Applications and Industries

Consumer Electronics

- Smart Home Electronics
- Fitness Equipment
- Gaming Consoles
- Wearable Devices
- Home Entertainment Systems
- Payment Terminals
- Tablets
- Mobile Phones
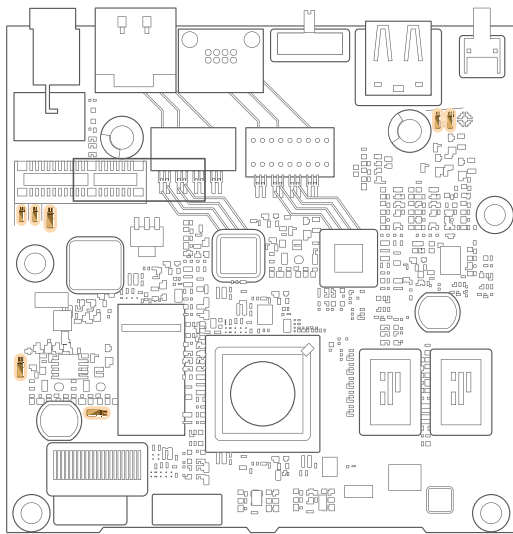- Printer
- VR Device

Industrial / Automotive

- POS Scanners
- Security Systems
- Thermostats
- Backup Cameras
- GPS
- Satellite Radio
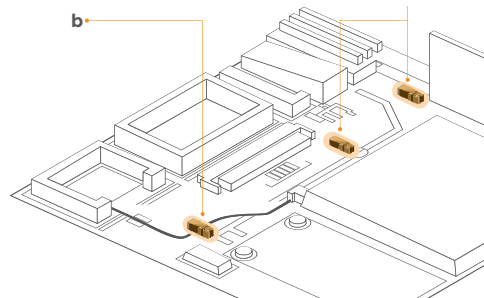- Infotainment
- Rugged tablet/phone

Consumer Electronics

- Patient Monitoring Devices
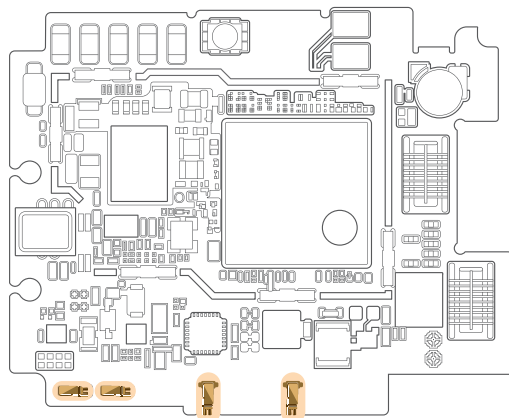- Blood Glucose Monitors
- Hearing Aids

Medical Device PCB

Used for grounding or shielding on the PCB

Tablet PCB
a. Used for grounding or shielding on the PCB
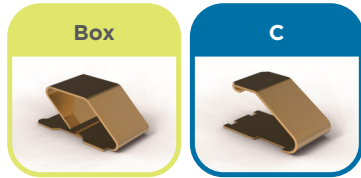b. Used for an antenna feed

Wearable Device PCB
Used for grounding between the PCB
and the cover of the device
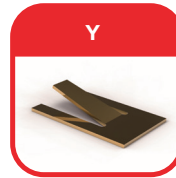
Types of Spring Fingers

Standard-flat Contact

Box	C

Standard box and C type connectors both have simple geometry for easy application.

Pre-loaded Contact

Pre-loaded

Pre-loaded spring fingers are recommended when a stable electrical contact with minimal deflection is needed. The force change is minimized over the working range of the spring finger. Pre-loaded spring fingers are available in three scalable families.

Ultra-low Profile

Y

Ultra low profile, Y type spring fingers are used in applications where low effective heights are needed.

## Ultra-small Contact

Small

Offered in different heights and styles/form factors, ultra small spring fingers are used in a broad range of applications with space constraints across various industries.


Types of Scalable Fingers & Key Features

Standard Scalable

- Dimples on the contact enhance contact force
- Holes for connection to the PCB help increase solder strength and reduce wicking
- Locking feature prevents overstretching
- Contact deflects to the bottom to help prevent permanent deformation
- Bent tip prevents hooking
- Radius on both sides of tip helps remove sharp edges
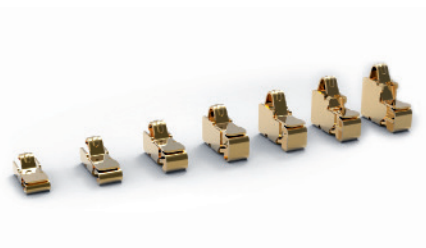
Side Protected Scalable

- Low force from 0.2N – 1.0N
- To increase strength and reduce wicking
- Prevents tangled springs in operator gloves
- Avoids deflection during PCB transfer
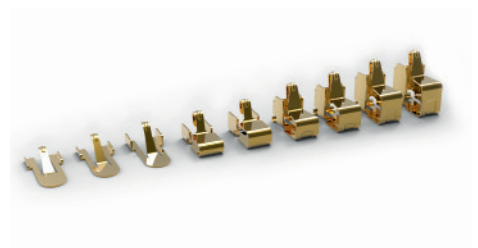
Side Protected Pre-loaded Scalable

- Very low force from 0.2N – 0.7N
- Offers a family of smaller working ranges
- Enhanced sidewall design

Standard and Ultra Low Profile

Product Number	Type	Contact Finish	Uncompressed Height (mm)	Width (mm)	Working Range	Current Capacity
1447009-5	Y	Gold	0.8	2	0.5–0.7	0.5A
2040852-1	Y	Gold	0.8	2	0.5–0.7	1.5A
1447360-9	C	Gold	1.7	1.5	1.2–1.5	1.5A
1447360-8	C	Gold	1.3	1.2	0.8–1.0	1.5A
1746136-1	Box	Gold	1.5	2	1.1–1.3	1.5A
1871059-1	C	Gold	1.7	1.5	1.2–1.5	1.5A
1674954-1	Box	Gold	2	2	1.1–1.5	0.5A
1734300-1	C	Gold	3	2.5	1.8–2.3	1.5A
1447009-7	C	Gold	3.5	2.5	2.2–2.7	1.5A
1447009-8	C	Gold	3.5	2.5	2.2–2.7	1.5A
1734303-1	Box	Tin-Copper	4	2.5	3.3–3.7	1.5A
1437259-6	C	Nickel	4	2.5	2.5–2.9	1.5A
1775073-1	Box	Gold	4.3	2.5	3.2–3.5	1.5A
2339640-1	Box	Gold	6.0	2.5	3.6–4.5	2.0A
440423-1	C	Gold	5.0	2.5	3.2–3.5	2.0A

Pre-Loaded

Product Number	Type	Contact Finish	Uncompressed Height (mm)	Width (mm)	Working Range	Current Capacity
2292838-3	Pre-loaded	Gold	1.1	1	0.4–0.6	1.5A
1551631-5	Pre-loaded	Gold	1.24	1	0.6–1.0	0.5A
2134078-1	Pre-loaded	Gold	1.2	1.05	0.6–0.8	1.5A
2199001-1	Pre-loaded	Gold	1.2	1.05	0.6–0.8	1.5A
1565158-1	Pre-loaded	Gold	1.45	1.1	1.1–1.3	1.0A
1-1447360-1	Pre-loaded	Gold	1.4	1	1.1–1.3	1.5A
1857724-4	Pre-loaded	Gold	1.8	1	1.1–1.5	1.5A
1565322-1	Pre-loaded	Gold	1.6	0.75	1.1–1.5	1.5A
2040761-1	Pre-loaded	Gold	1.99	2	1.5–1.9	1.5A
1554901-1	Pre-loaded	Gold	2	1.1	1.1–1.9	1.5A
2289559-1	Pre-loaded	Gold	2.3	1	1.6–2.0	0.5A
1746854-1	Pre-loaded	Gold	2.4	1.1	1.6–2.0	1.0A
1827625-1	Pre-loaded	Gold	3	1.4	2.2–2.7	1.5A
1903646-1	Pre-loaded	Gold	3	1.4	2.2–2.7	1.5A
2286211-3	Pre-loaded	Gold	2.4	1.7	1.5–2.0	4.2A

Spring Fingers

Scalable

Product Number	Type	Contact Finish	Uncompressed Height (mm)	Width (mm)	Working Range	Current Capacity
1551572-5	Pre-loaded	Gold	1.8	1.15	0.9–1.4	0.5A
1551573-5	Pre-loaded	Gold	2.15	1.15	1.2–1.7	0.5A
1551574-5	Pre-loaded	Gold	2.6	1.15	1.6–2.1	0.5A
1551575-5	Pre-loaded	Gold	3	1.15	2.1–2.6	0.5A
1551576-5	Pre-loaded	Gold	3.4	1.15	2.5–3.1	0.5A
2199248-4	C	Gold	1	2	0.4–0.8	2.0A
2199248-5	C	Gold	1.3	2	0.6–1.0	2.0A
2199248-6	C	Gold	1.6	2	0.8–1.3	2.0A
2199249-3	C	Gold	2	1.5	1.2–1.7	2.0A
2199249-4	C	Gold	2.3	1.5	1.5–2.0	2.0A
3-2199250-2	C	Gold	2.9	1.5	2.1–2.6	2.0A
3-2199250-3	C	Gold	3.2	1.5	2.4–2.9	2.0A
3-2199250-4	C	Gold	3.6	1.5	2.8–3.3	2.0A
3-2199250-5	C	Gold	3.8	1.5	3.1–3.6	2.0A
2108693-4	Pre-loaded	Gold	1.1	1	0.6–0.8	1.5A
2108610-5	Pre-loaded	Gold	1.4	1	0.8–1.1	1.5A
2108611-5	Pre-loaded	Gold	1.7	1	1.2–1.5	1.5A
2108612-5	Pre-loaded	Gold	2.05	1	1.6–1.9	1.5A
2108613-5	Pre-loaded	Gold	2.4	1	1.9–2.2	1.5A
2108614-5	Pre-loaded	Gold	2.7	1	2.2–2.5	1.5A
2108615-5	Pre-loaded	Gold	3	1	2.5–2.8	1.5A

Ultra-Small

Product Number	Type	Contact Finish	Uncompressed Height (mm)	Width (mm)	Working Range	Current Capacity
2306334-3	Small	Gold	1.2	1	0.8–1.1	1.5A
2329497-2	Small	Gold	1.15	1	0.4–0.7	1.0A
2306654-3	Small	Gold	1.8	1	0.8–1.2	1.5A
2306454-3	Small	Gold	2.28	1	1.5–1.8	1.0A
2336713-2	Small	Gold	1.45	1	0.8–1.0	1.0A

Frequently Asked Questions

Question 1
Why would I use a pre-loaded spring finger in an application?

Answer 1
A pre-loaded spring finger allows for the same amount of force with a smaller compression and provides a stable electrical contact with minimal deflection. These features are useful for applications with limited available height.

Question 2
Which style of spring finger is best for my application?

Answer 2
Spring fingers are typically some of the last pieces added to a board. The type used depends upon the height and space left on the board, but the decision is typically based on your design needs.

Question 3
Can I combine different types of spring fingers in an application?

Answer 3
Yes, an application can have multiple spring fingers of more than one type. For example, simple C types can be used for grounding between the device and the PCB, while multiple pre-loaded spring fingers are used on the board for shielding or other simple connections.

Question 4
What are the benefits of using a scalable spring finger?

Answer 4
Scalable spring fingers use a common footprint, allowing easy design changes without requiring any extra space.

te.com

TE Connectivity, TE, TE Connectivity (logo) are trademarks owned or licensed by the TE Connectivity Ltd. family of companies.
All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

©2020 TE Connectivity Ltd. family of companies. All Rights Reserved.

6-1773460-8   02/20   DND

For More Information

USA:	1.800.522.6752
Canada:	1.905.475.6222
Mexico:	52.0.55.1106.0800
Latin/S. America:	54.0.11.4733.2200
Germany:	49.0.6251.133.1999
UK:	44.0.800.267666
France:	33.0.1.3420.8686
Netherlands:	31.0.73.6246.999
China:	86.0.400.820.6015

TE
connectivity