

Press Fit FROM HARWIN SOLUTION

Automotive Solution



SOLDER-FREE TERMINATION FOR HIGH-RELIABILITY CONNECTIONS

Harwin's MMi Press-Fit series provides a solderless, robust, and highly repeatable interconnect system—engineered to withstand high shock, vibration, and temperature variations in industrial and power-intensive environments. This series simplifies assembly, reduces thermal stress, and ensures gas-tight electrical contacts through compliant pin technology.

Available in multiple sizes (0.63 × 0.63 mm, 1.50 × 0.60 mm, and 2.80 × 0.60 mm), the Press-Fit terminals are suitable for both signal and medium-to-high current power applications. Designed with tight dimensional tolerances and optimized insertion/retention forces, they support both manual and automated press-in processes without the need for reflow or wave soldering.

FEATURES:

- Solderless press-fit termination — eliminates thermal stress and solder cracking
- Available in **0.63 / 1.50 / 2.80 mm** tail variants
- High retention force ≥ 50N to 100N, with press-in force from 60N to 250N
- Robust **tin-plated copper alloy** for reliable conductivity
- Compatible with **1.6mm ±0.14 PCB** thickness, 1.0mm plated hole diameter
- Validated to withstand **shock (30g), vibration (10g), and industrial gas exposure**
- Supplied in tape-and-reel for high-volume production

Key Technical Features

MATERIALS	ELECTRICAL	MECHANICAL	ENVIRONMENTAL
Contacts: Copper Alloy (UNS C51900)	Contact Resistance: ≤ 0.5 mΩ (initial)	Press-In Force: 60 – 250 N (varies by pin size)	Operating Temperature: –40°C to +125°C
Contact Finish: Tin Plating	PCB Hole: Ø1.00 mm	Retention Force: ≥ 50 N (063/150), ≥ 100 N (280)	Humidity Resistance: 21-day exposure at 75% RH
Pin Sizes: 0.63×0.63 mm 1.50×0.60 mm 2.80×0.60 mm	PCB Thickness: 1.6 ± 0.14 / 0.2 mm	Mechanical Shock: 30g, 6ms, 50 shocks/axis	Vibration Resistance: 15–1000 Hz @ 10g, 6 hrs/axis
Series Name: MMP-PF-063 / 150 / 280	Recommended Usage: Signal + Power Applications	Durability: Exceeds 144 cycles of thermal and mechanical exposure	Corrosive Gas Test: SO ₂ , NO ₂ , H ₂ S, Cl ₂ exposure (per DIN 41640 T.72)

Harwin's Available Press-Fit Parts

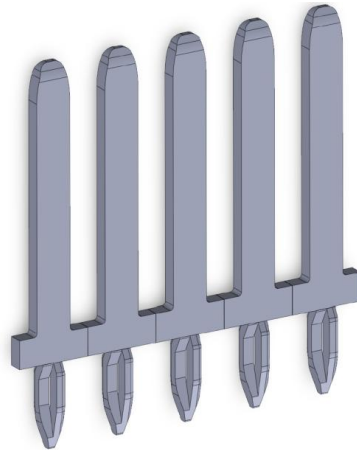
Press Fit MMP-PF-063 - Standard 0.63 mm square pins for signal-level connection.

- MMP-PF-063-1140-T0-R1
- MMP-PF-063-1140-T0-R2



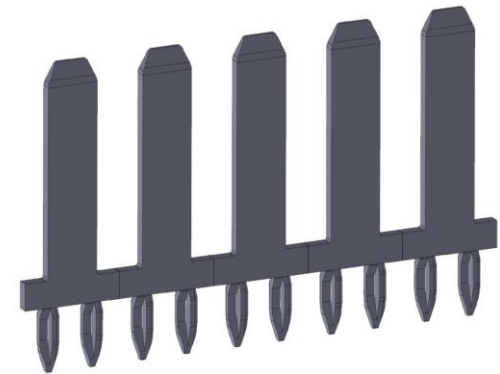
Press Fit MMP-PF-150- Standard 1.50 mm × 0.60 for mid-current, board resilience

- MMP-PF-150-1120-T0-R1
- MMP-PF-150-1120-T0-R2
- MMP-PF-150-1160-T0-R1
- MMP-PF-150-1160-T0-R2



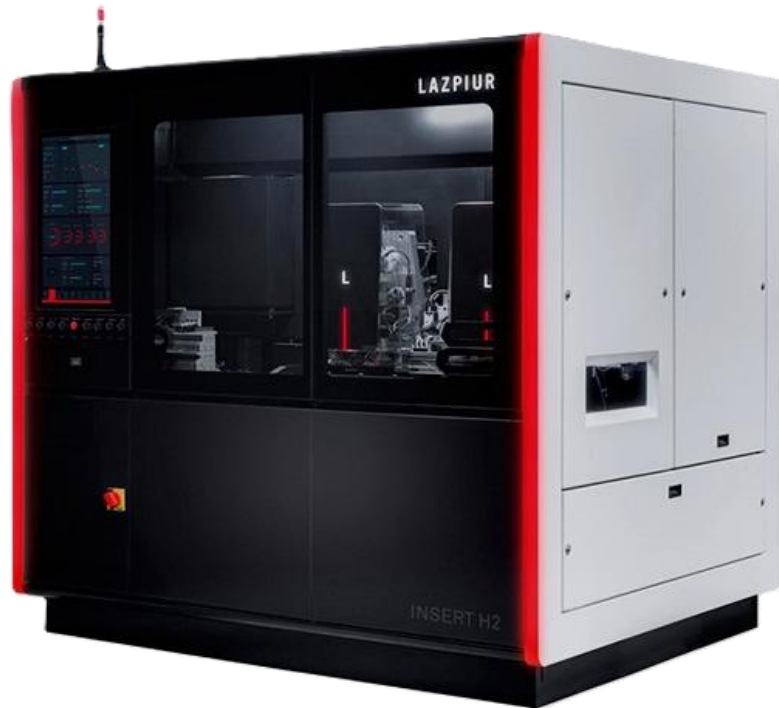
Press Fit MMP-PF-280 - 2.80 mm × 0.60 mm options—high-current, heavy-duty applications

- MMP-PF-280-1190-T0-R1
- MMP-PF-280-1190-T0-R2
- MMP-PF-280-1260-T0-R1
- MMP-PF-280-1260-T0-R2



Application Tooling and Equipment

SOLDERLESS INTERCONNECT TECHNOLOGY



Press-Fit Insertion Machine

In some applications, the insertion of single pins replaces molded or overmolded connectors reduce cost, weight and volume of the system.

In this case, the connector housing is moved into the finish product cover.

Lazpiur offers a wide range of semi automatic and automatic insertion machines for inserting press-fit connections into the PCBA. These standalone or inline machines can be integrated into electronic PCB manufacturing processes.

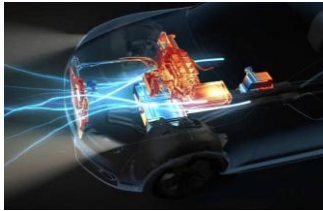
To ensure optimum quality, our insertion machines integrate option to ensure good press-fit insertion such as vision and force monitoring sensors.

Application & Market

Solution: Intelligent Cockpit & Automatic Driving



Intelligent Cockpit



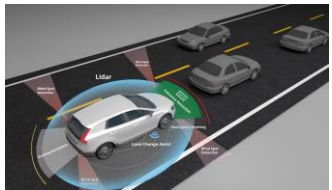
HVAC System



Lighting System



Navigation, Instrumentation



LiDAR, Camera and Sensor



Solution: Powertrain Zone



On-Board Charging



Vehicle Charger

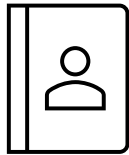


Battery Management System



Zone Control Unit

THANK YOU



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