

# CNE Series

NEW

## Sensor connector

### ■ Features

- **Wire mount plug/socket**
  - Compact and highly reliable of pressure welding connector
  - Enables to connect wires as wire mount plug/socket
  - Different 9 colors of cover by wire diameter
  - Visible wiring status with translucent cover
- **Board mount socket**
  - Enables to insert 4EA, 2EA, or 1EA wire mount plugs
  - Contact placed in mold against electric shock and short-circuit
  - Mountable on board closely
- **Commons**
  - Significantly reduces connection time and effort
  - Wide products range for various wires
  - Compact and high density installation with 2 mm of contact pitch
  - Compliance with e-CON
  - Max. 3 A of current capacity by a pin



### ■ Ordering information

|                                                                      |  |  |  |                     |  |  |  |
|----------------------------------------------------------------------|--|--|--|---------------------|--|--|--|
| <b>CNE — P 03 — WT</b>                                               |  |  |  | <b>CNE — B 2 03</b> |  |  |  |
| Item                                                                 |  |  |  | Item                |  |  |  |
| Cover color(wire specifications)                                     |  |  |  | Pins                |  |  |  |
| ※ <b>Cover color and wire specifications'</b><br>(Refer to G-3 page) |  |  |  | Lines               |  |  |  |
| Pins                                                                 |  |  |  | Connector type      |  |  |  |
| Connector type                                                       |  |  |  | Board mount socket  |  |  |  |
| Item                                                                 |  |  |  | Sensor connector    |  |  |  |

|         |                    |
|---------|--------------------|
| 03      | 3-pins             |
| 04      | 4-pins             |
| No-mark | 1-line             |
| 2       | 2-line             |
| 4       | 4-line             |
| B       | Board mount socket |
| CNE     | Sensor connector   |

### ■ Specifications

| Type                 |           | Wire mount plug                                                                  | Wire mount socket | Board mount socket                                     |
|----------------------|-----------|----------------------------------------------------------------------------------|-------------------|--------------------------------------------------------|
| Model                |           | <b>CNE-P</b> □□                                                                  | <b>CNE-S</b> □□   | <b>CNE-B</b> □□                                        |
| Applica-<br>tion     | Connector | Board mount socket/Wire mount socket                                             |                   | Wire mount plug                                        |
|                      | Cable     | AWG30 to 20(Ø0.6 to Ø2.0)                                                        |                   |                                                        |
|                      | PCB       | Fender plated-through hole,<br>Hole dia.: 1.0mm,<br>PCB thickness : 1.0 to 2.2mm |                   |                                                        |
| Rated voltage        |           | Max. 250VAC/DC                                                                   |                   |                                                        |
| Rated current        |           | Max. 3.0A                                                                        |                   |                                                        |
| Temperature          |           | -20 to 85°C(applying 1A), -20 to 75°C(applying 2A), -20 to 60°C(applying 3A)     |                   |                                                        |
| Humidity             |           | 40 to 80%RH                                                                      |                   |                                                        |
| Terminal retention   |           | 1.4kgf min.                                                                      |                   |                                                        |
| Pressure strength    |           | • AWG30: 0.5kgf min.      • AWG24 : 0.8kgf min.      • AWG20 : 1.0kgf min.       |                   |                                                        |
| Extraction           |           | 0.49N(50gf)/pin min.                                                             |                   |                                                        |
| Insertion            |           | 1.96N(200gf)/pin max.                                                            |                   |                                                        |
| Dielectric strength  |           | 1,000VAC for 1min.(between terminals)                                            |                   |                                                        |
| Insulated resistance |           | Min. 1,000MΩ(between terminals)                                                  |                   |                                                        |
| Contact resistance   |           | Max. 0.05Ω (short-current : 1mA, max. open voltage : 20mV)                       |                   |                                                        |
| Material             |           | Body : PCABS(UL94V-0), Terminal : C5210(Gold 0.2μm),<br>Case : PC(UL94-V0)       |                   | Body : PCABS(UL94-V0),<br>Terminal : C5210(Gold 0.2μm) |

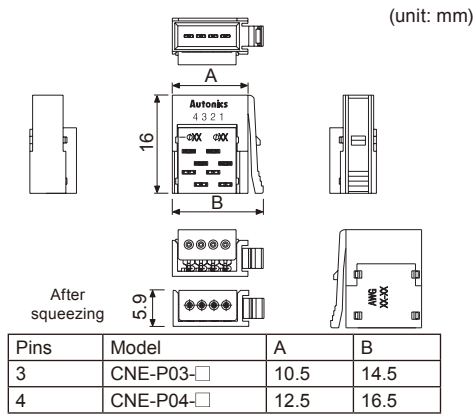
## ■ Cover color and wire specifications

| Cover color      | 3-pin      | 4-pin      | Applied wire specifications                 |                    |
|------------------|------------|------------|---------------------------------------------|--------------------|
|                  |            |            | Normal cross section area(mm <sup>2</sup> ) | Cover diameter(mm) |
| Transparent(WT)  | CNE-□03-WT | CNE-□04-WT | 0.05 to 0.08<br>(AWG30 to 28)               | Ø0.6 to 0.8        |
| Yellow-Green(YG) | CNE-□03-YG | CNE-□04-YG |                                             | Ø0.8 to 1.0        |
| Violet(VT)       | CNE-□03-VT | CNE-□04-VT |                                             | Ø1.0 to 1.2        |
| Red(RE)          | CNE-□03-RE | CNE-□04-RE | 0.13 to 0.21<br>(AWG26 to 24)               | Ø0.8 to 1.0        |
| Yellow(YW)       | CNE-□03-YW | CNE-□04-YW |                                             | Ø1.0 to 1.2        |
| Orange(OG)       | CNE-□03-OG | CNE-□04-OG |                                             | Ø1.2 to 1.6        |
| Green(GN)        | CNE-□03-GN | CNE-□04-GN | 0.32 to 0.5<br>(AWG22 to 20)                | Ø1.0 to 1.2        |
| Blue(BL)         | CNE-□03-BL | CNE-□04-BL |                                             | Ø1.2 to 1.6        |
| Gray(GY)         | CNE-□03-GY | CNE-□04-GY |                                             | Ø1.6 to 2.0        |

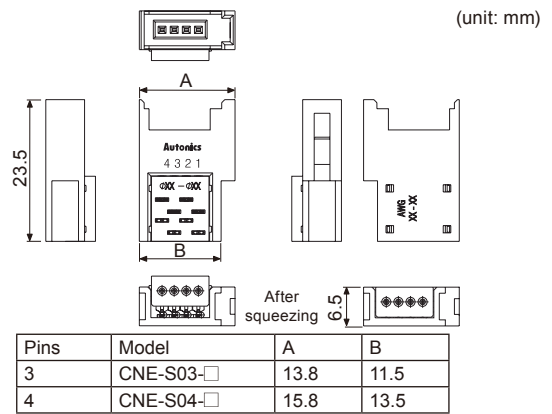
※ □ : P(Wire mount plug), S(Wire mount socket)

## ■ Dimensions

### ◎ Wire mount plug

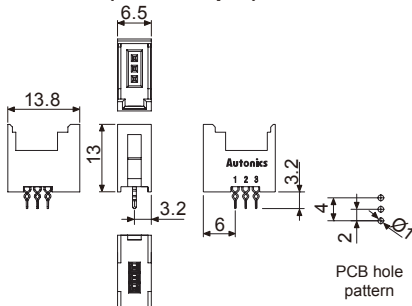


### ◎ Wire mount socket

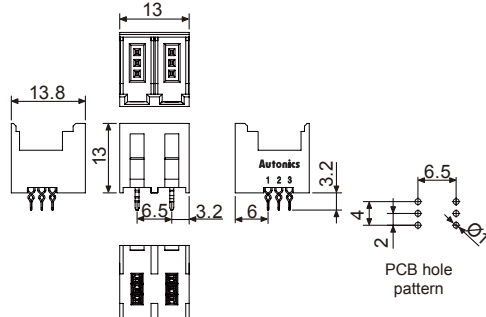


### ◎ Board mount socket

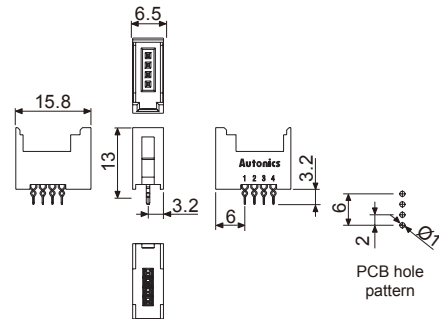
#### ● CNE-B03(1-line×3-pin)



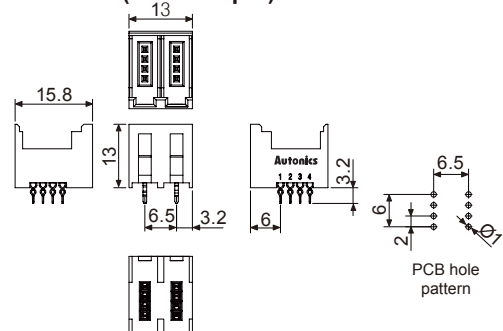
#### ● CNE-B203(2-line×3-pin)



#### ● CNE-B04(1-line×4-pin)



#### ● CNE-B204(2-line×4-pin)



(A) Photo electric sensor

(B) Fiber optic sensor

(C) Door/Area sensor

(D) Proximity sensor

(E) Pressure sensor

(F) Rotary encoder

(G) Connector/Socket

(H) Temp. controller

(I) SSR/Power controller

(J) Counter

(K) Timer

(L) Panel meter

(M) Tacho/Speed/ Pulse meter

(N) Display unit

(O) Sensor controller

(P) Switching mode power supply

(Q) Stepper motor& Driver&Controller

(R) Graphic/Logic panel

(S) Field network device

(T) Software

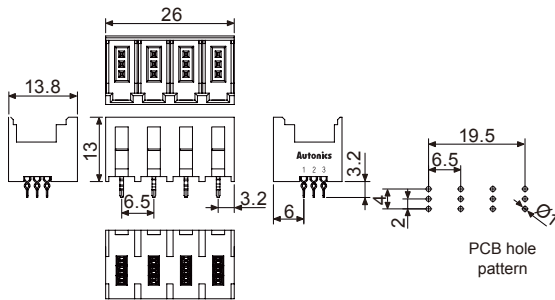
(U) Other

# CNE Series

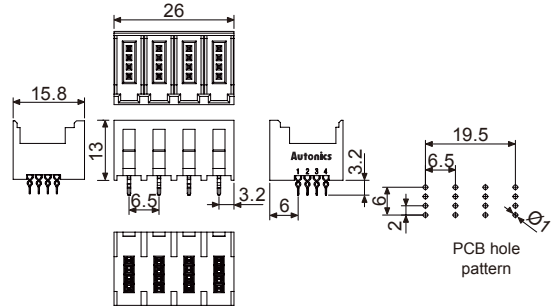
## ◎ Board mount socket

(unit: mm)

### ● CNE-B403(4-line×3-pin)



### ● CNE-B404(4-line×4-pin)



## ■ How to press sensor connector

### 1) Select connector.

- Check the wire specifications (conductor section, cover diameter).
- Select the proper color of sensor connector(model) by referring to the below table.

| Cover color      | Wire mount plug | Wire mount socket | Applied wire specifications                  |                    |
|------------------|-----------------|-------------------|----------------------------------------------|--------------------|
|                  |                 |                   | Nominal cross section area(mm <sup>2</sup> ) | Cover diameter(mm) |
| Transparent(WT)  | CNE-P□-WT       | CNE-S□-WT         | 0.05 to 0.08<br>(AWG30 to 28)                | Ø0.6 to 0.8        |
| Yellow-Green(YG) | CNE-P□-YG       | CNE-S□-YG         |                                              | Ø0.8 to 1.0        |
| Violet(VT)       | CNE-P□-VT       | CNE-S□-VT         |                                              | Ø1.0 to 1.2        |
| Red(RE)          | CNE-P□-RE       | CNE-S□-RE         | 0.13 to 0.21<br>(AWG26 to 24)                | Ø0.8 to 1.0        |
| Yellow(YW)       | CNE-P□-YW       | CNE-S□-YW         |                                              | Ø1.0 to 1.2        |
| Orange(OG)       | CNE-P□-OG       | CNE-S□-OG         |                                              | Ø1.2 to 1.6        |
| Green(GN)        | CNE-P□-GN       | CNE-S□-GN         | 0.32 to 0.5<br>(AWG22 to 20)                 | Ø1.0 to 1.2        |
| Blue(BL)         | CNE-P□-BL       | CNE-S□-BL         |                                              | Ø1.2 to 1.6        |
| Gray(GY)         | CNE-P□-GY       | CNE-S□-GY         |                                              | Ø1.6 to 2.0        |

※□: Number of pins (03: 3-pin, 04: 4-pin)

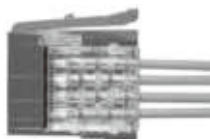
※The proper sensor connector may be different by conductor of wire.

※Cover diameter of applied wire at connector (at translucent part) and AWG number of body backside are marked.



### 2) Insert wires.

- Check the pin number and insert wires at the insertion part of the cover.
- Check the wires are inserted at the end of cover.



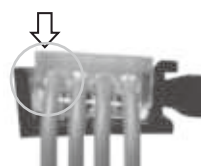
### 3) Squeeze the connector.

- Insert the cover to the body with tools (press fitting pliers, etc).
- ※Squeeze it with tools at the side direction as below figure.



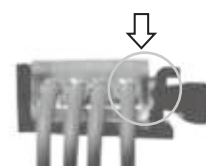
### 4) Check the cover.

- Check the cover which has gaps and is even with the cover.



Wrong (1)

Not enough cover insertion.



Wrong (2)

Not enough cover insertion.

※Press the part of arrows again.