 0.8 kg max.   |
| Applicable PC board (standard) | 1.6 mm (0.062 in.) (through hole type)   |



### ■ MATERIALS

#### 1. Standard type

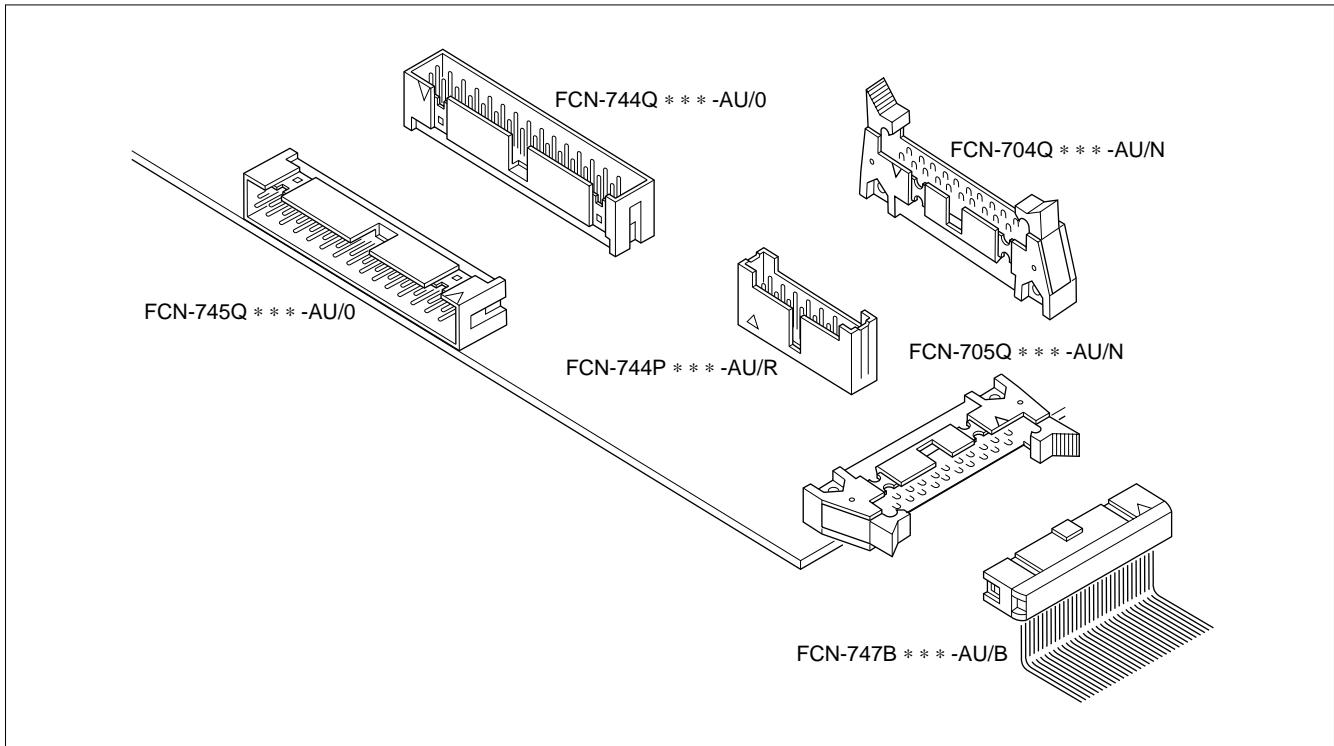
| Item                | Materials           |           |
|---------------------|---------------------|-----------|
| Insulating material | Polyester (UL94V-0) |           |
| Conductor           | Copper alloy        |           |
| Plating             | Contact             | Gold      |
|         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

#### 2. Power connector integrated type

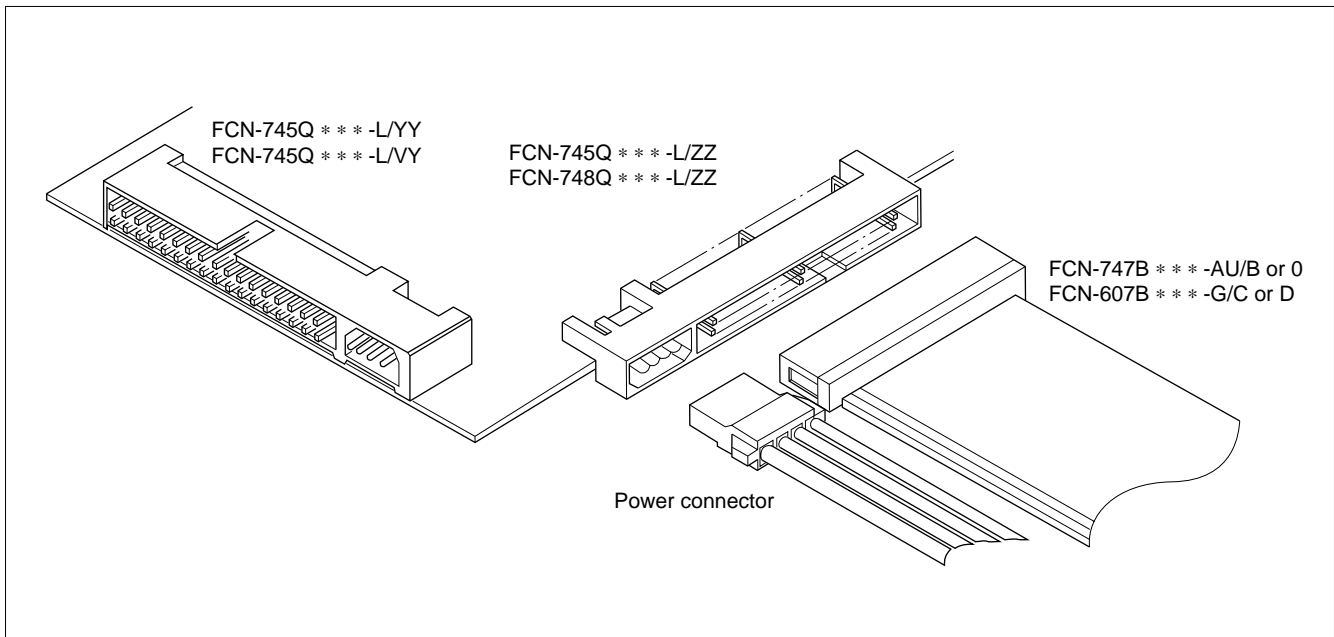
| Item                | Materials  |           |
|---------------------|--|-----------|
| Insulating material | Through hole type:<br>Polyester (UL94V-0)<br>SMT type: PPS (UL94V-0) |           |
| Conductor           | Copper alloy   |           |
| Plating             | Signal pin contact   | Gold      |
|                     | Signal pin tail  | Palladium |
|                     | Power pin  | Solder    |

## ■ APPLICATION EXAMPLE

### 1. Standard type



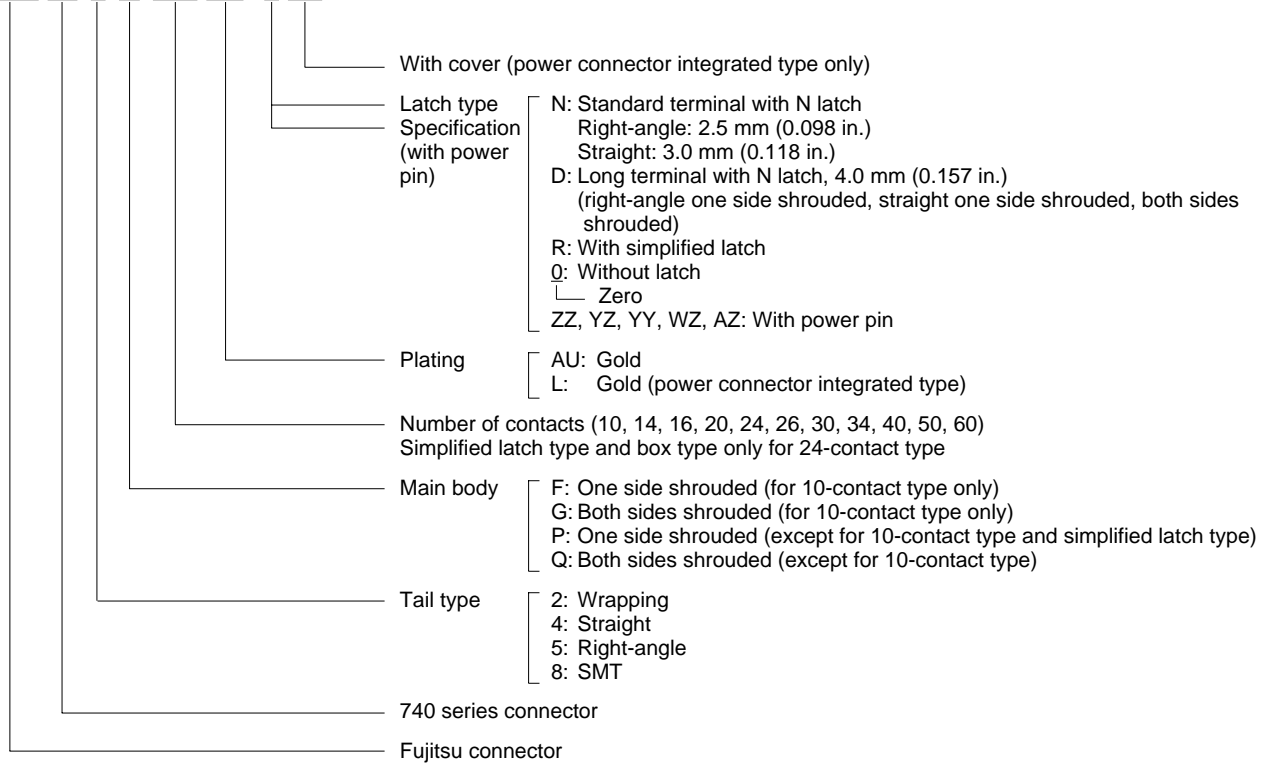
### 2. Power connector integrated type



## ■ ORDERING CODE

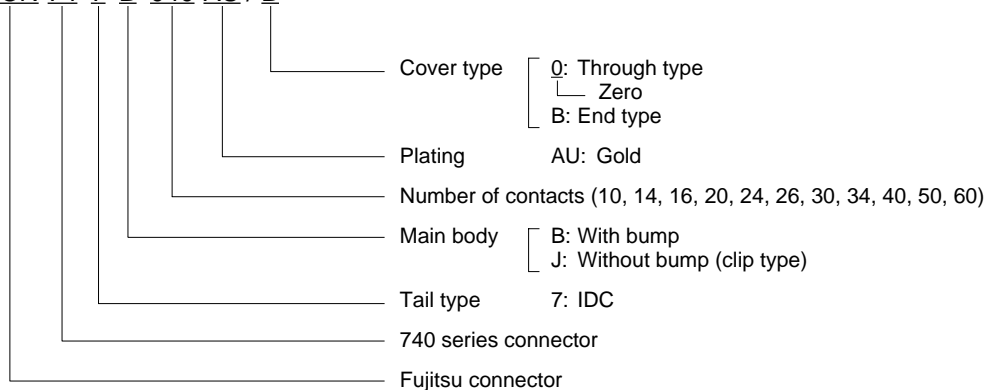
### 1. Header

FCN-74 5 Q 050-AU / 0-0C



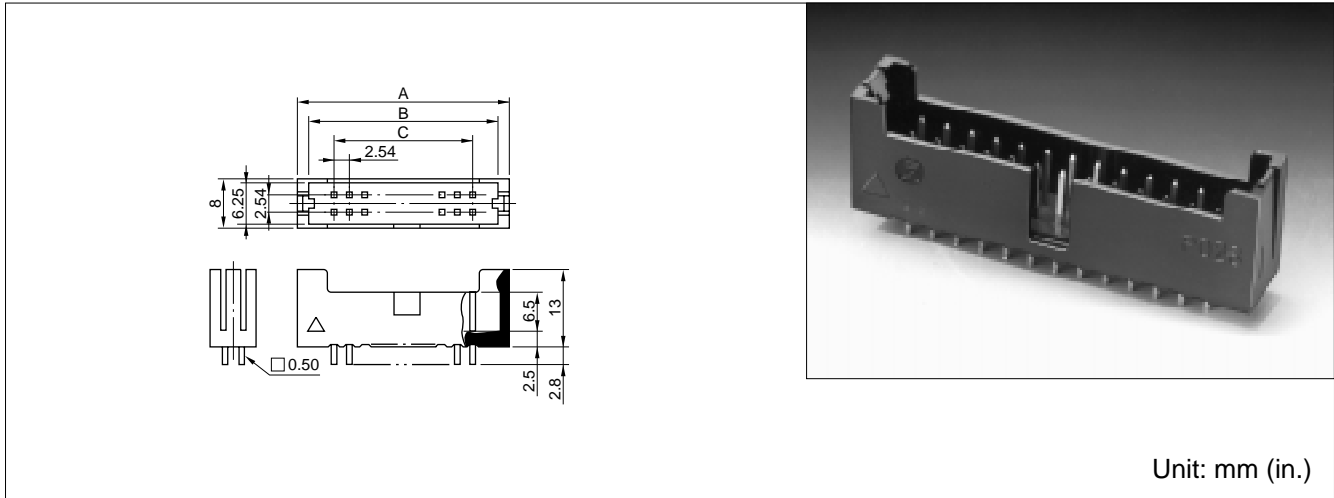
### 2. Socket

FCN-74 7 B 040-AU / B

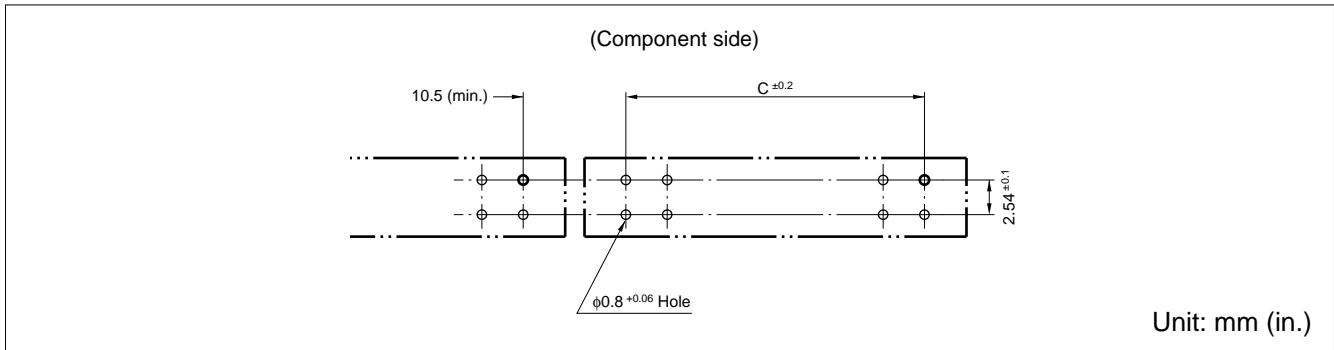


## STRAIGHT PLUG (WITH SIMPLIFIED LATCH)

### ■ DIMENSIONS



### ■ MOUNTING HOLE LAYOUT

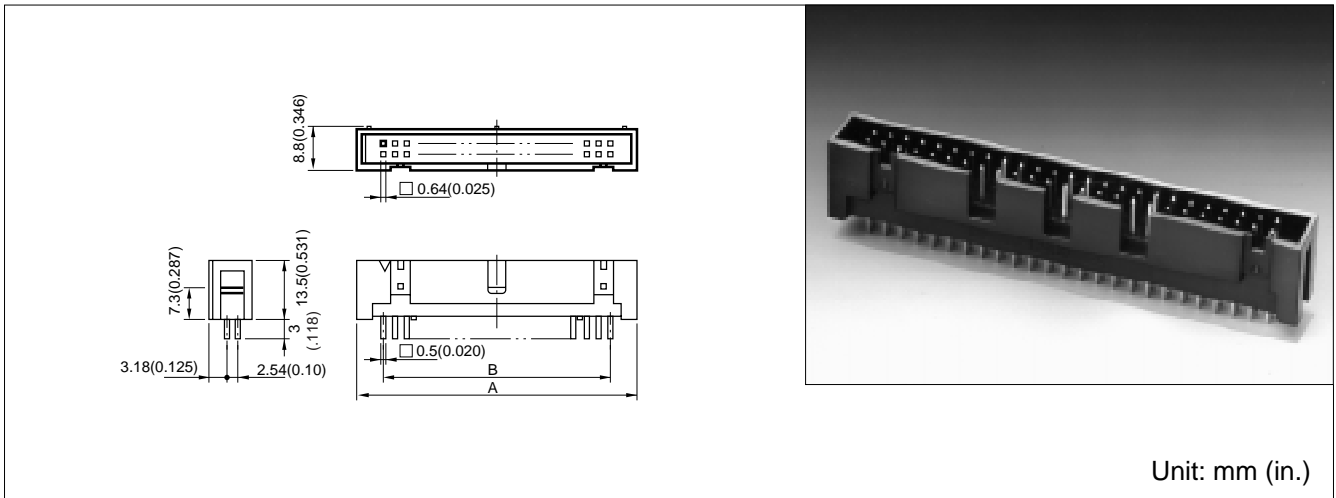


### ■ PART NUMBERS AND DIMENSIONS

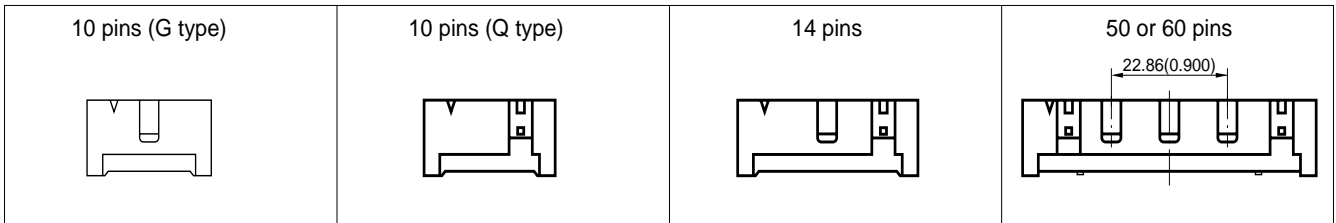
| Number of contacts | Part number      | Mini header          |       |       |
|--------------------|------------------|----------------------|-------|-------|
|                    |                  | Dimensions: mm (in.) |       |       |
|                    |                  | A                    | B     | C     |
| 10                 | FCN-744P010-AU/R | 20.12                | 17.72 | 10.16 |
| 14                 | FCN-744P014-AU/R | 25.20                | 22.80 | 15.24 |
| 16                 | FCN-744P016-AU/R | 27.74                | 25.34 | 17.78 |
| 20                 | FCN-744P020-AU/R | 32.82                | 30.42 | 22.86 |
| 24                 | FCN-744P024-AU/R | 37.90                | 35.50 | 27.94 |
| 26                 | FCN-744P026-AU/R | 40.44                | 38.04 | 30.48 |
| 30                 | FCN-744P030-AU/R | 45.52                | 43.12 | 35.56 |
| 34                 | FCN-744P034-AU/R | 50.60                | 48.20 | 40.64 |

## STRAIGHT PLUG (BOX TYPE)

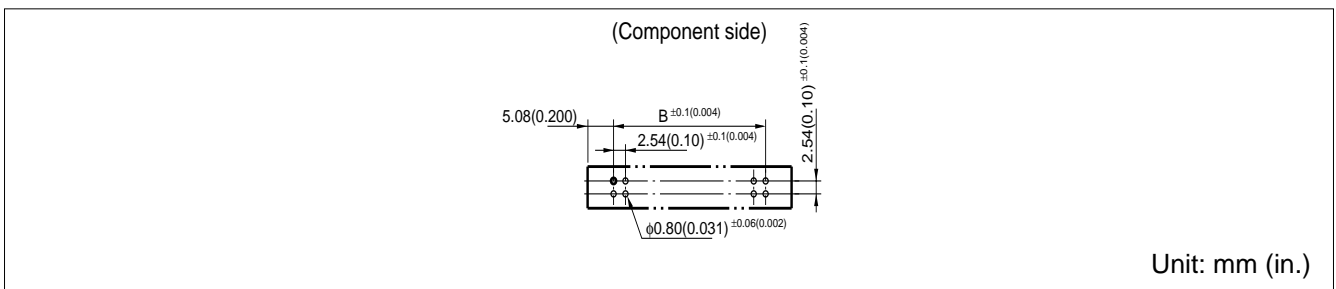
### ■ DIMENSIONS



### ■ CONFIGURATION BY THE NUMBER OF PINS



### ■ MOUNTING HOLE LAYOUT

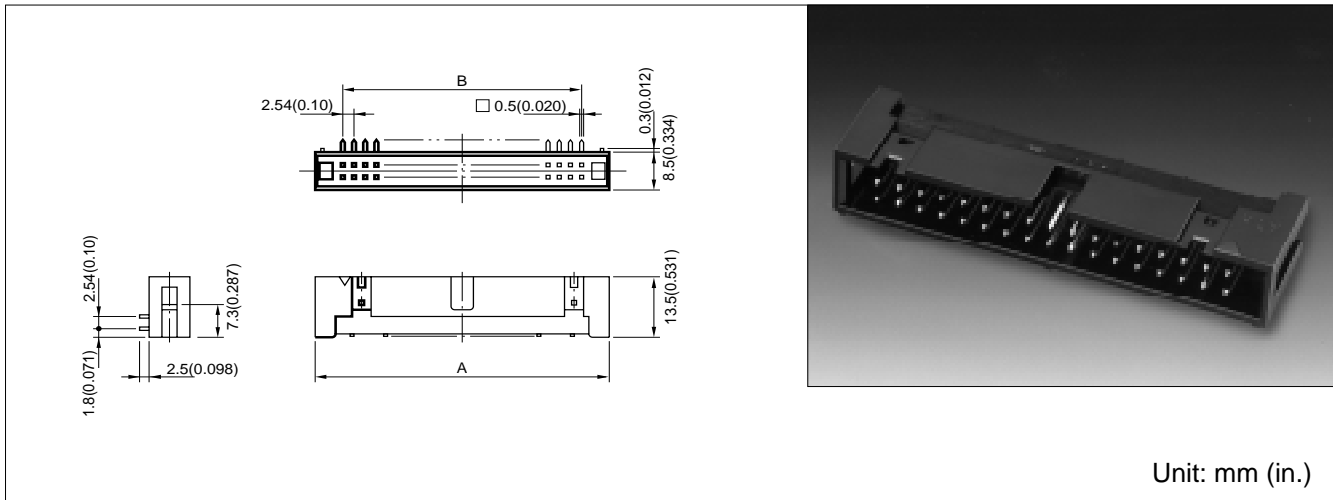


### ■ PART NUMBERS AND DIMENSIONS

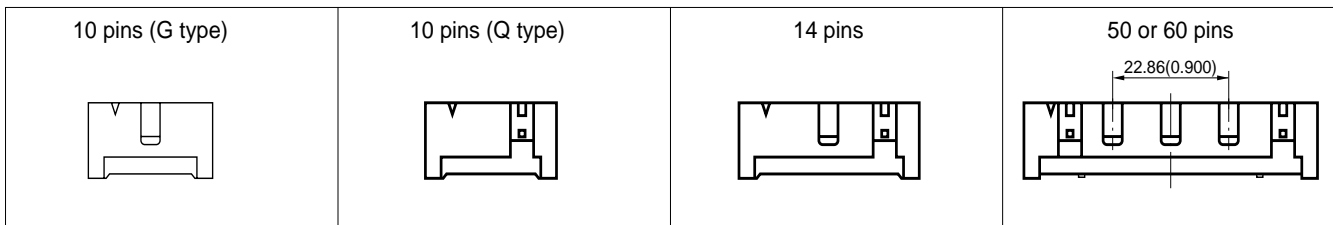
| Number of contacts | Part number      | Dimensions: mm (in.) |               |
|--------------------|------------------|----------------------|---------------|
|                    |                  | A                    | B             |
| 10                 | FCN-744G010-AU/0 | 20.3 (0.799)         | 10.16 (0.400) |
| 10                 | FCN-744Q010-AU/0 | 20.3 (0.799)         | 10.16 (0.400) |
| 14                 | FCN-744Q014-AU/0 | 25.4 (1.000)         | 15.24 (0.600) |
| 16                 | FCN-744Q016-AU/0 | 27.9 (1.098)         | 17.78 (0.700) |
| 20                 | FCN-744Q020-AU/0 | 33.0 (1.299)         | 22.86 (0.900) |
| 24                 | FCN-744Q024-AU/0 | 38.08 (1.499)        | 27.94 (1.100) |
| 26                 | FCN-744Q026-AU/0 | 40.6 (1.598)         | 30.48 (1.200) |
| 30                 | FCN-744Q030-AU/0 | 45.7 (1.799)         | 35.56 (1.400) |
| 34                 | FCN-744Q034-AU/0 | 50.8 (2.000)         | 40.64 (1.600) |
| 40                 | FCN-744Q040-AU/0 | 58.4 (2.299)         | 48.26 (1.900) |
| 50                 | FCN-744Q050-AU/0 | 71.1 (2.799)         | 60.96 (2.400) |
| 60                 | FCN-744Q060-AU/0 | 83.8 (32.99)         | 73.66 (2.900) |

## RIGHT-ANGLE PLUG (BOX TYPE)

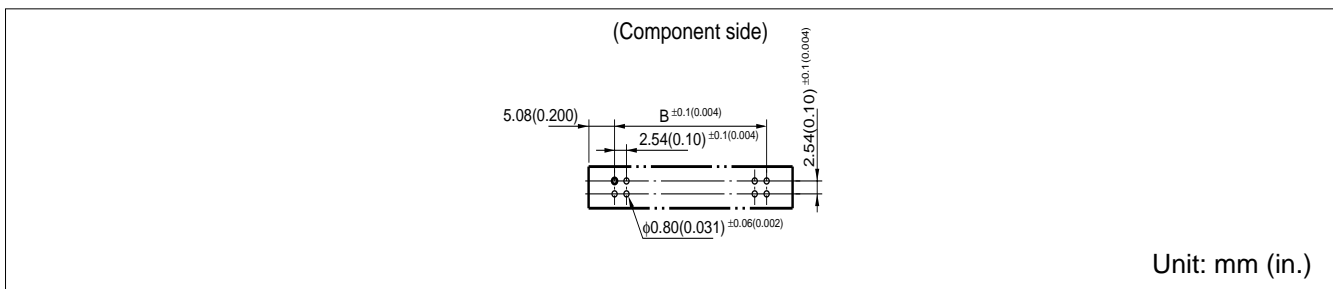
### ■ DIMENSIONS



### ■ CONFIGURATION BY THE NUMBER OF PINS



### ■ MOUNTING HOLE LAYOUT

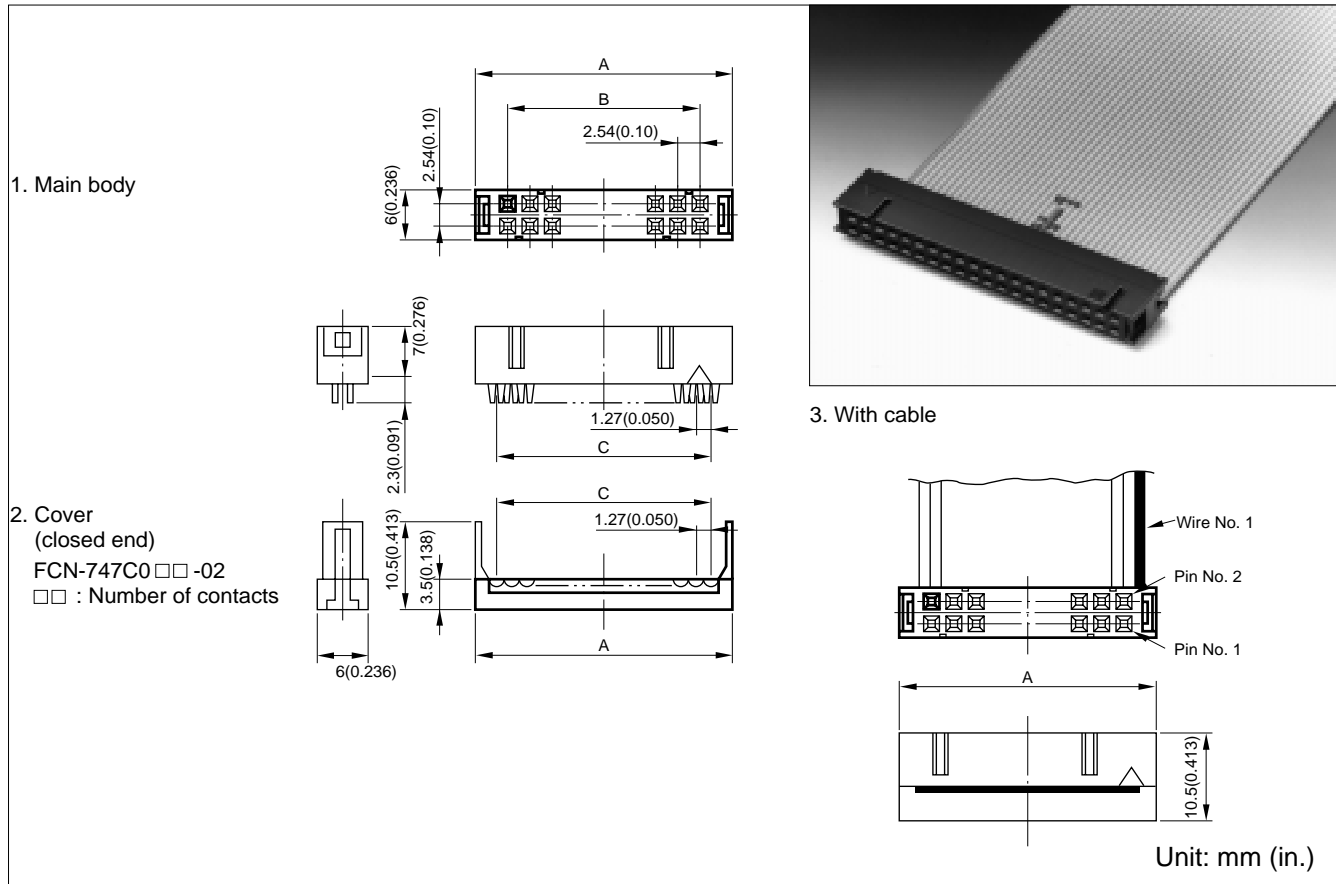


### ■ PART NUMBERS AND DIMENSIONS

| Number of contacts | Part number      | Dimensions: mm (in.) |               |
|--------------------|------------------|----------------------|---------------|
|                    |                  | A                    | B             |
| 10                 | FCN-745G010-AU/0 | 20.3 (0.799)         | 10.16 (0.400) |
| 10                 | FCN-745Q010-AU/0 | 20.3 (0.799)         | 10.16 (0.400) |
| 14                 | FCN-745Q014-AU/0 | 25.4 (1.000)         | 15.24 (0.600) |
| 16                 | FCN-745Q016-AU/0 | 27.9 (1.098)         | 17.78 (0.700) |
| 20                 | FCN-745Q020-AU/0 | 33.0 (1.299)         | 22.86 (0.900) |
| 24                 | FCN-745Q024-AU/0 | 38.08 (1.499)        | 27.94 (1.100) |
| 26                 | FCN-745Q026-AU/0 | 40.6 (1.598)         | 30.48 (1.200) |
| 30                 | FCN-745Q030-AU/0 | 45.7 (1.799)         | 35.56 (1.400) |
| 34                 | FCN-745Q034-AU/0 | 50.8 (2.000)         | 40.64 (1.600) |
| 40                 | FCN-745Q040-AU/0 | 58.4 (2.299)         | 48.26 (1.900) |
| 50                 | FCN-745Q050-AU/0 | 71.1 (2.799)         | 60.96 (2.400) |
| 60                 | FCN-745Q060-AU/0 | 83.8 (32.99)         | 73.66 (2.900) |

## IDC SOCKET (CLIP TYPE, CLOSED END COVER)

### ■ DIMENSIONS

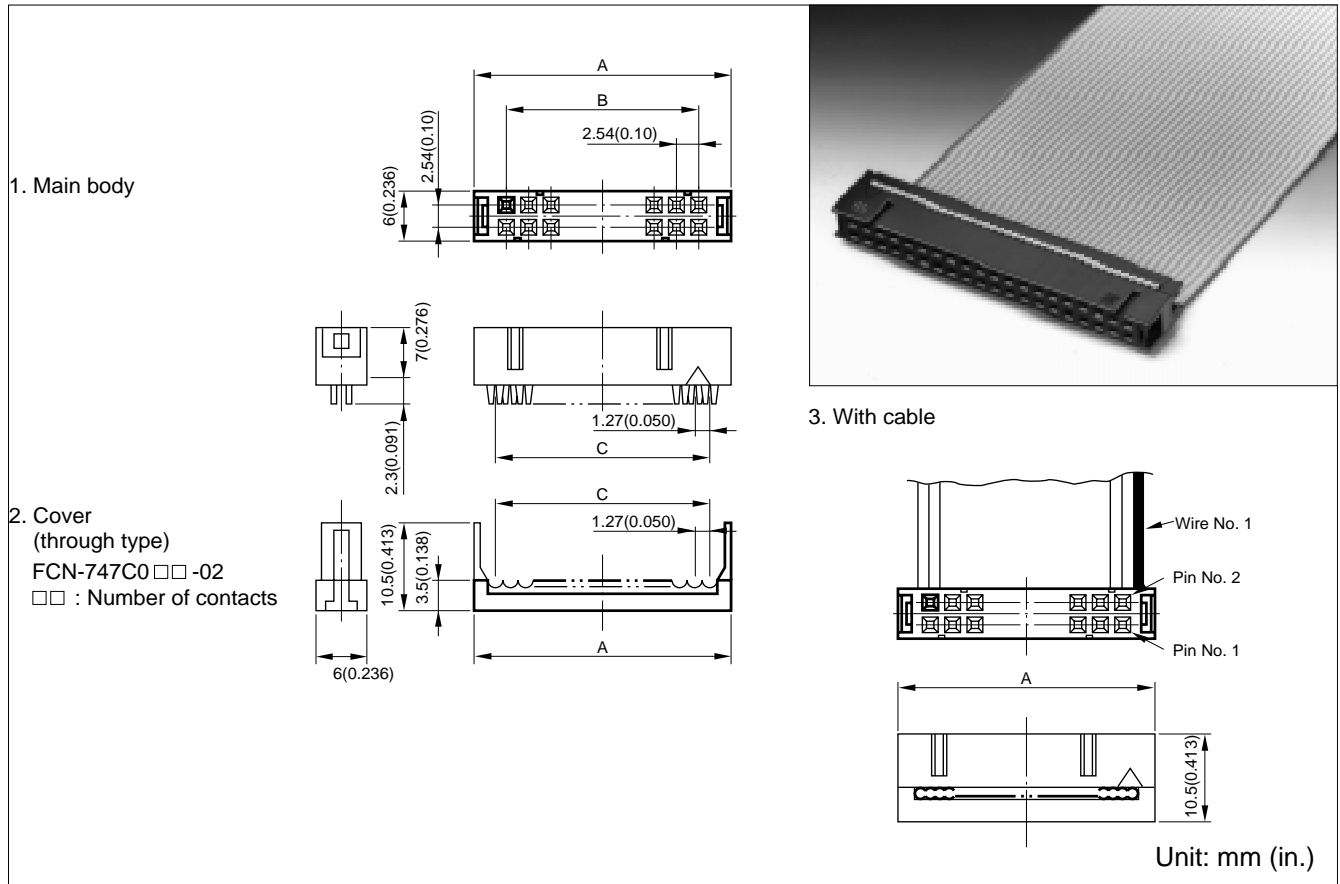


### ■ PART NUMBERS AND DIMENSIONS

| Number of contacts | Part number      | Dimensions: mm (in.) |               |               | Min. purchase lot quality |
|--------------------|------------------|----------------------|---------------|---------------|---------------------------|
|                    |                  | A                    | B             | C             |                           |
| 10                 | FCN-747J010-AU/B | 17.27 (0.680)        | 10.16 (0.400) | 11.43 (0.450) | 30                        |
| 14                 | FCN-747J014-AU/B | 22.35 (0.880)        | 15.24 (0.600) | 16.51 (0.650) | 23                        |
| 16                 | FCN-747J016-AU/B | 24.89 (0.980)        | 17.78 (0.700) | 19.05 (0.750) | 21                        |
| 20                 | FCN-747J020-AU/B | 29.97 (1.180)        | 22.86 (0.900) | 24.13 (0.950) | 17                        |
| 24                 | FCN-747J024-AU/B | 35.05 (1.380)        | 27.94 (1.100) | 29.21 (1.150) | 15                        |
| 26                 | FCN-747J026-AU/B | 37.59 (1.480)        | 30.48 (1.200) | 31.75 (1.250) | 14                        |
| 30                 | FCN-747J030-AU/B | 42.67 (1.680)        | 35.56 (1.400) | 36.83 (1.450) | 12                        |
| 34                 | FCN-747J034-AU/B | 47.75 (1.880)        | 40.64 (1.600) | 41.91 (1.650) | 11                        |
| 40                 | FCN-747J040-AU/B | 55.37 (2.180)        | 48.26 (1.800) | 49.54 (1.950) | 9                         |
| 50                 | FCN-747J050-AU/B | 68.07 (2.680)        | 60.96 (2.400) | 62.23 (2.450) | 7                         |
| 60                 | FCN-747J060-AU/B | 80.77 (3.180)        | 73.66 (2.900) | 74.93 (2.950) | 6                         |

## IDC SOCKET (CLIP TYPE, THROUGH END COVER)

### ■ DIMENSIONS



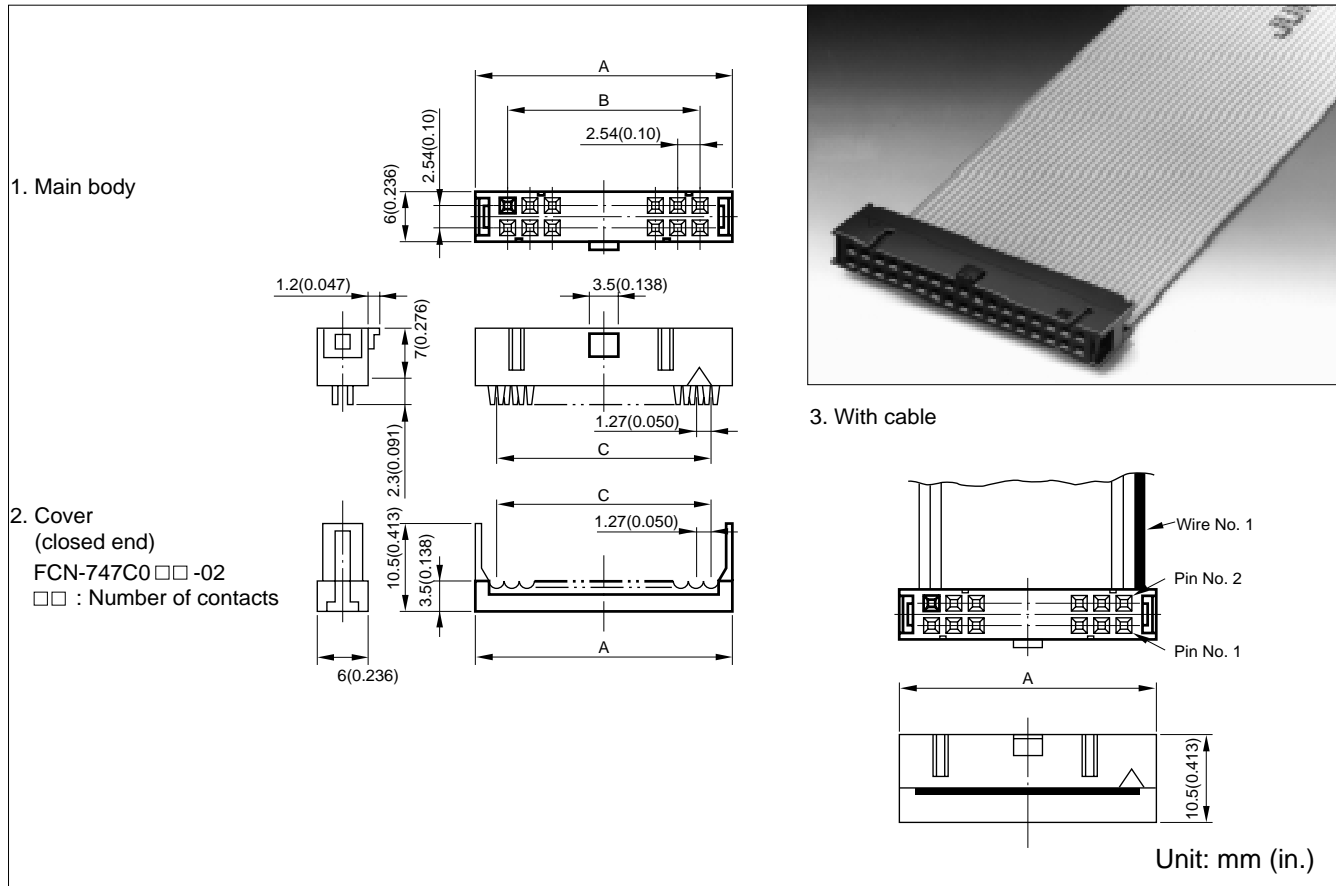
### ■ PART NUMBERS AND DIMENSIONS

| Number of contacts | Part number      | Dimensions: mm (in.) |               |               | Min. purchase lot quality |
|--------------------|------------------|----------------------|---------------|---------------|---------------------------|
|                    |                  | A                    | B             | C             |                           |
| 10                 | FCN-747J010-AU/0 | 17.27 (0.680)        | 10.16 (0.400) | 11.43 (0.450) | 30                        |
| 14                 | FCN-747J014-AU/0 | 22.35 (0.880)        | 15.24 (0.600) | 16.51 (0.650) | 23                        |
| 16                 | FCN-747J016-AU/0 | 24.89 (0.980)        | 17.78 (0.700) | 19.05 (0.750) | 21                        |
| 20                 | FCN-747J020-AU/0 | 29.97 (1.180)        | 22.86 (0.900) | 24.13 (0.950) | 17                        |
| 24                 | FCN-747J024-AU/0 | 35.05 (1.380)        | 27.94 (1.100) | 29.21 (1.150) | 15                        |
| 26                 | FCN-747J026-AU/0 | 37.59 (1.480)        | 30.48 (1.200) | 31.75 (1.250) | 14                        |
| 30                 | FCN-747J030-AU/0 | 42.67 (1.680)        | 35.56 (1.400) | 36.83 (1.450) | 12                        |
| 34                 | FCN-747J034-AU/0 | 47.75 (1.880)        | 40.64 (1.600) | 41.91 (1.650) | 11                        |
| 40                 | FCN-747J040-AU/0 | 55.37 (2.180)        | 48.26 (1.800) | 49.54 (1.950) | 9                         |
| 50                 | FCN-747J050-AU/0 | 68.07 (2.680)        | 60.96 (2.400) | 62.23 (2.450) | 7                         |
| 60                 | FCN-747J060-AU/0 | 80.77 (3.180)        | 73.66 (2.900) | 74.93 (2.950) | 6                         |



## IDC SOCKET (BUMP TYPE, CLOSED END COVER)

### ■ DIMENSIONS

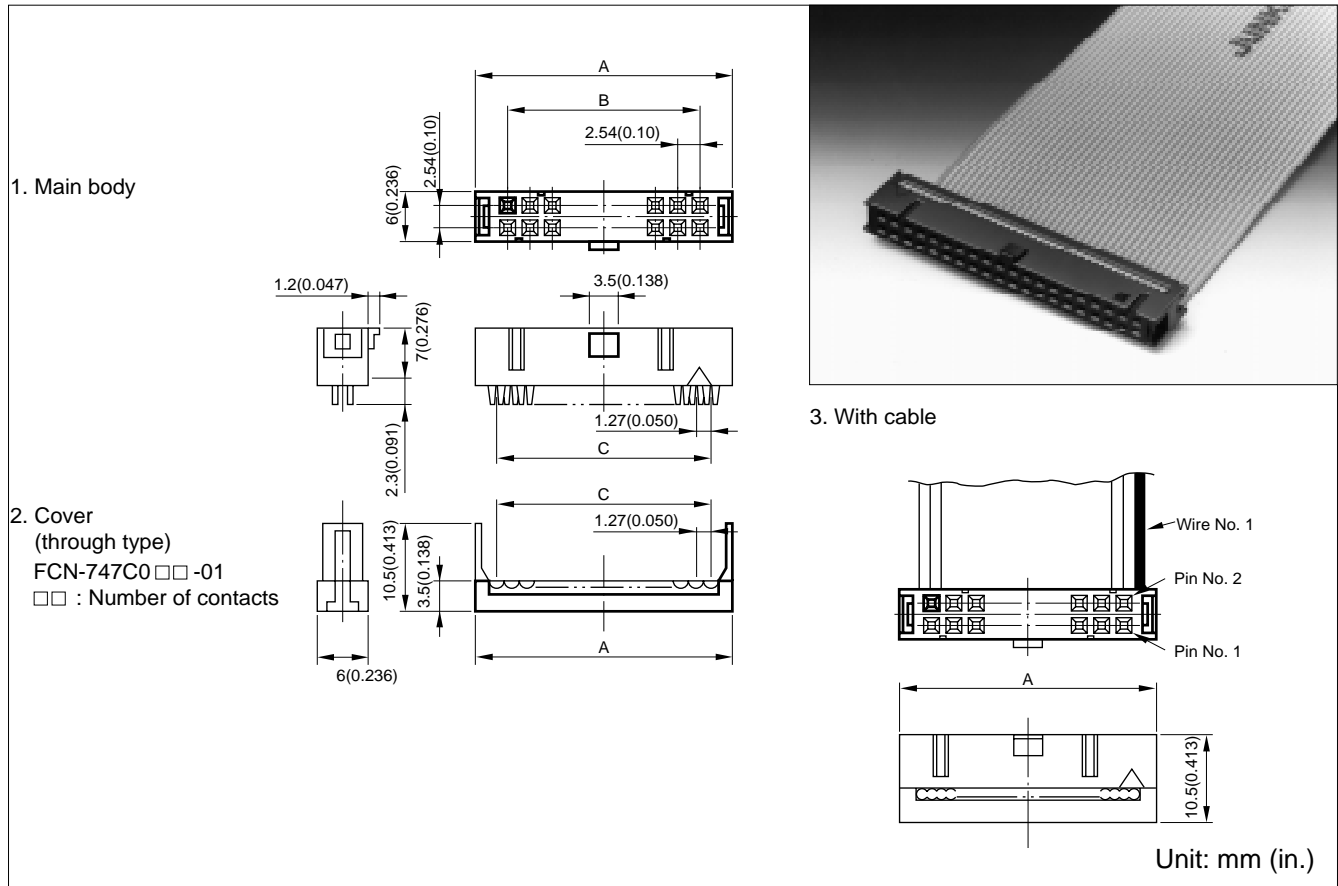


### ■ PART NUMBERS AND DIMENSIONS

| Number of contacts | Part number      | Dimensions: mm (in.) |               |               | Min. purchase lot quality |
|--------------------|------------------|----------------------|---------------|---------------|---------------------------|
|                    |                  | A                    | B             | C             |                           |
| 10                 | FCN-747B010-AU/B | 17.27 (0.680)        | 10.16 (0.400) | 11.43 (0.450) | 30                        |
| 14                 | FCN-747B014-AU/B | 22.35 (0.880)        | 15.24 (0.600) | 16.51 (0.650) | 23                        |
| 16                 | FCN-747B016-AU/B | 24.89 (0.980)        | 17.78 (0.700) | 19.05 (0.750) | 21                        |
| 20                 | FCN-747B020-AU/B | 29.97 (1.180)        | 22.86 (0.900) | 24.13 (0.950) | 17                        |
| 24                 | FCN-747B024-AU/B | 35.05 (1.380)        | 27.94 (1.100) | 29.21 (1.150) | 15                        |
| 26                 | FCN-747B026-AU/B | 37.59 (1.480)        | 30.48 (1.200) | 31.75 (1.250) | 14                        |
| 30                 | FCN-747B030-AU/B | 42.67 (1.680)        | 35.56 (1.400) | 36.83 (1.450) | 12                        |
| 34                 | FCN-747B034-AU/B | 47.75 (1.880)        | 40.64 (1.600) | 41.91 (1.650) | 11                        |
| 40                 | FCN-747B040-AU/B | 55.37 (2.180)        | 48.26 (1.800) | 49.54 (1.950) | 9                         |
| 50                 | FCN-747B050-AU/B | 68.07 (2.680)        | 60.96 (2.400) | 62.23 (2.450) | 7                         |
| 60                 | FCN-747B060-AU/B | 80.77 (3.180)        | 73.66 (2.900) | 74.93 (2.950) | 6                         |

## IDC SOCKET (BUMP TYPE, THROUGH END COVER)

### ■ DIMENSIONS



### ■ PART NUMBERS AND DIMENSIONS

| Number of contacts | Part number      | Dimensions: mm (in.) |               |               | Min. purchase lot quality |
|--------------------|------------------|----------------------|---------------|---------------|---------------------------|
|                    |                  | A                    | B             | C             |                           |
| 10                 | FCN-747B010-AU/0 | 17.27 (0.680)        | 10.16 (0.400) | 11.43 (0.450) | 30                        |
| 14                 | FCN-747B014-AU/0 | 22.35 (0.880)        | 15.24 (0.600) | 16.51 (0.650) | 23                        |
| 16                 | FCN-747B016-AU/0 | 24.89 (0.980)        | 17.78 (0.700) | 19.05 (0.750) | 21                        |
| 20                 | FCN-747B020-AU/0 | 29.97 (1.180)        | 22.86 (0.900) | 24.13 (0.950) | 17                        |
| 24                 | FCN-747B024-AU/0 | 35.05 (1.380)        | 27.94 (1.100) | 29.21 (1.150) | 15                        |
| 26                 | FCN-747B026-AU/0 | 37.59 (1.480)        | 30.48 (1.200) | 31.75 (1.250) | 14                        |
| 30                 | FCN-747B030-AU/0 | 42.67 (1.680)        | 35.56 (1.400) | 36.83 (1.450) | 12                        |
| 34                 | FCN-747B034-AU/0 | 47.75 (1.880)        | 40.64 (1.600) | 41.91 (1.650) | 11                        |
| 40                 | FCN-747B040-AU/0 | 55.37 (2.180)        | 48.26 (1.800) | 49.54 (1.950) | 9                         |
| 50                 | FCN-747B050-AU/0 | 68.07 (2.680)        | 60.96 (2.400) | 62.23 (2.450) | 7                         |
| 60                 | FCN-747B060-AU/0 | 80.77 (3.180)        | 73.66 (2.900) | 74.93 (2.950) | 6                         |



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