

PV[®] Wire-to-Board and Wire-to-Wire Connector System

VERSATILE DESIGN FOR DEMANDING APPLICATIONS

Amphenol's PV[®] solution is a versatile and modular system able to meet all the board-to-board, board-to-wire, and 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 provide polarization to prevent mismating



TARGET MARKETS



FEATURES

- Unique dual-metal PV[®] receptacle contact
- Beryllium copper spring
- Keyed MINI-LATCH housings
- Brass contact body
- Choice of three different spring pressures
- Shrouded header side walls engage with the sides of the MINI-LATCH housing
- Two wall header design
- RoHS compliant and lead-free

BENEFITS

- Ensures durability up to 1000 cycles
- High normal force during mating interface
- Provide polarization to prevent mismating
- Reliable, gas-tight crimp termination
- Allows the user to customize insertion and withdrawal forces to specific application requirements
- Provides additional retention
- Provides mechanical benefits
- 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 32AWG 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

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MINI-LATCH RECEPTACLE HOUSINGS

0.100in. / 2.54mm pitch

SINGLE ROW, POLARIZED, 78211 SERIES

Range: 03 to 15 positions



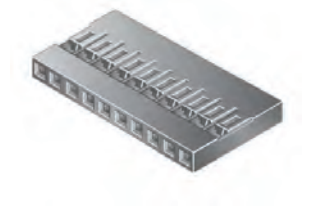
DOUBLE ROW, POLARIZED, 65846 SERIES

Range: 04 to 72 positions



SINGLE ROW, 65039 SERIES

Range: 01 to 36 positions



DOUBLE ROW, 65043 SERIES

Range: 04 to 72 positions



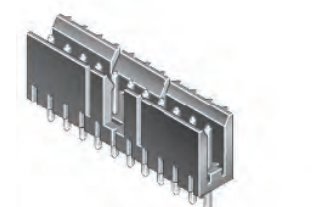
Maximum wire diameter for use in these housings is 1.52mm

SHROUDED PCB HEADERS

0.100in. / 2.54mm pitch

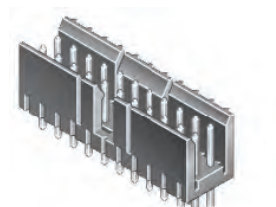
SINGLE ROW, VERTICAL, 69167 SERIES

Range: 03 to 15 positions



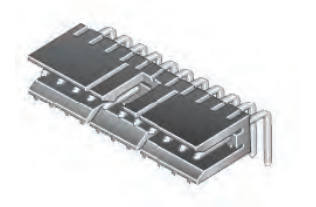
DOUBLE ROW, VERTICAL, 69168 SERIES

Range: 06 to 30 positions



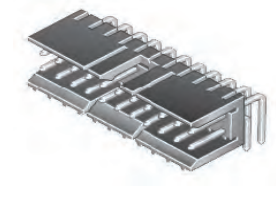
SINGLE ROW, 78208 SERIES

Range: 03 to 15 positions



DOUBLE ROW, 78207 SERIES

Range: 06 to 30 positions



PART NUMBER CONSTRUCTION

| | | | | | | | | |
|-------|---|---|---|----|---|---|---|----|
| PPPPP | — | Z | — | NN | — | H | — | LF |
|-------|---|---|---|----|---|---|---|----|

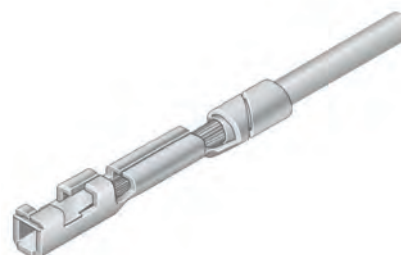
| PCB Header Style | PPPPP | Plating Finish | Z | Number of Positions | NN |
|-------------------------|-------|---------------------------|---|--------------------------|----------|
| Single row, vertical | 69167 | 30µin. (0.76µm) Gold/GXT® | 1 | Available for single row | 03 to 15 |
| Single row, right angle | 78208 | 15µin. (0.38µm) Gold/GXT® | 2 | Available for double row | 06 to 30 |
| Double row, vertical | 69168 | Pure tin | 4 | | |
| Double row, right angle | 78207 | | | | |

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 | Step 2 |
|------------------------------|--------------|
| 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 |

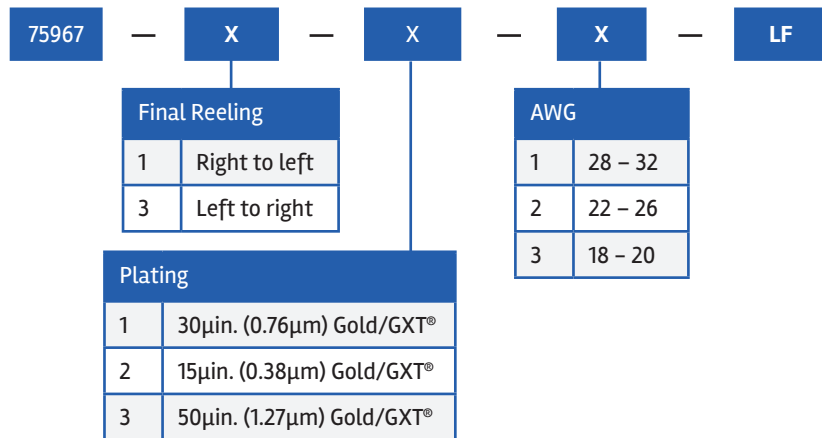


| Step 3 | | Step 4 | | | | | | | |
|--------------------------------|--------------|--------------------|-------------------|-------------------|----------------------------|-------------------|-------------------|-------------------|--|
| Wire Size (AWG) | Spring Force | Plating/ Packaging | | | | | | | |
| | | 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 | |

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PV® CRIMP-TO-WIRE MALE PIN TERMINALS

PART NUMBER CONSTRUCTION

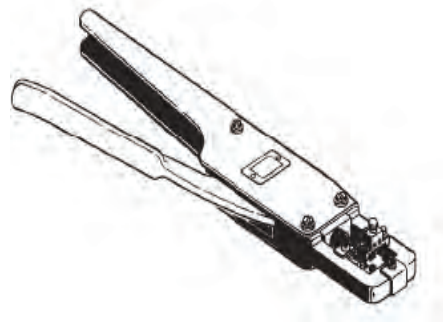


APPLICATION TOOLING

- PV® Hand tool P/N:
 - 10162308-001 – AWG 18-20
 - 10162309-001 – AWG 22-26
 - 10162310-001 – AWG 28-32



- PV® Hand tool for male pin terminals P/N
 - HT-0102 – AWG 22-32
- PV® Contact Removal Tool
 - Part Number
 - HT-0080



BWBPWWT0323EA4