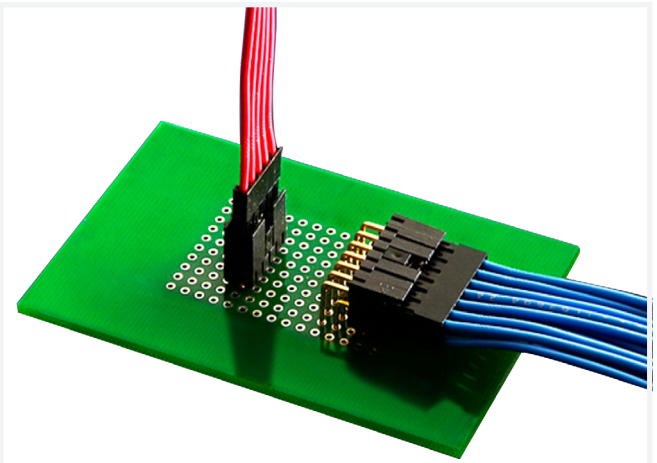
PV® Wire-to-Board Connector System

VERSATILE DESIGN FOR DEMANDING APPLICATIONS

Amphenol ICC's PV® solution is a versatile and modular system able to meet all the board-to-board, board-to-wire, wire-to-wire applications where high density, outstanding electrical and mechanical performances are required.

- Unique dual-metal PV® receptacle contact ensures durability up to 1000 cycles
- Beryllium copper spring ensures high normal force at the mating interface
- Polarized mating geometry to prevent mismatching
- Keyed MINI-LATCH housings provides polarization to prevent mismating



TARGET MARKETS

FEATURES

FEATURES	BENEFITS
Unique dual-metal PV® receptacle contact	Ensures durability up to 1000 cycles
Beryllium copper spring	High normal force during mating interface
Keyed MINI-LATCH housings	Provide polarization to prevent mismating
Brass contact body	Reliable, gas-tight crimp termination
Choice of three different spring pressures	Allows the user to customize insertion and withdrawal forces to specific application requirements
Shrouded header side walls engage with the sides of the MINI-LATCH housing	Provides additional retention
Two wall header design	Provides mechanical benefits
RoHS compliant and lead-free	Meets environmental, health and safety requirements

TECHNICAL INFORMATION

MATERIAL

- Contact Material:
  - PV® Wire Terminals: Brass body and beryllium copper spring
  - PCB Headers: Phosphor bronze
- Contact Plating:
  - PV® Wire Terminals: Gold or lead-free pure tin over nickel
  - PCB Headers: Gold or GXT™ (palladium-nickel with gold flash) or lead-free pure tin over nickel
- Housing Material:
  - MINI-LATCH Housings: Modified polyphenylene oxide UL94V-0
- Shrouded PCB Headers: Glass filled nylon UL94V-0
- RoHS Information: All parts with "LF" suffix are RoHS compliant

APPROVALS AND CERTIFICATION

- UR E66906
- CSA LR46923

SPECIFICATION

- Product Specification:
  - BUS-12-067 (PV® and MINI-LATCH wire connectors)
  - BUS-12-075 (Shrouded PCB headers)
- Application Drawings: TA-75, TA-146, TA-531

ELECTRICAL PERFORMANCE

- Current Rating Single Circuit: 3.0A with 32 AWG wire; larger wires allow more; all applications require de-rating
- Withstanding Voltage: 1000V RMS
- Insulation Resistance, Wire Connector: >10000MΩ
- Insulation Resistance, PCB Header: >5000MΩ
- Contact Resistance (LLCR), Wire Connector: <2mΩ
- Mating Force (individual contact max.)
  - High Force Spring: 450g
  - Ultra-high Force Spring: 1100g
- Un-mating force (individual contact min.)
  - High Force Spring: 75g
  - Ultra-high Force Spring: 175g
- PV® Contact Retention in MINI-LATCH Housing: 4lbs per contact
- Durability: 1000 mating cycles
- Temperature: -40°C to +105°C

TARGET MARKETS/APPLICATIONS


Automotive


Industrial


Consumer


Data


Industrial & Instrumentation


Medical

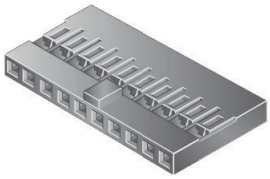
PV® Wire-to-Board Connector System

MINI-LATCH RECEPTACLE HOUSINGS

0.100in. / 2.54mm pitch

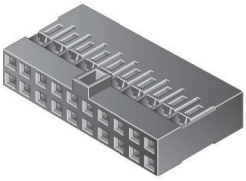
SINGLE ROW, POLARIZED, 78211 SERIES

Range: 03 to 15 positions



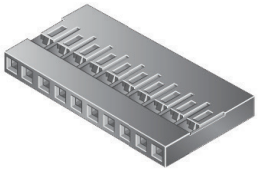
DOUBLE ROW, POLARIZED, 65846 SERIES

Range: 04 to 72 positions



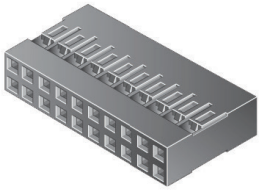
SINGLE ROW, 65039 SERIES

Range: 01 to 36 positions



DOUBLE ROW, 65043 SERIES

Range: 04 to 72 positions



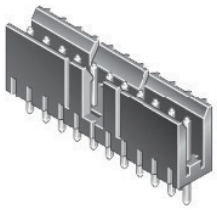
Maximum wire diameter for use in these housings is 1.52mm

SHROUDED PCB HEADERS

0.100in. / 2.54mm pitch

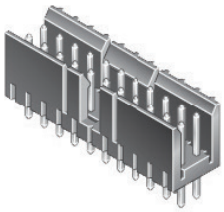
SINGLE ROW, VERTICAL, 69167 SERIES

Range: 03 to 15 positions



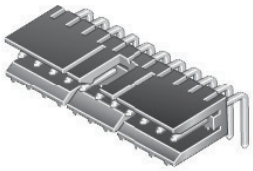
DOUBLE ROW, VERTICAL, 69168 SERIES

Range: 06 to 30 positions



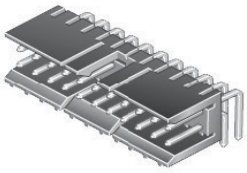
SINGLE ROW, 78208 SERIES

Range: 03 to 15 positions



DOUBLE ROW, 78207 SERIES

Range: 06 to 30 positions



PART NUMBER CONSTRUCTION

PPPPP — Z — NN — H — LF

PCB Header Style	PPPPP
Single row, vertical	69167
Single row, right angle	78208
Double row, vertical	69168
Double row, right angle	78207

Plating Finish	Z
30µin. (0.76µm) Gold/GTX	1
15µin. (0.38µm) Gold/GTX	2
Pure tin	4

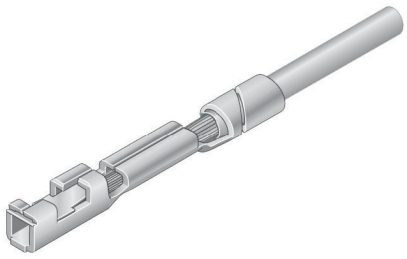
Number of Positions	NN
Available for single row	03 to 15
Available for double row	06 to 30

PV® DUAL METAL CRIMP RECEPTACLE TERMINALS

For mating to 0.025in. / 0.635mm square posts

Step 1	Step 2	Step 3	Step 4
Select application	Select spring force	Select wire size (AWG)	Select plating

Step 1	Step2
Application Housing	Spring Force
40 – 72 contacts per housing	Standard
10 – 50 contacts per housing	High
02 – 20 contacts per housing	Ultra high
Discrete contact posts	Ultra high

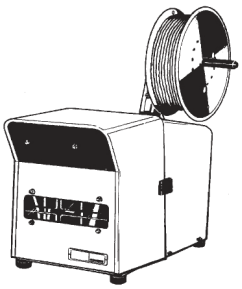


Step 3		Step 4						
Wire Size (AWG)	Spring Force	Plating/ Packaging						
		Reel				Box (Loose piece)		
		Tin	15µ Gold (0.38µm)	30µ Gold (0.76µm)	40µ Gold (0.91µm) (Europe)	Tin	15µ Gold (0.38µm)	30µ Gold (0.76µm)
		PV® Part Numbers						
18, 20 or two 22 or two 24	Standard		48241-000LF	48231-000LF	48276-002LF		48250-000LF	48266-000LF
	High		48244-000LF	48047-002LF			48253-000LF	48232-000LF
	Ultra-high	47648-000LF	48247-000LF	48252-000LF	47566-002LF	47749-000LF	48256-000LF	48233-000LF
22, 24, 26 or two 26 or two 28	Standard	47445-000LF	48242-000LF	48049-000LF	47457-002LF		48251-000LF	48235-000LF
	High	47217-000LF	48245-000LF	48046-000LF	47439-002LF	47715-000LF	48254-000LF	48234-000LF
	Ultra-high	47649-000LF	48248-000LF	48051-000LF	47565-002LF	47750-000LF	48257-000LF	48236-000LF
28, 30, 32 or two 30 or two 32	Standard	47446-000LF	48243-000LF	48048-002LF		47748-000LF		48238-000LF
	High	47213-000LF	48246-000LF	48045-000LF	47437-002LF	47714-000LF	48255-000LF	48237-000LF
	Ultra-high	47650-000LF	48249-000LF	48050-000LF	47564-002LF	47751-000LF	48258-000LF	48239-000LF
32, 34, 36	Standard			75543-015LF				
	High	75543-007LF		75543-013LF		75543-008LF		75543-014LF
	Ultra-high	75543-011LF		75543-017LF		75543-012LF		75543-018LF

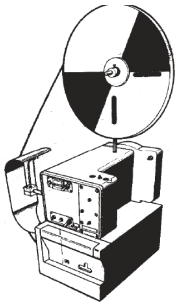
– European Part Numbers

APPLICATION TOOLING

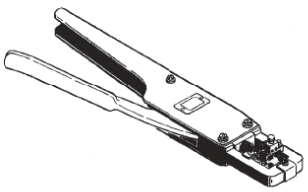
- PV-250A Semi-Automatic Crimping Machine
  - Easy to use
  - Pneumatically operated
  - Low cost
  - Estimated 1000 crimps per hour
- Machine Part Number
  - 107416-101 (18-20 AWG)
  - 107416-102 (22-26 AWG)
  - 107416-103 (28-32 AWG)



- OL-740 Semi-Automatic Two-Ton Bench Press
  - Uses quick-changing, adjustable crimping applicators for different terminals and wire sizes
  - Most rugged construction
  - Easy to use
  - Electrically operated
  - Estimated 2400 crimps per hour
- Machine Part Number
  - 133911-102 (does not include applicator)
- Applicator Tooling Part Numbers
  - 133867-104 (18-20 AWG)
  - 133867-105 (22-26 AWG)
  - 133867-106 (28-32 AWG)



- Ratcheting Hand Crimping Tool
- Part Number
  - HT-0073 (for 18-20 AWG Wire)
  - HT-0095 (for 22-32 AWG Wire)
  - HT-0112 (for 32-36 AWG Wire)



- PV® Contact Removal Tool
- Part Number
  - HT-0080

BWBPVWTB0619EA4

Mouser Electronics

Authorized Distributor

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

FCI / Amphenol:

69167-104HLF 69167-109 69167-143 69168-408 78207-210 47439-001LF 78207-116T 78207-118T 47649-000LF 65039-034LF 65039-026LF 78211-007LF 78211-015LF 78211-003LF 65039-030LF 65039-022LF 65039-020LF 78211-009LF 65039-036LF 65039-028LF 65039-032LF 65039-024LF 78211-005LF 75653-005LF 78211-010LF 47792-003LF 65039-031LF 65039-023LF 78211-006LF 78211-014LF 65039-019LF 65039-027LF 65039-035LF 65039-017LF 65039-033LF 65039-025LF 88237-026LF 78211-004LF 78211-012LF 69176-030LF 75691-007LF 65039-029LF 78211-008LF 65039-021LF 65043-030LF 67954-001LF 65043-034LF 65043-032LF 67954-002LF 47439-000LF 65043-035LF 65043-031LF 47388-000LF 48258-000LF 48239-000LF 48238-000LF 48248-000LF 65846-033LF 48049-000LF 48048-000LF 65043-033LF 69167-111 69167-113 69167-115 69167-203 69167-204 69167-208 69167-504 69167-506 69168-206 69168-208 69168-210 69168-216 69168-410 69168-416 69168-608 69168-610 69168-612 78207-124 78207-128 78207-208 78207-212 78207-410 78207-508 78207-510 78207-512 78208-203 78208-204 78208-304 78208-406 78208-409 78208-506 78208-112 78208-103 78208-110 78208-107 78208-104 78208-105 78208-106 69167-606