



## **TINI Q-G<sup>®</sup> MINIATURE CONNECTORS**

**U.S. Patent No. 4,361,375, 4,316,647, 4,921,431**

**Series TA(\*)F, TA(\*)FB, TA(\*)FL and TA(\*)FLB -**  
Straight female cord plug

**Series TA(\*)M, TA(\*)MB, TA(\*)ML and TA(\*)MLB -**  
Straight male cord plug

**Series TB(\*)M and TB(\*)MB -** Chassis/panel mount  
male receptacle

**Series TY(\*)F and TY(\*)FPC -** Chassis/panel, female  
receptacle, choice of solder lugs or P.C. terminations.

**Series TLP -** Looping Plugs

**Series TBA(\* \*) -** Audio Adapters

**Series TRA(\*)M -** PC Mount Male Receptacles

### **MICROPHONES**

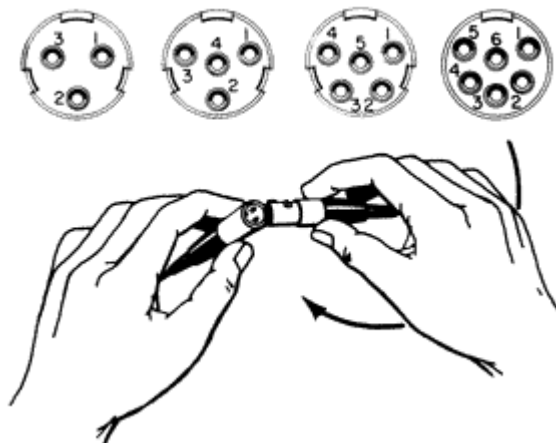
Ideal for live performances, recording sessions, and audio pickups. Available in black chrome finish for use on camera or where reflected light is a problem. Disconnecting plugs from lavalier or clip-on mikes is quick and easy...press the release button and pull the plug free. Either shielded or unshielded cables can be used up to 0.115 inches (2.92 mm) in diameter (standard). Cable shield may either be connected to a pin/contact through circuit or may be connected to the cable clamp strain relief. This alternate connection permits using the metal housings of plugs to completely shield internal connections and pins/contacts.

| Receptacle Series | Panel Mounting |      | Termination    |        |
|-------------------|----------------|------|----------------|--------|
|                   | Front          | Rear | P.C.           | Solder |
| TB(*)M            | X              |      | X <sup>1</sup> | X      |
| TY(*)F            | X              | X    |                | X      |
| TY(*)FPC          | X              | X    | X              |        |
| TRA(*)M           |                | X    | X              |        |

1 P.C. board termination is recommended alternate method

## INSTRUMENTATION

Tini Q-G<sup>®</sup> plugs and receptacles have the quality and versatility of functions and features for the most demanding compact connections in industrial, R and D and production instrumentation of all kinds. The 4, 5, and 6-pin/contact versions are especially suited to multi-circuit connections.



## DESIGN FEATURES

**STYLE** - Streamlined, miniaturized with nickel-plated metal and contrasting black plastic parts. Designed for light weight and unobtrusiveness. Also available in conductive black chrome finish.

**CONSTRUCTION** - Metal parts are rugged die-cast or precision machined with nickel-plating; plastic parts are molded of high dimensional-stability thermoplastic. Advanced design assures minimum weight consistent with strength and durability of cord plug housings of .413 inch (10.5 mm) diameter Weight: Series TA(\*)F plug = .25 ounce (7 g); Series TA(\*)M = .3 ounce (8.5 g).

**INSERTS** - Precision molded of thermoplastic for high mechanical and dielectric strength. Contacts and terminals are precision formed and plated for intimate contact and low resistance connections. Terminal numbers are molded on rear of male insert and on face of female insert for easy identification (except 6-pin male insert). Inserts can be supplied for OEM installation in microphones and instrumentation for optimum connecting reliability. For cord plugs, inserts can also be supplied for replacements.

**LATCHLOCK** - Positive latch system assures high integrity, vibration-resistant mating and transfer of shielding connection between housing, combined with simple, easy fingertip release.

**STRAIN RELIEF** - Rugged internal clamp holds cable tightly, while making a secure, low resistance connection between cable shield and housing.

**FLEX RELIEF** - Protects by minimizing cable bending stress at point of cable entry. Maximum recommended cable diameter is .115 inch (2.92 mm) when flex relief is used. By omitting flex relief (Series T(\*)FL and T(\*)ML only), cable up to .170 inch (4.32 mm) diameter can be used.

**ASSEMBLY** - Connector parts are mechanically keyed for simple assembly.

**POLARIZATION** - Mating male and female connectors are also mechanically keyed (latch and groove) so that it is impossible to mate them incorrectly.

**"SCOOP-PROOF" FEATURE** - Fully recessed pins on male plugs and receptacles cannot be "scooped", bent or damaged by accidental mismating with mating connector.

**COLOR ESCUTCHEONS** - Attractive color escutcheons, Series TYEF, are recommended for use with Series TY(\*)F and TY(\*)FPC receptacles (when rear mounted) for attractive panel trim, as well as color coding one or more connectors. Colors are: red, black, gray, green, blue, white and yellow.

**CUSTOM Tini Q-G<sup>®</sup> CABLE ASSEMBLIES** -

On special order where production quantities warrant, Switchcraft can supply assembled and tested Tini Q-G<sup>®</sup> cables.

## **MOUNTING**

### **Panel/Chassis Thickness:**

Series TB(\*)M: .25 inch (6.35 mm)  
maximum

### **Series TY(\*)F:**

Front--.375 inch (9.5 mm) maximum  
Rear--.093 inch (2.3 mm) maximum

### **Series TY(\*)FPC:**

Front--.312 inch (7.9 mm) maximum  
Rear--.093 inch (2.3 mm) maximum

## **SPECIFICATIONS: (all Tini QG, except 6 pin)**

## **ELECTRICAL**

**Contact Resistance:** .010 ohms maximum after life (and after salt spray).

**Current Rating (Carry Only):** 5 A, 125 V AC (4 A, 125 V AC on 5 circuit) based on 30°C maximum.

**Insulation Resistance:** 510,000 megohms minimum @ 500 V DC (initial); 10,000 megohms minimum (after humidity test).

**Dielectric Strength:** 1,000 V (rms).

## **MECHANICAL**

**Life:** 5,000 operations minimum

**Insertion/Withdrawal Forces (after life):** 6.1 lb./2.77 kg after life, insertion; 5.6 lb/2.54 kg, withdrawal.

**Solderability Standard:** Meets EIA RS-186-9E.

**Mechanical Shock:** Meets MIL-STD-202, method 213B.

**Vibration:** Meets MIL-STD-202, method 201A.

**Wire Size:** #22 wire gauge solid; #24 wire gauge stranded.

## **ENVIRONMENTAL**

**Thermal Range:** -55°C to + 85°C.

**Humidity:** Meets MIL-STD-202, method 106D.

**Thermal Shock:** Meets MIL-STD-202, method 107D.

**Salt Spray:** Meets MIL-STD-202, method 101.

## **MATERIAL**

**Housing, Plugs and Male Receptacles:** Copper alloy, nickel-plated.  
Female Receptacle Die-cast zinc, nickel-plated.

**Black Tini Q-G<sup>®</sup> Housing:** Copper alloy, black chrome-plated.

**Pin and Socket Contacts:** Copper alloy, silver-plated.

**Flex Relief:** Molded black thermoplastic elastomer.

**Latch Button:** Molded black thermoplastic.

**Release Lever and Mounting Washer:** Steel, nickel-plated.

**Standoff/Ground Terminal and Cable Clamp:** Steel, electroplated.

**Inserts and Insulating Spacer:** Molded, high strength thermoplastic.

**Latch (Female):** Copper alloy, nickel-plated.

**Mounting Nut:** Copper alloy, nickel-plated.

## **SPECIFICATIONS: (6 Pin Plugs, Receptacles and Adapters)**

### **ELECTRICAL**

**Contact Resistance:** .010 ohm maximum after life.

**Current Rating (Carry only):** 1.5A, 125 VAC, based on 30° maximum

**Insulation Resistance:** 510,000 M(ohm) minimum @ 500 VDC (initial).

**Dielectric Strength:** 250 V rms.

## **MECHANICAL**

**Life:** 2,000 operations

**Insertion/Withdrawal Forces (after life):** --13 pound insertion; --13 pound maximum withdrawal

**Solderability Standard:** Meets EIA RS-186-9E.

**Wire Size:** 28 wire gauge stranded.

## **MATERIAL**

**Housings, Plugs and Male Receptacles:** Copper alloy, nickel-plated.

**Socket Contacts:** Copper alloy, silver-plated.

**Pin Contacts:** Copper alloy, electroplated.

**Flex Relief and Latch Button:** Molded thermoplastic.

**Ground Terminal:** Copper alloy, electroplated.

**Inserts and Insulating Spacer:** Molded high strength thermoplastic, UL 94 V-0.

**Latch (Female):** Copper alloy, nickel-plated.

**Mounting Nut:** Copper alloy, nickel-plated.

**Ferrite:** 43 material, shielded head.

**Frame:** Molded thermoplastic, UL 94 V-0.

**TINI Q-C® CONNECTOR PART NUMBERING SYSTEM**

| Series                                      | Number of Contacts | Gender   | Options                                 |                           |
|---|--------------------|----------|---|---------------------------|
| CORD PLUG                                   | 3                  | M MALE   | B                                       | BLACK<br>CHROME<br>FINISH |
| FRONT PANEL MOUNT USING NUT (MALE ONLY)     | 4                  | F FEMALE | L                                       | LARGE<br>HANDLE           |
| RIGHT ANGLE PC/REAR PANEL MOUNT (MALE ONLY) | 5                  |          | AU                                      | GOLD<br>CONTACTS          |
| FRONT/REAR PANEL MOUNT (FEMALE ONLY)        | 6                  |          |   |                           |
|   |                    |          | OPTIONS SHOWN IN<br>ORDER OF APPEARANCE |                           |

**NOTE 1:**

1. TRA SERIES AVAILABLE IN 3 AND 6 PIN VERSIONS ONLY.
2. TY SERIES AVAILABLE IN 3, 4, AND 5 PIN VERSIONS ONLY