PV®

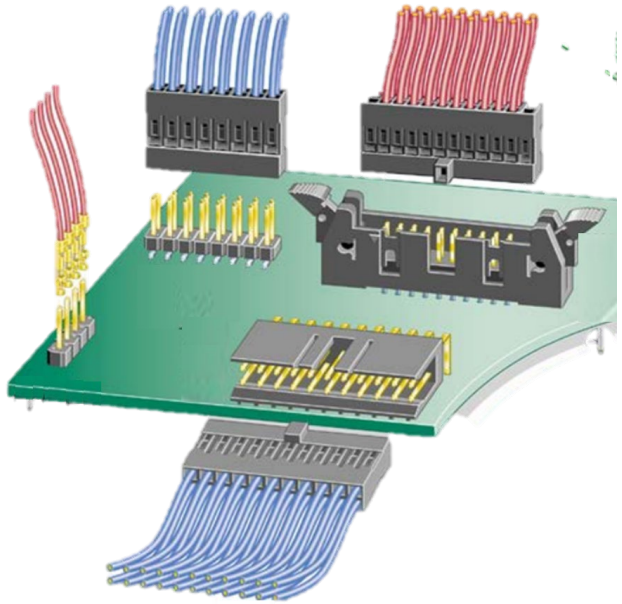
Product Presentation

Amphenol Information Communications and Commercial Products

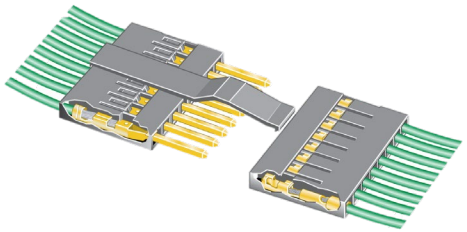
FCi Basics

Amphenol ICC

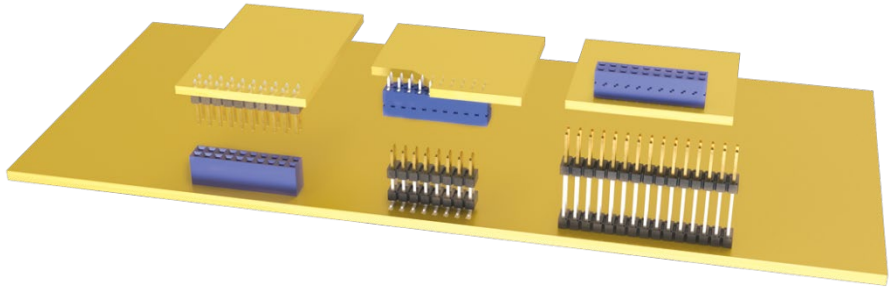
Wire-to-Board



Wire-to-Wire



Board-to-Board



Unique Design Provides High Reliability, High Durability And High Retention

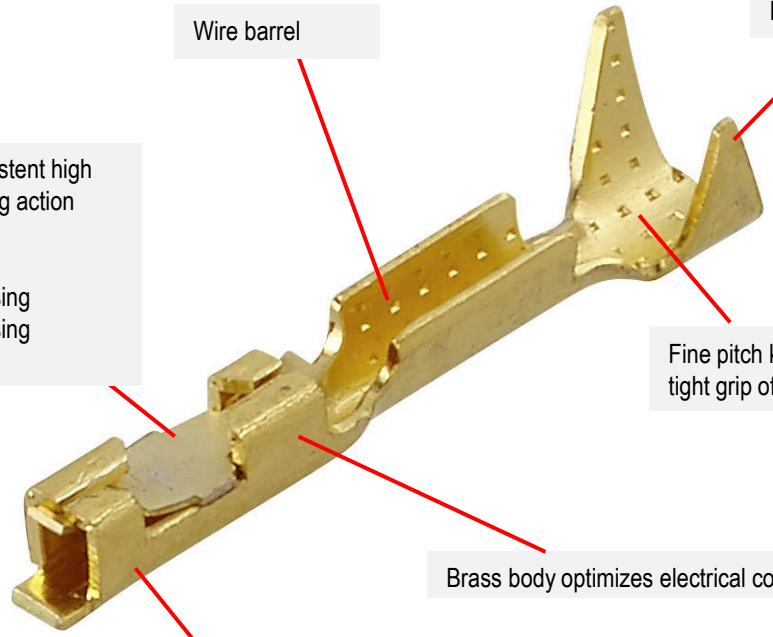
PV®
Value Proposition

- PV® is the high performance, highly reliable Wire-to-Board; Wire-to-Wire and Board-to-Board system on 2.54mm pitch for shock and vibration applications
- Built around a dual metal contact system with three different spring pressures, PV® can be customized to meet specific insertion, withdrawal and normal force requirements
- The leaf spring contact design provides a constant contact pressure through 1,000 mating cycles to ensure excellent electrical and mechanical performance over time
- PV name stood for “Perpetual Virgin” because the contact was as good as new after many mating cycles.
- The crimp to wire contact range from 18 AWG to 32 AWG is offering a wide range of crimping possibilities

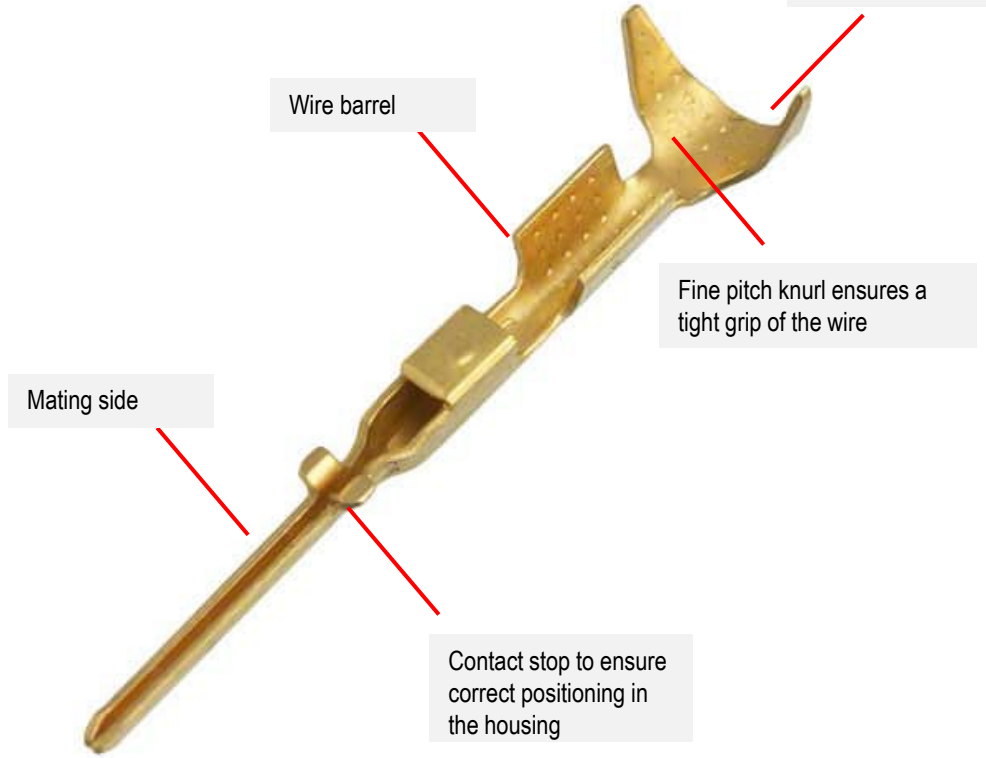
PV® Receptacle CTW

Beryllium Copper Spring ensures consistent high normal force and assures optimal wiping action

Spring Strength:
Ultra High: 02 – 20 contacts per housing
High: 10 – 50 contacts per housing



PV® Male Pin CTW

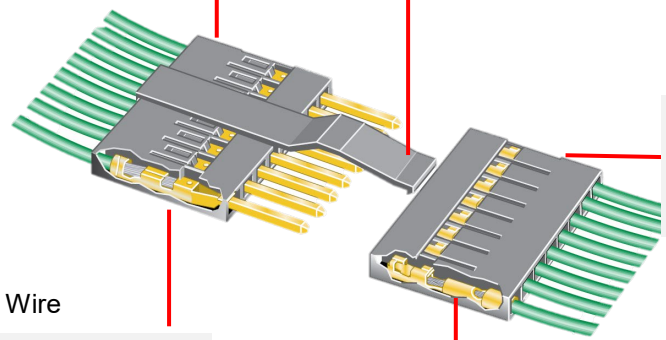


PV® Latch for flying connection

Type	Part Number
PV® Latch Single Row	67008-001LF
PV® Latch Single Row	67009-001LF

PV® Housing

Type	Base part number
Single Row	65039
Double Row	65043



PV® Housing

Type	Base part number
Single Row	65039
Double Row	65043

Type	Part Number
Polarizing Plug	65307-001LF

PV® Male Pin Crimp to Wire

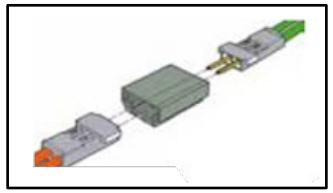
Reel 22-26 AWG	Part Number
Male Pin	75967-112LF (Au)

PV® Receptacle Crimp to Wire

Reel 22-26 AWG	Part Number
Ultra high spring	48051-000LF (Au); 47649-000LF (Tin)
High spring	48046-000LF (AU); 47217-000LF (Tin)
High spring small insulation	75231-015LF (Au)

Loose Piece 22-26 AGW	Part Number
Ultra high spring	48236-000LF (Au); 47750-000LF (Tin)

Single Row
2, 3 and 4 positions



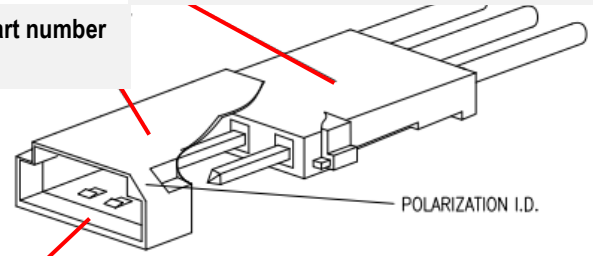
Double Row
4, 6 and 8positions

PV® Polarized Housing

Type	Base part number
Single Row	67954

PV® Polarized Housing Shroud

Type	Base part number
Single Row	67955



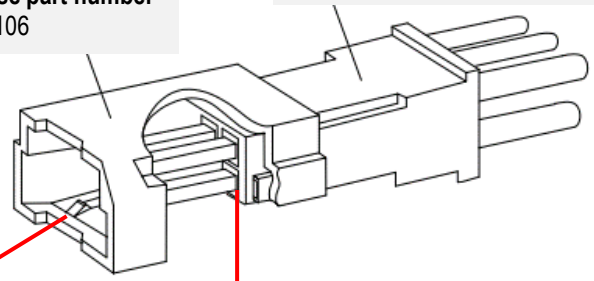
Mates with PV® Polarized Housing 67954
and
PV® Receptacle Crimp to Wire

PV® Polarized Housing Shroud

Type	Base part number
Double Row	68106

PV® Polarized Housing

Type	Base part number
Double Row	68105



Mates with PV® Polarized Housing 68105
and
PV® Receptacle Crimp to Wire

PV® Male Pin Crimp to Wire

Reel 22-26 AWG	Part Number
Male Pin	75967-112LF (Au)

PV® Receptacle Crimp to Wire

Reel 22-26 AWG	Part Number
Ultra high spring	48051-002LF (Au); 47649-000LF (Tin)
High spring	48046-000LF (AU); 47217-000LF (Tin)
High spring small insulation	75231-015LF (Au)

Loose Piece 22-26 AGW	Part Number
Ultra high spring	48236-000LF (Au); 47750-000LF (Tin)

PV® Housing

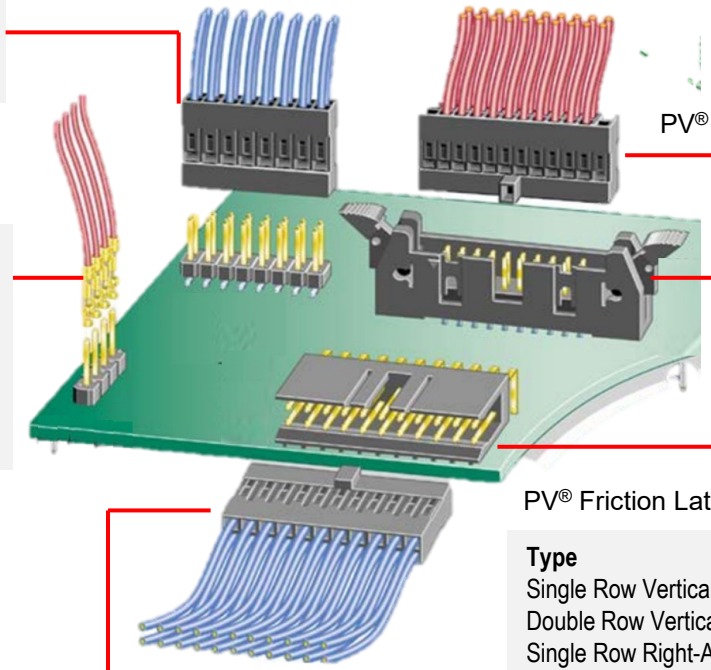
Type	Part Number
Polarizing Plug	65307-001LF

PV® Housing Shroud Assembly

Type	Base part number
Double Row	69153

PV® Housing

Type	Base part number
Single Row	65039
Double Row	65043



PV® Polarized Housing

PV® Receptacle Crimp to Wire

Reel 22-26 AWG	Part Number
Ultra high spring	48051-002LF (Au); 47649-000LF (Tin)
High spring	48046-000LF (AU); 47217-000LF (Tin)
High spring small insulation	75231-015LF (Au)

Loose Piece 22-26 AGW	Part Number
Ultra high spring	48236-000LF (Au); 47750-000LF (Tin)

Quickie® Eject Latch Header

Type	Base part number
Vertical, TMT	71918
Vertical, Press-Fit	10080054
Right-Angle TMT	71922

PV® Friction Latch Header

Type	Base part number
Single Row Vertical	69167
Double Row Vertical	69168
Single Row Right-Angle	78208
Double Row Right-Angle	78207

PV® Polarized Housing

Type	Base part number
Single Row	78211
Double Row	65846

PV® Walled Header

Type	Base part number
Double Row Vertical	68664
Double Row Right-Angle	68668

BergStik® Vertical Unshrouded Header Single Row

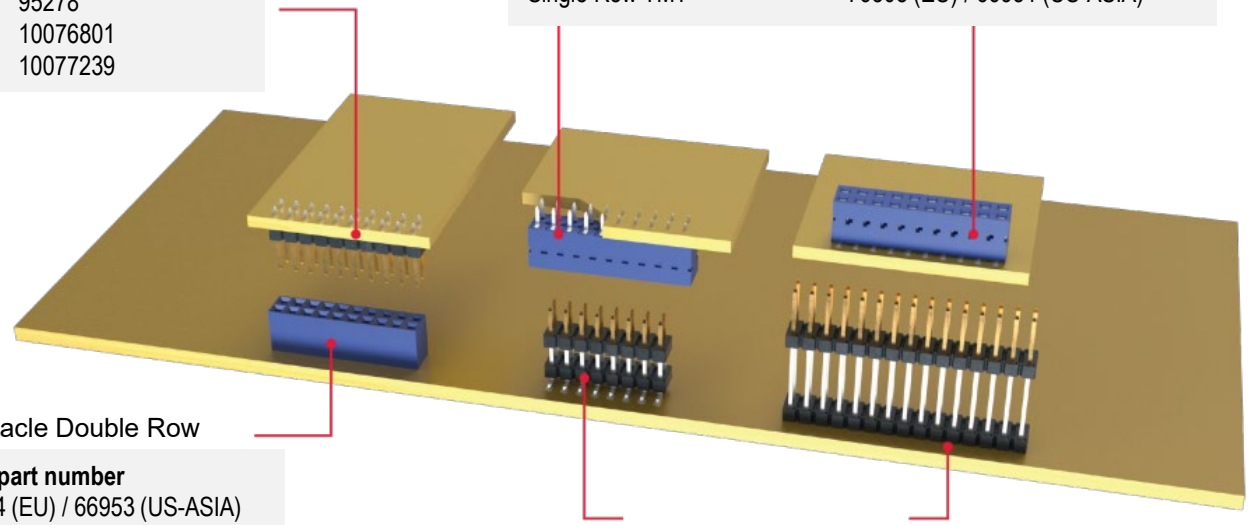
Type	Base part number
Single Row TMT	77311
Single Row SMT	95293
Single Row PiP	77311
Single Row Press-Fit	93689

BergStik® Vertical Unshrouded Header Double Row

Type	Base part number
Double Row TMT	77313
Double Row SMT	95278
Double Row PiP	10076801
Double Row Press-Fit	10077239

PV® Vertical Receptacle Single Row

Type	Base part number
Single Row TMT	76308 (EU) / 66951 (US-ASIA)



PV® Vertical PCB Receptacle Double Row

Type	Base part number
Double Row TMT	76314 (EU) / 66953 (US-ASIA)

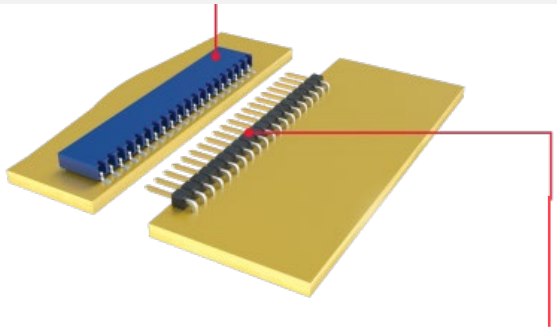
Type	Part Number
Polarizing Plug	65754-001LF

BergStik® Vertical Unshrouded Stacking Header

Type	Base part number
Single Row Stacking, TMT	54121
Double Row Stacking, TMT	54222
Double Row Stacking, SMT	54242

PV® Horizontal Receptacle

Type	Base part number
Double Row TMT	66925 / 66527 (Guide Pin)
Single Row TMT	67230



BergStik® Right-Angle Unshrouded Header Double Row

Type	Base part number
Double Row TMT	77317
Double Row PiP	10082202
Double Row SMT	10118084
Double Row SMT (w/ pegs)	10118085

BergStik® Right-Angle Unshrouded Header Single Row

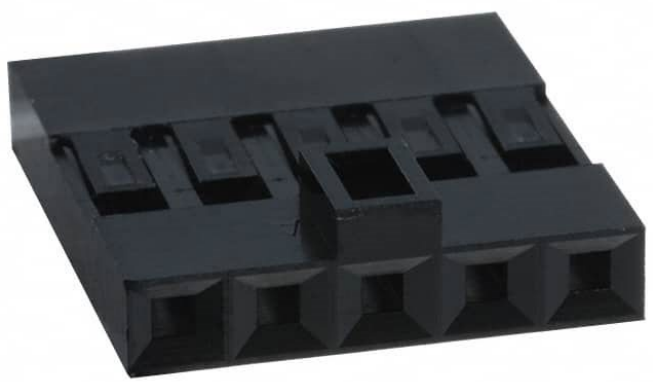
Type	Base part number
Single Row TMT	77315
Single Row PiP	10082201
Single Row SMT	10119333
Single Row SMT (w/ pegs)	10119332

PV® - Wire-to-Board and Wire-to-Wire

Product Specifications – CTW Housings

FCi Basics

Material	• Housing: : Modified polyphenylene oxide • Flammability Rating: UL94V-0
Environmental	• Operating Temperature: -65°C to +105°C
Electrical Performance	• Current Rating: 3A continuous • Insulation Resistance: 1 x 10^5 MΩmin. • Dielectric Withstanding Voltage: 1000Vrms min. • Contact Resistance: 15mΩ max
Mechanical Performance	• PV® Contact Retention in Housing: 4lbs per contact (18N)



PV® - Wire-to-Board

Product Specifications – Shrouded Headers

FCi Basics

Material

- Housing: Glass filled nylon
- Flammability Rating: UL94V-0
- Contact: Phosphor bronze
- Plating: Gold or GXT™ (palladium-nickel with gold flash) or lead-free pure tin over nickel

Environmental

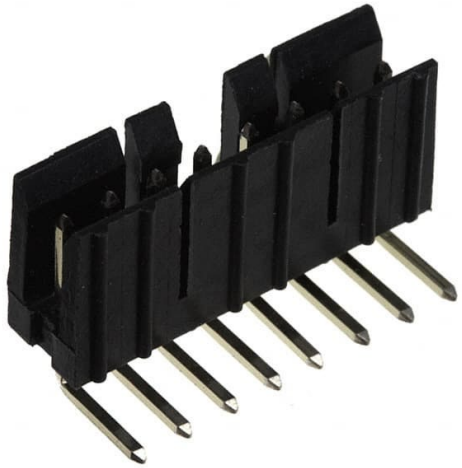
- Operating Temperature: -40°C to +105°C

Electrical Performance

- Current rating: 3 A continuous
- Withstanding Voltage: 1000V RMS
- Insulation Resistance: >5000MΩ
- Contact Resistance (LLCR), Wire Connector: <2mΩ

Mechanical Performance

- Mating cycles (durability): 1,000 - Gold



PV® Crimp-to-Wire contacts

Product Specifications

FCi Basics

Material

- Contact: Brass body and beryllium copper spring
- Plating: : Gold or lead-free pure tin over nickel

Environmental

- Operating Temperature: -40°C- to +105°C

Electrical Performance

- Current Rating: 3A continuous
- Withstanding Voltage: 1000V RMS
- Insulation Resistance: >10000MΩ
- Contact Resistance (LLCR): <2mΩ per contact

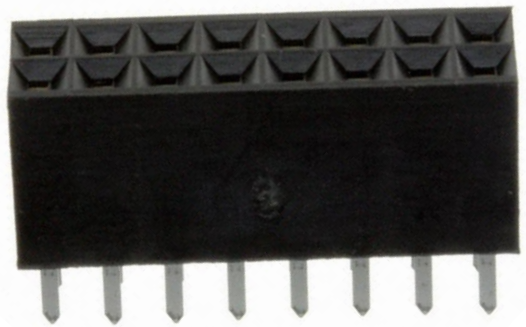
Mechanical Performance

- 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
- Wire Gauge: 18 to 32 AWG
- Mating force gold plating : from 1.35N to 5.75N (spring thickness dependent)
- Unmating force gold plating from 0.45N to 1.75N (spring thickness dependent)

PV® PCB Receptacles

Product Specifications

Material	• Contact: Phosphor-bronze • Plating: 0.76µm Gold or GXT® on contact, Tin on contact area
Environmental	• Operating Temperature: -40°C to +105°C
Electrical Performance	• Current Rating: 3A continuous • Dielectric Withstanding Voltage: 1000Vrms min. • Contact Resistance: 15mΩ max
Mechanical Performance	• Contact retention force to Housing: 15N per contact • Insertion force per Gold contact : 3N • Withdrawal force per Gold contact : 0.40N (30gf) min



PV®
Features and Benefits

Features	Benefits
High performance dual-metal PV® contact system	Maintains contact pressure through 1,000 mating cycles
A beryllium copper spring	Provides high normal force at the mating interface
Brass contact body	Produces a reliable, gas-tight crimp termination
Choice of three different spring pressures	Allows the user to customize insertion and withdrawal forces to specific application requirements
Wire to Board shrouded headers engage with the sides of the Mini-Latch housing	Provides additional retention
Keyed Mini-Latch housings and header keyways	Provide polarization to prevent mis-mating
PCB Receptacles up to 130 positions	Meets a variety of demanding application requirements

PV® web product presentation

PV® Wire to Board datasheet
PV® Wire to Board Friction Latch Headers product specification
PV® Wire to Board Crimp Contacts and Housings product specification

PV® PCB Receptacle product configurator

Thank you