



preci-dip

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# PCB CONNECTORS

## 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.

<b>OPERATING TEMPERATURE RANGE</b>	-55 ... +125 °C
<b>CLIMATIC CATEGORY (IEC)</b>	55/125/21
<b>OPERATING HUMIDITY RANGE</b>	Annual mean 75%
<b>MAX. WORKING VOLTAGE</b>	100 V <sub>RMS</sub> /150 V <sub>DC</sub> (2.54 mm grid)



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

### MECHANICAL CHARACTERISTICS

<b>CLIP RETENTION</b>	Min. 40 N (no displacement under axial force applied)
<b>CONTACT (SLEEVE / CLIP) RETENTION</b>	Min. 3.3 N acc. to MIL-DTL-83734, pt 4.6.4.2

### ELECTRICAL CHARACTERISTICS

<b>INSULATION RESISTANCE BETWEEN ANY TWO ADJACENT CONTACTS</b>	Min. 10'000 MΩ at 500 V <sub>AC</sub>				
<b>CAPACITANCE BETWEEN ANY TWO ADJACENT CONTACTS</b>	Max. 1 pF				
<b>AIR AND CREEPAGE DISTANCES BETWEEN ANY TWO ADJACENT CONTACTS</b>					
<b>SERIE</b>	3xx/4xx/7xx	80x	83x	85x	86x
<b>mm</b>	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, 16 h
  - 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-020C, 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 3<sup>rd</sup> cycle: 20 N min. (at max. hole dia.)

#### PCB HOLE DIMENSIONS

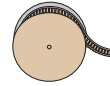
- 2 mm grid
  - Finished hole Ø: 0.7 + 0.09/-0.06 mm
  - Drilled hole Ø: 0.8 ± 0.02 mm
- 2.54 mm grid
  - Finished hole Ø: 1 + 0.09/-0.06 mm
  - Drilled hole Ø: 1.15 ± 0.02 mm

#### PCB HOLE PLATING

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

### PACKAGING

- Standard connector packaging is card box.
- SMD mount connectors available on request with Tape & Reel packaging acc. to EIA Standard 481. These products are marked with the symbol:



T & R Packaging

Please consult [www.precidip.com](http://www.precidip.com) for availability size of tape, size of reel, number of components per reel and packing units.