



preci-dip

## PCB CONNECTORS

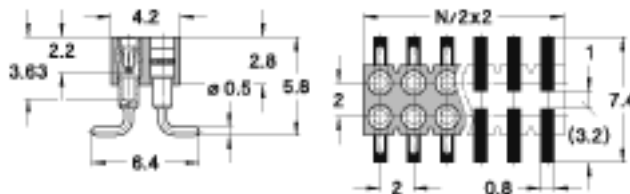
### SERIES 833

#### 833-PP-NNN-30-001101

Double row

2 mm, Surface mount perpendicular gull-wing

“Hard metric” PCB socket connectors SMD perpendicular mount.



### TECHNICAL SPECS.:

|                              |                                                 |
|------------------------------|-------------------------------------------------|
| Insulator                    | Black glass filled polymer LCP-GF30-FR          |
| Flammability                 | UL 94V-O                                        |
| Sleeve                       | Brass CuZn36Pb3 (C36000)                        |
| Contact                      | Clip (6 finger): Beryllium copper (C17200)      |
| Mating pin Ø                 | 0.40 to 0.56 mm, 0.50 mm square                 |
| Insertion force              | 0.7 N typ.                                      |
| Withdrawal force             | 0.4 N typ. (polished steel gauge Ø 0.46 mm)     |
| Mechanical life              | Min. 500 cycles                                 |
| Rated current                | 3 A                                             |
| Contact resistance           | Max. 10 m                                       |
| Dielectric strength          | Min. 1000 V RMS                                 |
| Coplanarity SMD terminations | Max. 0.1 mm (measured on 25 mm long connectors) |

### ORDERING INFORMATION:

| PP Plating code | Sleeve | Clip         |
|-----------------|--------|--------------|
| 87              | Tin    | Gold flash   |
| 83              | Tin    | Gold 0.75 µm |

NNN number of poles. Replace NNN with the requested number of poles, e.g. 833-87-NNN-30-001101 for a double row version with 16 pins becomes 833-87-016-30-001101

# TECHNICAL ASSISTANCE

## GENERAL SPECIFICATIONS:

The values listed below are general specs applying for PRECI-DIP socket and pin connectors. Please see individual catalog page for additional and product specific technical data.

|                             |                                 |
|-----------------------------|---------------------------------|
| Operating temperature range | -55 ... +125 °C                 |
| Climatic category (IEC)     | 55/125/21                       |
| Operating humidity range    | annual mean 75 %                |
| Max working voltage         | 100 VRMS/150 VDC (2.54 mm grid) |

PRECI-DIP sockets are recognized by Underwriters Laboratories Inc. and listed under "Connectors for Use in Data, Signal, Control and Power Applications", File Nr. E174442

## MECHANICAL CHARACTERISTICS:

|                                   |                                                       |
|-----------------------------------|-------------------------------------------------------|
| Clip retention                    | Min. 40 N (no displacement under axial force applied) |
| Contact (sleeve / clip) retention | Min. 3.3 N acc. to MIL-DTL-83734, pt 4.6.4.2          |

## ELECTRICAL CHARACTERISTICS:

|                                                         |                           |
|---------------------------------------------------------|---------------------------|
| Insulation resistance between any two adjacent contacts | Min. 10'000 M at 500 V AC |
| Capacitance between any two adjacent contacts           | Max. 1 pF                 |

**Air and creepage distances between any two adjacent contacts :**

| SERIES | 3xx/4xx/7xx | 80x        | 83x | 85x       | 86x |
|--------|-------------|------------|-----|-----------|-----|
| mm     | 0.7         | 0.85 / 0.7 | 0.5 | 0.4 / 0.5 | 0.5 |

## ENVIRONMENTAL CHARACTERISTICS:

The sockets withstand the following environmental tests without mechanical and electrical defects:

- Dry heat steady state IEC 60512-11-9.11i / 60068-2-2.Bb: 125 °C, 16h
- Damp heat cyclic IEC 60512-11-12.11m / 60068-2-30.Db: 25/55 °C, 90 – 100 %rH, 1 cycle of 24 h
- Cold steady state IEC 60512-11-10.11j / 60068-2-1.A: -55 °C, 2 h
- Thermal shock IEC 60512-11-4.11d / 60068-2-14.Na: -55/125 °C, 5 cycles 30 min
- Sinusoidal vibrations IEC 60512-6-4.6d / 60068-2-6.Fc: 10 to 500 Hz, 10 g, 1 octave/min, 10 cycles for each axis
- Shock IEC 60512-6-3.6c / 60068-2-27.Ea: 50 g, 11 ms, 3 shocks in three axis

During the above two tests no contact interruption >50 ns does appear.

- Solderability J-STD-002A, Test A, 245°C, 5 s solder alloy SnAg3.8Cu0.7
- Resistance to soldering heat J-STD-0020C, 260°C, 20 s
- Moisture sensitivity J-STD-020C level 1
- Resistance to corrosion :
  - 1) Salt spray test IEC 60068-2-11.Ka: 48 h
  - 2) Sulfur dioxide (SO<sub>2</sub>) test IEC 60068-2-42 Kc: 96 h at 25 ppm SO<sub>2</sub>, 25 °C, 75 %rH
  - 3) Hydrogen sulfide (H<sub>2</sub>S) test IEC 60068-2-43 Kd: 96 h at 12 ppm H<sub>2</sub>S, 25 °C, 75 %rH

## SOLDERLESS COMPLIANT PRESS-FIT CHARACTERISTICS:

### PRESS-FIT CHARACTERISTICS MEASURED ACC. TO IEC 60352-5

- Press-in force: 90 N max. (at min. hole dia.) / 65 N typ.
- Push-out force: 30 N min. (at max. hole dia.) / 50 N typ.
- Push-out 3rd cycle: 20 N min. (at max. hole dia.)

## PCB HOLE DIMENSIONS

- 2 mm grid: Finished hole  $\varnothing$ :  $0.7 + 0.09/-0.06$  mm | Drilled hole  $\varnothing$ :  $0.8 \pm 0.02$  mm
- 2.54 mm grid: Finished hole  $\varnothing$ :  $1 + 0.09/-0.06$  mm | Drilled hole  $\varnothing$ :  $1.15 \pm 0.02$  mm

## PCB HOLE PLATING

- PCB surface finish: Hole plating
- Tin: 5-15  $\mu$ m tin over min. 25  $\mu$ m copper
- Copper: min. 25  $\mu$ m copper
- Gold over nickel: 0.05-0.2  $\mu$ m gold over 2.5-5  $\mu$ m nickel over min. 25  $\mu$ m copper

## PACKAGING:

Standard connector packaging is card box.

SMD mount connectors available on request with Tape & Reel packaging acc. to EIA Standard 481.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Preci-dip:

[833-87-070-30-001101](#) [833-83-094-30-001101](#) [833-87-018-30-001101](#) [833-87-016-30-001101](#) [833-87-014-30-001101](#) [833-87-012-30-001101](#) [833-87-074-30-001101](#) [833-87-098-30-001101](#) [833-87-086-30-001101](#) [833-87-084-30-001101](#) [833-87-082-30-001101](#) [833-87-080-30-001101](#) [833-87-078-30-001101](#) [833-87-076-30-001101](#) [833-87-094-30-001101](#) [833-87-100-30-001101](#) [833-87-096-30-001101](#) [833-87-092-30-001101](#) [833-87-090-30-001101](#) [833-87-088-30-001101](#) [833-83-028-30-001101](#) [833-83-026-30-001101](#) [833-83-024-30-001101](#) [833-83-048-30-001101](#) [833-87-072-30-001101](#) [833-87-068-30-001101](#) [833-83-040-30-001101](#) [833-83-038-30-001101](#) [833-83-036-30-001101](#) [833-83-034-30-001101](#) [833-83-032-30-001101](#) [833-83-030-30-001101](#) [833-83-052-30-001101](#) [833-83-050-30-001101](#) [833-83-018-30-001101](#) [833-83-046-30-001101](#) [833-83-070-30-001101](#) [833-83-042-30-001101](#) [833-83-064-30-001101](#) [833-83-062-30-001101](#) [833-83-060-30-001101](#) [833-83-058-30-001101](#) [833-83-056-30-001101](#) [833-83-054-30-001101](#) [833-83-006-30-001101](#) [833-83-004-30-001101](#) [833-83-020-30-001101](#) [833-83-022-30-001101](#) [833-83-044-30-001101](#) [833-83-066-30-001101](#) [833-83-072-30-001101](#) [833-83-016-30-001101](#) [833-83-014-30-001101](#) [833-83-012-30-001101](#) [833-83-010-30-001101](#) [833-83-008-30-001101](#) [833-87-032-30-001101](#) [833-87-030-30-001101](#) [833-87-028-30-001101](#) [833-87-026-30-001101](#) [833-83-068-30-001101](#) [833-87-048-30-001101](#) [833-87-022-30-001101](#) [833-87-042-30-001101](#) [833-87-040-30-001101](#) [833-87-038-30-001101](#) [833-87-036-30-001101](#) [833-87-034-30-001101](#) [833-87-056-30-001101](#) [833-87-054-30-001101](#) [833-87-052-30-001101](#) [833-87-050-30-001101](#) [833-87-020-30-001101](#) [833-87-046-30-001101](#) [833-87-044-30-001101](#) [833-87-066-30-001101](#) [833-87-064-30-001101](#) [833-87-062-30-001101](#) [833-87-060-30-001101](#) [833-87-058-30-001101](#) [833-83-082-30-001101](#) [833-83-080-30-001101](#) [833-83-078-30-001101](#) [833-83-076-30-001101](#) [833-83-074-30-001101](#) [833-83-098-30-001101](#) [833-87-024-30-001101](#) [833-83-092-30-001101](#) [833-83-090-30-001101](#) [833-83-088-30-001101](#) [833-83-086-30-001101](#) [833-83-084-30-001101](#) [833-87-010-30-001101](#) [833-87-008-30-001101](#) [833-87-004-30-001101](#) [833-83-100-30-001101](#) [833-83-096-30-001101](#)