

# Stacking Connectors High-density circuits between boards

### The Cinch Advantage

CIN::APSE<sup>®</sup> stacking connectors are used for connecting PCB, flex PCB to PCB or component to PCB without the use of solder. The contacts are compact with a pitch of 0.050". Each pathway on the CIN::APSE<sup>®</sup> connector relies on a spring-like contact that establishes a durable electrical connection using mechanical pressure. The spring-like contact is protected from over compression by the CIN::APSE<sup>®</sup> insulator. Plungers are used on either side of the spring-like contact allowing compression cycles to over 100. The connector mounts onto the PCB and connects electrically to gold plated pads.

CIN::APSE<sup>®</sup> stacking connectors can be found in multiple military, aerospace and satellite applications where a mezzanine style PCB layout is utilized to reduce space and weight. CIN::APSE<sup>®</sup> 1.27mm pitch allows for high-density of circuits between boards. CIN::APSE<sup>®</sup> mechanical contacts are ideal for applications that require frequent disconnections for modifications or testing. The mechanical contacts also reduce soldering cost and rework.

### **Features**

- 25, 51, 83, 166, 249 positions
- 0.125", 0.250" and 0.277" heights
- Gold plated contacts and plungers
- 0.006" working compression range

| Part Number       | Positions | Height |      | Rows | Fastener                    |  |  |
|-------------------|-----------|--------|------|------|-----------------------------|--|--|
|                   |           | in     | mm   |      |                             |  |  |
| 3800520001*       | 25        | 0.125  | 3.18 | 2    | 2x #2 Thru Holes (Ø 0.090") |  |  |
| 3800520013*       | 51        | 0.125  | 3.18 | 2    | 2x #2 Thru Holes (Ø 0.090") |  |  |
| 3900520017        | 83        | 0.277  | 7.04 | 5    | 2x #4 Thru Holes (Ø 0.124") |  |  |
| 3900520008        | 166       | 0.277  | 7.04 | 5    | 3x #4 Thru Holes (Ø 0.124") |  |  |
| 3800520038        | 249       | 0.277  | 7.04 | 5    | 4x #2-56 Tapped Insert      |  |  |
| 3800520042        | 249       | 0.277  | 7.04 | 5    | 4x #4 Thru Holes (Ø 0.124") |  |  |
| *Oto also al Dast |           |        |      |      |                             |  |  |

\*Stocked Part





# **Outline Specification**

| Current Rating        | 1-3A per positions                   |  |  |  |  |
|-----------------------|--------------------------------------|--|--|--|--|
| Withstanding Voltage  | 500 VDC (sea level)                  |  |  |  |  |
| Contact Resistance    | <50 milliohms                        |  |  |  |  |
| Housing               | UL94V-O rated liquid crystal polymer |  |  |  |  |
| Plunger               | Gold-plated copper alloy             |  |  |  |  |
| Contact               | Gold-plated molybdenum               |  |  |  |  |
| Operating Temperature | -65°F (-55°C) to 257°F (125°C)       |  |  |  |  |
| Durability            | >100 mating cycles                   |  |  |  |  |
| Configuration         | Plunger, Contact, Plunger            |  |  |  |  |
| Alignment             | With pins                            |  |  |  |  |
| Inductance            | <2 nH                                |  |  |  |  |
| Vibration             | 20 Gs, 10-2,000 Hz                   |  |  |  |  |

## Configurations

#### **25 Position**



#### **51 Position**

| •<br>•<br>•<br>•<br>•<br>• | + + + | * * *   | * * * * | * * * *   | * * * * * * | * * * * | $\oplus$ |
|----------------------------|-------|---------|---------|-----------|-------------|---------|----------|
| $\Pi \Psi \Pi$             | * *   | * * * ' |         | * * * * * | * * * * * * |         | $\Psi$   |

#### 83 Position



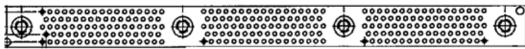
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a be**l** group

#### **166 Position**



#### 249 Position



Cinch Connectivity Solutions reserves the right to change specifications without notice

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