

# SERIES 89 NANOMINIATURE Dual-Row Rectangular Connectors



## 891-006 and 891-007 Vertical Mount Thru-Hole PCB Connectors

DUAL-ROW RECTANGULAR CONNECTORS



**Vertical Mount Thru-Hole** PCB Nano Connectors feature gold alloy TwistPin contacts. These nanominiature connectors offer premium performance and reliability for demanding applications. Available with female threads, or with jackscrews for use with flexible circuits. Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

**Choose Aluminum, Titanium or Stainless Steel Shells.** Twelve layouts from 9 to 91 contacts. Complies to the requirements of MIL-DTL-32139. These connectors are intermateable with any corresponding Glenair Series 891 Dual-Row metal shell nano miniature connector.

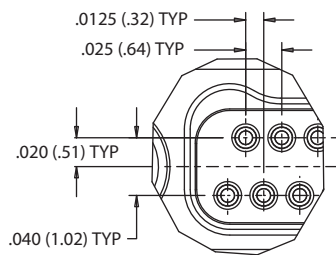
| HOW TO ORDER                                |   | 891-007   | -25S | A2 | -BST | 1 | T |
|---|---|---|------|----|------|---|---|
| <b>Sample Part Number</b>                   |   |   |      |    |      |   |   |
| <b>Series</b>                               | 891-006 = Plug, Vertical Mount PCB Connector<br>891-007 = Receptacle, Vertical Mount PCB Connector  |   |      |    |      |   |   |
| <b>Insert Arrangement/<br/>Contact Type</b> | Pins (891-006 Plugs) <b>9P, 15P, 21P, 25P, 31P, 37P, 41P, 51P, 65P, 69P, 85P, 91P</b><br>Sockets (891-007 Receptacles) <b>9S, 15S, 21S, 25S, 31S, 37S, 41S, 51S, 65S, 69S, 85S, 91S</b> |   |      |    |      |   |   |
| <b>Shell Material<br/>and Finish</b>        | <b>A1</b> = Aluminum Shell, Cadmium Plating<br><b>A31</b> = Aluminum Shell, Zinc Nickel Plating, Black<br><b>S</b> = Stainless Steel Shell, Passivated                                  | <b>A2</b> = Aluminum Shell, Electroless Nickel Plating<br><b>A33</b> = Aluminum Shell, Nickel PTFE Plating<br><b>T</b> = Titanium Shell, Unplated |      |    |      |   |   |
| <b>Termination Type</b>                     | <b>BST</b> = Board Straight Thru-Hole   |   |      |    |      |   |   |
| <b>PC Tail Length</b>                       | <b>1</b> = .110 (2.79) <b>2</b> = .172 (4.37) <b>3</b> = .140 (3.56)  |   |      |    |      |   |   |
| <b>Hardware</b>                             | <b>J</b> = Jackscrew <b>T</b> = Female Thread<br>(Stainless steel inserts installed in aluminum shells, tapped directly into stainless steel and titanium shells)                       |   |      |    |      |   |   |

| PLUG HARDWARE |                   | RECEPTACLE HARDWARE |                   |
|---------------|-------------------|---------------------|-------------------|
|               |                   |                     |                   |
| J - Jackscrew | T - Female Thread | J - Jackscrew       | T - Female Thread |

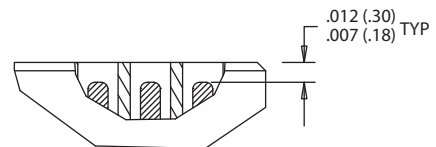
### NOTES

- Inspect and test IAW MIL-DTL-32139
- Interface dimensions per MIL-DTL-32139/3 and /4
- Materials/finishes
  - Shell: see part number break down
  - Insulator: LCP/N/A
  - Contacts: gold alloy / unplated
  - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
  - Hardware: passivated stainless steel

### DETAIL A



### DETAIL B



### PERFORMANCE SPECIFICATIONS

**Contact Spacing:** .025" (0.64) contact centers  
**Current Rating:** 1 AMP maximum tested per EIA-364-70  
**DWV:** 250 VAC RMS sea level, 100 VAC RMS 70,000 feet per EIA-364 Procedure 20  
**Insulation Resistance:** 5000 Megohms minimum test voltage 100 VDC, per EIA-364 Procedure 21  
**Operating Temperature:** -55° C. to +125° C.

**Contact Resistance:** 71 millivolt drop maximum, 1 AMP current, any catalog supported wire type  
**Vibration:** 20 g's, IAW EIA-364-28, Condition IV  
**Shock:** 100 g's, IAW EIA-364-27, Condition G  
**Durability:** 200 mating cycles per test procedure EIA-364-09  
**Corrosion Resistance:** 48 hours salt spray IAW EIA-364-26, Condition B

**Humidity:** 240 hours, IAW EIA-364-31, Test Condition B  
**Contact Engaging/Separation Force:** 5 ounce maximum, 0.4 ounce minimum  
**Thermal Vacuum Outgassing:** Total mass loss (TML) 1.0% max., volatile condensable material (VCM) 0.1% max. IAW ASTM E595

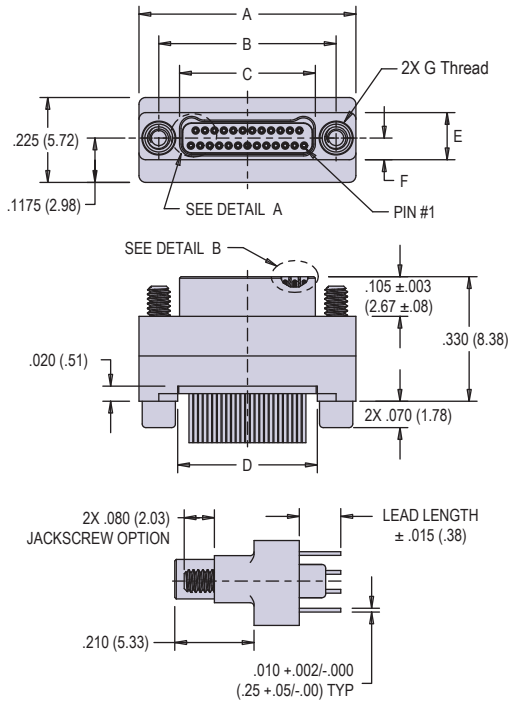
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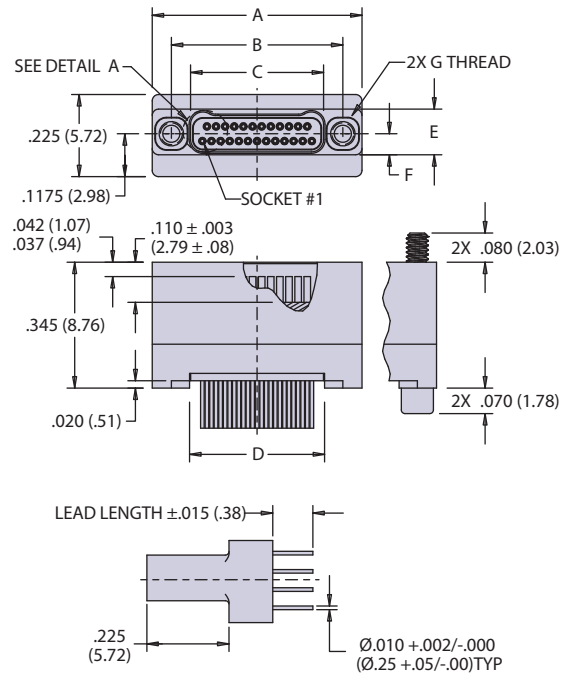
## 891-006 and 891-007 Vertical Mount Thru-Hole PCB Connectors

### DIMENSIONS

#### 891-006 Plug (Pin) Connectors



#### 891-007 Receptacle (Socket) Connectors



| Layout | A ± .005      | B BSC.        | C BSC.        | D ± .005      | E           | F            | G Thread  |
|--------|---------------|---------------|---------------|---------------|-------------|--------------|-----------|
| 9P     | .375 (9.53)   | .270 (6.86)   | .160 (4.06)   | .170 (4.32)   | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 9S     | .375 (9.53)   | .270 (6.86)   | .163 (4.14)   | .170 (4.32)   | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 15P    | .450 (11.43)  | .345 (8.76)   | .235 (5.97)   | .245 (6.22)   | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 15S    | .450 (11.43)  | .345 (8.76)   | .238 (6.05)   | .245 (6.22)   | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 21P    | .525 (13.34)  | .420 (10.67)  | .310 (7.87)   | .320 (8.13)   | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 21S    | .525 (13.34)  | .420 (10.67)  | .313 (7.95)   | .320 (8.13)   | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 25P    | .575 (14.61)  | .470 (11.94)  | .360 (9.14)   | .370 (9.40)   | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 25S    | .575 (14.61)  | .470 (11.94)  | .363 (9.22)   | .370 (9.40)   | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 31P    | .650 (16.51)  | .545 (13.84)  | .435 (11.05)  | .445 (11.30)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 31S    | .650 (16.51)  | .545 (13.84)  | .438 (11.13)  | .445 (11.30)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 37P    | .725 (18.42)  | .620 (15.75)  | .510 (12.95)  | .520 (13.21)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 37S    | .725 (18.42)  | .620 (15.75)  | .513 (13.03)  | .520 (13.21)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 41P    | .775 (19.69)  | .670 (17.02)  | .560 (14.22)  | .570 (14.48)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 41S    | .775 (19.69)  | .670 (17.02)  | .563 (14.30)  | .570 (14.48)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 51P    | .900 (22.86)  | .795 (20.19)  | .685 (17.40)  | .695 (17.65)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 51S    | .900 (22.86)  | .795 (20.19)  | .688 (17.48)  | .695 (17.65)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 65P    | 1.075 (27.31) | .970 (24.64)  | .860 (21.84)  | .870 (22.10)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 65S    | 1.075 (27.31) | .970 (24.64)  | .863 (21.92)  | .870 (22.10)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 69P    | 1.125 (28.58) | 1.020 (25.91) | .910 (23.11)  | .920 (23.37)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 69S    | 1.125 (28.58) | 1.020 (25.91) | .913 (23.19)  | .920 (23.37)  | .125 (3.18) | .0575 (1.46) | #0-80 UNF |
| 85P    | 1.377 (34.98) | 1.246 (31.65) | 1.110 (28.19) | 1.120 (28.45) | .150 (3.81) | .0700 (1.78) | #2-56 UNC |
| 85S    | 1.377 (34.98) | 1.246 (31.65) | 1.113 (28.27) | 1.120 (28.45) | .150 (3.81) | .0700 (1.78) | #2-56 UNC |
| 91P    | 1.452 (36.88) | 1.321 (33.55) | 1.185 (30.10) | 1.195 (30.35) | .150 (3.81) | .0700 (1.78) | #2-56 UNC |
| 91S    | 1.452 (36.88) | 1.321 (33.55) | 1.188 (30.18) | 1.195 (30.35) | .150 (3.81) | .0700 (1.78) | #2-56 UNC |

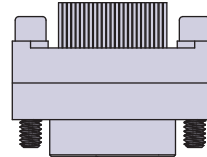
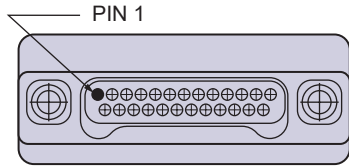
DUAL-ROW RECTANGULAR CONNECTORS

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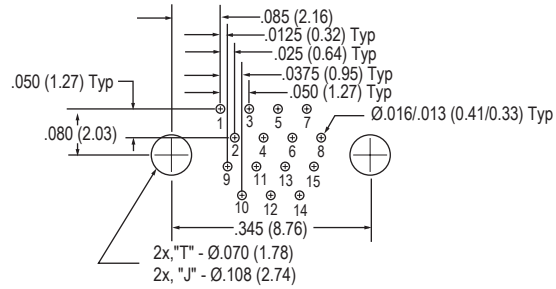
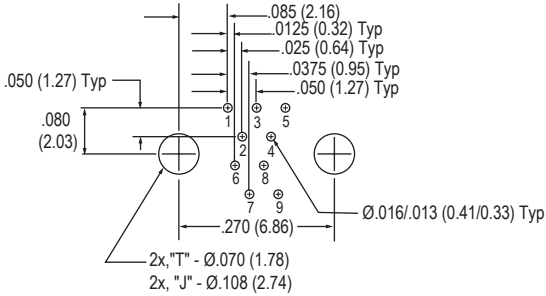


## 891-006 Vertical Mount Thru-Hole PCB Connectors - Plug PCB Footprint

DUAL-ROW RECTANGULAR CONNECTORS

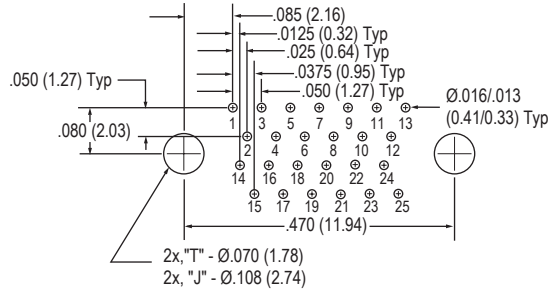
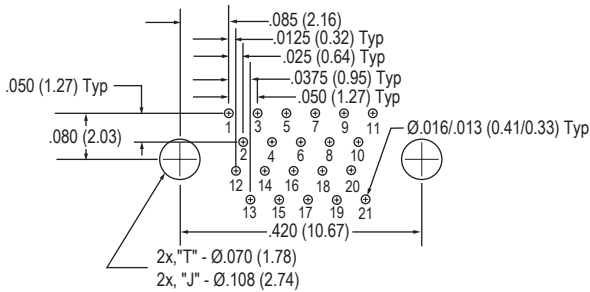


MATING FACE



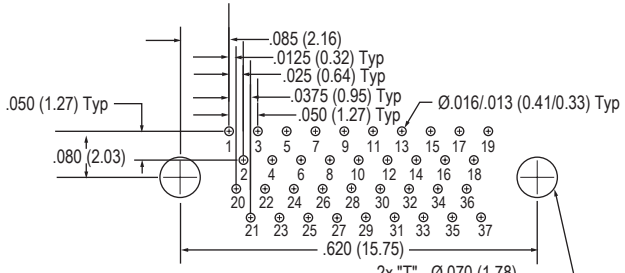
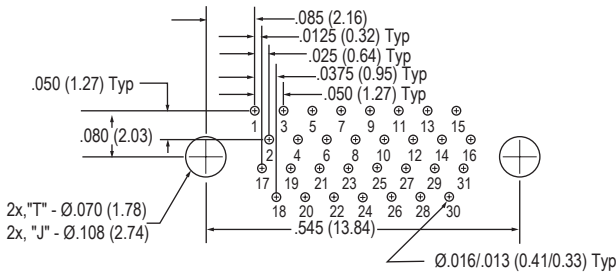
9 Contacts

15 Contacts



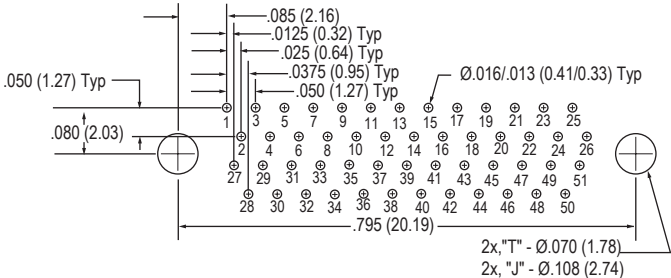
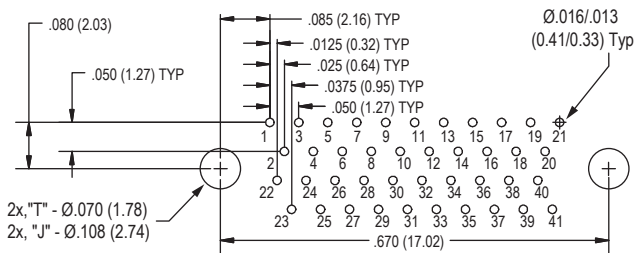
21 Contacts

25 Contacts



31 Contacts

37 Contacts



41 Contacts

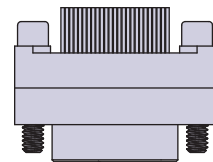
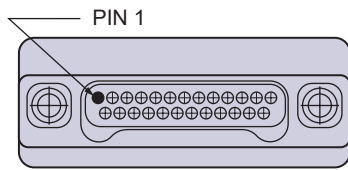
51 Contacts

Layouts shown are for connector mounting side of PC Board.

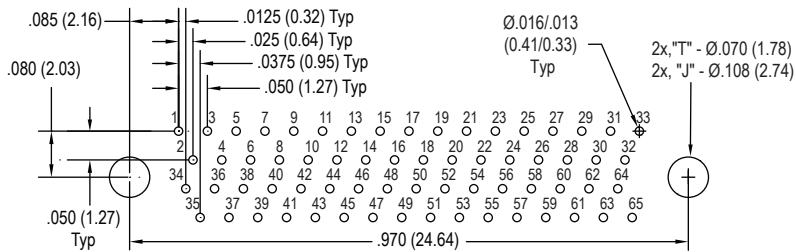
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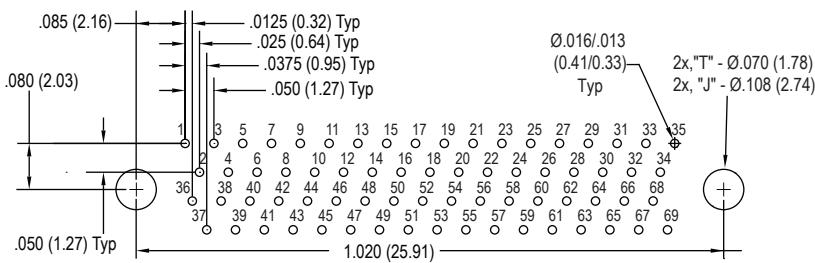
## 891-006 Vertical Mount Thru-Hole PCB Connectors - Plug PCB Footprint



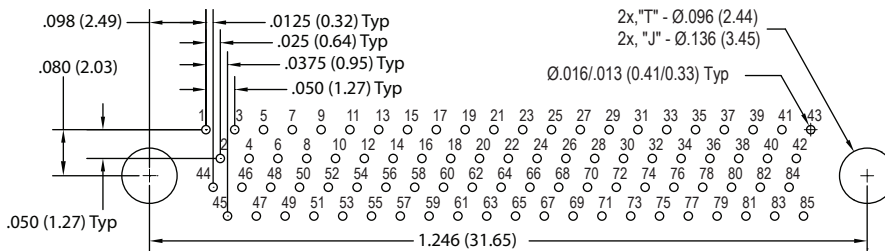
MATING FACE



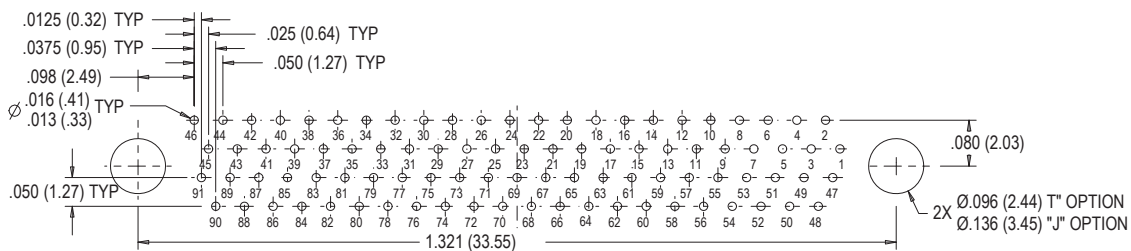
### 65 Contacts



### 69 Contacts



### 85 Contacts



### 91 Contacts

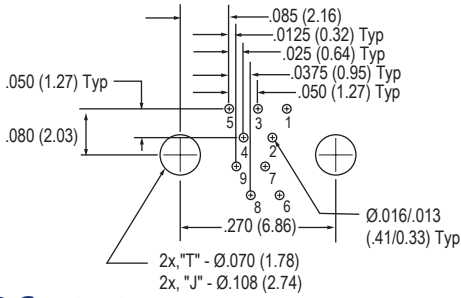
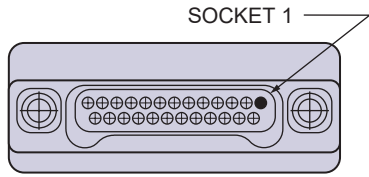
Layouts shown are for connector mounting side of PC Board.

# SERIES 89 NANOMINIATURE Dual-Row Rectangular Connectors

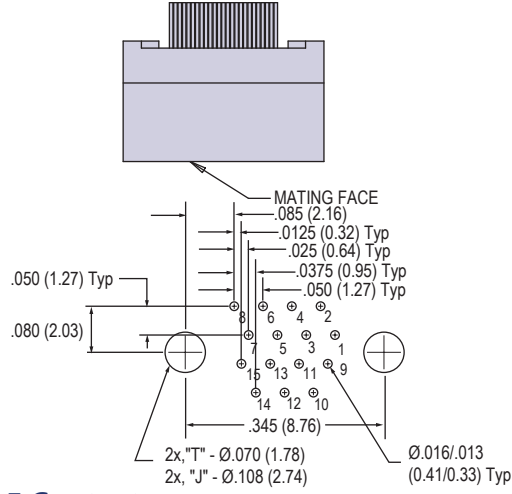


## 891-007 Vertical Mount Thru-Hole PCB Connectors - Receptacle PCB Footprint

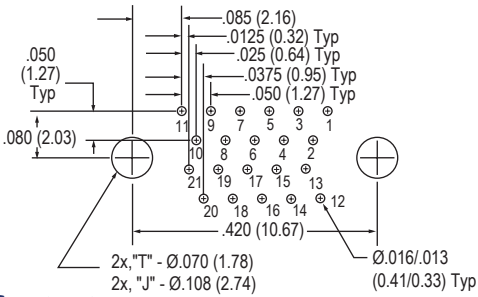
DUAL-ROW RECTANGULAR CONNECTORS



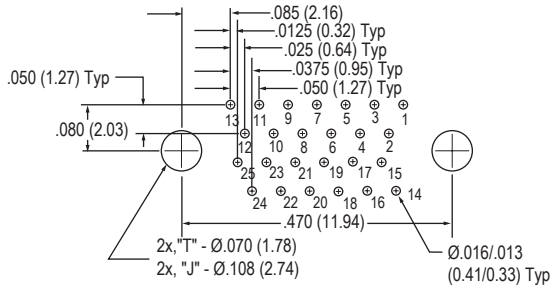
**9 Contacts**



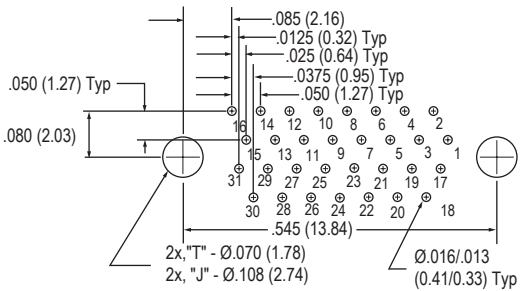
**15 Contacts**



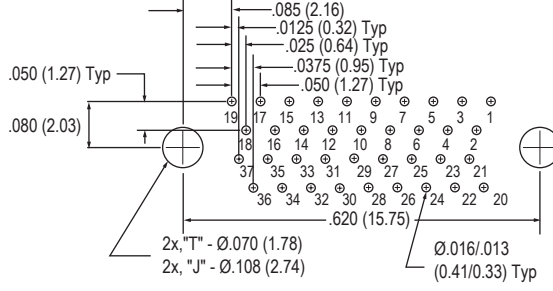
**21 Contacts**



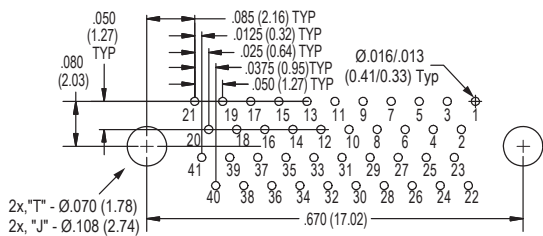
**25 Contacts**



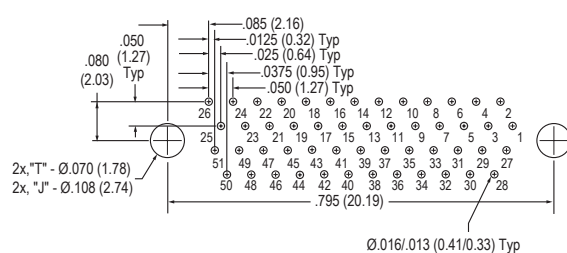
**31 Contacts**



**37 Contacts**



**41 Contacts**



**51 Contacts**

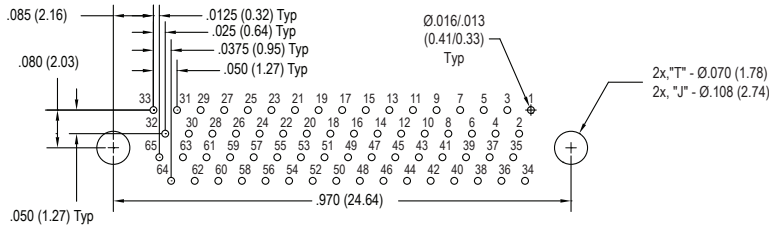
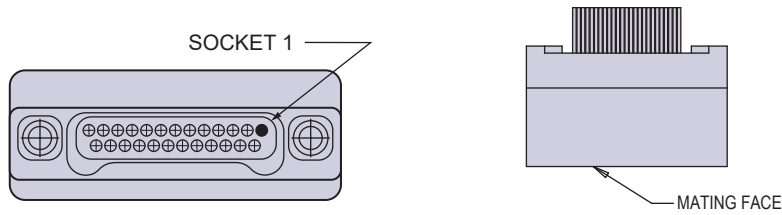
Layouts shown are for connector mounting side of PC Board.

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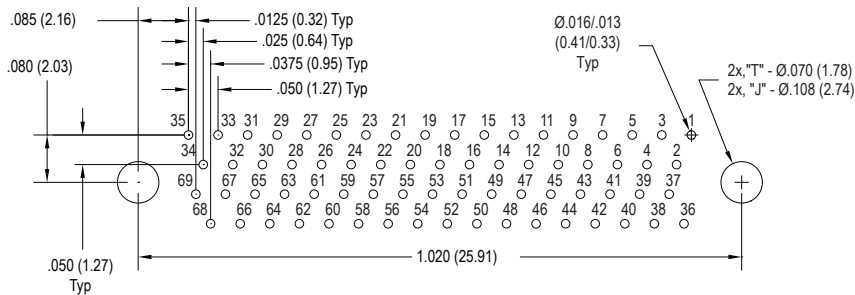


## 891-007 Vertical Mount Thru-Hole PCB Connectors - Receptacle PCB Footprint

DUAL-ROW RECTANGULAR CONNECTORS

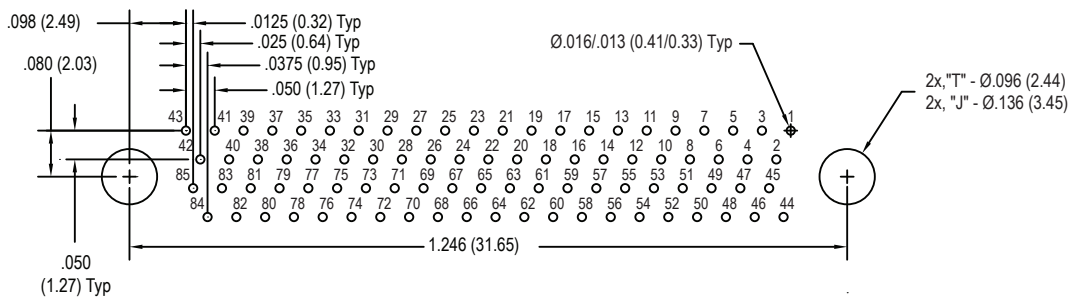


### 65 Contacts

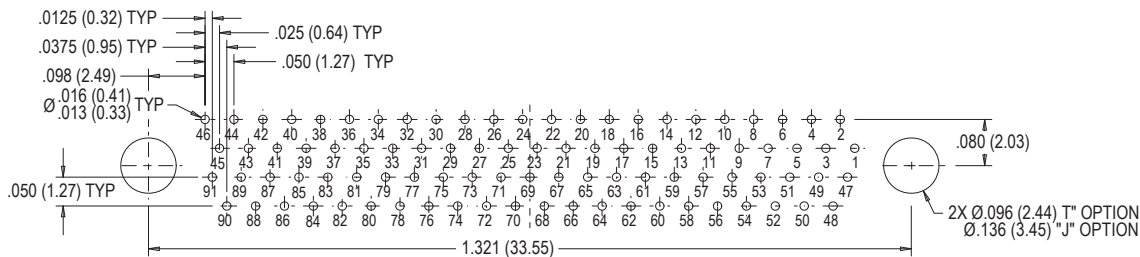


### 69 Contacts

### 25 Contacts



### 85 Contacts



### 91 Contacts

Layouts shown are for connector mounting side of PC Board.