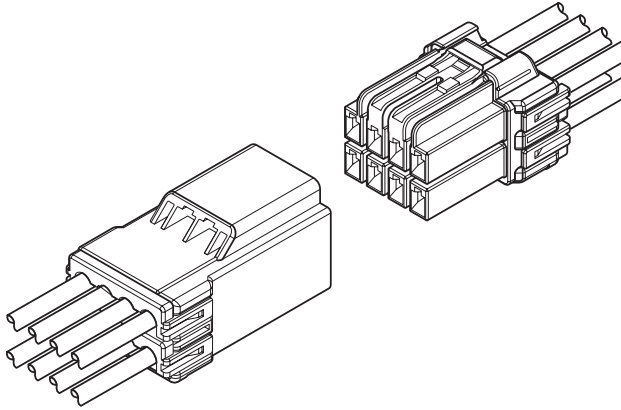


# HIL CONNECTOR

## 3.3mm pitch/Crimp style Wire-to-wire connectors

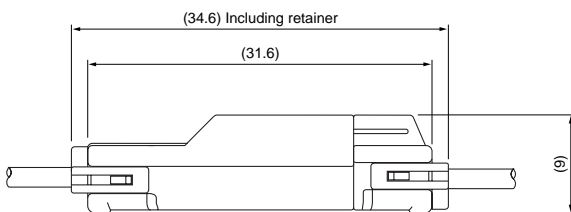


**This HIL connector is 3.3mm pitch wire-to-wire connector that has a mechanism to prevent an incomplete mating when mating connector.**

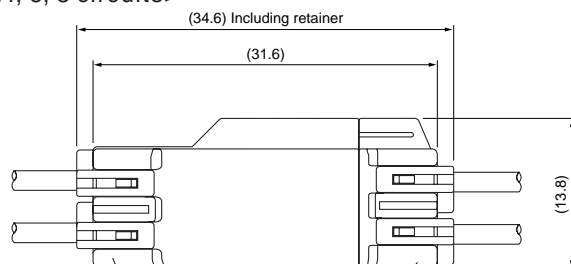
- **Inertia lock mechanism to prevent an incomplete mating**
- **Box-shaped contact to prevent the influence by external forces**
- **Polarizing key to prevent connector from mating with incorrect circuits**

### Assembly layout

<2, 3 circuits>



<4, 6, 8 circuits>



### Specifications

- Current rating: 5A AC, DC (2 circuits AWG #18)
  - Voltage rating: 300V AC, DC
  - Temperature range: -25°C to +85°C  
(including temperature rise in applying electrical current)
  - Contact resistance: Initial value/10m max.  
After environmental testing/20m max.
  - Insulation resistance: 1,000M min.
  - Withstanding voltage: 1,500V AC/minute
  - Applicable wire: Conductor size/01 type AWG #24 to #20  
/21 type AWG #22 to #18  
Insulation O.D./01 type 1.3 to 2.5mm  
/21 type 1.5 to 2.7mm  
(when using retainer for 21 type 1.5 to 2.5mm)
- \* Compliant with RoHS.  
\* Refer to "General Instruction and Notice when using Terminals and Connectors" at the end of this catalog.  
\* Contact JST for details.

Note: The current rating varies depending on the number of circuits and the wire size used in each connector. The table below lists the current rating as a function of the number of circuits and the wire size.

Current unit: A

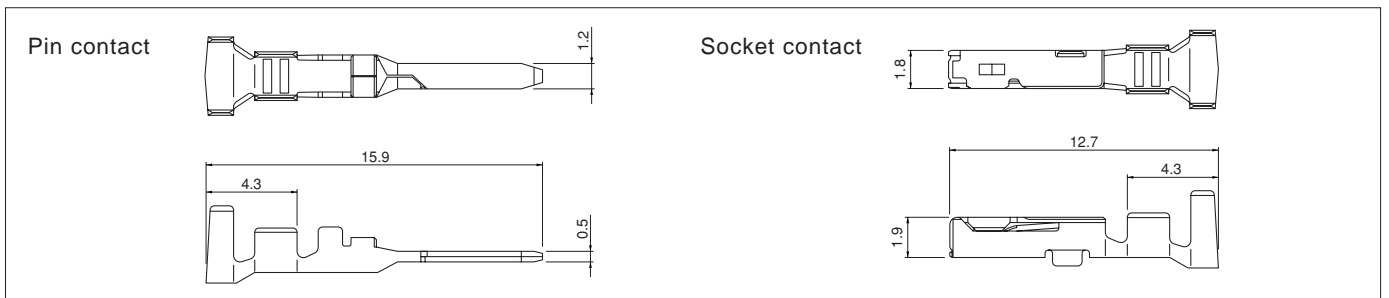
| Circuits | Wire size (AWG) |     |     |     |
|----------|-----------------|-----|-----|-----|
|          | #18             | #20 | #22 | #24 |
| 2        | 5               | 4   | 3   | 3   |
| 3        | 4               | 4   | 3   | 2   |
| 4        | 3               | 3   | 2   | 2   |
| 6        | 3               | 3   | 2   | 2   |
| 8        | 3               | 3   | 2   | 2   |

### List of combinations

| Resin color (Plug/ Receptacle) | Natural                  | Red                      | Blue                     |
|--------------------------------|--------------------------|--------------------------|--------------------------|
| Polarizing key pattern         | Polarizing key pattern 1 | Polarizing key pattern 2 | Polarizing key pattern 3 |
|                                |                          |                          |                          |
| Plug Model No.                 | HILP-( )V-1-S            | HILP-( )V-2-R            | HILP-( )V-3-E            |
| Receptacle Model No.           | HILR-( )VF-1-S           | HILR-( )VF-2-R           | HILR-( )VF-3-E           |

# HIL CONNECTOR

## Contact



| Model No.            |                      | Applicable wire |       | Insulation O.D. (mm) | Q'ty / reel |
|----------------------|----------------------|-----------------|-------|----------------------|-------------|
| Pin contact          | Socket contact       | mm <sup>2</sup> | AWG # |                      |             |
| <b>SHIM-01T-P0.5</b> | <b>SHIF-01T-P0.5</b> | 0.2~0.5         | 24~20 | 1.3~2.5              | 5,000       |
| <b>SHIM-21T-P0.5</b> | <b>SHIF-21T-P0.5</b> | 0.3~0.75        | 22~18 | 1.5~2.7              | 5,000       |

### Material and Finish

Copper alloy, tin-plated

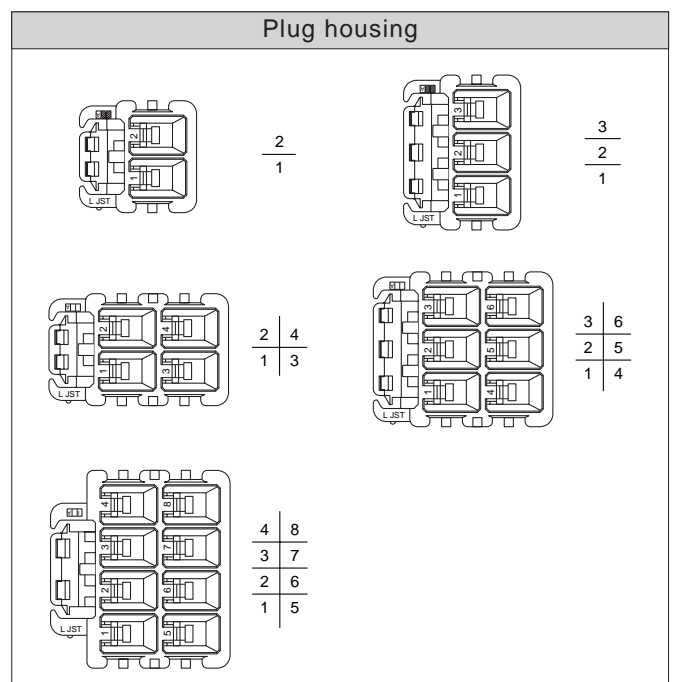
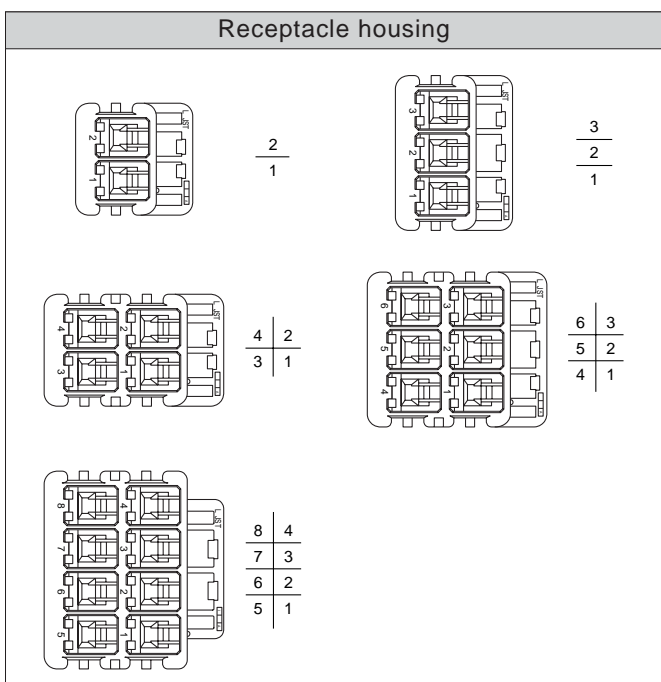
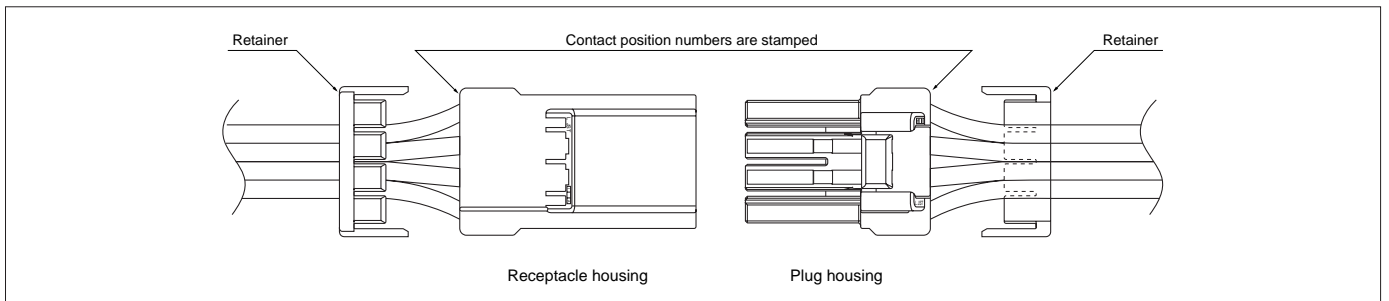
### RoHS compliance

Note: Insulation O.D. is 1.5mm to 2.5mm when using retainer for 21 type barrel size contact.

| Contact              | Crimping machine | Applicator       |                 |                            |
|----------------------|------------------|------------------|-----------------|----------------------------|
|                      |                  | Crimp applicator | Dies            | Crimp applicator with dies |
| <b>SHIM-01T-P0.5</b> | AP-K2N           | MKS-L            | MK/SHIF/M-01-05 | APLMK SHIF/M01-05          |
| <b>SHIM-21T-P0.5</b> |                  |                  | MK/SHIF/M-21-05 | APLMK SHIF/M21-05          |

| Contact              | Crimping machine | Applicator       |                 |                            |
|----------------------|------------------|------------------|-----------------|----------------------------|
|                      |                  | Crimp applicator | Dies            | Crimp applicator with dies |
| <b>SHIF-01T-P0.5</b> | AP-K2N           | MKS-L            | MK/SHIF/M-01-05 | APLMK SHIF/M01-05          |
| <b>SHIF-21T-P0.5</b> |                  |                  | MK/SHIF/M-21-05 | APLMK SHIF/M21-05          |

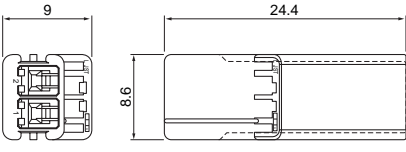
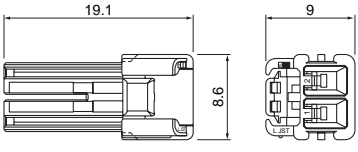
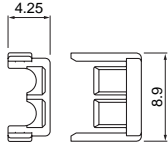
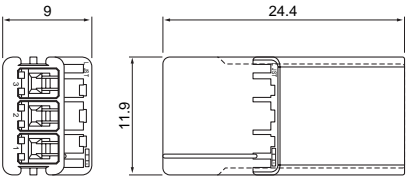
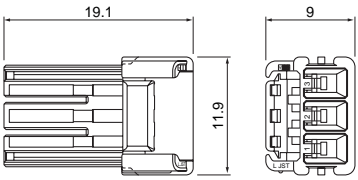
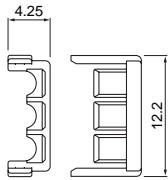
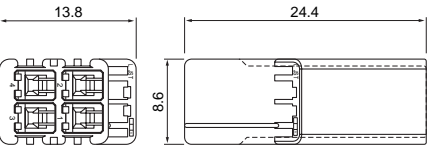
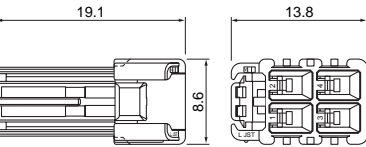
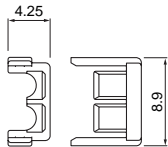
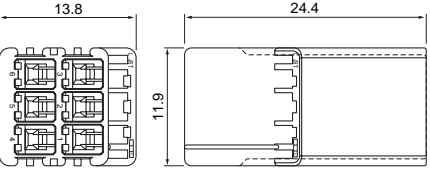
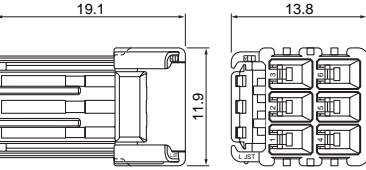
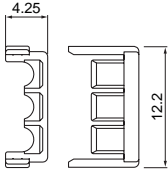
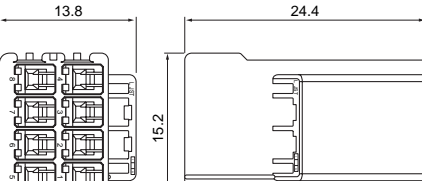
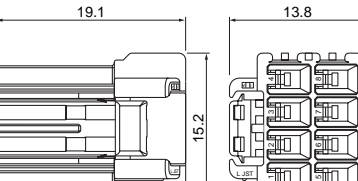
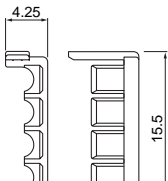
## Contact position location numbers



# HIL CONNECTOR

## Housing

Material: Housing...PA 66, UL94V-0, natural  
Retainer...Glass-filled PA 66, UL94V-0, natural

| Circuits | Voltage rating | Current rating | Receptacle housing (for pin contact)  | Plug housing (for socket contact)   | Retainer  |
|----------|----------------|----------------|---|---|---|
| 2        | 300V           | 5A             | <b>HILR-02VF-1-S</b><br>   | <b>HILP-02V-1-S</b><br>   | <b>HILS-02V</b><br>(commonly used for 2-circuit housing and 4-circuit housing)<br>   |
| 3        | 300V           | 4A             | <b>HILR-03VF-1-S</b><br>  | <b>HILP-03V-1-S</b><br>  | <b>HILS-03V</b><br>(commonly used for 3-circuit housing and 6-circuit housing)<br>  |
| 4        | 300V           | 3A             | <b>HILR-04VF-1-S</b><br> | <b>HILP-04V-1-S</b><br> | <b>HILS-02V</b><br>(commonly used for 2-circuit housing and 4-circuit housing)<br> |
| 6        | 300V           | 3A             | <b>HILR-06VF-1-S</b><br> | <b>HILP-06V-1-S</b><br> | <b>HILS-03V</b><br>(commonly used for 3-circuit housing and 6-circuit housing)<br> |
| 8        | 300V           | 3A             | <b>HILR-08VF-1-S</b><br> | <b>HILP-08V-1-S</b><br> | <b>HILS-04V</b><br>  |

RoHS compliance

Note: Current rating is for use with AWG #18 wire.

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