GENERAL PURPOSE - REPLACEABLE PROBES

Replaceable Probes are those designed for typical Automotive and Industrial Board Test and standard continuity test, contacting industry norm test points such as leads, vias and pads.

All of the probes in this section are designed for high volume testing and are replaceable through the use of a mating receptacle mounted into a retaining plate or retaining block via a “press-ring” or knurl.

A replaceable probe is retained by a separate component, the receptacle, which is permanently fixed into a retention plate to which electrical connection is made. Removal of the probe does not damage or break the electrical connection. Typical probe retention is achieved by detents in the receptacle or additionally with a “Pylon” bend in the probe itself to prevent anti walkout.

ECT offers an extensive selection of General Purpose Probes for a wide variety of application in various industries, making ECT spring probes the first choice of test engineers worldwide.
**RMP-22B**

20 mil (0.51 mm)

**RMR-22W**

Crimp with 30° of 33 AWG wire attached

**RMR-22W-30**

Crimp with 30° of 34 AWG wire attached

**RMR-22W-32**

Crimp with 30° of 30 AWG wire attached

**RMR-22F**

Crimp with 30° of 33 AWG wire attached

**Mechanical**

Recommended Travel: .052 (1.33)

Full Travel: .079 (2.01)

Operating Temperature: -55°C to +105°C

**Spring Force in oz. (grams)**

<table>
<thead>
<tr>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0.51 (14)</td>
</tr>
</tbody>
</table>

**Electrical (Static Conditions)**

Current Rating: 2 amps

Average Probe Resistance: <125 mOhms

**Materials and Finishes**

Plunger: Heat-treated Steel, Nickel Boron plated

Barrel: BeCu alloy, Gold plated

Spring: Music Wire, Gold plated

**Receptacle**

Hole diameter: Ø .016 to .017 (0.41 to 0.43)

Suggested drill: #78 or 0.42 mm

Material Housing: Heat-treated BeCu, Gold plated over hard Nickel

**Tip Style**

| B | Ø .008 (0.20) |

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**MEP-30**

30 mil (0.76 mm)

**HPR-30W**

Crimp with 30° of 33 AWG wire attached

**HPR-30W-30**

Crimp with 30° of 30 AWG wire attached

**Mechanical**

Recommended Travel: .050 (1.27)

Full Travel: .075 (1.91)

Operating Temperature: -55°C to +105°C

**Spring Force in oz. (grams)**

<table>
<thead>
<tr>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0.39 (11)</td>
</tr>
</tbody>
</table>

**Electrical (Static Conditions)**

Current Rating: 2 amps

Average Probe Resistance: <50 mOhms

**Materials and Finishes**

Plunger: Heat-treated BeCu, Gold plated over hard Nickel

Barrel: Work hardened BeCu, Gold plated over hard Nickel

Spring: Music Wire, Gold plated

**Receptacle**

Hole diameter: Ø .0265 to .0276 (0.67 to 0.70)

Suggested drill: #71 or 0.70 mm

Material: Work hardened BeCu, Gold plated over hard Nickel

**Tip Style**

<table>
<thead>
<tr>
<th>B</th>
<th>Ø .014 (0.36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>Ø .014 (0.36)</td>
</tr>
<tr>
<td>J</td>
<td>Ø .014 (0.36)</td>
</tr>
<tr>
<td>U</td>
<td>Ø .012 (0.30)</td>
</tr>
</tbody>
</table>
**HPA-40**

39 mil (1.00 mm)

**Mechanical**

- **Recommended Travel:** 0.050 (1.27)
- **Full Travel:** 0.075 (1.91)
- **Operating Temperature:** -55°C to +150°C

**Spring Force in oz. (grams)**

<table>
<thead>
<tr>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0.79 (22) 1.75 (49)</td>
</tr>
</tbody>
</table>

**Electrical (Static Conditions)**

- **Current Rating:** 2 amps
- **Average Probe Resistance:** <35 mOhms

**Materials and Finishes**

- **Plunger:** Heat-treated BeCu, Gold plated over hard Nickel
- **Barrel:** Work hardened Nickel Silver, Gold plated over hard Nickel
- **Spring:** Stainless Steel, Silver plated

**Receptacle**

- **Hole diameter:** 0.028 (0.70)
- **Suggested drill:** #70 or 0.70 mm
- **Material Housing:** Work hardened Nickel Silver, Gold plated over hard Nickel

**Tip Style**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>G</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 0.035 (0.89)</td>
<td>Ø 0.021 (0.53)</td>
<td>Ø 0.021 (0.53)</td>
<td>Ø 0.021 (0.53)</td>
<td>Ø 0.021 (0.53)</td>
</tr>
</tbody>
</table>

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.
### P2662A

**50 mil (1.27 mm)**

**Mechanical**
- Recommended Travel: 0.067 (1.70) in.
- Full Travel: 0.090 (2.29) in.
- Operating Temperature: -55°C to +85°C

**Spring Force in oz. (grams)**

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1</td>
<td>0.70 (20)</td>
</tr>
<tr>
<td>Alternate</td>
<td>2</td>
<td>0.60 (17)</td>
</tr>
</tbody>
</table>

**Electrical (Static Conditions)**
- Current Rating: 3 amps
- Average Probe Resistance: <30 mOhms

**Materials and Finishes**
- **Plunger:** Heat-treated BeCu, Gold plated over hard Nickel
- **Barrel:** Phosphorous Bronze, Gold plated
- **Spring:** BeCu, Silver plated
- **Ball:** Stainless Steel

**Receptacle**
- Hole diameter: Ø .0350 to .0365 (0.89 to 0.93) in.
- Suggested drill: #64 or 0.92 mm

**Tip Style**

<table>
<thead>
<tr>
<th>1C</th>
<th>1Q</th>
<th>1R</th>
<th>2V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .021 (0.53)</td>
<td>Ø .021 (0.53)</td>
<td>Ø .021 (0.53)</td>
<td>Ø .040 (1.02)</td>
</tr>
</tbody>
</table>

### P2662B

**50 mil (1.27 mm)**

**Mechanical**
- Recommended Travel: 0.050 (1.27) in.
- Full Travel: 0.068 (1.73) in.
- Operating Temperature: -55°C to +85°C

**Spring Force in oz. (grams)**

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1</td>
<td>1.00 (28)</td>
</tr>
<tr>
<td>Alternate</td>
<td>2</td>
<td>0.50 (14)</td>
</tr>
</tbody>
</table>

**Electrical (Static Conditions)**
- Current Rating: 3 amps
- Average Probe Resistance: <30 mOhms

**Materials and Finishes**
- **Plunger:** Heat-treated BeCu, Gold plated over hard Nickel
- **Barrel:** Phosphorous Bronze, Gold plated
- **Spring:** BeCu, Silver plated
- **Ball:** Stainless Steel

**Receptacle**
- Hole diameter: Ø .0350 to .0365 (0.89 to 0.93) in.
- Suggested drill: #64 or 0.92 mm

**Tip Style**

<table>
<thead>
<tr>
<th>1C</th>
<th>1Q</th>
<th>1R</th>
<th>2V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .021 (0.53)</td>
<td>Ø .021 (0.53)</td>
<td>Ø .021 (0.53)</td>
<td>Ø .040 (1.02)</td>
</tr>
</tbody>
</table>
### General Purpose

**HPA-50**
50 mil (1.27 mm)

#### Mechanical
- **Recommended Travel:** 0.050 (1.27)
- **Full Travel:** 0.050 (1.27)
- **Operating Temperature:** -55°C to +105°C

#### Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.55 (44.00)</td>
<td>3.2 (91)</td>
</tr>
</tbody>
</table>

#### Electrical (Static Conditions)
- **Current Rating:** 3 amps
- **Average Probe Resistance:** < 35 mOhms

#### Materials and Finishes
- **Plunger:** Heat-treated BeCu, Gold plated over hard Nickel
- **Barrel:** Work hardened Phosphor Bronze, Gold plated over hard Nickel
- **Spring:** Music Wire, Gold plated

#### Receptacle
- **Hole diameter:** Ø 0.035 to 0.0365 (0.89 to 0.93)
- **Suggested drill:** #64 or 0.92 mm
- **Material Housing:** Work-hardened Nickel Silver, Gold plated over hard Nickel

### Tip Style

<table>
<thead>
<tr>
<th>B</th>
<th>D</th>
<th>G</th>
<th>T</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 0.021 (0.53)</td>
<td>Ø 0.035 (0.89)</td>
<td>Ø 0.021 (0.53)</td>
<td>Ø 0.035 (0.89)</td>
<td>Ø 0.018 (0.46)</td>
</tr>
</tbody>
</table>

Dimensions in inches (millimeters). Specifications subject to change without notice.
Consult factory for other temperature requirements, and applications below -40°C.
Stocking Disclaimer: Stacking levels for part numbers listed in this catalog are subject to change.
Availability is based on current levels of usage and demand.
Mechanical
- Recommended Travel: .067 (1.70)
- Full Travel: .100 (2.54)
- Operating Temperature:
  - Standard Spring: -55°C to +150°C
  - Alternate Spring: -55°C to +105°C

Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0.61 (17)</td>
<td>2.80 (79)</td>
</tr>
<tr>
<td>Alternate</td>
<td>-1</td>
<td>0.78 (22)</td>
</tr>
</tbody>
</table>

Electrical (Static Conditions)
- Current Rating: 3 amps
- Average Probe Resistance HPA: <35 mOhms
- Average Probe Resistance SPA: <50 mOhms

Materials and Finishes
- Plunger HPA: Heat-treated BeCu, Gold plated over hard Nickel
- Plunger SPA: Heat-treated BeCu, Rhodium plated over hard Nickel
- Barrel: Work hardened Phosphor Bronze, Gold plated over hard Nickel
- Spring:
  - Standard: Stainless Steel, Silver plated
  - Alternate: Music Wire, Silver plated

Receptacle
- Hole diameter: Ø .035 to .0365 (0.89 to 0.93)
- Suggested drill: #64 or 0.92 mm
- Material Housing: Work-hardened Nickel Silver, Gold plated over hard Nickel

HPA Tip Style

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>D</th>
<th>F</th>
<th>G12</th>
<th>G21</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .035 (0.89)</td>
<td>Ø .021 (0.53)</td>
<td>Ø .035 (0.89)</td>
<td>Ø .035 (0.89)</td>
<td>Ø .012 (0.31)</td>
<td>Ø .021 (0.53)</td>
<td>Ø .035 (0.89)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>J</th>
<th>L</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .021 (0.53)</td>
<td>Ø .035 (0.89)</td>
<td>Ø .035 (0.89)</td>
</tr>
</tbody>
</table>

SPA Tip Style

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>D</th>
<th>G12</th>
<th>G21</th>
<th>H</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .035 (0.89)</td>
<td>Ø .021 (0.53)</td>
<td>Ø .035 (0.89)</td>
<td>Ø .012 (0.31)</td>
<td>Ø .021 (0.53)</td>
<td>Ø .035 (0.89)</td>
<td>Ø .021 (0.53)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .035 (0.89)</td>
<td>Ø .035 (0.89)</td>
</tr>
</tbody>
</table>

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.
### HPA Tip Style

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 0.060 (1.52)</td>
<td>Ø 0.021 (0.53)</td>
<td>Ø 0.021 (0.53)</td>
<td>Ø 0.040 (1.02)</td>
<td>Ø 0.060 (1.52)</td>
<td>Ø 0.060 (1.52)</td>
<td>Ø 0.021 (0.53)</td>
</tr>
</tbody>
</table>

### SPA Tip Style

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 0.060 (1.52)</td>
<td>Ø 0.021 (0.53)</td>
<td>Ø 0.021 (0.53)</td>
<td>Ø 0.040 (1.02)</td>
<td>Ø 0.060 (1.52)</td>
<td>Ø 0.060 (1.52)</td>
<td>Ø 0.021 (0.53)</td>
</tr>
</tbody>
</table>

### Mechanical
- **Recommended Travel:** 0.067 (1.70)
- **Full Travel:** 0.100 (2.54)
- **Operating Temperature:** -55°C to +150°C

### Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1.10 (31)</td>
<td>2.5 (71)</td>
</tr>
<tr>
<td>Alternate</td>
<td>-1.10</td>
<td>1.30 (37)</td>
</tr>
</tbody>
</table>

### Electrical (Static Conditions)
- **Current Rating:** 3 amps
- **Average Probe Resistance HPA:** <35 mOhms
- **Average Probe Resistance SPA:** <50 mOhms

### Materials and Finishes
- **Plunger HPA:** Heat-treated BeCu, Gold plated over hard Nickel
- **Plunger SPA:** Heat-treated BeCu, Rhodium plated over hard Nickel
- **Barrel:** Work hardened Phosphor Bronze, Gold plated over hard Nickel
- **Spring:** Stainless Steel, Silver plated

### Receptacle
- **Hole diameter:** Ø 0.053 to 0.055 (1.35 to 1.40)
- **Suggested drill:** #54 or 1.40 mm
- **Material Housing:** Work-hardened Nickel Silver, Gold plated over hard Nickel
- **Material Post:** Phosphorous Bronze, Gold plated

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Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.
**General Purpose**

**HPA-52**
75 mil (1.91 mm)

**Mechanical**
- Recommended Travel: .075 (1.91)
- Full Travel: .075 (1.91)
- Operating Temperature: -55°C to +150°C

**Spring Force in oz. (grams)**

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1.68 (48)</td>
<td>3.22 (91)</td>
</tr>
<tr>
<td>Alternate</td>
<td>2.54 (72)</td>
<td>6.20 (176)</td>
</tr>
</tbody>
</table>

**Electrical (Static Conditions)**
- Current Rating: 3 amps
- Average Probe Resistance: <15 mOhms

**Materials and Finishes**
- Plunger: Heat-treated BeCu, Gold plated over hard Nickel
- Barrel: Work-hardened Phosphor Bronze, Gold plated over hard Nickel
- Spring: Stainless Steel, Silver plated

**Receptacle**
- Hole diameter: Ø .053 to .055 (1.35 to 1.40)
- Suggested drill: #54 or 1.40 mm
- Material Housing: Work-hardened Nickel Silver, Gold plated over hard Nickel
- Material Post: Phosphorous Bronze, Gold plated

**HPA Tip Style**

<table>
<thead>
<tr>
<th>B</th>
<th>D</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .021 (0.53)</td>
<td>Ø .040 (1.02)</td>
<td>Ø .057 (1.45)</td>
</tr>
</tbody>
</table>

**Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.**
Pylon Probe

General Purpose

Tip Style

<table>
<thead>
<tr>
<th>1C</th>
<th>1P</th>
<th>1R</th>
<th>1V</th>
<th>1W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .030 (0.76)</td>
<td>Ø .060 (1.52)</td>
<td>Ø .030 (0.76)</td>
<td>Ø .050 (1.27)</td>
<td>Ø .060 (1.52)</td>
</tr>
</tbody>
</table>

Mechanical
- Recommended Travel: .067 (1.70)
- Full Travel: 090 (2.29)
- Operating Temperature: -55°C to +150°C

Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>- 1</td>
<td>1.50 (42)</td>
</tr>
<tr>
<td>Alternate</td>
<td>- 2</td>
<td>1.00 (28)</td>
</tr>
</tbody>
</table>

Electrical (Static Conditions)
- Current Rating: 3 amps
- Average Probe Resistance: <10 mOhms

Materials and Finishes
- Plunger: Hardened BeCu, Gold plated
- Barrel: Phosphorous Bronze, Gold plated
- Spring: Stainless Steel
- Ball: Stainless Steel

Receptacle
- Hole diameter: Ø .0561 to .0576 (1.43 to 1.46)
- Suggested drill: 1.45 mm
- Material Housing: Brass, Gold plated
- Material Post: Phosphorous Bronze, Gold plated

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stacking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.
General Purpose

HPA-74
100 mil (2.54 mm)

Mechanical
- Recommended Travel: .075 (1.91)
- Full Travel: .100 (2.54)
- Operating Temperature:
  - Standard Spring: -55°C to +150°C
  - Alternate Spring: -55°C to +105°C

Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1.71 (48)</td>
<td>3.0 (83)</td>
</tr>
<tr>
<td>Alternate</td>
<td>- 1</td>
<td>2.82 (80)</td>
</tr>
</tbody>
</table>

Electrical (Static Conditions)
- Current Rating: 3 amps
- Average Probe Resistance: <35 mOhms

Materials and Finishes
- Plunger: Heat-treated BeCu, Gold plated over hard Nickel
- Barrel: Work hardened Phosphor Bronze, Gold plated over hard Nickel
- Spring:
  - Standard: Stainless Steel, Silver plated
  - Alternate: Music Wire, Silver plated

Probe Overall Length

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Overall Length (Dim. A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPA-74A, B</td>
<td>.598 (15.19)</td>
</tr>
<tr>
<td>HPA-74C</td>
<td>.586 (14.88)</td>
</tr>
<tr>
<td>HPA-74E, T135, T156</td>
<td>.610 (15.49)</td>
</tr>
<tr>
<td>HPA-74T75</td>
<td>.620 (15.75)</td>
</tr>
</tbody>
</table>

Receptacle
- Hole diameter: Ø .067 to .069 (1.70 to 1.75)
- Suggested drill: #51 or 1.70 mm
- Material: Nickel Silver alloy

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.
**General Purpose**

**EPA-2 / SPA-2**

100 mil (2.54 mm)

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**Mechanical**

Recommended Travel: .107 (2.72)

Full Travel: .160 (4.06)

Operating Temperature: -55°C to +105°C

**Spring Force in oz. (grams)**

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1.08 (31)</td>
<td>3.5 (99)</td>
</tr>
<tr>
<td>Alternate</td>
<td>2.64 (75)</td>
<td>6.5 (184)</td>
</tr>
<tr>
<td>Ultra High</td>
<td>4.09 (116)</td>
<td>10.0 (283)</td>
</tr>
</tbody>
</table>

**Electrical (Static Conditions)**

Current Rating: 5 amps

Average Probe Resistance EPA: <35 mOhms

Average Probe Resistance SPA: <50 mOhms

**Materials and Finishes**

- Plunger EPA: Heat-treated BeCu, Gold plated over hard Nickel
- Plunger SPA: Heat-treated BeCu, Rhodium plated over hard Nickel
- Barrel: Work hardened Nickel Silver, Gold plated over hard Nickel
- Spring: Music Wire, Silver plated
- Ball: Stainless Steel, Gold plated

**Receptacle**

- Hole diameter: Ø .067 to .069 (1.70 to 1.75)
- Suggested drill: #51 or 1.70 mm

- Material Housing: Work-hardened Nickel Silver, Gold plated over hard Nickel
- Material Post: Phosphorous Bronze, Gold plated

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**EPA / SPA Tip Style**

**Dimensions in inches (millimeters). Specifications subject to change without notice.**

Consult factory for other temperature requirements, and applications below -40°C.

Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change.

Availability is based on current levels of usage and demand.
General Purpose

P2664
100 mil (2.54 mm)

Mechanical
- Recommended Travel: .084 (2.13)
- Full Travel: .114 (2.90)
- Operating Temperature: -55°C to +150°C

Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>2.00 (57)</td>
<td>3.6 (102)</td>
</tr>
<tr>
<td>Alternate</td>
<td>3.00 (85)</td>
<td>5.7 (162)</td>
</tr>
</tbody>
</table>

Electrical (Static Conditions)
- Current Rating: 5 amps
- Average Probe Resistance: <10 mOhms

Materials and Finishes
- Plunger: Heat-treated BeCu, Gold plated over hard Nickel
- Barrel: Phosphorous Bronze, Gold plated
- Spring: Stainless Steel
- Ball: Stainless Steel

Probe Overall Length

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Overall Length (Dim. A)</th>
<th>Plunger Extension (Dim. B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2664G-...</td>
<td>.895 (22.73)</td>
<td>.0165 (4.19)</td>
</tr>
<tr>
<td>P2664G-1C.</td>
<td>.845 (21.46)</td>
<td>.0115 (2.92)</td>
</tr>
<tr>
<td>P2664G-2R.</td>
<td>.935 (23.75)</td>
<td>.0205 (5.21)</td>
</tr>
</tbody>
</table>

Receptacle
- Hole diameter: Ø .069 (1.75)
- Suggested drill: 1.75 mm
- Material Housing: Nickel Silver, Gold plated
- Material Post: Phosphorous Bronze, Gold plated

Tip Style

<table>
<thead>
<tr>
<th>Style</th>
<th>1C</th>
<th>1R</th>
<th>2R</th>
<th>4V</th>
<th>1W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .040 (1.02)</td>
<td>Ø .040 (1.02)</td>
<td>Ø .050 (1.27)</td>
<td>Ø .070 (1.78)</td>
<td>Ø .070 (1.78)</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions in inches (millimeters). Specifications subject to change without notice.
Consult factory for other temperature requirements, and applications below -40°C.
Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change.
Availability is based on current levels of usage and demand.

ECT-CPG com
shop.ECT-CPG.com
### Mechanical
- **Recommended Travel:** 0.114 (2.90)
- **Full Travel:** 0.170 (4.32)
- **Operating Temperature:** -55°C to +105°C

### Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1</td>
<td>2.70 (77)</td>
</tr>
<tr>
<td>Alternate</td>
<td>2</td>
<td>1.30 (37)</td>
</tr>
</tbody>
</table>

### Electrical (Static Conditions)
- **Current Rating:** 8 amps
- **Average Probe Resistance:** <10 mOhms

### Materials and Finishes
- **Plunger:** Heat-treated Steel or BeCu, Gold plated over hard Nickel
- **Barrel:** Phosphorous Bronze, Gold plated
- **Spring:** Music Wire
- **Ball:** Stainless Steel

### Receptacle
- **Hole diameter:** Ø 0.069 (1.75)
- **Suggested drill:** 1.75 mm

### Pylon Probe
- **Material Housing:** Nickel Silver, Gold plated
- **Material Post:** Phosphorous Bronze, Gold plated

---

### Tip Style

<table>
<thead>
<tr>
<th>3C</th>
<th>1R</th>
<th>1Q</th>
<th>2Q</th>
<th>1V</th>
<th>1W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 0.04 (1.02)</td>
<td>Ø 0.04 (1.02)</td>
<td>Ø 0.06 (1.52)</td>
<td>Ø 0.025 (0.64)</td>
<td>Ø 0.070 (1.78)</td>
<td>Ø 0.070 (1.78)</td>
</tr>
</tbody>
</table>

Steel:
- Ø 0.023 (0.58)

---

**Dimensions in inches (millimeters). Specifications subject to change without notice.**
Consult factory for other temperature requirements, and applications below -40°C.
Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change.
Availability is based on current levels of usage and demand.
General Purpose

P5160
100 mil (2.54 mm)

Mechanical
- Recommended Travel: 0.167 (4.24)
- Full Travel: 2.90 (5.84)
- Operating Temperature: -55°C to +105°C

Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1</td>
<td>2.50 (71)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.3 (184)</td>
</tr>
<tr>
<td>Alternate</td>
<td>2</td>
<td>1.70 (48)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.5 (99)</td>
</tr>
<tr>
<td>Elevated</td>
<td>3</td>
<td>2.50 (71)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.2 (232)</td>
</tr>
</tbody>
</table>

Electrical (Static Conditions)
- Current Rating: 8 amps
- Average Probe Resistance: <10 mOhms

Materials and Finishes
- Plunger: Hardened Steel or BeCu, Gold plated over hard Nickel
- Barrel: Phosphorous Bronze, Gold plated
- Spring: Music Wire
- Ball: Stainless Steel

Receptacle
- Hole diameter: Ø 0.069 (1.75)
- Suggested drill: 1.75 mm
- Material Housing: Nickel Silver, Gold plated
- Material Post: Phosphorous Bronze, Gold plated

Tip Style

<table>
<thead>
<tr>
<th>2C</th>
<th>3C</th>
<th>1R</th>
<th>3P</th>
<th>1Q</th>
<th>1V</th>
<th>2W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 0.040 (1.02)</td>
<td>Ø 0.040 (1.02)</td>
<td>Ø 0.030 (0.76)</td>
<td>Ø 0.060 (1.52)</td>
<td>Ø 0.060 (1.52)</td>
<td>Ø 0.069 (1.52)</td>
<td>Ø 0.060 (1.52)</td>
</tr>
</tbody>
</table>

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.
HPA-64 / SPA-64

100 mil (2.54 mm)

### Mechanical
- **Recommended Travel:** 0.05 (1.27)
- **Full Travel:** 0.05 (1.27)
- **Operating Temperature:** -55°C to +150°C

### Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1.10 (31) 3.85 (109)</td>
</tr>
</tbody>
</table>

### Electrical (Static Conditions)
- **Current Rating:** 3 amps
- **Average Probe Resistance HPA / SPA:** <50 mOhms

### Materials and Finishes
- **Plunger:** Heat-treated BeCu, Gold plated over hard Nickel
- **Barrel HPA:** Work hardened Nickel Silver, Gold plated over hard Nickel
- **Barrel SPA:** Work hardened Nickel Silver
- **Spring:** Stainless Steel, Silver plated

### Probe Overall Length

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Overall Length (Dim. A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPA/SPA-64-1, -4, -7</td>
<td>0.375 (9.53)</td>
</tr>
<tr>
<td>HPA/SPA-64-2, -3</td>
<td>0.365 (9.27)</td>
</tr>
<tr>
<td>HPA/SPA-64-8</td>
<td>0.385 (9.78)</td>
</tr>
<tr>
<td>SPA-64-9, -10</td>
<td>0.363 (9.22)</td>
</tr>
<tr>
<td>HPA-64-9, -10</td>
<td>0.365 (9.27)</td>
</tr>
</tbody>
</table>

### Receptacle
- **Hole diameter:** Ø 0.067 to 0.069 (1.70 to 1.75)
- **Suggested drill:** #51 or 1.70 mm
- **Material:** Nickel Silver alloy

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.
**General Purpose**

**P2665**
125 mil (3.18 mm)

---

**Mechanical**
- **Recommended Travel:** 0.167 (4.24)
- **Full Travel:** 0.230 (5.84)
- **Operating Temperature:** -55°C to +150°C

---

**Spring Force in oz. (grams)**

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1.50 (43)</td>
<td>3.0 (85)</td>
</tr>
<tr>
<td>Alternate</td>
<td>2.50 (71)</td>
<td>5.8 (164)</td>
</tr>
</tbody>
</table>

---

**Electrical (Static Conditions)**
- **Current Rating:** 15 amps
- **Average Probe Resistance:** <10 mOhms

---

**Materials and Finishes**
- **Plunger:** Heat-treated BeCu, Gold plated over hard Nickel
- **Barrel:** Phosphorous Bronze, Gold plated
- **Spring:** Stainless Steel
- **Ball:** Stainless Steel

---

**Probes Overall Length**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Overall Length (Dim. A)</th>
<th>Plunger Extension (Dim. B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2665G-...</td>
<td>1.29 (32.77)</td>
<td>0.320 (8.13)</td>
</tr>
<tr>
<td>P2665G-2W</td>
<td>1.27 (32.26)</td>
<td>0.300 (7.62)</td>
</tr>
</tbody>
</table>

---

**Receptacle**
- **Hole Diameter:** Ø .094 to .096 (2.39 to 2.44)
- **Suggested Drill:** #41 or 2.40 mm
- **Material Housing:** Nickel Silver, Gold plated
- **Material Post:** Phosphorous Bronze, Gold plated

---

**Tip Style**

<table>
<thead>
<tr>
<th>1C</th>
<th>1R</th>
<th>1V</th>
<th>1W</th>
<th>2W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .066 (1.68)</td>
<td>Ø .066 (1.68)</td>
<td>Ø .090 (2.29)</td>
<td>Ø .090 (2.29)</td>
<td>Ø .153 (3.89)</td>
</tr>
</tbody>
</table>

---

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.
EPA Tip Style

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .100 (2.54)</td>
<td>Ø .050 (1.27)</td>
<td>Ø .050 (1.27)</td>
<td>Ø .062 (1.58)</td>
<td>Ø .100 (2.54)</td>
<td>Ø .100 (2.54)</td>
<td>Ø .050 (1.27)</td>
</tr>
</tbody>
</table>

SPA Tip Style

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .100 (2.54)</td>
<td>Ø .050 (1.27)</td>
<td>Ø .050 (1.27)</td>
<td>Ø .062 (1.58)</td>
<td>Ø .100 (2.54)</td>
<td>Ø .100 (2.54)</td>
<td>Ø .050 (1.27)</td>
</tr>
</tbody>
</table>

Mechanical

Recommended Travel: .167 (4.24)
Full Travel: .250 (6.35)

Operating Temperature
- Standard Spring: -55°C to +85°C
- Alternate Spring: -55°C to +150°C
- Ultra High Spring: -55°C to +150°C

Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1.60 (45)</td>
<td>4.5 (128)</td>
</tr>
<tr>
<td>Alternate</td>
<td>- 1</td>
<td>2.52 (71)</td>
</tr>
<tr>
<td>Ultra High</td>
<td>- 2</td>
<td>4.18 (119)</td>
</tr>
</tbody>
</table>

Electrical (Static Conditions)

Current Rating: 6 amps
Average Probe Resistance EPA: <35 mOhms
Average Probe Resistance SPA: <50 mOhms

Materials and Finishes

Plunger EPA: Heat-treated BeCu, Gold plated over hard Nickel
Plunger SPA: Heat-treated BeCu, Rhodium plated over hard Nickel
Barrel: Work hardened Nickel Silver, Gold plated over hard Nickel

Spring
- Standard: BeCu, Silver plated
- Alternate: Stainless Steel, Silver plated
- Ultra High: Stainless Steel
Ball: Brass, Gold plated

Receptacle

Hole diameter: Ø .094 to .096 (2.39 to 2.44)
Suggested drill: #41 or 2.40 mm
Material Housing: Work-hardened Nickel Silver, Gold plated over hard Nickel
Material Post: Phosphorous Bronze, Gold plated

Special

A "P" at the end of the part number in the "Special" field indicates the end of the barrel will have a slight bulge and is used with receptacles lacking detents.

Dimensions in inches (millimeters). Specifications subject to change without notice.
Consult factory for other temperature requirements, and applications below -40°C.
Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change.
Availability is based on current levels of usage and demand.
**EPA-4 / SPA-4**
187 mil (4.75 mm)

### Mechanical
- **Recommended Travel:** .167 (4.24)
- **Full Travel:** .250 (6.35)
- **Operating Temperature**
  - Standard Spring: -55°C to +85°C
  - Alternate Spring: -55°C to +150°C
  - Ultra High Spring: -55°C to +150°C

### Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>2.20 (62)</td>
<td>4.8 (136)</td>
</tr>
<tr>
<td>Alternate</td>
<td>- 1</td>
<td>3.20 (80)</td>
</tr>
<tr>
<td>Ultra High</td>
<td>- 2</td>
<td>6.70 (190)</td>
</tr>
</tbody>
</table>

### Electrical (Static Conditions)
- **Current Rating:** 7 amps
- **Average Probe Resistance EPA:** <35 mOhms
- **Average Probe Resistance SPA:** <50 mOhms

### Materials and Finishes
- **Plunger EPA:** Heat-treated BeCu, Gold plated over hard Nickel
- **Plunger SPA:** Heat-treated BeCu, Rhodium plated over hard Nickel
- **Barrel:** Work hardened Nickel Silver, Gold plated over hard Nickel
- **Spring**
  - Standard: BeCu, Silver plated
  - Alternate: Stainless Steel, Silver plated
  - Ultra High: Stainless Steel
- **Ball:** Brass, Gold plated

**Receptacle**
- **Hole diameter:** Ø .107 to .109 (2.72 to 2.77)
- **Suggested drill:** 2.75 mm
- **Material Housing:** Work-hardened Nickel Silver, Gold plated over hard Nickel
- **Material Post:** Phosphorous Bronze, Gold plated

### Special
- A "P" at the end of the part number in the “Special” field indicates the end of the barrel will have a slight bulge and is used with receptacles lacking detents.

---

[Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.]
Replaceable Probe

**General Purpose**

**P2757**
187 mil (4.75 mm)

- **Tip Style**
  - 1C
  - 1R
  - 1V
  - 1W
  - 2W
  - 3W

<table>
<thead>
<tr>
<th>Tip Style</th>
<th>1C</th>
<th>1R</th>
<th>1V</th>
<th>1W</th>
<th>2W</th>
<th>3W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .098 (2.49)</td>
<td>Ø .120 (3.05)</td>
<td>Ø .152 (3.86)</td>
<td>Ø .154 (3.91)</td>
<td>Ø .250 (6.35)</td>
<td>Ø .122 (3.10)</td>
<td></td>
</tr>
</tbody>
</table>

- **O.A.L. “A”**
  - .116 (2.95)
  - .320 (8.13)

- **S2757-2ED**
  - Collar height: .090 (2.29)

- **S2757-2ETD**
  - Collar height: .090 (2.29)

- **S2757-2EWWD**
  - Collar height: .090 (2.29)

### Mechanical
- **Recommended Travel:** .167 (4.24)
- **Full Travel:** 2.30 (58.4)
- **Operating Temperature:** -55°C to +150°C

### Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1</td>
<td>2.00 (57)</td>
</tr>
<tr>
<td>Alternate</td>
<td>2</td>
<td>3.50 (99)</td>
</tr>
</tbody>
</table>

### Electrical (Static Conditions)
- **Current Rating:** 20 amps
- **Average Probe Resistance:** < 10 mOhms

### Materials and Finishes
- **Plunger:** Heat-treated BeCu, Gold or Silver plated over hard Nickel
- **Barrel:** Phosphorous Bronze, Gold plated
- **Spring:** Stainless Steel
- **Ball:** Stainless Steel

### Probe Overall Length

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Overall Length (Dim. A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2757G-...</td>
<td>1.210 (30.73)</td>
</tr>
<tr>
<td>P2757G-1W...</td>
<td>1.205 (30.61)</td>
</tr>
<tr>
<td>P2757G-2W...</td>
<td>1.205 (30.61)</td>
</tr>
</tbody>
</table>

### Receptacle
- **Hole diameter:** Ø .1350 to .1365 (3.43 to 3.47)
- **Suggested drill:** #29 or 3.45 mm
- **Material Housing:** Brass, Gold plated
- **Material Post:** Phosphorous Bronze, Gold plated

---

Dimensions in inches (millimeters). Specifications subject to change without notice.
Consult factory for other temperature requirements, and applications below -40°C.
Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change.
Availability is based on current levels of usage and demand.
### Mechanical
- **Recommended Travel:** .167 (4.24)
- **Full Travel:** .250 (6.35)
- **Operating Temperature**:
  - Light Spring: -55°C to +85°C
  - Standard Spring: -55°C to +150°C
  - Ultra High Spring: -55°C to +105°C

### Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light</td>
<td>1.96 (56)</td>
<td>3.5 (99)</td>
</tr>
<tr>
<td>Standard</td>
<td>6.13 (174)</td>
<td>16.0 (454)</td>
</tr>
<tr>
<td>Ultra High</td>
<td>12.90 (386)</td>
<td>48.0 (1361)</td>
</tr>
</tbody>
</table>

* Available ONLY in SPA-5

### Electrical (Static Conditions)
- **Current Rating:** 8 amps
- **Average Probe Resistance EPA:** <35 mOhms
- **Average Probe Resistance SPA:** <50 mOhms

### Materials and Finishes
- **Plunger EPA:** Heat-treated BeCu, Gold plated over hard Nickel
- **Plunger SPA:** Heat-treated BeCu, Rhodium plated over hard Nickel
- **Barrel:** Work hardened Nickel Silver, Gold plated over hard Nickel
- **Spring**:
  - Light: BeCu, Silver plated
  - Standard: Stainless Steel, Silver plated
  - Ultra High: Music Wire, Silver plated
- **Ball:** Brass, Gold plated

### Receptacle
- **Hole diameter:** Ø .141 to .143 (3.58 to 3.63)
- **Suggested drill:** 3.60 mm
- **Material Housing:** Work-hardened Nickel Silver, Gold plated over hard Nickel

### Special
- A "P" at the end of the part number in the "Special" field indicates the end of the barrel will have a slight bulge and is used with receptacles lacking detents.
**Solar Panel Test Probe SPP-25 Benefit Summary**

Spring probe technology is an ideal solution to provide electrical connection to obtain I-V curve measurements, or providing reliable contact for your challenging high current or low voltage connections. SPP-25 probes feature low, stable resistance, a center close for enhanced pointing accuracy, tip styles designed to distribute spring force across a large area, and two force options; 4oz and 6oz. The probes are specifically designed to yield a linear force – compression relationship as the probe is actuated. This minimizes potentially harmful jumps or steps in force.
GENERAL PURPOSE – EPOXY OR SOLDER MOUNT

The ECT / Pylon line of standard products includes non-replaceable Pogo contacts. They differ from replaceable contacts in that they do not require a socket or receptacle and are designed to be permanently mounted. Non-replaceable probes are designed for industrial applications where typical probe life meets or exceeds those of the end-use product. They are often located inside the end product where probe replacement is either impossible or end-product damage would occur.

Electrical connections are usually made with a soldered connection for electrical and mechanical stability. The probe is retained in the retention plate with either epoxy or solder on the outside of the probe body. Non-replaceable Pogo contacts are another example of ECT and Pylon’s quality and innovation and how it can work for you.

EPOXY MOUNT INSTRUCTIONS

ECT non-replaceable products may be retained in mounting holes using solder or adhesives.

- **Solder mount** If conductivity is required, we recommend utilizing solder mounting for retention.
- **Epoxy mount** If conductivity is not required, utilizing epoxy adhesives for mounting is acceptable.

Adhesives used are typically two-part epoxies, and can be either conductive or non-conductive dependent upon the application. ECT does not recommend the use of fast setting Superglue style adhesives as they can outgas and may put a nearly invisible barrier on contact surfaces. Epoxy mounting, when properly utilized, provides excellent holding or retention ability compared to traditional mounting techniques such as solder mounting.

Several types of epoxies are available for use, depending on whether conductivity is required, the desired set time, the temperature of application and the requirements and temperature in the end use.

The following epoxy adhesives are known to work well in typical customer applications:

- **DEVCON #14277** Two-part epoxy
- **Loctite 3140 Hysol Epoxy Resin**
- **Loctite 3164 Hysol Epoxy Hardener**
- **DURALCO #4525** Room temperature curing epoxy

EPOXY MOUNTING PROCEDURE

1. The probe barrel must be clean and free of any coatings, paint, or other materials.
2. Additionally, the plated through hole, or mounting hole must be clean and free of any coatings, paint, or other materials.
3. To install the probe, apply a thin layer of conductive epoxy to the clean inside area of the mounting hole or to the clean outside of the probe barrel, according to manufacturer’s directions.
4. If desired, apply a release agent, on all other surfaces to keep the epoxy from adhering to undesirable locations. Utilize a release agent which is compatible with your process.
5. If the depth of the mounting hole is shallow, ensure that a fixture is used to ensure perpendicularity of the probe to the mounting plane.
6. Once the epoxy hardens, or sets up to an acceptable stiff plastic consistency, remove any fixturing or release agents.
### MEP-22B
**20 mil (0.51 mm)**

**Mechanical**
- Recommended Travel: 0.050 (1.27)
- Full Travel: 0.079 (2.01)
- Operating Temperature: -55°C to +105°C

**Spring Force in oz. (grams)**

<table>
<thead>
<tr>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0.51 (14)</td>
</tr>
</tbody>
</table>

**Electrical (Static Conditions)**
- Current Rating: 2 amps
- Average Probe Resistance: <125 mOhms

**Materials and Finishes**
- Plunger: Heat-treated Steel, Nickel Boron plated
- Barrel: BeCu alloy, Gold plated
- Spring: Music Wire, Gold plated

**Mounting**
- Hole diameter: Ø 0.0135 to 0.0140 (0.34 to 0.36)
- Suggested drill: #80 or 0.35 mm

### MEPJ-22BD
**20 mil (0.51 mm)**

**Mechanical**
- Recommended Travel: 0.052 (1.33)
- Full Travel: 0.079 (2.01)
- Operating Temperature: -55°C to +105°C

**Spring Force in oz. (grams)**

<table>
<thead>
<tr>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0.38 (11)</td>
</tr>
</tbody>
</table>

**Electrical (Static Conditions)**
- Current Rating: 2 amps
- Average Probe Resistance: <125 mOhms

**Materials and Finishes**
- Plunger: Heat-treated Steel, Nickel Boron plated
- Barrel: Phosphor Bronze, Gold plated
- Spring: Music Wire, Gold plated

**Mounting**
- Hole diameter: Ø 0.0135 to 0.0140 (0.34 to 0.36)
- Suggested drill: #80 or 0.35 mm

### Tip Style

- **B**
  - Ø 0.006 (0.15)

### Tip Style

- **B**
  - Ø 0.008 (0.20)

---

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.
Non-Replaceable Probe - Epoxy mount

General Purpose

A-A-S
39 mil (1.00 mm)

Mechanical
Recommended Travel: .020 (0.51)
Full Travel: .030 (0.76)
Operating Temperature: -55°C to +150°C

Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th></th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0.5 (14)</td>
<td>2.0 (57)</td>
</tr>
</tbody>
</table>

Electrical (Static Conditions)
Current Rating: 2 amps
Average Probe Resistance: <30 mOhms

Materials and Finishes
Plunger: Heat treated BeCu, Gold plated
Barrel: Phosphor Bronze, Gold plated
Spring: Stainless Steel, Gold plated
Ball: Stainless Steel, Gold plated

Epoxy Mounting
Hole diameter: Ø .0315 (0.80)
Suggested drill: #68 or 0.79 mm

Tip Style
C R V
Ø .021 (0.53) Ø .021 (0.53) Ø .014 (0.36)

A-S
50 mil (1.27 mm)

Mechanical
Recommended Travel: .020 (0.51)
Full Travel: .030 (0.76)
Operating Temperature: -55°C to +150°C

Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th></th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>0.7 (20)</td>
<td>1.3 (37)</td>
</tr>
</tbody>
</table>

Electrical (Static Conditions)
Current Rating: 2 amps
Average Probe Resistance: <30 mOhms

Materials and Finishes
Plunger: Heat treated BeCu or Brass, Gold plated
Barrel: Brass, Gold plated
Spring: Stainless Steel, Gold plated
Ball: Stainless Steel, Gold plated

Mounting
Hole diameter: Ø .0380 (0.97)
Suggested drill: #62 or 0.97 mm

Tip Style
C R V
Ø .014 (0.36) Ø .014 (0.36) Ø .014 (0.36)

Dimensions in inches (millimeters). Specifications subject to change without notice.
Consult factory for other temperature requirements, and applications below -40°C.
Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change.
Availability is based on current levels of usage and demand.
### General Purpose

#### C-S

**75 mil (1.91 mm)**

- **Mechanical**
  - Recommended Travel: .030 (0.76)
  - Full Travel: .045 (1.14)
  - Operating Temperature: -55°C to +150°C

- **Spring Force in oz. (grams)**
  - Preload: 0.5 (14)
  - Rec. Travel: 3.4 (96)

- **Electrical (Static Conditions)**
  - Current Rating: 5 amps
  - Average Probe Resistance: <30 mOhms

- **Materials and Finishes**
  - Plunger: Heat treated BeCu, Gold plated
  - Barrel: Brass, Gold plated
  - Spring: Stainless Steel, Gold plated
  - Ball: Stainless Steel, Gold plated

- **Epoxy Mounting**
  - Hole diameter: Ø .0465 (1.18)

- **Tip Style**
  - C R
    - Ø .026 (0.66)

#### E-S

**100 mil (2.54 mm)**

- **Mechanical**
  - Recommended Travel: .043 (1.09)
  - Full Travel: .065 (1.65)
  - Operating Temperature: -55°C to +150°C

- **Spring Force in oz. (grams)**
  - Preload: 1.0 (29)
  - Rec. Travel: 2.75 (78)

- **Electrical (Static Conditions)**
  - Current Rating: 5 amps
  - Average Probe Resistance: <30 mOhms

- **Materials and Finishes**
  - Plunger: Heat treated BeCu, Gold plated
  - Barrel: Brass, Gold plated
  - Spring: Stainless Steel, Gold plated
  - Ball: Stainless Steel, Gold plated

- **Epoxy Mounting**
  - Hole diameter: Ø .0670 (1.70)

- **Probe Overall Length**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Overall Length (Dim A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-S-C, F,R</td>
<td>.405 (12.57)</td>
</tr>
<tr>
<td>E-S-V, W</td>
<td>.540 (13.72)</td>
</tr>
</tbody>
</table>

- **Tip Style**
  - Ø .045 (1.14)  Ø .045 (1.14)  Ø .045 (1.14)  Ø .000 (2.29)  Ø .070 (1.78)
Non-Replaceable Probe - Epoxy mount

**General Purpose**

**F-S**
125 mil (3.18 mm)

**G-S**
125 mil (3.18 mm)

### Mechanical
- **Recommended Travel:** .066 (1.68)
- **Full Travel:** .100 (2.54)
- **Operating Temperature:** -55°C to +150°C

### Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th></th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard</strong></td>
<td>2.0 (57)</td>
<td>6.0 (170)</td>
</tr>
</tbody>
</table>

### Electrical (Static Conditions)
- **Current Rating:** 5 amps
- **Average Probe Resistance:** <30 mOhms

### Materials and Finishes
- **Plunger:** Heat treated BeCu, Gold plated or Heat treated Brass, Gold plated
- **Barrel:** Brass, Gold plated
- **Spring:** Stainless Steel, Gold plated
- **Ball:** Stainless Steel, Gold plated

### Epoxy Mounting
- **Hole diameter:** Ø .0860 (2.18)
- **Suggested drill:** #44

### Tip Style

<table>
<thead>
<tr>
<th>Tip Style</th>
<th>C</th>
<th>R</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>F</strong></td>
<td>Ø .045 (1.14)</td>
<td>Ø .045 (1.14)</td>
<td>Ø .090 (2.29)</td>
</tr>
<tr>
<td><strong>G</strong></td>
<td>Ø .061 (1.55)</td>
<td>Ø .061 (1.55)</td>
<td></td>
</tr>
</tbody>
</table>

### Stocking Disclaimer:
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Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C.
### General Purpose

**Non-Replaceable Probe - Epoxy mount**

#### P2532
156 mil (3.96 mm)

- **Tip Style**
  - Series: 1
  - 1: Ø .059 (1.50)
  - 2: Ø .059 (1.50)
- **Mechanical**
  - Recommended Travel: .093 (2.36)
  - Full Travel: .139 (3.53)
  - Operating Temperature: -55°C to +150°C
- **Spring Force in oz. (grams)**
<table>
<thead>
<tr>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1.0 (28)</td>
</tr>
</tbody>
</table>

#### P2550
187 mil (4.75 mm)

- **Tip Style**
  - Series: 6
  - 8: Ø .156 (3.96)
  - 0: Ø .122 (3.10)
  - 6: Ø .154 (3.91)
  - 9: Ø .125 (3.18)
- **Mechanical**
  - Recommended Travel: .167 (4.24)
  - Full Travel: .250 (6.35)
  - Operating Temperature: -55°C to +150°C
- **Spring Force in oz. (grams)**
<table>
<thead>
<tr>
<th>Order Code</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1.00 (28)</td>
<td>3.20 (91)</td>
</tr>
<tr>
<td>High</td>
<td>-8</td>
<td>4.00 (113)</td>
</tr>
</tbody>
</table>

#### Electrical (Static Conditions)
- **Current Rating:** 5 amps
- **Average Probe Resistance:** <30 mΩms

#### Materials and Finishes
- **Plunger:** Heat-treated BeCu, Gold plated over hard Nickel
- **Barrel:** Brass, Gold plated
- **Spring:** Stainless Steel, Gold plated
- **Ball:** Stainless Steel, Gold plated

#### Epoxy Mounting
- Hole diameter: Ø .126 (3.20)
- Suggested drill: #30 or 2.40 mm

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.
GENERAL PURPOSE – PRESS RING MOUNT

The ECT / Pylon line of standard products includes non-replaceable Pogo contacts. They differ from replaceable contacts in that they do not require a socket or receptacle and are designed to be permanently mounted. Non-replaceable probes are designed for industrial applications where typical probe life meets or exceeds those of the end-use product. They are usually located inside the end product where probe replacement is either impossible or end-product damage would occur.

Electrical connections are typically made by crimping or soldering a wire at the terminal of the probe.

The probe is retained in the retention plate by its press ring, which deforms during the installation process and therefore provides a permanent mount.
**MEP-20**

25 mil (0.635 mm)

### Mechanical
- **Recommended Travel:** .050 (1.27) in.
- **Full Travel:** .075 (1.91) in.
- **Operating Temperature:** -55°C to +105°C

### Spring Force in oz. (grams)

<table>
<thead>
<tr>
<th>Standard</th>
<th>Preload</th>
<th>Rec. Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>.39 (11)</td>
<td>1.39 (39)</td>
<td></td>
</tr>
</tbody>
</table>

### Electrical (Static Conditions)
- **Current Rating:** 2 amps
- **Average Probe Resistance:** <50 mOhms

### Materials and Finishes
- **Plunger:** Heat-treated BeCu, Gold plated over hard Nickel
- **Barrel:** Work hardened BeCu, Gold plated over hard Nickel
- **Spring:** Music Wire, Silver plated

### Mounting
- **Hole diameter:** Ø .0205 to .0215 (0.52 to 0.55) in.
- **Suggested drill:** #75 or 0.52 mm
- **Minimum mounting plate thickness:** .250 (6.35) mm

### Order versions
- MEP-20x: Crimp
- MEP-20x-30: Crimp with 30 inches of 30 AWG wire attached

### Application
1. The MEP-20 can also be mounted in a staggered pattern to access test pads on centers less than .025”.
2. Recommended wire gauge 30 AWG, maximum insulation dia. .019 (0.48).
3. Shrink tubing is recommended for use on alternating receptacles to reduce the possibility of electrical shorting.

### Tip Style

<table>
<thead>
<tr>
<th>Tip Style</th>
<th>B</th>
<th>G</th>
<th>J</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø .010 (0.25)</td>
<td>Ø .010 (0.25)</td>
<td>Ø .010 (0.25)</td>
<td>Ø .006 (0.15)</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions in inches (millimeters). Specifications subject to change without notice. Consult factory for other temperature requirements, and applications below -40°C. Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change. Availability is based on current levels of usage and demand.