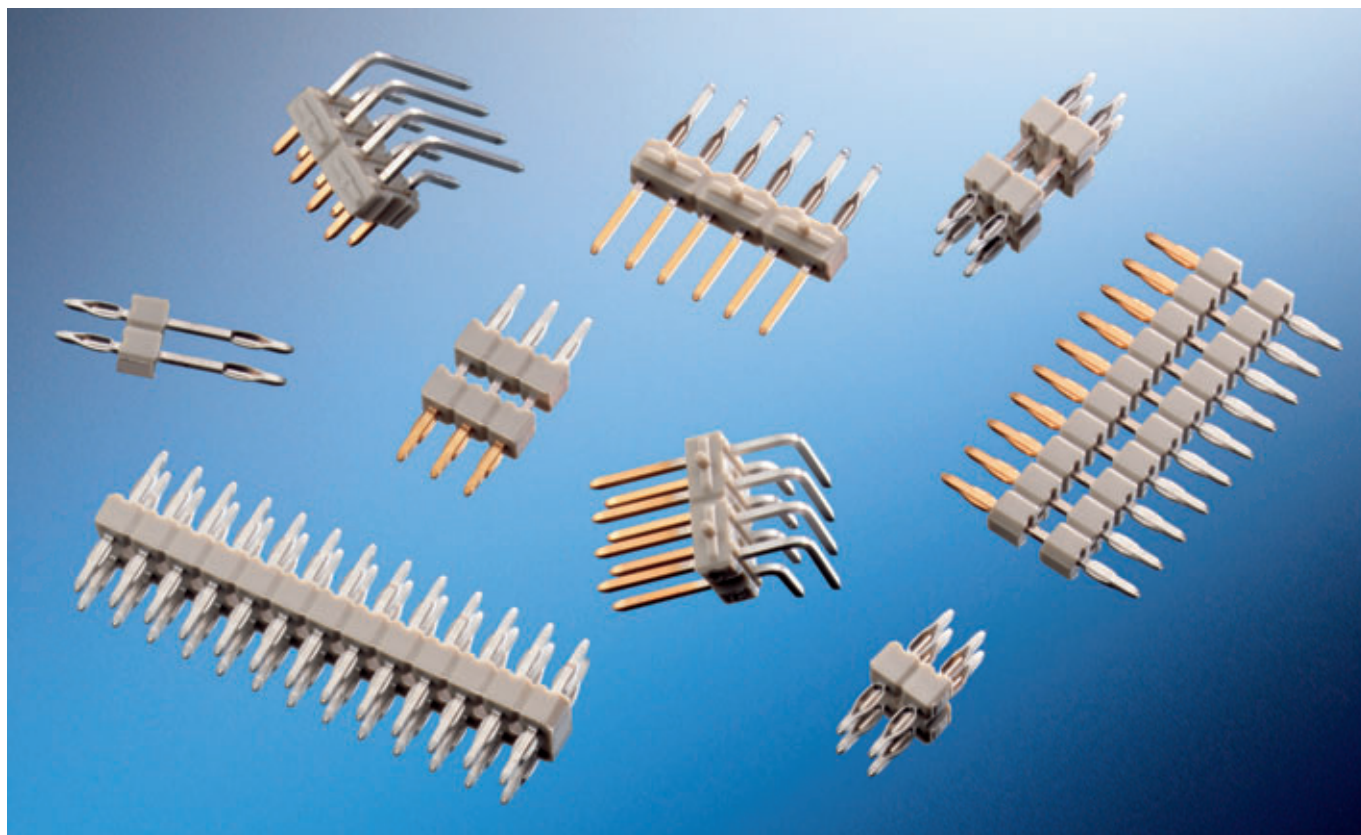


## 2.54 mm STL Pin Headers and Sockets





### General

If you need to connect two PCBs which are arranged on top of each other or to attach connecting cables to PCBs inside your equipment, you will find that the ERNI pin header range offers almost countless possibilities. Anything is possible!

This data sheet lists virtually every possible version of our pin header range. However, if specific numbers of pins, contact lengths or contact materials are required for your particular application, please consult us at any time.

For developing our new header range, we have taken today's rationalization types into account. You can pressfit ERNI headers solderless or you can reflow solder them. The solderless pressfit technique is particularly recommended for PCBs with components fitted on both sides.

### Features

- Solder, THR, SMT and Pressfit
- Single or dual row
- Straight or right angled
- Harsh environments
- Gas tight, vibration proof connection
- DIN and LPV intermateability
- Flexible manufacturing process

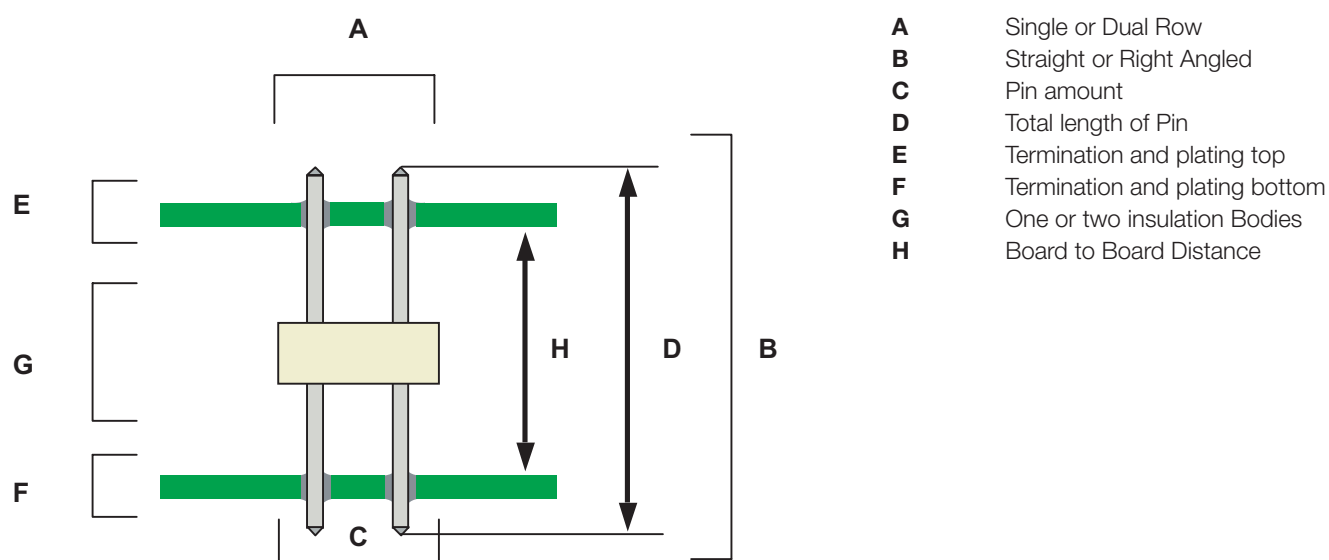
## 2.54 mm STL Pin Headers

### Electrical and Mechanical Characteristics

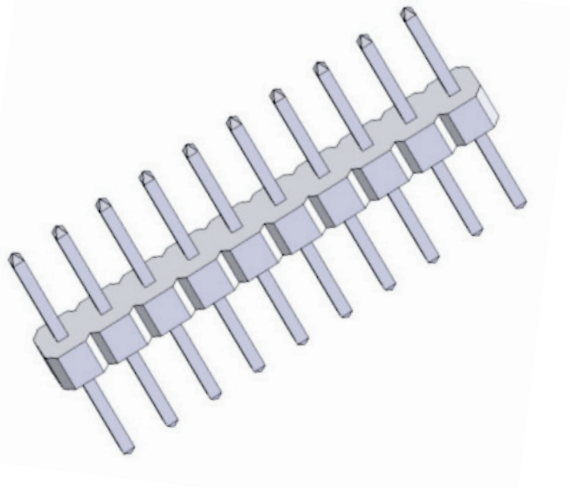


Characteristics		Solder/ THR	Pressfit	SMT
Maximum No. of Pins	Single row	50	36	36
	Dual row	100	72	Not Available
Temperature Range		-55°C to +125°C		
Current Rating	+20°C	2 A		
	+70°C	1 A		
	+100°C	0.5 A		
Minimum clearance and creepage distance:		1.8 mm	1.2 mm	1.8 mm
Contact Retention Force:		Min. 10 N/pin		
Insulation resistance:		KC 500		
Flammability:		UL 94 V-0		
Total Pin Length		9 - 38 mm	9 - 38 mm	10 - 37 mm
Contact plating 2-3 µm Ni base material		0.8-1.2 µm Au, 0.8-1.2 µm PdNi		
Termination side		4-6 µm Sn	1-2 µm Sn	4-6 µm Sn
Insulation body material	PA 46 GF	High temperature (SMT/THR)		
	PBT GF	Standard (Solder/Pressfit)		
Packaging		Bulk		
RoHS Compliant in accordance to EC 2002/95/EG and 2003/11/EG				

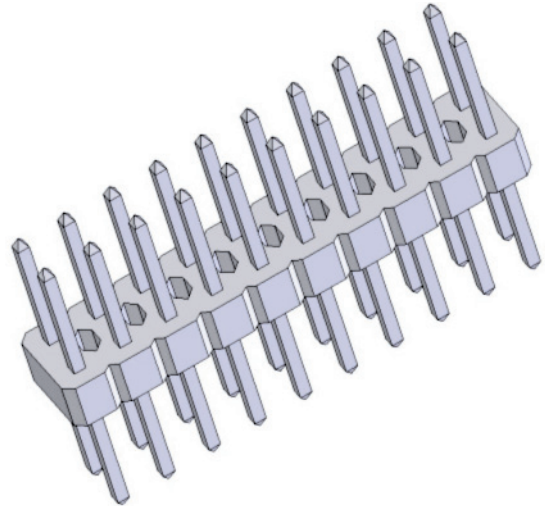
## Information



### A. Single Row or Dual Row



Single Row

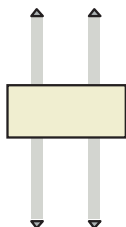


Dual Row

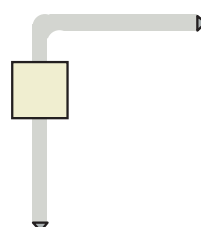
### B. Straight or Right Angled



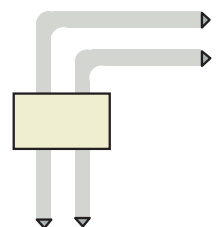
Straight single Row



Straight dual Row



R/A single Row



R/A dual Row

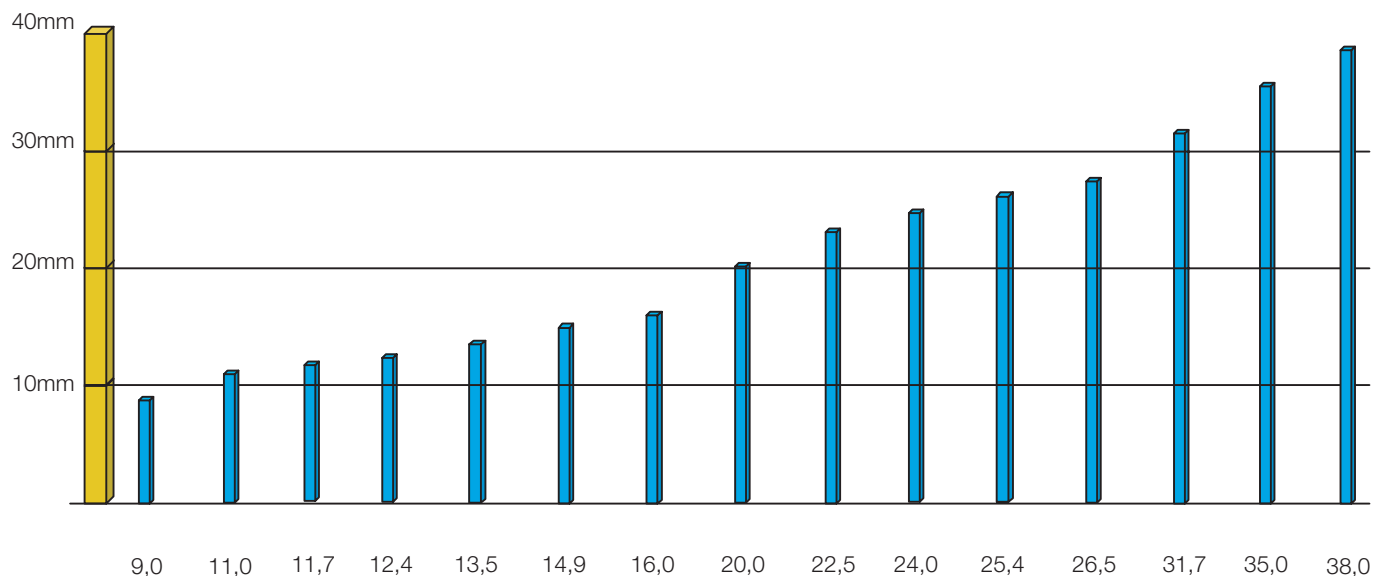
### C. Pin amount

Single Row headers are available as solder/THR versions with up to 50 pins (1x50) or as pressfit/SMT versions with up to 36 pins (1x36) maximum.

Dual Row headers are available as solder/THR versions with up to a total of 100 pins (2x50) or as pressfit versions with up to a total of 72 pins (2x36) maximum.

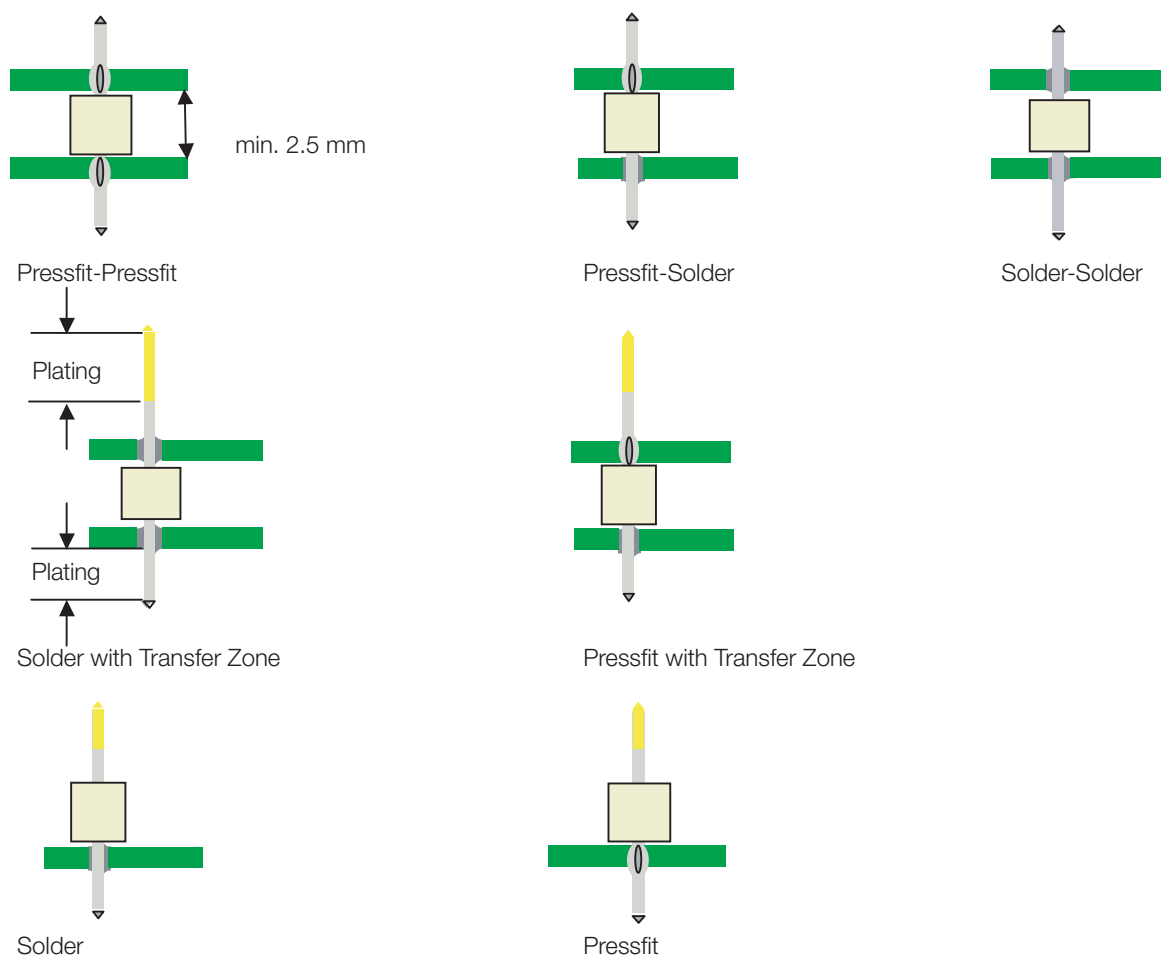
SMT dual row and SMT straight versions are not available

#### D. Available Total Pin Lengths

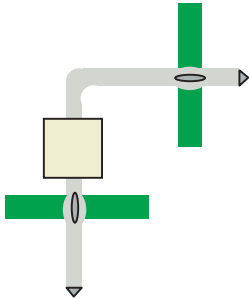


ERNI provides pin headers in various standard lengths. From 9 mm to 38 mm we offer 15 different standard pin lengths.

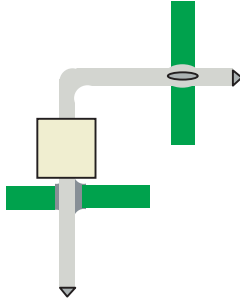
#### E+F. Termination and Plating Straight Version



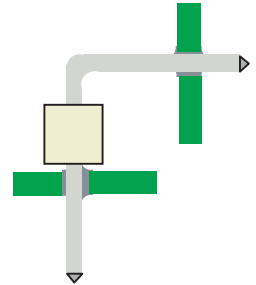
### E+F. Termination and Plating Right Angled Version



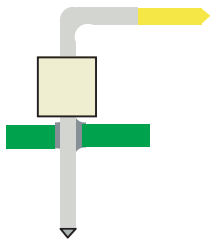
Pressfit-Pressfit



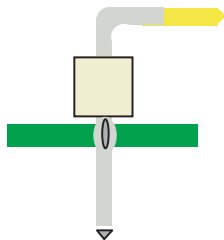
Pressfit-Solder



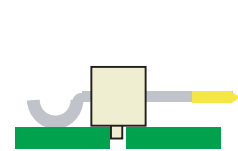
Solder-Solder



Contact-Solder

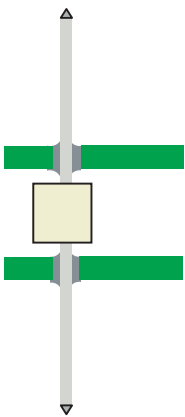


Contact-Pressfit

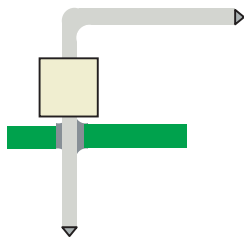


SMT

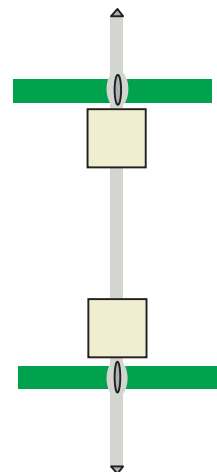
### G. Insulation bodies



Single and dual row  
straight



Single row right  
angled



Single and dual row  
straight

## 2.54 mm STL Pin Headers

### Description



#### Available insulation bodies



Single row with stand offs  
2.8 mm height



Dual row with stand offs  
2.8 mm height



Single row w/o stand offs  
2.5 mm height

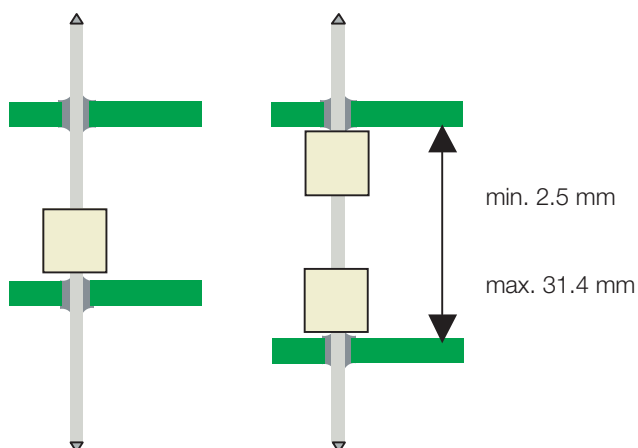


Dual row w/o stand offs  
2.5 mm height

Our insulation bodies have prepared fracture points so that any number of pins can be snapped off.

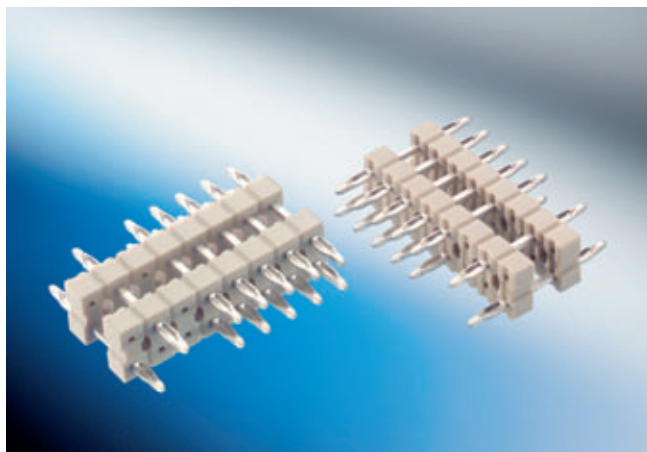
Material: ERNI Offers two different materials for its Pin Headers. PA 46 GF black for high temperature soldering like SMT or THR, and PBT GF for wave soldering processes and pressfit versions.

#### H. Board to Board distance



Various board-to-board distances are available,  
from 2.5 mm to 31.4 mm.  
Pin Headers are available with one or two insulation bodies.

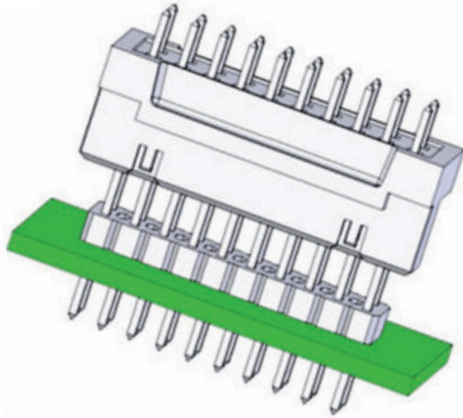
#### Partially loaded



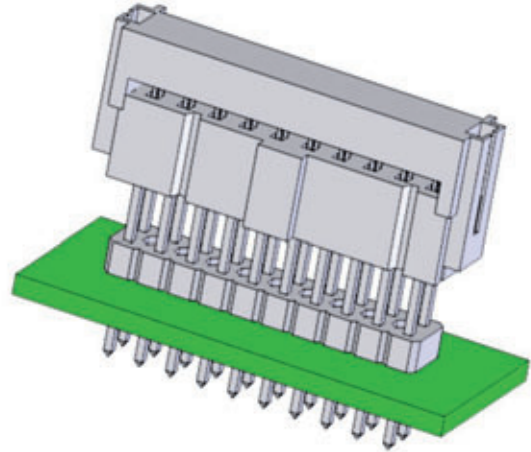
ERNI's flexible manufacturing process allows partially loaded pin headers.  
Various designs are possible. Solder or Pressfit.



### Mating and PCB configurations



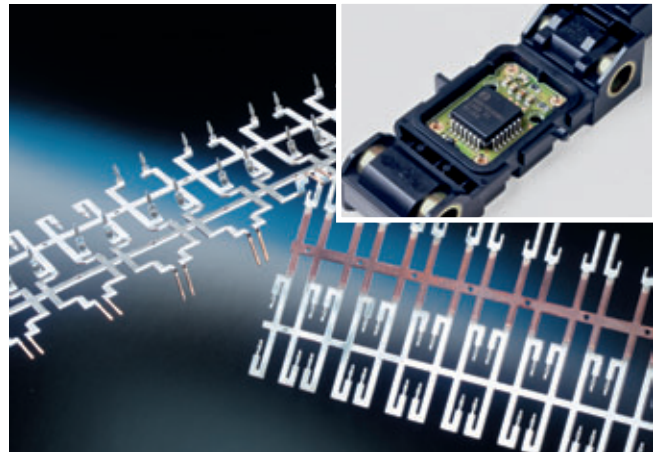
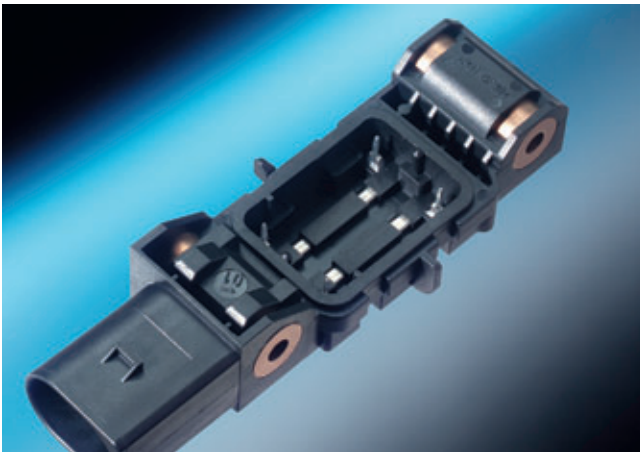
DIN intermateability



LPV intermateability

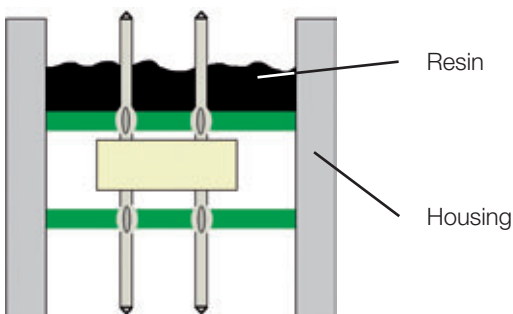
The pictures above show a female DIN B/3 and a female LPV IDC connector mating with a 20 pin pin header. This is possible due to their common 2.54 mm pitch and the compatibility with the widely spread pin diameter of 0.63 mm x 0.63 mm.

### Automotive approval



### Harsh Environments

By using a resin to seal the application from outside materials such as fluids, dirt and dust ERNI's pin headers are even suitable for harsh environments.

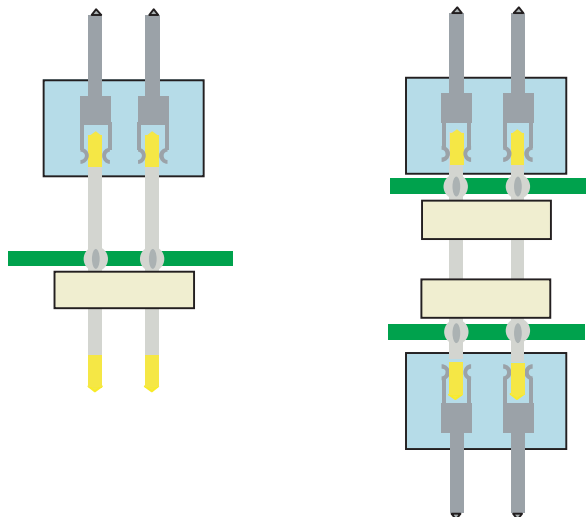


## 2.54 mm STL Pin Headers

### Description



### Additional examples



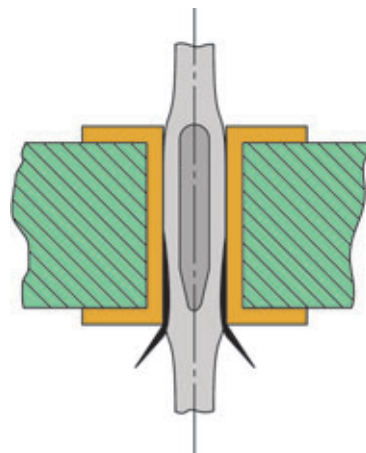
### Pressfit Termination

Special shape of the pin offers the necessary elasticity

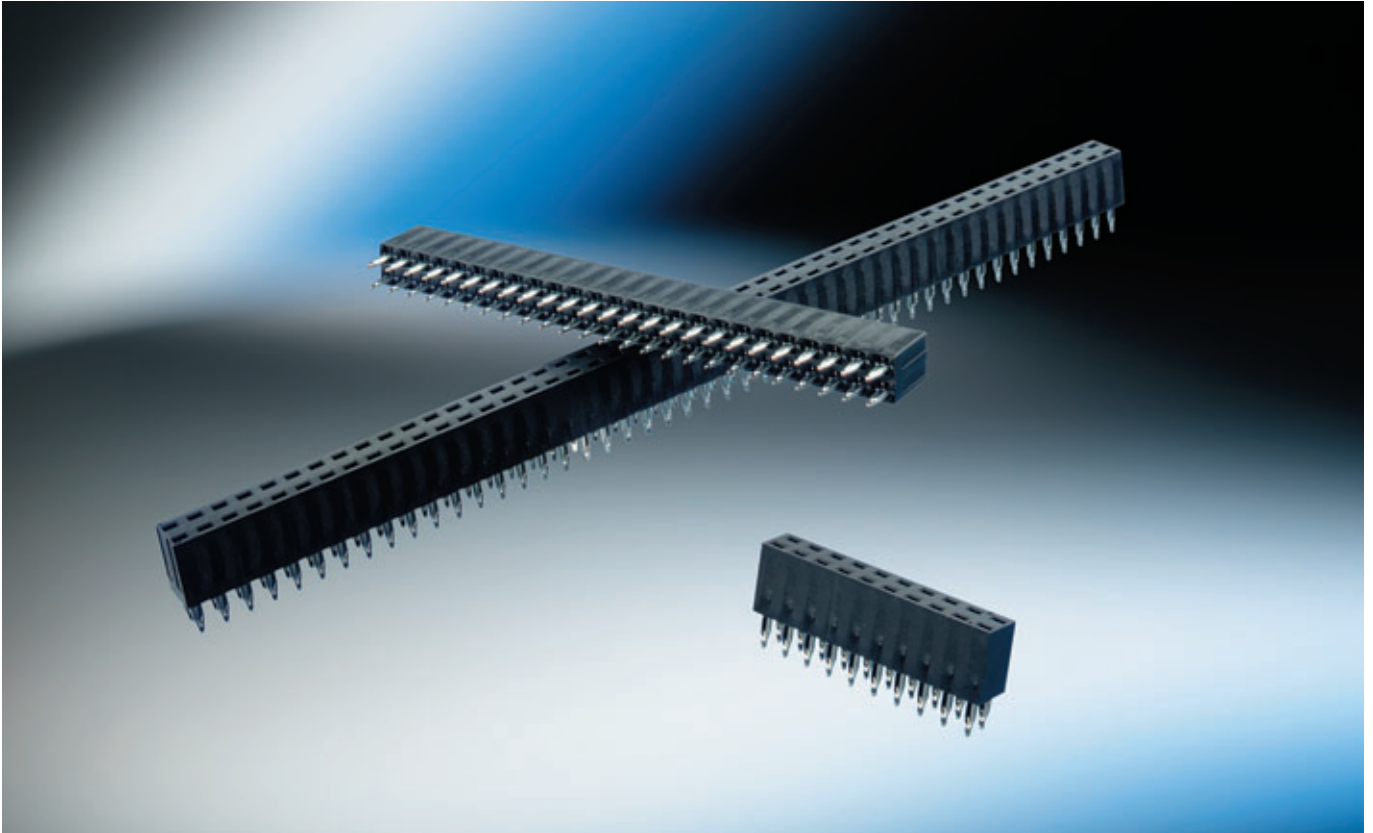


Rounded die cut edges protect the metal plating

Gas tight, vibration proof connection, provides a secure fit



ERNI Pressfit technology offers a startlingly simple yet high-quality method for connecting mezzanine boards. Double sided pressfit pin headers in 2.54 mm grid take on both mechanical and electrical functions at the same time. Although the connection is permanent, it is very sturdy, functional, vibration resistant and non-sensitive as well as being an efficient, low cost and variable technical solution.

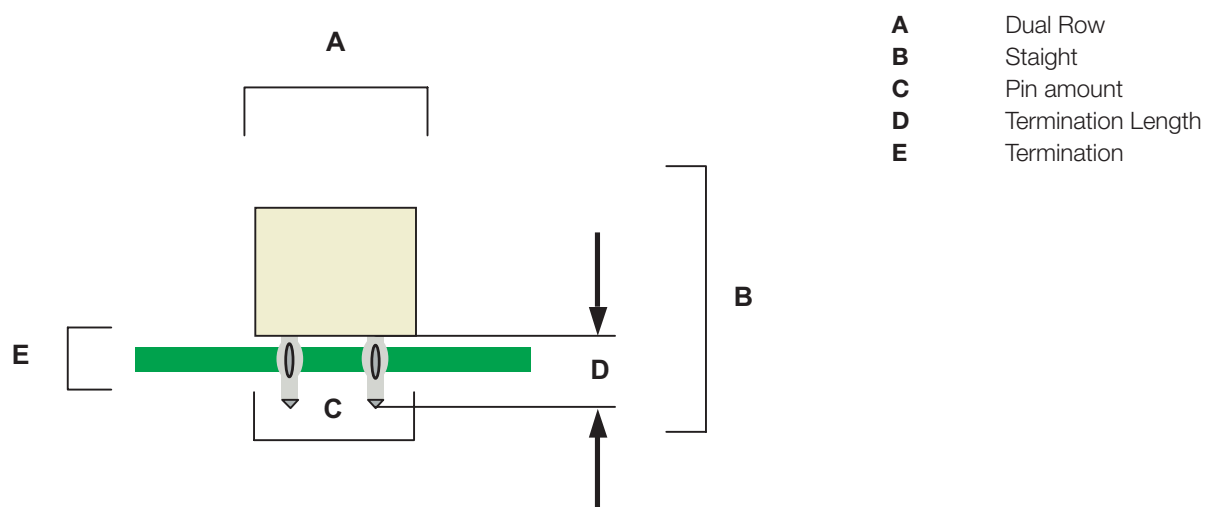


### General

ERNI's Socket strips are a perfect addition to the 2.54mm Unshrouded Header System STL. With its 2.54 mm pitch they are fully compatible with all 2-row unshrouded headers. This combination represents an excellent way to connect 2 PCB boards. Socket strips are available with pin configurations of 10, 16, 34, 52, 72 and 94 pins.

### Features

- Pressfit
- Dual row
- Straight versions
- Harsh environments
- Gas tight, vibration proof connection
- DIN and LPV intermatability
- Flexible manufacturing process



## Description

### A+B. Dual Row Straight

Socket strips are only available in straight versions with two pin rows.

### C. Pin amount

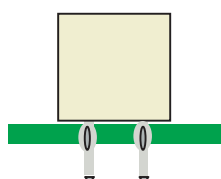
Socket strips are only available as pressfit versions with up to a total of 94 pins (2x47) maximum.

### D. Termination Length

ERNI offers the socket strips with the standard termination length of 3.7 mm.

### E. Termination

Pressfit







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