

Amphenol

COMMUNICATIONS SOLUTIONS

PV[®]

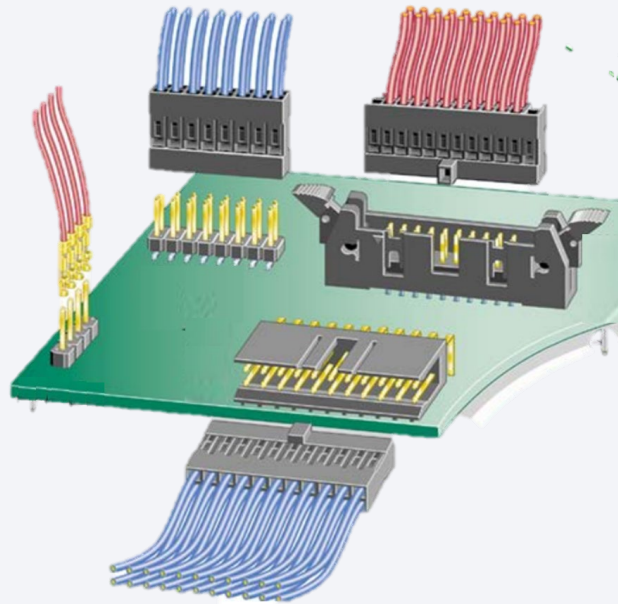
Product Presentation

 **FCi Basics**

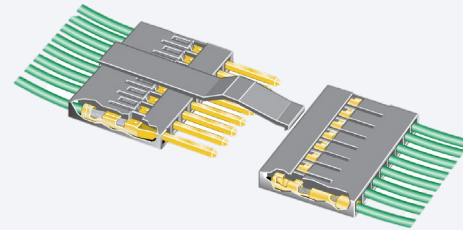


- PV[®] is the high performance, highly reliable Wire-to-Board; Wire-to-Wire and Board-to-Board system on 2.54mm pitch for shock and vibration applications
- Built around a dual metal contact system with three different spring pressures, PV[®] can be customized to meet specific insertion, withdrawal 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

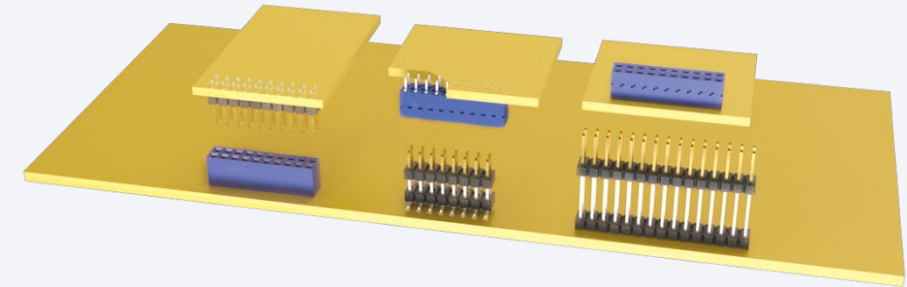
Wire-to-Board



Wire-to-Wire

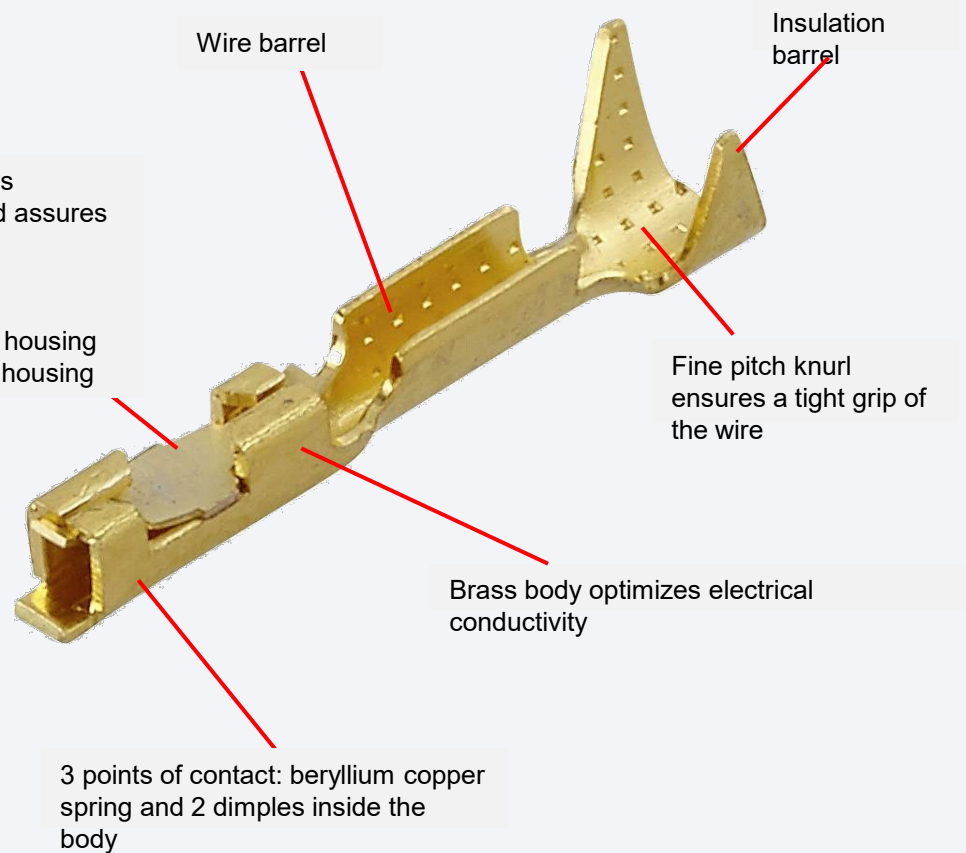


Board-to-Board



Unique Design Provides High Reliability, High Durability And High Retention

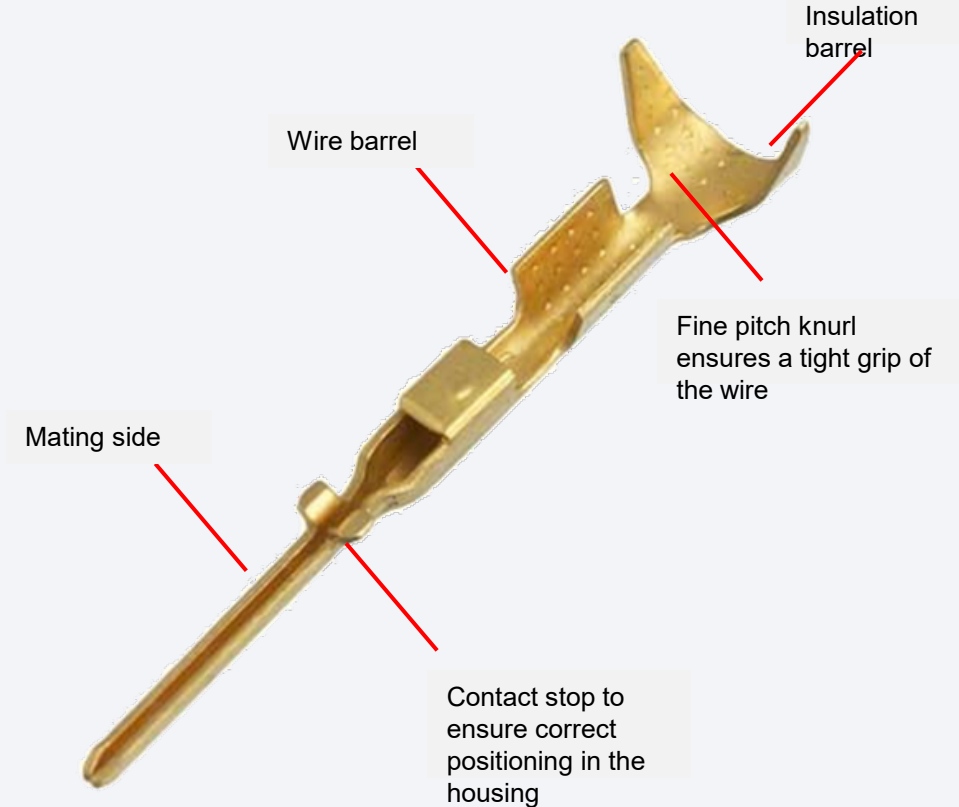
PV[®] Receptacle CTW



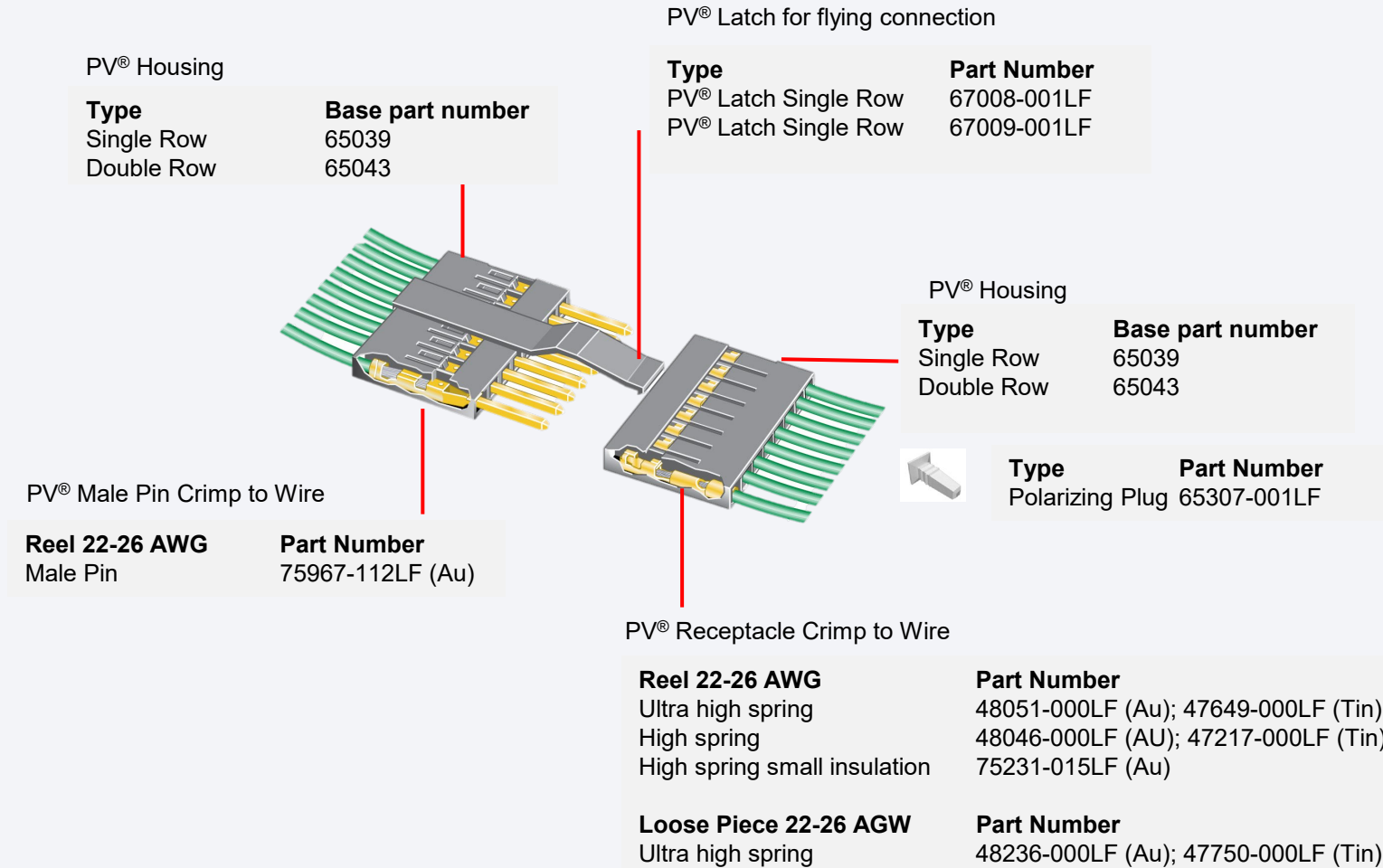
Beryllium Copper Spring ensures consistent high normal force and assures optimal wiping action

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

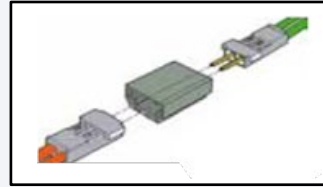
PV[®] Male Pin CTW



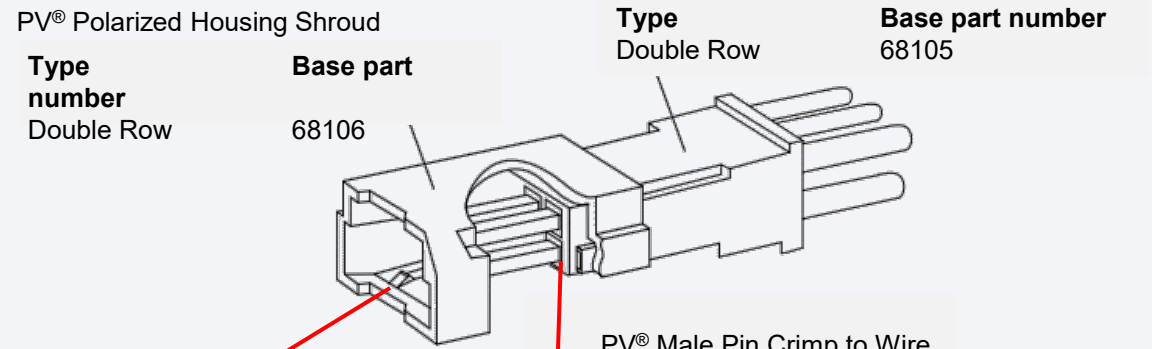
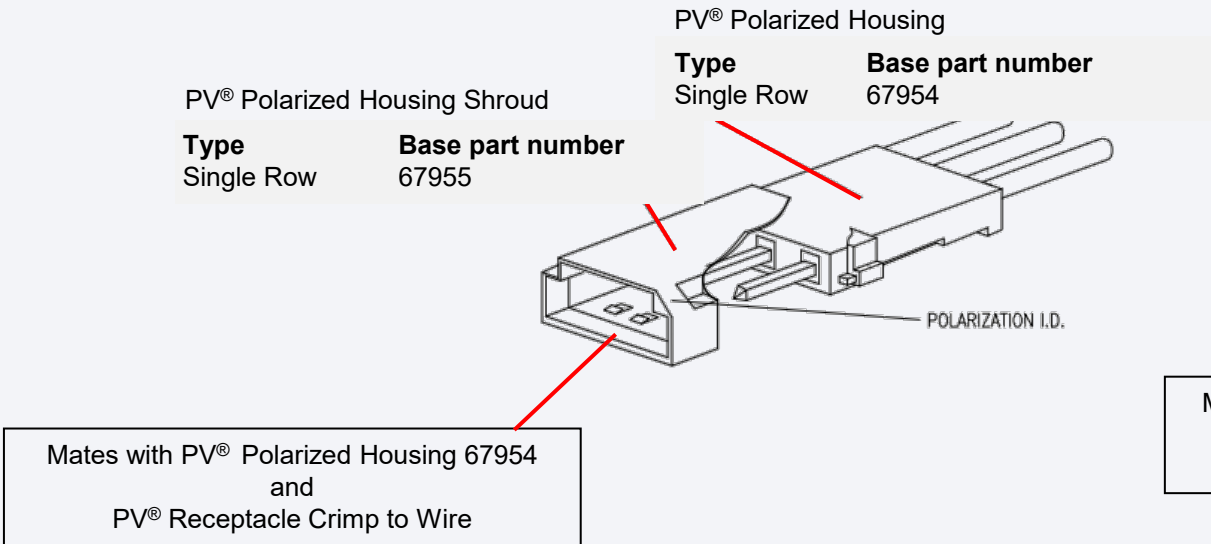
PV[®] Wire to Wire 1/2



Single Row
2, 3 and 4 positions



Double Row
4, 6 and 8 positions



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

| | |
|------------------------------------------|-------------------------------------|
| 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 | |
| Ultra high spring | Part Number |
| | 48236-000LF (Au); 47750-000LF (Tin) |

PV[®] Wire to Board Product Overview

PV[®] Housing

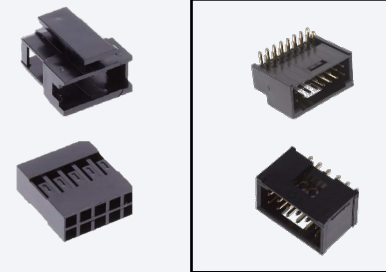
| Type | Part Number |
|-----------------|-------------|
| Polarizing Plug | 65307-001LF |

PV[®] Housing

| Type | Base part number |
|------------|------------------|
| Single Row | 65039 |
| Double Row | 65043 |

PV[®] Housing Shroud Assembly

| Type | Base part number |
|------------|------------------|
| Double Row | 69153 |



PV[®] Housing

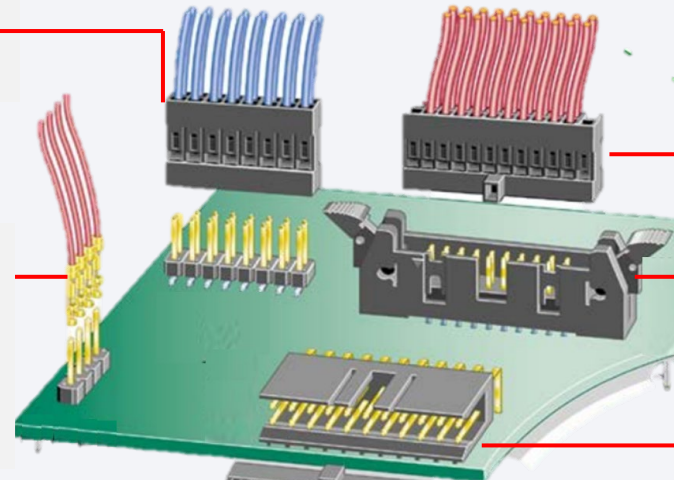
PV[®] Walled Header

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

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[®] Polarized Housing

Quickie[®] Eiect Latch Header

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

PV[®] Polarized Housing

| Type | Base part number |
|------------|------------------|
| Single Row | 78211 |
| Double Row | 65846 |

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[®] Board to Board Product Overview

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 |

BeraStik[®] Vertical Unshrouded Header Double Row

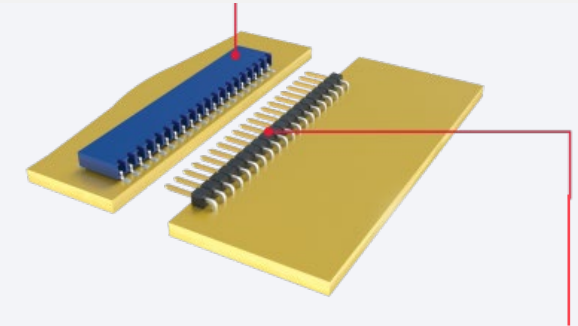
| Type | Base part number |
|----------------------|------------------|
| Double Row TMT | 77313 |
| Double Row SMT | 95278 |
| Double Row PiP | 10076801 |
| Double Row Press-Fit | 10077239 |

PV[®] Vertical Receptacle Single Row

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

PV[®] 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[®] Vertical PCB Receptacle Double Row

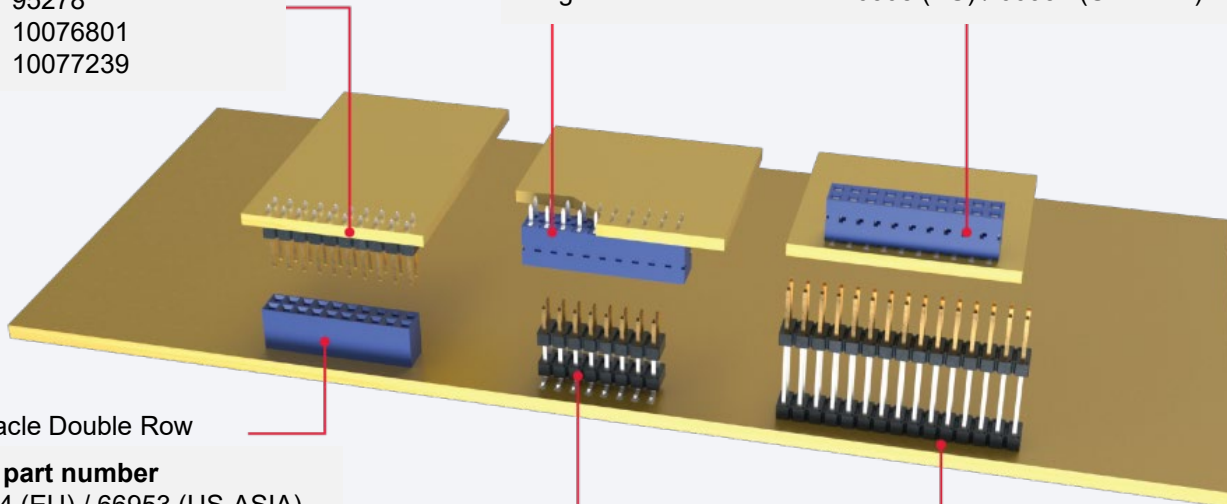
| Type | Base part number |
|----------------|------------------------------|
| Double Row TMT | 76314 (EU) / 66953 (US-ASIA) |

BergStik[®] Vertical Unshrouded Stacking Header

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

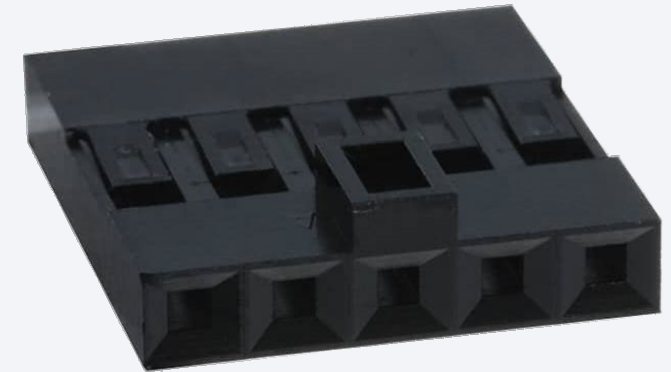


| Type | Part Number |
|-----------------|-------------|
| Polarizing Plug | 65754-001LF |



PV[®] Wire to Board / Wire to Wire Product Specification CTW Housings

| | |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material | <ul style="list-style-type: none">•Housing: Modified polyphenylene oxide•Flammability Rating: UL94V-0 |
| Environmental | <ul style="list-style-type: none">•Operating Temperature: -65°C to +105°C |
| Electrical Performance | <ul style="list-style-type: none">•Current Rating: 3A continuous•Insulation Resistance: 1 x 10⁵ MΩmin.•Dielectric Withstanding Voltage: 1000Vrms min.•Contact Resistance: 15mΩ max |
| Mechanical Performance | <ul style="list-style-type: none">•PV[®] Contact Retention in Housing: 4lbs per contact (18N) |



PV[®] Wire to Board Product Specification Shrouded Headers

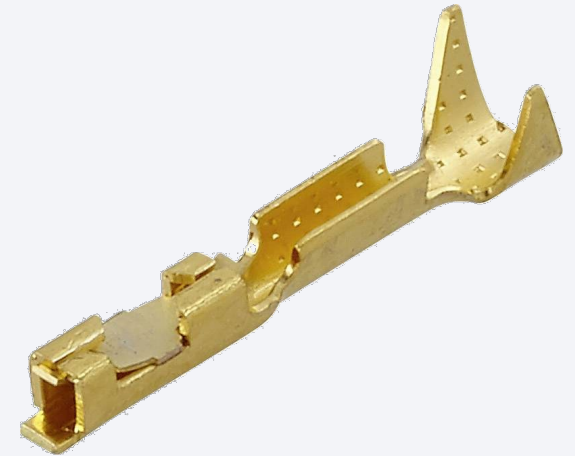
| | |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material | <ul style="list-style-type: none">•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 | <ul style="list-style-type: none">•Operating Temperature: -40°C to +105°C |
| Electrical Performance | <ul style="list-style-type: none">•Current rating: 3 A continuous•Withstanding Voltage: 1000V RMS•Insulation Resistance: >5000MΩ•Contact Resistance (LLCR), Wire Connector: <2mΩ |
| Mechanical Performance | <ul style="list-style-type: none">•Mating cycles (durability): 1,000 - Gold |



PV[®] Crimp to Wire contacts

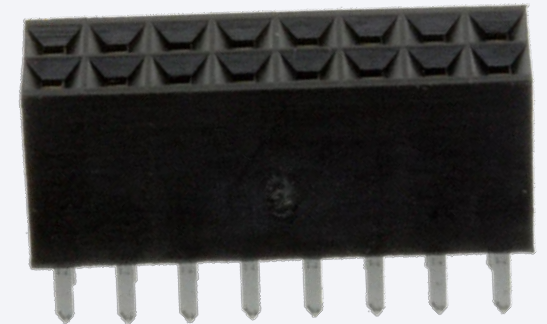
Product Specification

| | |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material | <ul style="list-style-type: none">•Contact: Brass body and beryllium copper spring•Plating: : Gold or lead-free pure tin over nickel |
| Environmental | <ul style="list-style-type: none">•Operating Temperature: -40°C to +105°C |
| Electrical Performance | <ul style="list-style-type: none">•Current Rating: 3A continuous•Withstanding Voltage: 1000V RMS•Insulation Resistance: >10000MΩ•Contact Resistance (LLCR): <2mΩ per contact |
| Mechanical Performance | <ul style="list-style-type: none">• Mating Force (individual contact max.)<ul style="list-style-type: none">•High Force Spring: 450g; Ultra-high Force Spring: 1100g• Un-mating force (individual contact min.)<ul style="list-style-type: none">•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 Receptacle Product Specification

| | |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Material | <ul style="list-style-type: none">•Contact: Phosphor-bronze•Plating: 0.76µm Gold or GXT[®] on contact, Tin on contact area |
| Environmental | <ul style="list-style-type: none">•Operating Temperature: -40°C to +105°C |
| Electrical Performance | <ul style="list-style-type: none">•Current Rating: 3A continuous•Dielectric Withstanding Voltage: 1000Vrms min.•Contact Resistance: 15mΩ max |
| Mechanical Performance | <ul style="list-style-type: none">• Contact retention force to Housing: 15N per contact• Insertion force per Gold contact : 3N• Withdrawal force per Gold contact : 0.40N (30gf) min |



| 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

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 **FCi Basics**