Spring-Loaded Contacts & Connectors
OEM Connectors & Probes

Whether it’s vibration, shock, rotation, wipe, water, salt, sand, dust, heat or the vacuum of space, you can depend on IDI to deliver products that will withstand adverse conditions and perform on demand. IDI harsh environment probes and connectors offer many other design features including:

- One-piece compression mount connector
- Consistently low resistance < 10 mΩ throughout hundreds of thousands of cycles
- 20 GHz @ -.5db
- High density — .010 (0.25) pitch
- Short signal paths as low as 0.070"
- Blind mate
- Surface mount, through hole mount or cabled termination

IDI custom connectors ensure a reliable, fail-safe connection even in the harshest of environments. At the core of most IDI connectors is the spring contact probe, a connection technology inherently well suited to harsh environments.

**SHOCK AND VIBRATION**
Spring contact probes provide a constant force against the mating contact surface, easily absorbing and compensating for movement seen during shock and vibration without contact interruption as defined by MIL-STD-810F.

**WATER, SALT, SAND AND DUST**
IDI utilizes various design features for ingress protection to IP68 and MIL-810F on our connectors. And IDI offers the world’s first and only Environmentally Sealed Probe (pg. 21) with ingress protection to IP68 and MIL-STD-810F.

**ROTATION AND WIPE**
The contact or plunger in the spring contact probe is free to rotate and slide within the housing or barrel of the probe. This inherent design characteristic makes spring probe connectors ideal for bayonet and sliding mate connector designs.

**HEAT AND VACUUM OF SPACE**
IDI connectors and probes operate under a wide variety of temperature extremes. Most designs are rated from -55° C to 250° C. Alternate materials allow for even more aggressive temperature extremes.

**IDI SPRING PROBE CONNECTORS**
Spring contact probes provide repeatable contact in the field for modular components, reduce costs, and eliminate cabled connections by providing a dependable direct connection in rotating or sliding joints.

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IDI Interconnect Devices, Inc. welcomes your e-mail at info@idinet.com
IDI is the world leader in spring contact probe design and the industry’s expert in applying spring probes as connector contacts. Embodied in IDI’s connector product lines, probes are an enabling technology that fundamentally change the capabilities of the products in which they are incorporated.

**EXCELLENT FOR BLIND MATE**
IDI connectors featuring spring contact probes are compliant on the surface of their mating half, rather than extending into it as with conventional pin and socket connectors. This grants them their unique blind-mate capabilities.

An IDI connector may be designed to engage at a 90° angle to its target, wiping into position to clear contaminants. Conversely, the IDI connector may be disengaged at that same angle at any angle, making probe technology the best approach to quick-disconnect applications.

**LOW PROFILE, HIGH COMPLIANCE RATIO**
IDI’s advanced spring contact probe technology permits a very high compliance-to-length ratio. This allows IDI to make connectors as compact as 2 mm, while maintaining 0.5 mm of compliance – low profile connectors have never been so practical or forgiving of mating conditions or vibration.

**HIGH FREQUENCY**
This short signal path, combined with IDI’s industry leading expertise, permits remarkable signal integrity for both analog and digital applications.

Speeds of 12 Gb/S and bandwidths of 20 GHz can be achieved with spring probe interposers, and coaxial arrays and contacts can be used to permit excellent isolation.

**LOW STABLE RESISTANCE**
Through IDI’s decades of probe design experience, our connectors feature several innovations for control of DC performance. Advanced biasing techniques provide excellent stability of contact resistance, even under conditions of heavy shock and vibration. Our connectors can be designed to withstand up to 30 Amps of current.

**HIGH INSERTION LIFE**
Connectors based on spring contact probes are capable of remarkable longevity. Our probes are driven by helical coil springs, which maintain a constant force of contact over millions of cycles. IDI’s plating and materials expertise combined with this engineering, delivers contacts that exceed the highest customer specifications for insertion life.

**ENVIRONMENTALLY SEALED**
IDI’s application expertise and the durable nature of our contacts, permits us to design connectors with excellent performance in harsh environments. IP68 and Mil-810 requirements can be accommodated without sacrificing performance.

Contact IDI today to find out how we can make your interconnection possible.
The interposer, or contact array, is the heart of the connector. It is also IDI’s specialty – as the world’s leading spring contact probe manufacturer we are uniquely positioned to bring the advantages of this contact mechanism to life.

IDI is able to bring our customers the most benefit when providing a total solution, but we can provide our technology at any level. Loose contacts, simple interposers, cabled mating halves, and complex docking solutions are all within our portfolio.

Contact IDI today to find your own unique solution.

**INSERTION LIFE**

Spring contact probes are driven by helical coil springs. This, combined with IDI’s advanced materials and plating expertise, allows us to offer connectors which are capable of hundreds of thousands of insertions. In addition, wiping interconnects can be made to withstand millions of rotations.

**DC STABILITY**

Through innovative design features such as our patented Eccentric Drill, IDI’s interposers maintain low and consistent contact resistance through their long insertion lives.

Maintaining peak performance through the required life of the interposer requires a careful selection of biasing features. IDI maintains a staff of dedicated experts who can guide you to the optimal contact engine for your application.

Properly specified interposers can withstand the intense shock and vibration associated with aerospace and military applications, maintaining reliable contact without fail even when launched onboard munitions.

**SIGNAL INTEGRITY**

Bandwidths of 20 GHz and data rates of 12 Gb/S are possible with simple pin field interposers. This is due to IDI’s remarkably short contacts and our expertise in predicting their behavior in application.

Interposers may also be made coaxial through the use of precision-machined insulators and metal interposer bodies. IDI is the inventor of the independent coaxial spring contact probe, featuring a spring-loaded shielding plunger; this may be added to a connector to provide one or more discrete high speed lines.

IDI’s interposers can be designed to take advantage of spring contact probes’ surprising current carrying capacity. Individual contacts are capable of handling as much as 30 Amps in free air; combined with IDI’s advanced thermal analysis capabilities, connectors can be designed which can handle substantial amounts of power safely.
ENVIROMENTAL SEALING
The ruggedness and reliability of spring contact probes make them ideal for applications in harsh environments. IDI’s connectors have a wide array of available features which permit sealing to IP68 or Mil standards in either the mated or unmated condition.

Accomplishing a seal while mated is a process of combining gaskets with a latching mechanism reliable enough to prevent ingress, and IDI has several variations on that architecture to draw from.

Creating an unmated seal is more challenging, but IDI is equal to the task. Contacts may be selected which prevent ingress into the housing or even into the spring cavity. IDI’s experience is the key to our success – our experts can easily match your requirements to our product line.

OTHER FEATURES
Connectors can be created which feature metal housings for shielding. Special latching designs can be employed to overcome significant engagement or sealing forces. Bayonet designs which wipe the contacts across a field of targets are uniquely possible with spring contact probes.

QUICK DISCONNECT
IDI capitalizes on the unique engagement of spring contact probes with our innovative quick disconnect connector designs.

Magnets may be used to draw the connector into engagement. This, combined with the blind mate characteristic of probes, allows the connector to be disengaged safely and instantly. Magnetic engagement features almost no wear of the engaging surfaces, and may be mated and demated repeatedly with no degradation in performance.

Where magnets are impractical for reasons of engagement force, sealing, or other considerations, IDI can create special latching features which also permit a quick disconnection. These may be designed for a single break or for repeated disengagement, depending on the requirements of the application.

Housings
Spring contact probes are a flexible, adaptable contact technology, and IDI has extensive experience in creating solutions to unusual problems.

That design agility often finds its application in the housing of the connector, which provides the alignment and latching functions for the connector.

Special features to accommodate environmental sealing, low-force insertion or quick-disconnect extraction, or a host of other requirements are at your disposal.

Contact IDI to find out more about how we can make your application a success.
Mating Halves

IDI's spring contact probe based connectors have the unique advantage of requiring only a flat pad as their target. This greatly simplifies the design of the complete connector.

The mating halves for our connectors are often customer-created by simply exposing pads on a printed circuit board.

IDI can provide target pins, or can supply a complete mating half which accomplishes alignment and sealing functions.

**PCB Mate**

Simple gold-plated pads on a printed circuit board are a reliable, easy-to-implement, and very low profile target structure for a spring contact probe based connector; this is also often a nearly zero-cost option for our customers. IDI can provide design guidelines to help our customers easily integrate our mating half into their design.

**Blind Mate Capability**

Spring contact probes contact only the surface of their target; they do not engage into the target in the manner of a pin and socket connector. This permits IDI's connectors to mate at up to a 90° angle. Our connectors can rotate after the fashion of brush contacts for millions of cycles.

Critically, it is difficult to harm a spring probe based connector through mismating, and this makes our connector designs uniquely attractive in blind mate applications.

**Target Pins**

IDI can construct a plastic mating half for the connector with solid metal pins for target contacts. This allows for an extremely robust and repeatable interconnection, and is often a good way to extend the interconnection into the customer's device in a manner which permits sealing and a short Z-axis transfer. A selection of pins is available from IDI for those customers who wish to create their own mating half.

**Environmental Sealing**

The mating half of the connector can incorporate features which help to protect the customer's device from the ingress of water and other contaminants. IDI has the experience in sealing target pins, and in providing gaskets and design guidelines to make customer applications safe for harsh environments.

A spring contact probe requires only a flat pad for its target. It will safely mate to that target if its tip strikes within the target's diameter, and that diameter is only limited by the desired pitch of the connector. A probe-based connector is thus very forgiving of X-Y misalignment; and if the probe strikes off the pad, little harm comes to the connector and it may be safely re-engaged.
Terminations

**COMPRESSION MOUNT**

IDI’s extensive involvement in the semiconductor test industry provides us with a wellspring of expertise in the creation of spring contact interposers that are compliant from each side.

IDI’s compression-mount interposers feature highly developed contact designs. Our contacts, even when used in interposers having thousands of pins, mate faultlessly to their mounting PCB on the first insertion. They retain their excellent electrical characteristics through as much as 58G of shock and 9G RMS of vibration.

**PCB TERMINATION**

IDI offers two highly refined options for termination by solder to a rigid or flexible printed circuit board. Our thru-hole designs offer a tremendous design flexibility and are ideal for a simple, tooling-free approach to custom connector implementation. IDI’s surface mount connectors integrate easily with the modern manufacturing processes, and keep connector profile to a minimum.

Through-hole contacts require no plastic body for the interposer; individual contacts may be populated directly into the PCB and soldered by hand. This is ideal for quick-turn, instantly implemented customized solutions.

Our surface mount contacts are supported by a plastic interposer body. IDI’s expertise in press fitting and insert molding contacts guarantees the user a reliable, trouble-free interposer.

**CABLE TERMINATION**

When termination to cable is desired, IDI offers crimp tails and solder tails for its contacts. IDI is well equipped to supply cabling to meet customer requirements as well.

IDI offers termination options that are designed to preserve the many unique advantages of our connectors.

Our highly reliable compression mount technology offers a solderless solution that you can count on; our PCB termination options are refined to ensure manufacturability and keep our profile low; and our cabling options are robust and adaptable.
C Series Connectors

IDI’s C Series Connectors ensure a reliable, rugged connection in the harshest environments. Based on our C Series Probe technology, they provide:

- Standard pins offered in custom configurations to meet your applications exact footprint
- 0.100 (2.54) pitch
- Ground, Power & Signal options
- 6mm & 4mm lengths
- Up to 10 amps current rating
- Contact resistance < 10 mΩ typical
- Great for RF, high speed and mixed signal connectors
- Consistently low resistance through tens of thousands of connections
- Ground contacts mate first, break last to support hot swap applications.
- Power contacts probe design supports increased current carrying capacity
- Surface mount, thru hole and solder cup termination options
- Consistent performance throughout broad temperature ranges
- Blind mates
- Superior continuity in high shock and vibration environments
- Minimal insertion and return loss for signals up to 10 GHz
- Resistance to dust and a range of chemicals
- Ingress protection under the most stringent requirements
- Direction connections for rotating or sliding joints

C-SERIES EXAMPLES
## PROBE SPECIFICATIONS

**Minimum Centers:** 100 (2.54)

**Current Rating:**
- CG Series: 10 amps continuous
- CP Series: 10 amps continuous
- CS Series: .5 amp continuous
  (Individual probe in free air @ ambient temperature)

**Typical Resistances:**
- CG Series: < 10 mΩ
- CP Series: < 10 mΩ
- CS Series: < 60 mΩ

**Spring Force:**
- 3.1 oz. (88g) @ working travel for 4mm compressed length series
- 2.9 oz. (82g) @ working travel for 6mm compressed length series

### Overall Length

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<th>Thru Hole</th>
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<td>.295 (7.50)</td>
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<tr>
<td>CG-2.5-6</td>
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**Travel**

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<td>.039 (1.00)</td>
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<tr>
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<td>.028 (0.71)</td>
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<td>CS-2.5-6</td>
<td>.079 (2.00)</td>
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</tr>
</tbody>
</table>

### MATERIALS

**Barrel:** Brass, gold plated

**Spring:** Stainless steel

**Plunger:**
- CG Series: Brass, gold plated
- CP Series: Brass, gold plated
- CS Series: Brass, Duralloy™ plated

**Special Features:**
- CG Series: Bias plunger design
- CP Series: Bias plunger design
- CS Series: Standard design

**Recommendations:**
- Mounting hole: .064/.065 (1.62/1.65)
- Pad size for Surface Mount: .085 (2.20)
- Wire gage for Solder Cup: 20 gage max.
- Drill size for Thru Hole Tail: .035 (0.89)

**View updates of this information at www.idinet.com**
Battery and Connector Probes

**101582 Probe**

- **Probe Specifications**
  - Minimum Centers: 0.070 (1.78) 0.050 (1.27) staggered rows
  - Current Rating: 20 amps continuous (Individual probe in free air @ ambient temperature)
  - Spring Force: 1.7 oz. (48g) @ 0.030 (0.76) travel
  - Typical Resistance: < 10 mΩ
  - Maximum Travel: 0.030 (0.76)
  - Working Travel: 0.030 (0.76)

- **Materials**
  - Barrel: Brass, gold plated
  - Spring: Stainless steel
  - Plungers: Beryllium copper, gold plated

**How to Order**

101582-000

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**101438 Probe**

- **Probe Specifications**
  - Minimum Centers: 0.080 (2.03)
  - Current Rating: 1 amp continuous (Individual probe in free air @ ambient temperature)
  - Spring Force: 3.5 oz. (99g) @ 0.020 (0.51) travel
  - Typical Resistance: < 10 mΩ
  - Maximum Travel: 0.039 (0.99)
  - Working Travel: 0.020 (0.51)

- **Materials**
  - Barrel: Brass, gold plated
  - Spring: Stainless steel, gold plated
  - Plunger: Beryllium copper, gold plated

**How to Order**

101438-000

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

Interconnect Devices, Inc. welcomes your e-mail at info@idinet.com
**PROBE SPECIFICATIONS**

**100671 PROBE**
- **Minimum Centers:** .175 (4.45)
- **Current Rating:** 3 amps continuous (individual probe in free air @ ambient temperature)
- **Spring Force:** 5.1 oz. (145g) @ .027 (0.69) travel
- **Typical Resistance:** < 10 mΩ
- **Maximum Travel:** .040 (1.02)*
- **Working Travel:** .027 (0.69)

**101111 PROBE**
- **Minimum Centers:** .029 (0.75)
- **Current Rating:** 6 amps continuous (individual probe in free air @ ambient temperature)
- **Spring Force:** 1.5 oz. (43g) @ .022 (0.55) travel
- **Typical Resistance:** < 50 mΩ
- **Maximum Travel:** .025 (0.63)*
- **Working Travel:** .022 (0.58)

**MATERIALS**

**100671 PROBE**
- **Barrel:** Nickel/silver, gold plated
- **Spring:** Stainless steel, gold plated
- **Plunger:** Beryllium copper, gold plated

**101111 PROBE**
- **Barrel:** Phosphor bronze, gold plated
- **Spring:** Music wire, gold plated
- **Plunger:** Phosphor bronze, gold plated

*not recommended for use at maximum travel

**HOW TO ORDER**

**100671-000**

**101111-008**

Specifications subject to change without notice. Dimensions in inches (millimeters)
Battery and Connector Probes

### 101506

**Probe Specifications**
- Minimum Centers: .050 (1.27)
- Current Rating: 5 amps continuous (Individual probe in free air @ ambient temperature)
- Spring Force: 1.38 oz. (39g) @ .020 (0.51) travel
- Typical Resistance: < 20 mΩ
- Maximum Travel: .028 (0.71)
- Working Travel: .020 (0.51)

**Materials**
- Barrel: Nickel/silver, gold plated
- Spring: Stainless steel, gold plated
- Plunger: Beryllium copper, gold plated

### How to Order

101506-000

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### 101294 Probe

**Probe Specifications**
- Minimum Centers: .050 (1.27)
- Current Rating: 5 amps continuous (Individual probe in free air @ ambient temperature)
- Spring Force: 0.9 oz. (26g) @ .020 (0.51) travel
- Typical Resistance: < 20 mΩ
- Maximum Travel: .027 (0.69)
- Working Travel: .020 (0.51)

**Materials**
- Barrel: Nickel/silver, gold plated
- Spring: Stainless steel, gold plated
- Plunger: Beryllium copper, gold plated

**How to Order**

101294-000

Specifications subject to change without notice. Dimensions in inches (millimeters)
Battery and Connector Probes

**100803 Probe**

- **Minimum Centers:** .050 (1.27)
- **Current Rating:** 5 amps continuous (Individual probe in free air @ ambient temperature)
- **Spring Force:** 1.2 oz. (34g) @ .050 (1.27) travel
- **Typical Resistance:** < 50 mΩ
- **Maximum Travel:** .060 (1.52)
- **Working Travel:** .050 (1.27)

**Materials**
- **Barrel:** Nickel/silver, gold plated
- **Spring:** Stainless steel, gold plated
- **Plunger:** Beryllium copper, gold plated

**How to Order**

100803-011

**101190 Probe**

- **Minimum Centers:** .100 (2.54)
- **Current Rating:** 15 amps continuous (Individual probe in free air @ ambient temperature)
- **Spring Force:** 2.6 oz. (74g) @ .067 (1.70) travel
- **Typical Resistance:** < 6 mΩ
- **Maximum Travel:** .100 (2.54)
- **Working Travel:** .067 (1.70)

**Materials**
- **Barrel:** Nickel/silver, gold plated
- **Spring:** Stainless steel
- **Plungers:** Beryllium copper, gold plated

**How to Order**

101190-002

Specifications subject to change without notice. Dimensions in inches (millimeters).
Battery and Connector Probes

**PROBE SPECIFICATIONS**

**100606 PROBE**

Minimum Centers: .175 (4.45)
Current Rating: 15 amps continuous (Individual probe in free air @ ambient temperature)
Spring Force: 6.2 oz. (176g) @ .060 (1.52) travel
Typical Resistance: < 10 mΩ
Maximum Travel: .090 (2.29)
Working Travel: .060 (1.52)

Materials:
- Barrel: Nickel/silver, gold plated
- Spring: Stainless steel, passivated
- Plunger: Beryllium copper, gold plated
- Bias Ball: Stainless steel

**100891 PROBE**

Minimum Centers: .175 (4.45)
Current Rating: 15 amps continuous (Individual probe in free air @ ambient temperature)
Spring Force: 9.0 oz. (256g) @ .067 (1.70) travel
Typical Resistance: < 5 mΩ
Maximum Travel: .100 (2.54)
Working Travel: .067 (1.70)

Materials:
- Barrel: Nickel/silver, gold plated
- Spring: Stainless steel, gold plated
- Plunger: Beryllium copper, gold plated

**HOW TO ORDER**

100606-000

100891-002

Specifications subject to change without notice. Dimensions in inches (millimeters).
# Battery and Connector Probes

## Probe Specifications

**100410 Probe**

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<tbody>
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<tr>
<td>Current Rating</td>
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<tr>
<td>(Individual probe in free air @ ambient temperature)</td>
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<tr>
<td>Spring Force</td>
<td>6.2 oz. (176g) @ .060 (1.52) travel</td>
</tr>
<tr>
<td>Typical Resistance</td>
<td>&lt; 5 mΩ</td>
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<tr>
<td>Maximum Travel</td>
<td>.090 (2.29)</td>
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<tr>
<td>Working Travel</td>
<td>.060 (1.52)</td>
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**101119 Probe**

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<td>(Individual probe in free air @ ambient temperature)</td>
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<tr>
<td>Spring Force</td>
<td>6.2 oz. (176g) @ .060 (1.52) travel</td>
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<tr>
<td>Typical Resistance</td>
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<tr>
<td>Maximum Travel</td>
<td>.090 (2.29)</td>
</tr>
<tr>
<td>Working Travel</td>
<td>.060 (1.52)</td>
</tr>
</tbody>
</table>

**Materials**

- **Barrel**: Nickel/silver, gold plated
- **Spring**: Stainless steel
- **Plunger**: Beryllium copper, gold plated
- **Bias Ball**: Stainless steel

**How to Order**

- **100410-005**

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Specifications subject to change without notice. Dimensions in inches (millimeters).
### Battery and Connector Probes

#### 101050 Probe

- **Probe Specifications**
  - Minimum Centers: .125 (3.18)
  - Current Rating: 10 amps continuous (individual probe in free air @ ambient temperature)
  - Spring Force: 2.3 oz. (65g) @ .060 (1.52) travel
  - Typical Resistance: < 10 mΩ
  - Maximum Travel: .090 (2.29)
  - Working Travel: .060 (1.52)

- **Materials**
  - Barrel: Nickel/silver, gold plated
  - Spring: Stainless steel, passivated
  - Plunger: Beryllium copper, gold plated
  - Ball: Stainless steel, gold plated

- **How to Order**
  - 101050-003 for .110 dia. flange
  - 101050-005 for .077 dia. flange

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

#### 101247 Probe

- **Probe Specifications**
  - Minimum Centers: .200 (5.08)
  - Current Rating: 20 amps continuous (individual probe in free air @ ambient temperature)
  - Spring Force: 11.7 oz. (256g) @ .147 (3.73) travel
  - Typical Resistance: < 10 mΩ
  - Maximum Travel: .180 (4.57)
  - Working Travel: .147 (3.73)

- **Materials**
  - Barrel: Brass, gold plated
  - Spring: Stainless steel, passivated
  - Plunger: Beryllium copper, gold plated

- **How to Order**
  - 101247-001

Specifications subject to change without notice. Dimensions in inches (millimeters).
**Battery and Connector Probes**

### 101679 Probe Specifications

- **Minimum Centers:** .055 (1.40)
- **Current Rating:** 3 amps continuous  
  (Individual probe in free air @ ambient temperature)
- **Spring Force:** 1.3 oz. (37g) @ .023 (0.58) travel
- **Typical Resistance:** < 25 mΩ
- **Maximum Travel:** .023 (0.58)
- **Working Travel:** .023 (0.58)

#### Materials

- **Barrel:** Brass, gold plated
- **Spring:** Stainless steel
- **Plunger:** Brass, gold plated

### 101628 Probe Specifications

- **Minimum Centers:** .125 (3.18)
- **Current Rating:** 25 amps continuous  
  (Individual probe in free air @ ambient temperature)
- **Spring Force:** 5.3 oz. (150g) @ .040 (1.02) travel
- **Typical Resistance:** < 5 mΩ
- **Maximum Travel:** .040 (1.02)
- **Working Travel:** .040 (1.02)

#### Materials

- **Barrel:** Brass, gold plated
- **Spring:** Music wire, nickel plated
- **Plunger:** Beryllium copper, gold plated
- **Ball:** Stainless steel

### How to Order

101679-000

101628-000

Specifications subject to change without notice. Dimensions in inches (millimeters).
**Battery and Connector Probes**

### PROBE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Minimum Centers:</th>
<th>.175 (4.45)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Rating:</td>
<td>20 amps continuous</td>
</tr>
<tr>
<td></td>
<td>(Individual probe in free air @ ambient temperature)</td>
</tr>
<tr>
<td>Spring Force:</td>
<td>9.7 oz. (275g) @ .050 (1.27) travel</td>
</tr>
<tr>
<td>Typical Resistance:</td>
<td>&lt; 10 mΩ</td>
</tr>
<tr>
<td>Maximum Travel:</td>
<td>.080 (2.03)</td>
</tr>
<tr>
<td>Working Travel:</td>
<td>.050 (1.27)</td>
</tr>
</tbody>
</table>

**MATERIALS**

Barrel: Nickel silver, gold plated
Spring: Stainless steel, passivated
Plunger: Brass, Duralloy™

### HOW TO ORDER

101402-000

---

### PROBE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Minimum Centers:</th>
<th>.250 (6.35)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Rating:</td>
<td>30 amps continuous</td>
</tr>
<tr>
<td></td>
<td>(Individual probe in free air @ ambient temperature)</td>
</tr>
<tr>
<td>Spring Force:</td>
<td>8.9 oz. (252g) @ .054 (1.37) travel</td>
</tr>
<tr>
<td>Typical Resistance:</td>
<td>&lt; 5 mΩ</td>
</tr>
<tr>
<td>Maximum Travel:</td>
<td>.082 (2.08)</td>
</tr>
<tr>
<td>Working Travel:</td>
<td>.054 (1.37)</td>
</tr>
</tbody>
</table>

**MATERIALS**

Barrel: Brass, Duralloy™ plated
Spring: Stainless steel, passivated
Plunger: Brass, Duralloy™ plated

### HOW TO ORDER

100804-002

Specifications subject to change without notice. Dimensions in inches (millimeters).
**Battery and Connector Probes**

### 101602 Environmentally Sealed Probe

**Probe Specifications**
- Minimum Centers: .175 (4.44)
- Current Rating: 10 amps with 80° C rise
  (Individual probe in free air @ ambient temperature)
- Typical Resistance: < 10 mΩ
- Spring Force: 6.7 oz. (190 g) @ .070 (1.77) travel
- Maximum Travel: .100 (2.54)
- Working Travel: .070 (1.77)

**Materials**
- Barrel: Nickel silver, gold plated
- Plunger: Full-hard beryllium copper, gold plated
- Spring: Stainless steel
- Bias Ball: Stainless steel
- O-ring: Silicone
- Cap & Plug: Stainless steel, gold plated

### 101549 Probe

**Probe Specifications**
- Minimum Centers: .125 (3.18)
- Current Rating: 3 amps with 80° C rise
  (Individual probe in free air @ ambient temperature)
- Typical Resistance: < 50 mΩ
- Spring Force: 3.5 oz. (100 g) @ .039 (1.00) travel, each end
- Maximum Travel: .059 (1.50) travel, each end
- Working Travel: .039 (1.00) travel, each end

**Materials**
- Barrel: Nickel silver, gold plated
- Plunger: Full-hard beryllium copper, gold plated
- Spring: Stainless steel

**How to Order**

101602-000

101549-000

Specifications subject to change without notice. Dimensions in inches (millimeters)
**SERIES SS & GSS**

**.100 CENTERS**

**BECu Plunger Tips**

**Probe Specifications**
- Minimum Centers: .100 (2.54) mm
- Current Rating: 3 amps continuous
- Spring Force: 3.8 or 7.0 oz.
- @ .050 (1.27) travel
- Typical Resistance:
  - SS: < 65 mΩ
  - GSS: < 30 mΩ
- Maximum Travel: .060 (1.52) mm
- Working Travel: .050 (1.27) mm

**Rated Force oz (g) Preload oz (g) Material**
- SS: 3.8 (108) 1.6 (45) SS
- GSS: 7.0 (198) 1.3 (37) MW

**Materials**
- Barrel:
  - SS: Nickel/silver
  - GSS: Nickel/silver, gold plated
- Spring:
  - SS: Stainless steel or music wire
  - GSS: Stainless steel or music wire, gold plated
- Plunger:
  - Beryllium copper, gold plated over nickel
- Receptacle:
  - Nickel/silver

**Head Length By Tip Style - SS & GSS Probe**

<table>
<thead>
<tr>
<th>Tip</th>
<th>Head Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS</td>
<td>.040 (1.02)</td>
</tr>
<tr>
<td>GSS</td>
<td>.028 (0.71)</td>
</tr>
<tr>
<td>RP</td>
<td>.040 (1.02)</td>
</tr>
<tr>
<td>WW</td>
<td>.080 (2.03)</td>
</tr>
</tbody>
</table>

**Receptacle Options**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Style</th>
<th>Receptacle Length</th>
<th>Probe/Receptacle Combined Length</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSS-100-CR</td>
<td>Crimp</td>
<td>0.475 (12.07)</td>
<td>0.550 (13.97)*</td>
<td>—</td>
</tr>
<tr>
<td>RSS-100-NT</td>
<td>No Tail</td>
<td>0.402 (10.21)</td>
<td>0.462 (11.73)*</td>
<td>—</td>
</tr>
<tr>
<td>RSS-100-RP</td>
<td>Round Post</td>
<td>0.625 (15.88)</td>
<td>0.685 (17.40)*</td>
<td>.220 post length -.028 dia.</td>
</tr>
<tr>
<td>RSS-100-WW</td>
<td>Wire Wrap</td>
<td>0.822 (20.88)</td>
<td>0.882 (22.40)*</td>
<td>.420 post length -.025 sq.</td>
</tr>
</tbody>
</table>

* Plus head length per tip style from chart

**How to Order: Spring Contact Probe**

<table>
<thead>
<tr>
<th>SS</th>
<th>1</th>
<th>3.8</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip Style</td>
<td>Spring Force</td>
<td>Playing Options</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RSS</th>
<th>100</th>
<th>WW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>Size</td>
<td>Termination</td>
</tr>
</tbody>
</table>

**View Updates of This Information at www.idinet.com**

Specifications subject to change without notice. Dimensions in inches (millimeters)
**RSS-100 Receptacles**

**RSS-100-CR**

- Drill Size: #50
- Mounting Hole Size: .068/.070 (1.73/1.78)

**RSS-100-WW**

- Drill Size: #50
- Mounting Hole Size: .068/.070 (1.73/1.78)

**RSS-100-NT**

- Drill Size: #50
- Mounting Hole Size: .068/.070 (1.73/1.78)

**RSS-100-RP**

- Drill Size: #50
- Mounting Hole Size: .068/.070 (1.73/1.78)

**Receptacle Options**

- Minimum Centers: .100 (2.54)
- Drill Size: #50
- Mounting Hole Size: .068/.070 (1.73/1.78)

**Materials**

- Standard Series: Nickel/silver
- High Performance Series: Nickel/silver, gold plated

This receptacle houses an SS100 or GSS100 on each end.

**How to Order**

**Standard Series:** RS-SS/SS

**High Performance:** R-SS/SS

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

MATERIALS:
- BARREL: BRASS, GOLD PLATED
- PLUNGER: BERYLLIUM COPPER, GOLD PLATED
- SPRING: STAINLESS STEEL
SPRING FORCE AT PRELOAD: 1.8oz
AT .060 FULL STROKE: 4.6oz
TYPICAL RESISTANCE < 10 MILLIOHMS
CURRENT RATING: 10 AMPS

RECOMMENDED MOUNTING HOLE:
- .065/.064 [1.65/1.63]
- MINIMUM CENTERS: .100 [2.54]
TECHNICAL SUMMARY

MATERIALS:
BARREL - BRASS, GOLD PLATED
PLUNGER - BERYLLIUM COPPER, GOLD PLATED
SPRING - STAINLESS STEEL
SPRING FORCE AT PRELOAD - 1.8 oz
AT .060 FULL STROKE - 4.6 oz
TYPICAL RESISTANCE < 10 MILLIOhm
CURRENT RATING - 10 AMPS
RECOMMENDED MOUNTING HOLE - .065/.064 [1.65/1.63]
MINIMUM CENTERS - .100 [2.54]

Prototype Released
Prototype Released

Circle No. DATEREV. LTR.

DWG. NO.

DWG. TITLE

FINISH

MATERIAL

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DIMENSIONS ARE IN INCHES

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SHEET

ASSEMBLY - CONTACT - BB - SC

INTERCONNECT DEVICES, INC.
KANSAS CITY, KS
5101 RICHLAND AVE.

TECHNICAL SUMMARY

MATERIALS:
BARREL - BRASS, GOLD PLATED
PLUNGER - BERYLLIUM COPPER, GOLD PLATED
SPRING - STAINLESS STEEL
SPRING FORCE AT PRELOAD - 1oz
AT .078 FULL STROKE - 4.6oz
TYPICAL RESISTANCE < 10 MILLIOHM
CURRENT RATING - 10 AMPS
RECOMMENDED MOUNTING HOLE - .065/.064 [1.65/1.63]
MINIMUM CENTERS - .100 [2.54]
TECHNICAL SUMMARY

MATERIALS:
- BARREL - BRASS, GOLD PLATED
- PLUNGER - BERYLLIUM COPPER, GOLD PLATED
- SPRING - STAINLESS STEEL
- SPRING FORCE AT PRELOAD - 1.8oz at .060 FULL STROKE - 4.6oz
- TYPICAL RESISTANCE < 10 MILLIOMS
- CURRENT RATING - 10 AMPS

RECOMMENDED MOUNTING HOLE - .065/.064 [1.65/1.63]
MINIMUM CENTERS - .100 [2.54]

Prototype Released

CHK.ECRN No. DATE
REV. LTR. DWG. NO.

DIMENSIONS ARE IN INCHES

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PROPRIETARY AND CONFIDENTIAL

10/30/12

KANSAS CITY, KS
5101 RICHLAND AVE.
INTERCONNECT DEVICES, INC.

ANGLES AND TOLERANCE ON:
- DECIMALS .XXX OR LESS
- .005 .XXXX

NOTES:
- TO SPECIFICATIONS
- 50:1 SCALE SIZE REV.
- A.3 SHEET

ASSEMBLY - CONTACT - BB - TH

MATERIALS:
- BRASS, GOLD PLATED
- BERYLLIUM COPPER, GOLD PLATED
- STAINLESS STEEL
- COPPER OXIDIZED
- 1018 ROLLED STEEL
GKS 941/GKS 064/GKS 986
Solderable Test Probes

GKS 941
GKS-941 Type 1
GKS-941 Type L

GKS 064
GKS-064 Type L

GKS 986
GKS-986

Available Tip Styles
Material Tip Style Plating Further Versions
∅ ∅ (inch)

2.5 (.098) 2.0 (.079) 6.3 (.250)
2.5 (.098) 1.0 (.039)

3.05 (.120) 0.50 (.020) R

3.0 (.118) 0.50 (.020) A

Working Stroke:

GKS 941: 3.2 mm (.126)
GKS 064: 1.4 mm (.055)
GKS 986: 3.0 mm (.118)

Maximum Stroke:

GKS 941: 4.0 mm (.157)
GKS 064: 1.7 mm (.067)
GKS 986: 5.0 mm (.197)

Spring Force at Work Stroke:

GKS 941: 0.8 N (2.9oz)
GKS 064: 0.4 N (1.4oz)
GKS 986: 1.0 N (3.6oz)

Other Solderable Test Probes:
see GKS-913 and others on request

Warning:
Soldering the Probes demands great care. High temperatures must not reach the inside of the barrel, because this could destroy the spring.

Ordering Example

Test Probe with Terminal Post Ø 0,5 or 1,0 mm:

Test Probe with Terminal Post Ø 1,0 mm:

Test Probe GKS-986:

Materials:

Plunger: BeCu, gold- or rhodium-plated
Barrel: Brass, gold-plated
Spring: Steel, gold-plated

Electrical Data

Current Rating:

GKS 941: 5 - 8 A
GKS 064: 5 - 8 A
GKS 986: 5 - 8 A

R_t typical:

<100 mΩ
<100 mΩ
<100 mΩ

Materials:

GKS 941: see GKS 941
GKS 064: see GKS 941
GKS 986: see GKS 941

Other Specifications:

Motor:
≥ 1,91 mm
≥ 75 Mil
Installation Height: 17,5 mm (.689)
Recommended Stroke: 3,2 mm (.126)

Grid:
≥ 2,54 mm
≥ 100 Mil
Installation Height: 12,3 mm (.484)
Recommended Stroke: 1,4 mm (.055)

Grid:
≥ 2,54 mm
≥ 100 Mil
Installation Height: 19,0 mm (.748)
Recommended Stroke: 3,0 mm (.118)
Mounting and Functional Dimensions

**Available Tip Styles**

<table>
<thead>
<tr>
<th>Tip Style</th>
<th>Material</th>
<th>Diameter (mm)</th>
<th>Plating</th>
<th>Spring Force (N)</th>
<th>Collar Height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>Brass</td>
<td>1.30</td>
<td>A</td>
<td>2,28 - 2,29</td>
<td>2,89</td>
</tr>
<tr>
<td>03</td>
<td>Brass</td>
<td>1.30</td>
<td>A</td>
<td>2,00</td>
<td>2,80</td>
</tr>
<tr>
<td>04</td>
<td>Brass</td>
<td>1.30</td>
<td>A</td>
<td>2,92 - 2,94</td>
<td>2,94</td>
</tr>
<tr>
<td>05</td>
<td>Brass</td>
<td>1.30</td>
<td>A</td>
<td>2,00</td>
<td>2,80</td>
</tr>
<tr>
<td>06</td>
<td>Brass</td>
<td>1.30</td>
<td>A</td>
<td>2,92 - 2,94</td>
<td>2,94</td>
</tr>
</tbody>
</table>

**Mechanical Data**
- **Working Stroke:** 1,0 mm (.039)
- **Maximum Stroke:** 1,2 mm (.047)
- **Spring Force at Work. Stroke:** 2,0 N (7.2oz)
- **Alternative:** 1,0 N (3.6oz)

**Electrical Data**
- **Current Rating:** 5 - 8 A
- **R<sub>1</sub> typical:** < 10 mΩ

**Materials**
- **Plunger:** BeCu or steel, gold-plated
- **Barrel:** Brass, gold-plated
- **Spring:** Steel, gold-plated
- **Receptacle:** Brass, gold-plated

**Ordering Example**

**Test Probe:**
- KS 967 7 6 1 3 0 5 0 5 0 3 0 5
- G K S 9 6 7 3 0 4 1 3 0 A 2 0 0 1

**Receptacles:**
- KS 967 5 M R
- K S 9 6 7 5 0
- K S 9 6 7 0 0
- K S 7 6 1 6 0 3 5

**Test Probe (Seite 69):**
- KS 967 7 6 1 3 0 5 0 5 0 3 0 5
- G K S 9 6 7 3 0 4 1 3 0 A 2 0 0 1

**Receptacle (Seite 69):**
- KS 967 M R
- K S 9 6 7 5 0
- K S 9 6 7 0 0

**Recommended Screw-in Torque:**
- Min.: 10 Ncm / Max.: 20 Ncm

**Note:**
GKS-967 ... M will be screwed into Receptacle KS-967 60 35 M-R; using special tools (see Page 170/171).
## GKS 761 M

**Mechanical Data**
- **Working Stroke:** 1.0 mm (.039)
- **Maximum Stroke:** 1.2 mm (.047)
- **Spring Force at Work. Stroke:** 1.0 N (3.6oz)

**Electrical Data**
- **Current Rating:** 5 A
- **Rₚ typical:** < 20 mΩ

**Materials**
- **Plunger:** BeCu, gold-plated
- **Barrel:** Brass, gold-plated
- **Spring:** Steel, gold-plated
- **Receptacle:** Brass, gold-plated

**Mounting Hole Size**
- **in CEM1 and FR4 with KS-761 60 35 M-R:** ø 2.00 - 2.02 mm (.0787 - .0866)

**Ordering Example**
- see Page 68

---

## GKS 970

**Mechanical Data**
- **Working Stroke:** 1.0 mm (.039)
- **Maximum Stroke:** 1.3 mm (.051)
- **Spring Force at Work. Stroke:** 0.6 N (2.0oz)

**Electrical Data**
- **Current Rating:** 2 A
- **Rₚ typical:** < 100 mΩ

**Materials**
- **Plunger:** BeCu, gold-plated
- **Barrel:** Brass, gold-plated
- **Spring:** Stainless Steel, gold-plated
- **Receptacle:** Brass, gold-plated

**Mounting Hole Size**
- **in CEM1 and FR4 with Receptacle:** ø 1.49 - 1.50 mm (.0587 - .0591)
- **without Receptacle:** ø 1.2 mm (.0472)

**Available Tip Styles**

### New

<table>
<thead>
<tr>
<th>Tip Style</th>
<th>ø (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>05</td>
<td>0.080</td>
</tr>
<tr>
<td>1.00</td>
<td>0.031</td>
</tr>
</tbody>
</table>

**Note:**
- GKS-761 ... M will be screwed into Receptacle KS-761 60 35 M-R, using special tools (see Page 170/171).
- Recommended Screw-in Torque: Min.: 3 Ncm / Max.: 5 Ncm

---

## GKS 961

**Mechanical Data**
- **Working Stroke:** 2.0 mm (.0787)
- **Maximum Stroke:** 2.6 mm (.102)
- **Spring Force at Work. Stroke:** 2.0 N (7.2oz)

**Electrical Data**
- **Current Rating:** 5 - 8 A
- **Rₚ typical:** < 20 mΩ

**Materials**
- **Plunger:** BeCu, gold-plated
- **Barrel:** Brass, gold-plated
- **Spring:** Steel, gold-plated
- **Receptacle:** Brass, gold-plated

**Mounting Hole Size**
- **in CEM1 and FR4 with Receptacle:** ø 2.28 - 2.29 mm (.0898 -.0902)
- **without Receptacle:** ø 1.0 mm (.039)

**Available Tip Styles**

### Available Tip Styles

<table>
<thead>
<tr>
<th>Tip Style</th>
<th>ø (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>05</td>
<td>0.050</td>
</tr>
<tr>
<td>1.00</td>
<td>0.020</td>
</tr>
</tbody>
</table>

**Note:**
- Recommended Stroke: 2.8 mm (.110)
- Installation Height: 2.6 mm (.102) bzw. 5.1 mm (.201)
- Grid: ≥ 3 mm bzw. ≥ 120 Mil
- Grid: ≥ 1.9 mm bzw. ≥ 75 Mil
- Short-stroke and Charging Test Probes

---

All specifications are subject to change without prior notification.
Mounting and Functional Dimensions

### GKS-913

#### Tip Styles

<table>
<thead>
<tr>
<th>Material</th>
<th>Tip Style</th>
<th>Plating</th>
<th>Spring Force (dN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brass or BeCu</td>
<td>02</td>
<td>A</td>
<td>3,5 (1.38)</td>
</tr>
<tr>
<td>gold- or rhodium-plated</td>
<td>02/05/06/08</td>
<td>A</td>
<td>3.2 (1.26)</td>
</tr>
<tr>
<td>Steel, gold-plated or Stainless Steel <em><strong>(C)</strong></em></td>
<td>02</td>
<td>A</td>
<td>3,2 (1.26)</td>
</tr>
<tr>
<td>Brass, gold-plated</td>
<td>02</td>
<td>A</td>
<td>3,2 (1.26)</td>
</tr>
</tbody>
</table>

#### Operating Temperature

Standard: -40° up to +80° C

*** with Spec. Designation “C”: -100° up to +200° C (1,5 N)

For applications up to 24 A: HSS-520 (see Page 102).

** Screw-in Versions see Page 134.

### Materials

- Plunger: Brass or BeCu, gold- or rhodium-plated
- Barrel: Brass, gold-plated
- Spring: Steel, gold-plated or Stainless Steel ***(C)***
- Receptacle: Brass, gold-plated

### Electrical Data

- Current Rating: 5 - 8 A (24 A***)
- $R_i$ typical: < 20 mΩ (***=> 100 mΩ)

### Mechanical Data

- Working Stroke: 2,8 mm (.110)
- Maximum Stroke: see table on the right
- Spring Force at Work. Stroke: 1,5 N (5.4oz)
  - alternative: 0,8 N (2.9oz); 2,5 N (9.0oz)

### Ordering Example

<table>
<thead>
<tr>
<th>Series</th>
<th>Tip Material</th>
<th>Tip Style</th>
<th>Tip Diameter (1/100 mm)</th>
<th>Plating</th>
<th>Spring Force (dN)</th>
<th>Collar Height (mm)</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>GKS</td>
<td>1 = Brass</td>
<td>02</td>
<td>2,98 - 2,99 mm (.1173 - .1177)</td>
<td>A = Gold</td>
<td>3,2 (1.26)</td>
<td>7,2 (.283)</td>
<td>02</td>
</tr>
<tr>
<td></td>
<td>3 = BeCu</td>
<td>02/05/06/08</td>
<td>2,98 - 2,99 mm (.1173 - .1177)</td>
<td>A = Gold</td>
<td>3,2 (1.26)</td>
<td>7,2 (.283)</td>
<td>02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>02</td>
<td>2,98 - 2,99 mm (.1173 - .1177)</td>
<td>A = Gold</td>
<td>3,2 (1.26)</td>
<td>7,2 (.283)</td>
<td>02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>02</td>
<td>2,98 - 2,99 mm (.1173 - .1177)</td>
<td>A = Gold</td>
<td>3,2 (1.26)</td>
<td>7,2 (.283)</td>
<td>02</td>
</tr>
</tbody>
</table>

** Note: **

- Tip Version
- 0 End of Probe Barrel open
- 1 End of Probe Barrel with solder terminal
- 5 End of Probe Barrel closed; can be soldered into PCB
- 2 End of Probe Barrel closed; can be soldered into PCB

Warning: Soldering the Probes demands great care. High temperatures must not reach the inside of the barrel, because this could destroy the spring.

The Receptacle KS-913 35 can only be combined with the Probe Types 0, S and Z.

### Available Tip Styles

<table>
<thead>
<tr>
<th>Tip Style</th>
<th>Further Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>3,5 (1.38)</td>
</tr>
<tr>
<td>03</td>
<td>3,2 (1.26)</td>
</tr>
<tr>
<td>05</td>
<td>3,2 (1.26)</td>
</tr>
<tr>
<td>06</td>
<td>3,2 (1.26)</td>
</tr>
<tr>
<td>08</td>
<td>3,2 (1.26)</td>
</tr>
<tr>
<td>30</td>
<td>3,2 (1.26)</td>
</tr>
<tr>
<td>30*</td>
<td>3,2 (1.26)</td>
</tr>
<tr>
<td>30**</td>
<td>3,2 (1.26)</td>
</tr>
<tr>
<td>35</td>
<td>3,2 (1.26)</td>
</tr>
</tbody>
</table>

### Mounting Hole Size

- in Materials CEM 1 and FR 4:
  - with Receptacle: ø 2.98 - 2.99 mm (.1173 - .1177)
  - without Receptacle: ø 2.65 mm (.1043)

### Collar Height and Installation Height

The Installation Height of the Tip is defined by the Collar Height.

<table>
<thead>
<tr>
<th>Collar Height</th>
<th>Tip Style</th>
<th>Install. Height (without KS) in mm</th>
<th>max. Stroke</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>02/05/06/08</td>
<td>7,2 (.283)</td>
<td>3,5 (1.38)</td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>02</td>
<td>7,2 (.283)</td>
<td>3,2 (1.26)</td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>02</td>
<td>8,7 (.343)</td>
<td>3,3 (1.30)</td>
<td></td>
</tr>
</tbody>
</table>

### For applications up to 24 A:

HSS-520 (see Page 102).

### Screw-in Versions see Page 134.

### Tools:

- Insertion and Extraction Tools for GKS and KS see Page 112.

### Grid:

- ≥ 4.00 mm
- ≥ 160 Mil

### Installation Height:

- 7,2 / 8,7 mm (.283/.343)

### Recommended Stroke:

- 2,8 mm (.110)
Mounting and Functional Dimensions

**Available Tip Styles**

<table>
<thead>
<tr>
<th>No.</th>
<th>Tip Style</th>
<th>φ (inch)</th>
<th>Further Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>02</td>
<td>0,23</td>
<td>3,50 (.138)</td>
</tr>
<tr>
<td>3</td>
<td>03</td>
<td>0,23</td>
<td>A (0,091)</td>
</tr>
<tr>
<td>3</td>
<td>05</td>
<td>0,23</td>
<td>A (0,091)</td>
</tr>
<tr>
<td>3</td>
<td>06*</td>
<td>0,18</td>
<td>A (0,071)</td>
</tr>
<tr>
<td>3</td>
<td>06</td>
<td>0,23</td>
<td>3,50 R (.138)</td>
</tr>
<tr>
<td>3</td>
<td>08</td>
<td>0,23</td>
<td>2,30 R (.091)</td>
</tr>
<tr>
<td>3</td>
<td>08</td>
<td>0,23</td>
<td>R (.091)</td>
</tr>
</tbody>
</table>

**Collar Height and Installation Height**

The Installation Height of the Tip is determined by the Collar Height.

<table>
<thead>
<tr>
<th>Collar Height</th>
<th>Tip Style</th>
<th>Install. Height (without KS)</th>
<th>max. Stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>02</td>
<td>02/05/06/08</td>
<td>7,2 mm (.283)</td>
<td>3,5 mm (.138)</td>
</tr>
<tr>
<td>02</td>
<td>06 180*</td>
<td>7,2 mm (.283)</td>
<td>3,2 mm (.126)</td>
</tr>
<tr>
<td>02</td>
<td>58***</td>
<td>8,7 mm (.343)</td>
<td>3,3 mm (.130)</td>
</tr>
</tbody>
</table>

**Mechanical Data**

- **Working Stroke:** 2,8 mm (.110)
- **Maximum Stroke:** see Table
- **Spring Force at Work. Stroke:** 1,5 N (5.4oz)
- **alternative:** 0,8 N (2.9oz); 2,5 N (9.0oz)

**Electrical Data**

- **Current Rating:** 5 - 8 A
- **Ri typical:** < 20 mΩ (*** > 100 mΩ)
- **Spring force < 1,5 N are not recommended for high-current applications**

**Operating Temperature**

- **Standard:** -40° up to +80° C
- **with Spec. Design. °C:** -100° up to +200° C (1,5 N)

**Mounting Hole Size**

- **in CEM 1 and FR 4:** 0,298 - 2,999 mm (1,1173 - .1177)
- **for KS-913 35 M:** 0,298 - 2,999 mm (1,1173 - .1177)
- **for KS-913 35 M-R:** 0,300 - 3,02 mm (1,1181 - .1189)

**Grid:**

- ≥ 4,00 mm
- ≥ 160 Mil

**Installation Height:** 7,2 / 8,7 mm (.283 / .343)

**Recommended Stroke:** 2,8 mm (.110)

**Ordering Example**

- **Test Probe:**
  - Series: G K S
  - 913
  - 308
  - 230
  - R
  - 15
  - 02
  - M

- **Receptacle:**
  - Series: K S
  - 913
  - 35
  - M
  - 913
  - 35
  - M - R

**Note:**

- The Receptacle KS-913 35 M (-R) can only be combined with the Probe Type „GKS-913 ... M“
- For applications up to 24 A: see HSS-520 on Page 106
- Note: GKS-913 ... M will be screwed into KS-913 35 M (-R) using special tools (see Page 170/171).

**Recommended Screw-in Torque:** Min.: 5 Ncm / Max.: 10 Ncm
HSS 520 / 520 M

Short-Stroke High-Current Probe up to 24 A

Mounting and Functional Dimensions

HSS-520

<table>
<thead>
<tr>
<th>Type 0</th>
<th>Type 1</th>
<th>Type Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>ø2.65</td>
<td>ø2.65</td>
<td>ø2.08</td>
</tr>
<tr>
<td>0.914</td>
<td>0.904</td>
<td>0.82</td>
</tr>
<tr>
<td>15.1</td>
<td>15.0</td>
<td>13.6</td>
</tr>
<tr>
<td>ø0.31</td>
<td>ø0.31</td>
<td>ø0.32</td>
</tr>
<tr>
<td>0.21</td>
<td>0.21</td>
<td>0.2</td>
</tr>
<tr>
<td>0.8</td>
<td>0.8</td>
<td>0.66</td>
</tr>
<tr>
<td>ø1.6</td>
<td>ø1.6</td>
<td>ø1.3</td>
</tr>
<tr>
<td>3.5</td>
<td>3.5</td>
<td>1.5</td>
</tr>
<tr>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>2.5</td>
<td>2.5</td>
<td>2.65</td>
</tr>
<tr>
<td>19.1</td>
<td>19.2</td>
<td>13.6</td>
</tr>
<tr>
<td>5.94</td>
<td>5.96</td>
<td>5.36</td>
</tr>
<tr>
<td>1,6</td>
<td>1,6</td>
<td>1,008</td>
</tr>
<tr>
<td>0.063</td>
<td>0.063</td>
<td>0.008</td>
</tr>
</tbody>
</table>

Materials

Plunger: BeCu, gold-plated
Barrel: Brass, gold-plated
Spring: Stainless Steel
Receptacle: Brass, gold-plated

Mounting Hole Size

in Material CEM 1 and FR 4:
- for KS-913 35: ø 2,98 - 2,99 mm (.1173 - .1177)
- for KS-913 35 M-R: ø 3,00 - 3,02 mm (.1181 - .1189)
- without Receptacle: ø 2,65 mm (.1043)

Electrical Data

Current Rating: 24 A
R1 typical: < 20 mΩ

Operating Temperature

Standard: -100° up to +200° C

Note:

Typ Version
0 End of Probe Barrel open
1 End of Probe Barrel with solder terminal
M End of Probe Barrel with thread M2 for KS-913 35 M (-R)
S End of Probe Barrel closed; can be soldered into PCB
Z End of Probe Barrel closed; can be soldered into PCB

Warning: Soldering the Probes demands great care. High temperatures must not reach the inside of the barrel, because this could destroy the spring.

The Receptacle KS-913 35 can only be combined with the Probe Types 0, S and Z. The Receptacle KS-913 35 M can only be combined with the Probe Type M.

Ordering Example

Test Probe:
- H S S 5 2 0 3 0 6 2 3 0 A 1 5 0 2 M
- K S – 9 1 3 5
- K S – 9 1 3 5 M
- K S – 9 1 3 5 M - R

Receptacles:
- K S – 9 1 3 3 5
- K S – 9 1 3 3 5 M
- K S – 9 1 3 3 5 M - R

Available Tip Styles

<table>
<thead>
<tr>
<th>Material</th>
<th>Tip Style</th>
<th>Further Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0, 2, 3</td>
<td>(0.063)</td>
</tr>
</tbody>
</table>

Notes:

HSS-520 ... M will be screwed into Receptacle KS-913 35 M (-R), using special tools (see Page 170/171).

Recommended Screw-in Torque:
Min.: 5 Ncm / Max.: 10 Ncm

Tools:

Insertion and Extraction Tools for GKS and KS see Page 118.
GKS 364
Test Probe with continuous Plunger

Mounting and Functional Dimensions

Available Tip Styles

<table>
<thead>
<tr>
<th>Material</th>
<th>Tip Style</th>
<th>Ø</th>
<th>Further Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ø 4.00</td>
<td>N</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Ø 4.00</td>
<td>N</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Ø 4.00</td>
<td>N</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Ø 4.00</td>
<td>N</td>
<td>-</td>
</tr>
</tbody>
</table>

* Angle of Tip 60°

Mechanical Data

- **Working Stroke:** 4.0 mm (.157)
- **Maximum Stroke:** 5.0 mm (.197)
- **Spring Force at Work Stroke:** 1.5 N (5.4oz)
  alternative: 0.6 N (2.0oz); 3.0 N (10.8oz), 8.0 N (28.9oz)

Materials

- **Plunger:** Steel, nickel-plated
- **Barrel:** Brass, gold-plated
- **Spring:** Steel, gold-plated or Stainless Steel**
- **Receptacles:** RKS-364 23: Brass, not plated
  KS-364 125: Brass, gold-plated

Electrical Data

- **Current Rating, Conn. to Plunger:** 15-20 A
- **Current Rating, Connection to KS:** 5 - 8 A
- **Rt typical, Connection to Plunger:** < 10 mΩ
- **Rt typical, Connection to KS:** < 30 mΩ
  (** > 100 mΩ)

Mounting Hole Size

- **with Receptacle:** Ø 5.59 - 5.60 mm (.2201 - .2205)
- **without Receptacle:** Ø 5.00 mm (.1969)

Operating Temperature

- **Standard:** -40° up to +80° C
- **with 1.5 and 3.0 N-Spring:** -100° up to +200° C

Ordering Example

**Test Probe:**

**Receptacles:**

**Spacer for Receptacle:**

**Lamellar Plug:**

(For plugging onto the end of the Plunger)

---

All specifications are subject to change without prior notification.
Mounting and Functional Dimensions

GKS 365

GKS 366

Mechanical Data GKS 365
Working Stroke: 3.2 mm (.126)
Maximum Stroke: 4.0 mm (.157)
Spring Force at Work. Stroke; 1.5 N (5.4oz)
alternative: 0.6 N (2.2oz); 3.0 N (10.8oz),
4.0 N (14.4oz); 8.0 N (28.9oz)

Mechanical Data GKS 366
Working Stroke: 8.0 mm (.315)
Maximum Stroke: 10.0 mm (.394)
Spring Force at Work. Stroke: 1.5 N (5.4oz)
alternative: 3.0 N (10.8oz); 6.0 N (21.6oz);,
8.0 N (28.9oz); 16.0 N (57.5oz)

Electrical Data
Current Rating: 5 - 8 A
R<sub>th</sub> typical: < 30 mΩ (**) > 100 mΩ

Available Tip Styles GKS 365

<table>
<thead>
<tr>
<th>Material</th>
<th>Tip Style</th>
<th>Plating</th>
<th>Further Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>‡ ‡</td>
<td>2.04</td>
<td>Ø 4.00</td>
<td>N</td>
</tr>
<tr>
<td>1.05</td>
<td>Ø 4.00</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>2.06</td>
<td>Ø 4.00</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>1.13</td>
<td>Ø 4.00</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>1.13S</td>
<td>Ø 4.00</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

* No radial Forces allowed. Plunger can get stuck
** Ordering Example: GKS-365 113 400 A xx01 S

Available Tip Styles GKS 366

<table>
<thead>
<tr>
<th>Material</th>
<th>Tip Style</th>
<th>Plating</th>
<th>Further Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>‡ ‡</td>
<td>1.05</td>
<td>Ø 4.00</td>
<td>N</td>
</tr>
<tr>
<td>3.06</td>
<td>Ø 4.00</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>3.56</td>
<td>Ø 4.00</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

Mounting Hole Size
with Receptacle: Ø 5.59 - 5.60 mm
(.2201 - .2205)
without Receptacle for GKS-365:
Ø 4.97 mm (.1957)
without Receptacle for GKS-366:
Ø 5.00 mm (.1969)

Note:
Other comparable Versions on request.

GKS 35 - 365 1 0 5 4 0 0 A 1 5 0 1
GKS 366 1 0 5 4 0 0 A 1 5 0 1
R K S – 3 6 5 2 3 K S – 3 6 5 1 2 5
R K S – 3 6 4 2 3 K S – 3 6 4 1 2 5
D S – 3 6 4 0 1 D S – 3 6 4 0 3

All specifications are subject to change without prior notification
Target Contact

**PIN SPECIFICATIONS**
**Mounting Hole**: .034 (0.86)

**MATERIALS**
Material: Brass
Plating: Gold over nickel

**HOW TO ORDER**
PI-5328

---

**PIN SPECIFICATIONS**
**Mounting Hole**: .057 (1.45)

**MATERIALS**
Material: Brass
Plating: Gold over nickel

**HOW TO ORDER**
PI-5329

---

**PIN SPECIFICATIONS**
**Mounting Hole**: .057 (1.45)

**MATERIALS**
Material: Brass
Plating: Gold over nickel

**HOW TO ORDER**
PI-5327

---

**PIN SPECIFICATIONS**
**Mounting Hole**: .084 (2.15)

**MATERIALS**
Material: Brass
Plating: Gold over nickel

**HOW TO ORDER**
PI-5330

Specifications subject to change without notice. Dimensions in inches (millimeters)
Contact Terminals for Interfaces and Transfer Fields

Grid:
≥ 2.54 mm
≥ 100 Mil

**Contact Terminals with Collar Height:**
- KT-254 W-E03 (wire-wrap)
- KT-254 W3 E03 (wire-wrap)
- KT-254 L-E03 (Solder)
- KT-254 L3 E03 (Solder)
- KT-120 L3 E02 - 30 (Solder)
- KT-150 L3 E03 - M3 (Solder)

**Contact Terminals with Collar Height:**
- KT-254 W-E02 (wire-wrap)
- KT-254 W3 E02 (wire-wrap)
- KT-254 L-E02 (Solder)
- KT-254 L3 E02 (Solder)
- KT-254 L3 E02 - 30 (Solder Connection)
- KT-254 W-PL (wire-wrap)

**Other Contact Terminals:**
- KT-254 W3 E12 (wire-wrap)
  For assembly in INGUN-ZSK Transfer Field (ZSK = Top-side Contacting Unit)
- KT-158 02 (Order No. 9408)
  Contacting Terminal for GenRad Interface
- KT-158 (Order No. 3650)
  Contacting Terminal for Zehntel Interface
- KT-158 06 (Order No. 21814)
- KT-586 102 400 R
  Contacting Terminal for general usage
- KT-279 102 300
  (to solder in)
- KT-112 143 215 E02
  (Replaceable. Will be used with KS-112, see Page 50)

**Mounting Hole Size**
- for KT-254:
  - in CEM1: 1.98 - 2.00 mm (.0780 - .0787)
  - in FR4: 1.98 - 1.99 mm (.0780 - .0783)
- for KT-158:
  - in CEM1 and FR4: 1.40 mm (.0591)
- for KT-586:
  - in CEM1 and FR4: 2.55 - 2.57 mm (.1004 - .1012)
- for KT-120:
  - in CEM1 and FR4: 3.00 - 3.02 mm (.1181 - .1189)
- for KT-150:
  - in CEM1 and FR4: 4.00 - 4.02 mm (.1575 - .1583)

**Electrical Data**
- R<sub>1</sub> typical: < 5 mΩ

**Materials**
- Contact Terminals: Brass, gold-plated
- KT-586: Brass, rhodium-plated

**Collar Height and Install. Height for KT-254**
The Installation Height of the Contact Terminals is determined by the collar height.

*Services: Customized Contact Blocks drilled according to customer demands (and matching certain INGUN Receptacles) are available from INGUN.*
Dimension A:

CO.IM 2750/9.5 : $A = 9.5 (.374)$

CO.IM 2750 : $A = 12 (.472)$
Matière : Brass
Revetement : Gold (Au)