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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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preci-dip

# PCB CONNECTORS

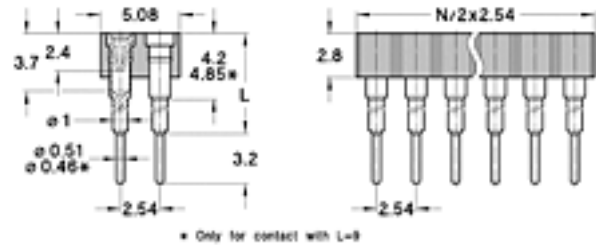
**SERIES**  
**416**

**416-PP-2NN-41-XXX101**

Double row

2.54 mm, Straight solder tail, Mating pin Ø 0.47 mm

Interconnect socket strips, solder tail



## TECHNICAL SPECS.:

<b>Insulator</b>	Black glass filled polyester PCT-GF30-FR
<b>Flammability</b>	UL 94V-O
<b>Sleeve</b>	Brass CuZn36Pb3 (C36000)
<b>Contact</b>	Clip (4 finger): Beryllium copper (C17200)
<b>Mating pin Ø</b>	0.40 to 0.56 mm
<b>Insertion force</b>	2 N typ.
<b>Withdrawal force</b>	1 N typ. (polished steel gauge Ø 0.43 mm)
<b>Mechanical life</b>	Min. 500 cycles
<b>Rated current</b>	3 A
<b>Contact resistance</b>	Max. 10 m
<b>Dielectric strength</b>	Min. 1000 V RMS

## ORDERING INFORMATION:

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

NN number of poles. Replace NN with the requested number of poles, e.g. 416-83-2NN-41-007101 for a double row version with 16 pins becomes 416-83-216-41-007101

# 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  $\mu\text{m}$  tin over min. 25  $\mu\text{m}$  copper
- Copper: min. 25  $\mu\text{m}$  copper
- Gold over nickel: 0.05-0.2  $\mu\text{m}$  gold over 2.5-5  $\mu\text{m}$  nickel over min. 25  $\mu\text{m}$  copper