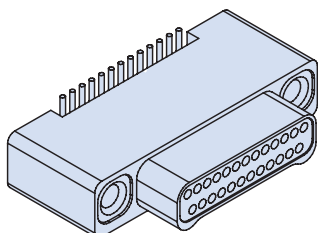




# SERIES 89 Dual Row Connectors



## Vertical Surface Mount PCB Connectors How to Order



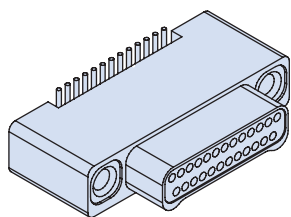
**Vertical Surface Mount PCB Connectors** feature gold alloy TwistPin contacts. Contacts are precision-crimped #30 AWG gold-plated wire. These nanominiature connectors offer premium performance and reliability for demanding applications.

**Pre-Tinned PC Tails** are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

**Choose Aluminum, Titanium or Stainless Steel Shells** in eleven layouts from 9 to 85 contacts. Complies to the requirements of MIL-DTL-32139.

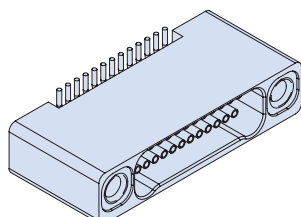
| How to Order                        |                                                                                                                                                                                        |      |    |      |   |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----|------|---|
| Sample Part Number                  | 891-011                                                                                                                                                                                | -25S | A2 | -BSS | T |
| Series                              | 891-010 Plug, Vertical SMT Connector<br>891-011 Receptacle, Vertical SMT Connector                                                                                                     |      |    |      |   |
| Insert Arrangement/<br>Contact Type | Pins (891-010 Plugs): <b>9P, 15P, 21P, 25P, 31P, 37P, 41P, 51P, 65P, 69P, 85P</b><br>Sockets (891-011 Receptacles): <b>9S, 15S, 21S, 25S, 31S, 37S, 41S, 51S, 65S, 69S, 85S</b>        |      |    |      |   |
| Shell Material<br>and Finish        | <b>A1</b> - Aluminum Shell, Cadmium Plating <b>T</b> - Titanium Shell, Unplated<br><b>A2</b> - Aluminum Shell, Electroless Nickel Plating <b>S</b> - Stainless Steel Shell, Passivated |      |    |      |   |
| Termination Type                    | <b>BSS</b> - Board Surface Mount Straight                                                                                                                                              |      |    |      |   |
| Hardware                            | <b>T</b> - Female Thread                                                                                                                                                               |      |    |      |   |

Plug (Pin) Connector



T - Female Thread

Receptacle (Socket) Connector

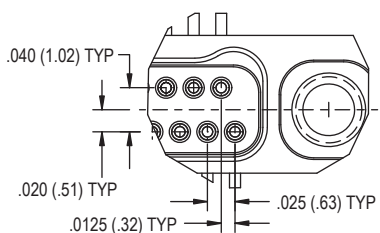


T - Female Thread

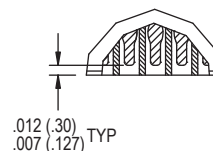
### NOTES

- Material and Finish:
  - 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
- Inspect and test IAW MIL-DTL-32139
- Interface dimensions per MIL-DTL-32139/3 and /4

### DETAIL A

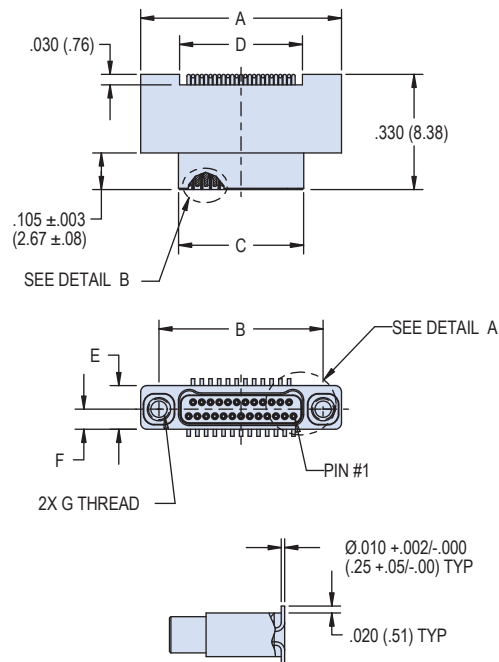


### DETAIL B

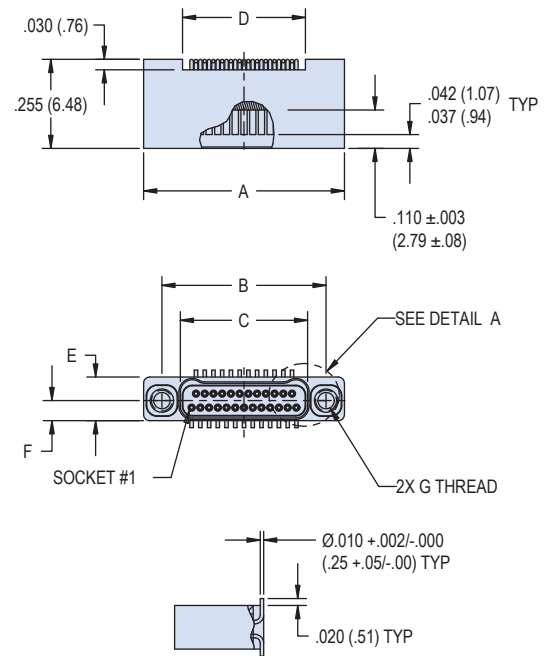


Dimensions

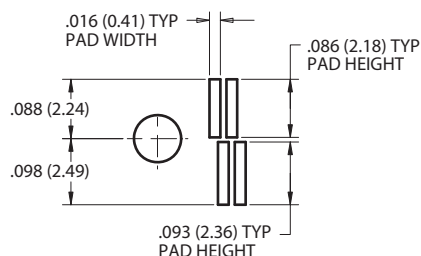
891-010 Plug (Pin) Connectors



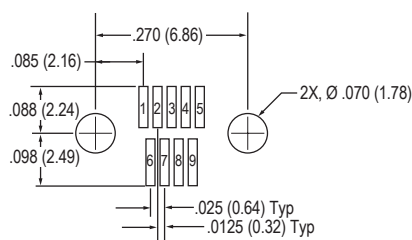
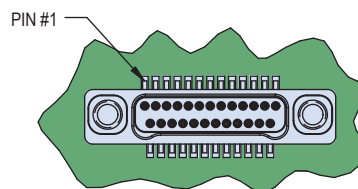
891-011 Receptacle (Socket) Connectors



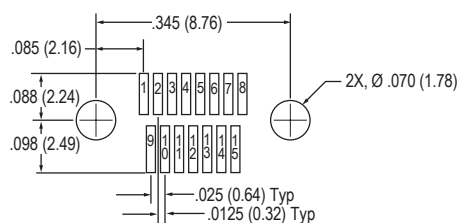
| Layout | A          |            | B BSC. |       | C BSC. |       | D          |            | E          |            | F BSC. |      | G Thread  |
|--------|------------|------------|--------|-------|--------|-------|------------|------------|------------|------------|--------|------|-----------|
|        | In. ± .005 | mm. ± 0.13 | In.    | mm.   | In.    | mm.   | In. ± .005 | mm. ± 0.13 | In. ± .005 | mm. ± 0.13 | In.    | mm.  |           |
| 9P     | .375       | 9.52       | .270   | 6.86  | .160   | 4.06  | .152       | 3.86       | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 9S     | .375       | 9.52       | .270   | 6.86  | .163   | 4.14  | .152       | 3.86       | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 15P    | .450       | 11.43      | .345   | 8.76  | .235   | 5.97  | .227       | 5.77       | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 15S    | .450       | 11.43      | .345   | 8.76  | .238   | 6.04  | .227       | 5.77       | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 21P    | .525       | 13.33      | .420   | 10.67 | .310   | 7.87  | .302       | 7.67       | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 21S    | .525       | 13.33      | .420   | 10.67 | .313   | 7.95  | .302       | 7.67       | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 25P    | .575       | 14.60      | .470   | 11.94 | .360   | 9.14  | .352       | 8.94       | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 25S    | .575       | 14.60      | .470   | 11.94 | .363   | 9.22  | .352       | 8.94       | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 31P    | .650       | 16.51      | .545   | 13.84 | .435   | 11.05 | .427       | 10.85      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 31S    | .650       | 16.51      | .545   | 13.84 | .438   | 11.12 | .427       | 10.85      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 37P    | .725       | 18.41      | .620   | 15.75 | .510   | 12.95 | .502       | 12.75      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 37S    | .725       | 18.41      | .620   | 15.75 | .513   | 13.03 | .502       | 12.75      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 41P    | .775       | 19.69      | .670   | 17.02 | .560   | 14.23 | .552       | 14.03      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 41S    | .775       | 19.69      | .670   | 17.02 | .563   | 14.30 | .552       | 14.03      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 51P    | .900       | 22.86      | .795   | 20.19 | .685   | 17.40 | .677       | 17.20      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 51S    | .900       | 22.86      | .795   | 20.19 | .688   | 17.47 | .677       | 17.20      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 65P    | 1.075      | 27.30      | .970   | 24.64 | .860   | 21.84 | .852       | 21.64      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 65S    | 1.075      | 27.30      | .970   | 24.64 | .863   | 21.92 | .852       | 21.64      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 69P    | 1.125      | 28.57      | 1.020  | 25.91 | .910   | 23.11 | .902       | 22.91      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 69S    | 1.125      | 28.57      | 1.020  | 25.91 | .913   | 23.19 | .902       | 22.91      | .125       | 3.18       | .0575  | 1.46 | #0-80 UNF |
| 85P    | 1.377      | 34.97      | 1.246  | 31.65 | 1.110  | 28.19 | 1.102      | 27.99      | .150       | 3.81       | .070   | 1.78 | #2-56 UNC |
| 85S    | 1.377      | 34.97      | 1.246  | 31.65 | 1.113  | 28.27 | 1.102      | 27.99      | .150       | 3.81       | .070   | 1.78 | #2-56 UNC |



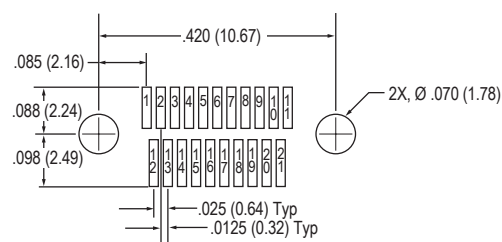
**PAD FOOTPRINT DETAIL  
LAYOUT 9-69**



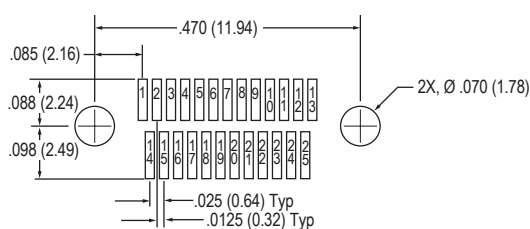
## 9 Contacts



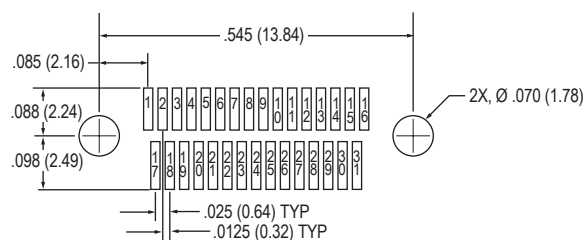
## 15 Contacts



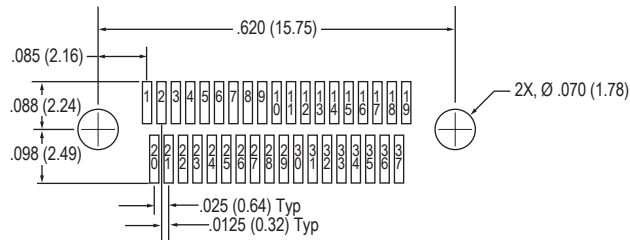
## 21 Contacts



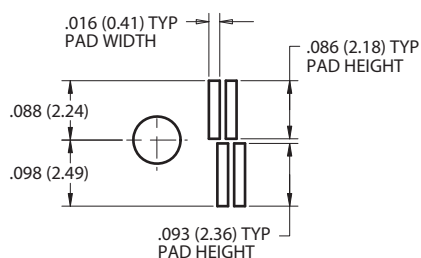
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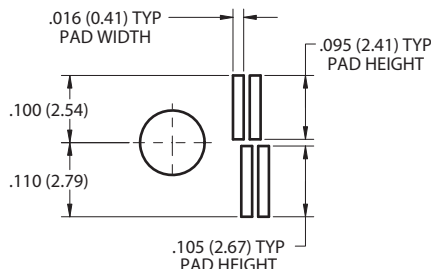
## 31 Contacts



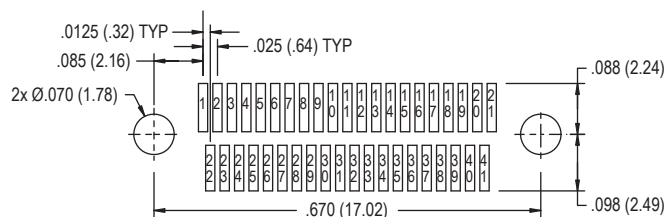
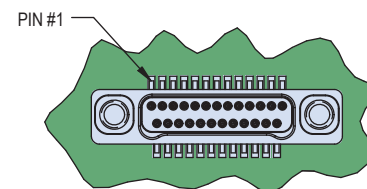
## 37 Contacts



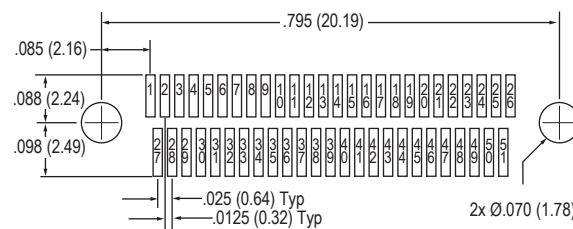
**PAD FOOTPRINT DETAIL  
LAYOUT 9-69**



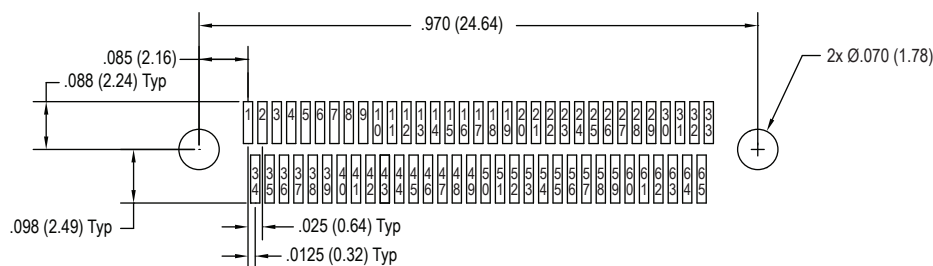
**PAD FOOTPRINT DETAIL  
LAYOUT 85 ONLY**



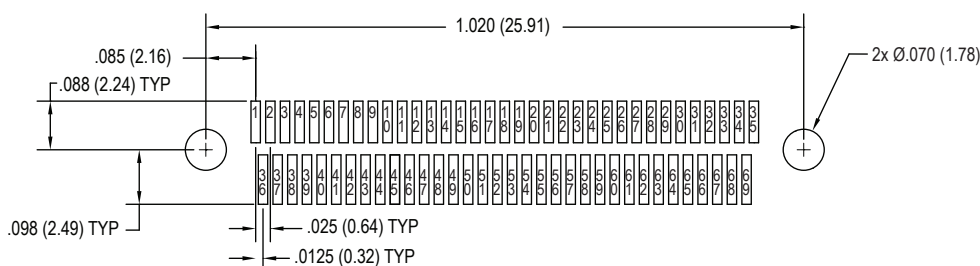
## 41 Contacts



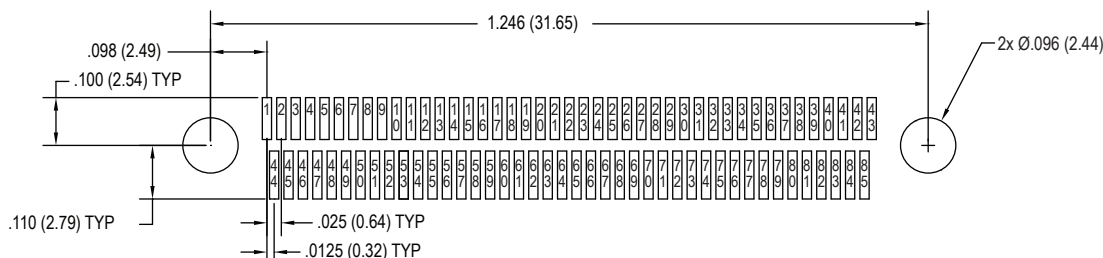
## 51 Contacts



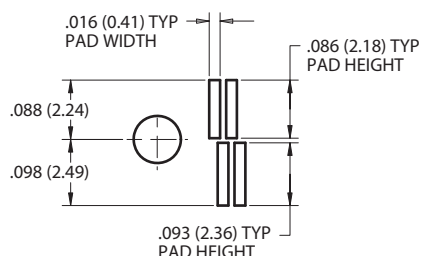
## 65 Contacts



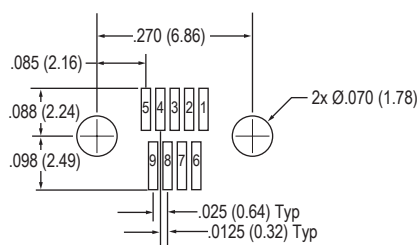
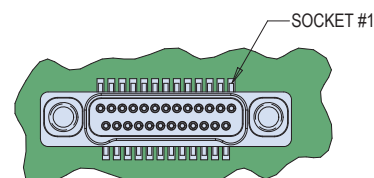
## 69 Contacts



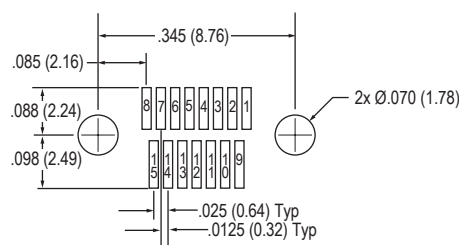
## 85 Contacts (See pad detail for 85 contact layout above)



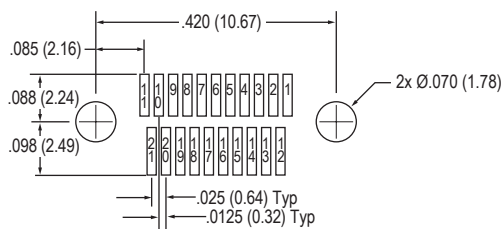
**PAD FOOTPRINT DETAIL  
LAYOUT 9-69**



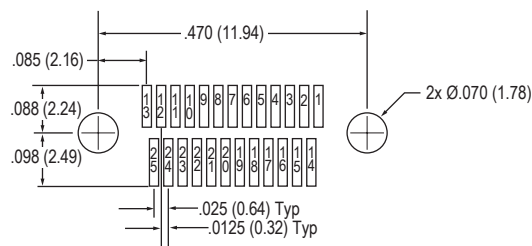
## 9 Contacts



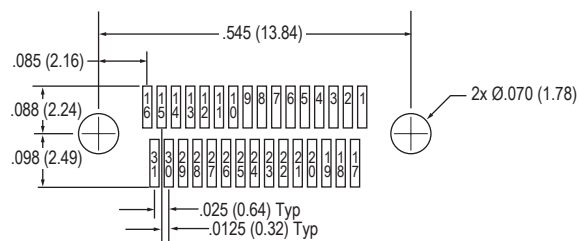
## 15 Contacts



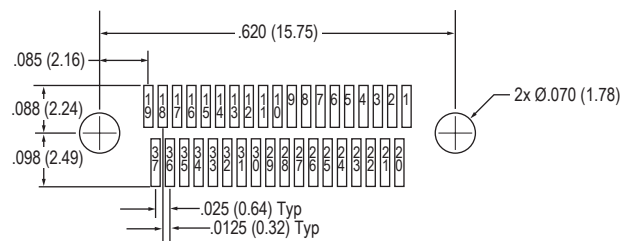
## 21 Contacts



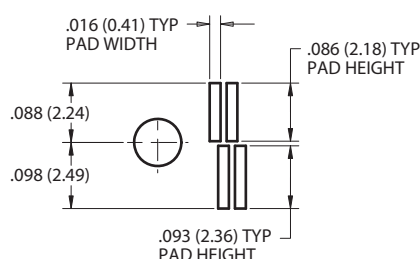
## 25 Contacts



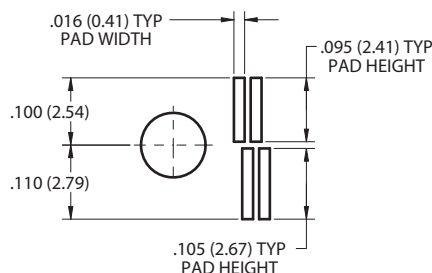
## 31 Contacts



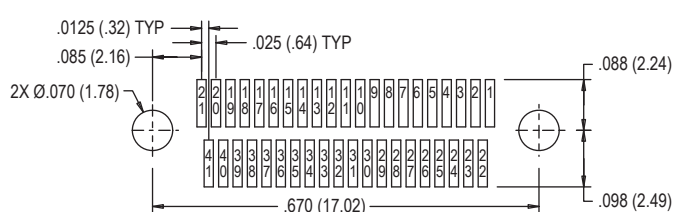
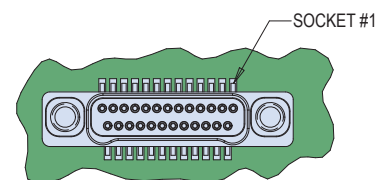
## 37 Contacts



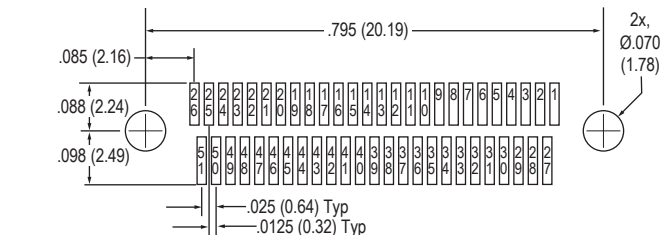
**PAD FOOTPRINT DETAIL  
LAYOUT 9-69**



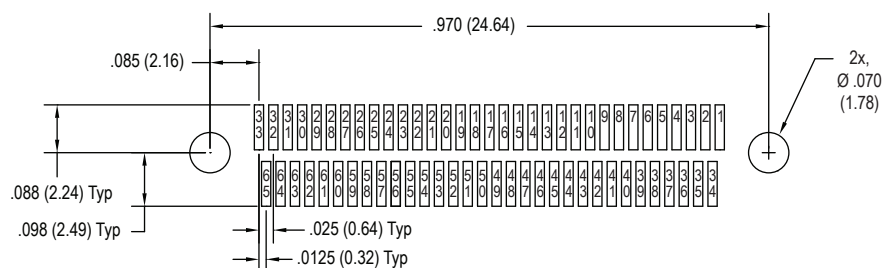
**PAD FOOTPRINT DETAIL  
LAYOUT 85 ONLY**



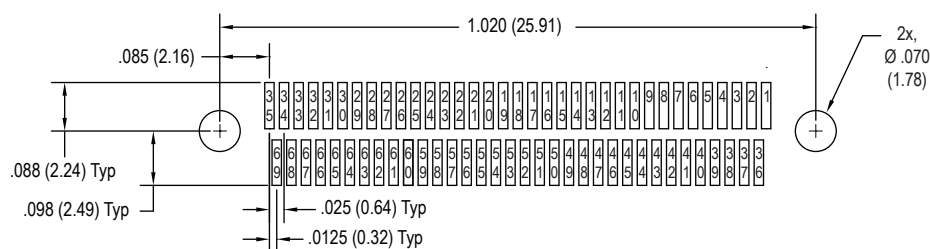
**41 Contacts**



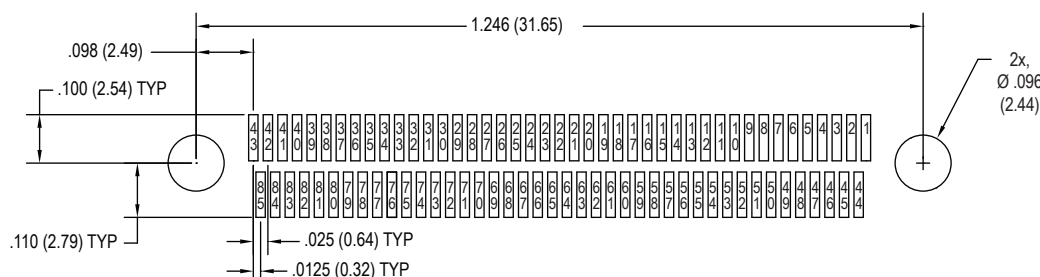
**51 Contacts**



**65 Contacts**



**69 Contacts**



**85 Contacts (See pad detail for 85 contact layout above)**