PV® WIRE–TO–BOARD CONNECTOR SYSTEM

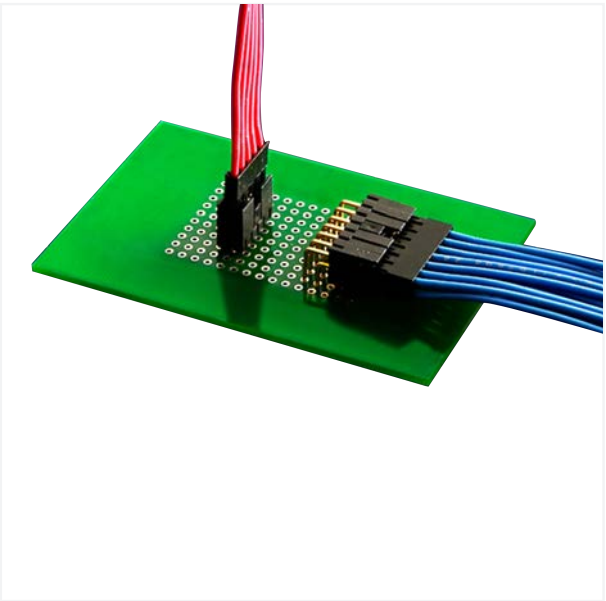
Unique Design Provides High Reliability, High Durability And High Retention

OVERVIEW

The innovative PV® crimp–to–wire system connects discrete wire to printed circuit boards. High reliability dual–metal receptacle terminals plug to industry standard 0.025 inch (0.635mm) square posts. A variety of containment, protection and guidance options are available for both sides of the connector interface.

Wire side– PV® receptacle terminals can be terminated to wire and used discretely or inserted to multiple–circuit, MINI–LATCH connector housings that include optional polarizing keys.

Printed Circuit side– Shrouded multiple–post, headers include an integral friction feature that grips the sides of the mating MINI–LATCH housings and reduces the risk of disengagement. Other FCI header options include discrete staked pins or BergStik® un–shrouded headers.



FEATURES & BENEFITS

- Unique dual–metal PV® receptacle contact maintains contact pressure through 1000 mating cycles. A beryllium copper spring provides high normal force at the mating interface, while the 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 individual application requirements
- Shrouded header side walls engage with the sides of the MINI–LATCH housing to provide additional retention
- MINI–LATCH housing firmly retains PV® wire contacts
- Available in single or double row configurations
- Keyed MINI–LATCH housings and header keyways provide polarization to prevent mis–mating
- Two wall header design provides mechanical benefits plus economy
- Application tooling is supported by FCI

TARGET MARKETS/APPLICATIONS

- Instrumentation and Medical
- Industrial equipment
- Consumer and white goods
- Automotive electronics
- Data and communications
- Military and avionics

PV® WIRE–TO–BOARD CONNECTOR SYSTEM

MINI–LATCH RECEPTACLE HOUSINGS

0.100in. / 2.54mm pitch

SINGLE ROW, POLARIZED, 78211 SERIES

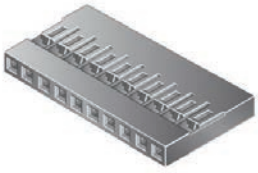
Range: 03 to 15 positions

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

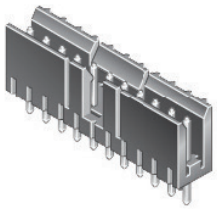
Maximum wire diameter for use in these housings is 1.52mm

SHROUDED PCB HEADERS

0.100in. / 2.54mm pitch

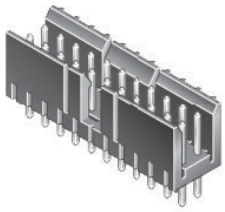
SINGLE ROW, VERTICAL, 69167 SERIES

Range: 03 to 15 positions



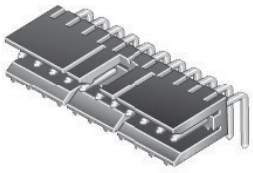
DOUBLE ROW, VERTICAL, 69168 SERIES

Range: 04 to 30 positions



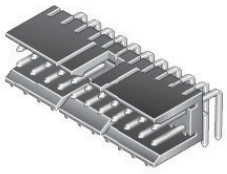
SINGLE ROW, 65039 SERIES

Range: 01 to 15 positions



DOUBLE ROW, 65043 SERIES

Range: 04 to 30 positions



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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

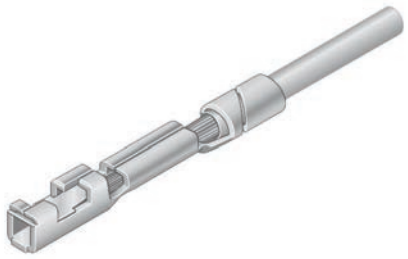
Number of Positions	NN
Available for single row	03 to 15
Available for double row	04 to 30

PV® DUAL METAL CRIMP RECEPTACLE TERMINALS

For mating to 0.025in. / 0.635mm square posts

Step 1	Step 2	Step 2	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

– European Part Numbers

For more information,
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TECHNICAL INFORMATION

MATERIALS

- 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
- All parts with "LF" suffix are RoHS–compliant

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 maximum)
  - High force spring: 450g
  - Ultra–high force spring: 1100g
- Un–mating force (individual contact minimum)
  - High force spring: 75g
  - Ultra–high force spring: 175g
- PV® contact retention in MINI–LATCH Housing:
  4lbs per contact
- Durability: 1000 cycles
- Temperature: –40°C to +105°C

SPECIFICATIONS

- 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

APPROVALS AND CERTIFICATIONS

- UR E66906
- CSA LR46923

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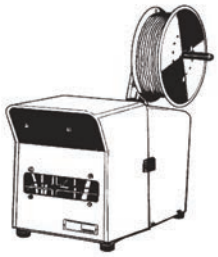
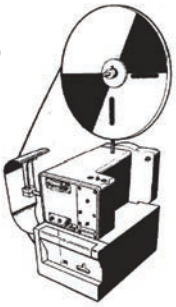
APPLICATION TOOLING

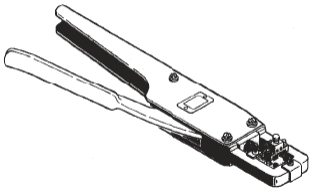
- PV–250A Semi–automatic Crimping Machine
  - Easy to use
  - Pneumatically operated
  - Low cost
  - Estimated 1000 crimps per hour
- Machine Part Number
  - 107416–101 (18–20 AWG)
  - 107416–102 (22–26 AWG)
  - 107416–103 (28–32 AWG)



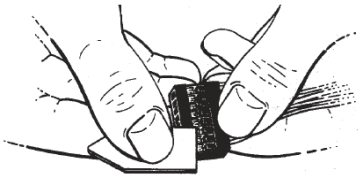
- OL–740 Semi–automatic Two–Ton Bench Press
  - Uses quick–changing, adjustable crimping applicators for different terminals and wire sizes
  - Most rugged construction
  - Easy to use
  - Electrically operated
  - Estimated 2400 crimps per hour
- Machine Part Number
  - 133911–102 (does not include applicato
- 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



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