



Minitek Pwr™ 3.0/Minitek Pwr™ 4.2

Customer Presentation

Apr 2014



FCI Minitek Pwr™ 4.2 and 3.0 Overview



Circuit Size	Minitek Pwr™ 4.2	Minitek Pwr™ 3.0	Right Angle Minitek Pwr™ 4.2
Available Configuration	Power: 2 ~ 24 Signal: N/A	Power: 2 ~ 24 Signal: N/A	Power: 2 ~ 24 Signal: N/A
PCB Termination	Wire to Wire, Wire to Board, Panel Mount	Wire to Wire, Wire to Board	Wire to Wire, Wire to Board
Applied Wire	16 ~ 22, 24 ~ 28 AWG	20 ~ 30 AWG	16 ~ 22, 24 ~ 28 AWG
Max. Current per Contact	9A	5A	9A
Pitch	4.2mm	3.0mm	4.2mm
Features	Minifit JR Compatible	Microfit Compatible	Minifit JR Compatible

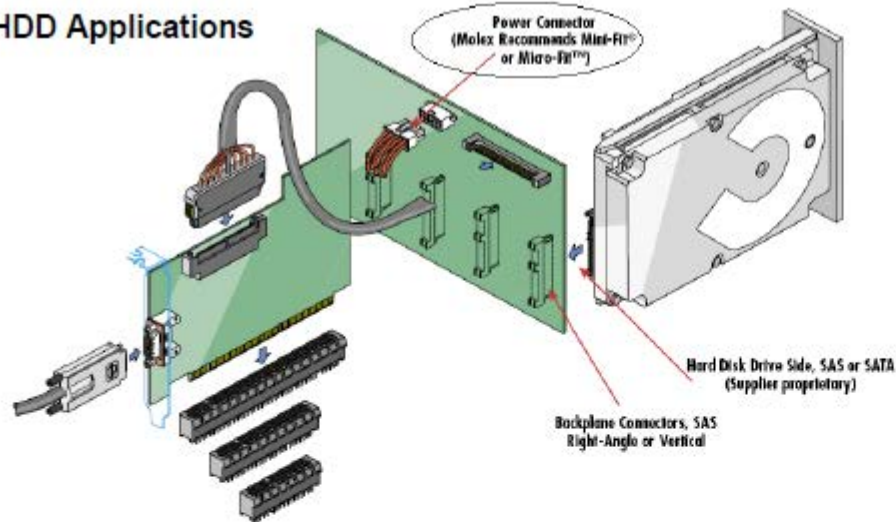
Key Features	
3.0mm (0.12") pitch and 4.2mm (0.165") pitch	Individual Circuit per Silo
Extended Positive Locking	Available in 94V0
Wire-to-Wire	Wire-to-Board
Polarized and Keyed	
Customer Options	
FMLB (First Mate Last Break)	Voided Circuits Break
Modified Housings	Latchless
Special Polarization Options	R/A receptacle option (patent pending)

Typical Server Storage Application



Need Signal and Power pin to control and drive HDD

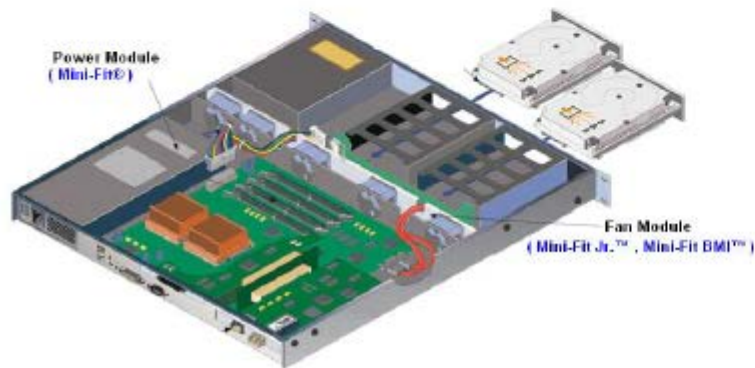
HDD Applications



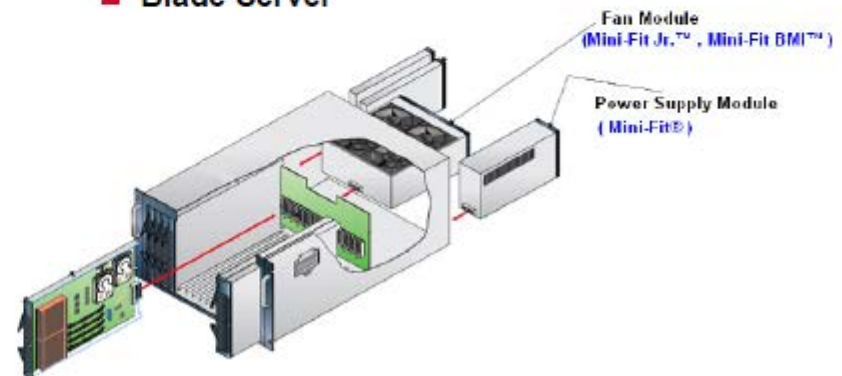
Major Data Applications:

- Desktops/ tower
- High end computers
- Storage
- Servers
- Networking Equipment
- Power supplies

Rack-Mount Server



Blade Server



¹Molex, Micro-Fit[™] and Mini-Fit Jr.[™] are trademarks of Molex Inc.

Minitek Pwr™ 4.2 (interchangeable with Molex's¹ Mini-Fit Jr.™)



Product Facts

- Wire-to-wire, Wire-to-board and wire-to-panel connectors with 4.2mm centerline.
- Easy mate and unmate with positive latch design.
- Dual row, 2-24 positions
- Receptacle, panel mount, plugs, and vertical or right-angle pin headers
- Available in UL94V-0 flammability rated nylon
- Products are lead free to help promote a cleaner environment
- Intermateable and interchangeable with Molex's¹ Mini-Fit Jr.™
- UL is in process (expect in Q2 2014)

Benefits

- Compatible with Molex's¹ Mini-Fit Jr.™
- Short L/T (4 weeks)
- Price advantage
- Cable solution

Performance Characteristics

- Current Rating : Up to 9A
- Insulation Resistance : 1000M Ω Min
- Voltage rating : 600
- Insertion Force : 14.7N max.
- Withdrawal : 1 N min.
- Durability : 30 cycles
- Operating temperature range : -40°C to +105°C



Technical Documents

- Product Spec : GS-12-1181
- Package Spec : GS-14-2362
- Application Spec : GS-20-0401

Tool information

- Ratched hand crimping tool : 10129483-001LF
- Terminal extract tool : 10129274-042LF

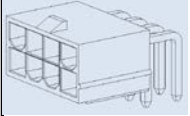
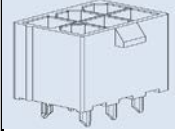
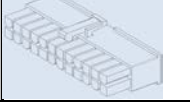
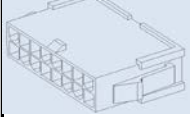
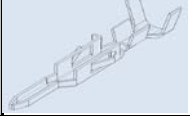
Minitek Pwr™ 4.2 Current Rating



MAXIMUM CURRENT RATING (Amperes)									
Brass					Phosphor Bronze				
Wire \ Contact Size	2 & 3	4 - 6	7 - 10	12 - 24	Wire \ Contact Size	2 & 3	4 - 6	7 - 10	12 - 24
AWG #16	9	8	7	6	AWG #16	8	7	6	5
AWG #18	9	8	7	6	AWG #18	8	7	6	5
AWG #20	7	6	5	5	AWG #20	6	5	4	4
AWG #22	5	4	4	4	AWG #22	4	3	3	3
AWG #24	4	3	3	3	AWG #24	3	2	2	2
AWG #26	3	2	2	2	AWG #26	2	1	1	1
AWG #28	2	1	1	1	AWG #28	1	1	1	1

Minitek Pwr™ 4.2 (interchangeable with Molex's¹ Mini-Fit Jr.™)



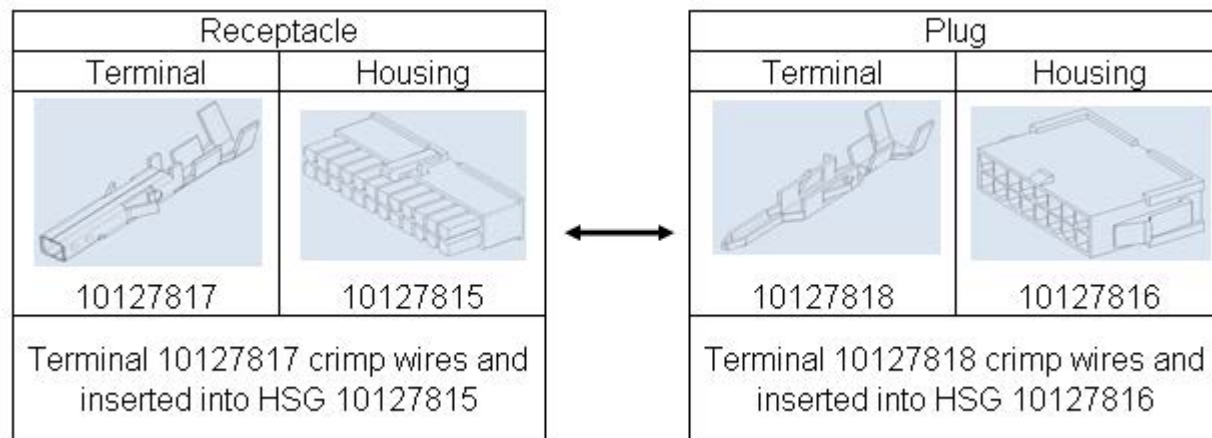
Product Description	Positions	Material	FCI P/N	Competitor Molex (Mini-Fit)	Figure
PCB Header Right Angle w/o pegs	#2~#24	PA66, UL 94V-0, naturl color Brass Terminal	10127819	5569	
PCB Header Vertical w/o pegs	#2~#24	PA66, UL 94V-0, naturl color Brass Terminal	10127820	5566	
Receptacle Housing	#2~#24	PA66, UL 94V-0, naturl color	10127815	5557	
Plug Housing	#2~#24	PA66, UL 94V-0, naturl color	10127816	5559	
Female Terminal	-	PhBr / Brass AWG 16~22 AWG 24~28	10127817	5556	
Male Terminal	-	PhBr / Brass AWG 16~22 AWG 24~28	10127818	5558	

¹Molex, Micro-Fit™ and Mini-Fit Jr.™ are trademarks of Molex Inc.

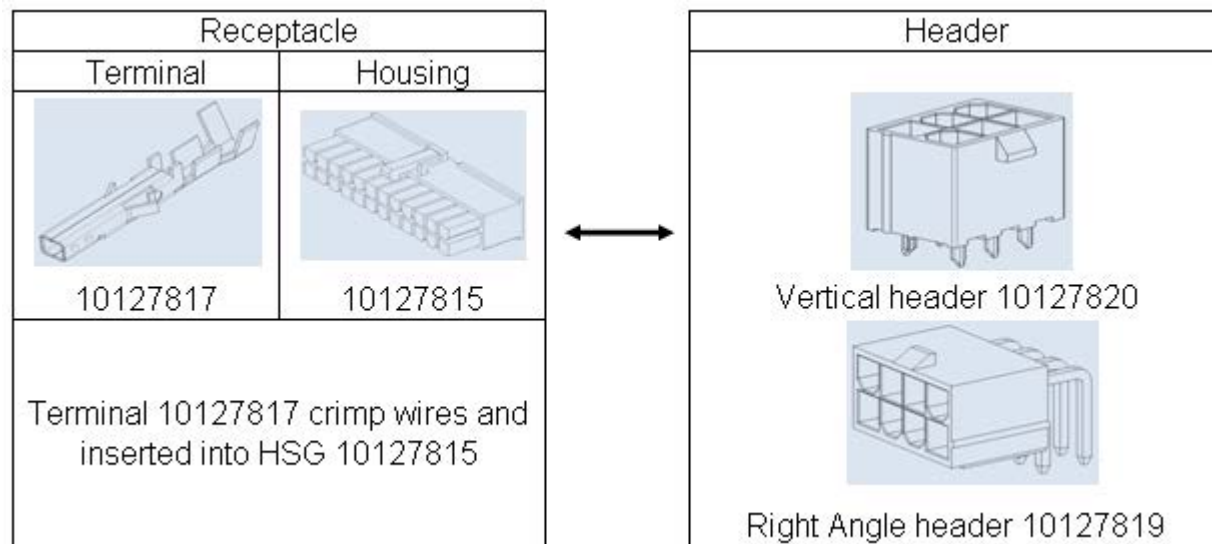
Mating application (Minitek Pwr™ 4.2)



Wire-to-Wire



Wire-to-Board



Minitek Pwr™ 3.0 (interchangeable with Molex's¹ Micro-Fit™)



Product Facts

- Wire-to-wire and Wire-to-board connector system
- Contacts are on 3.0mm (0.118") centerline spacing
- 2-24 contact positions – dual row
- Dual beam contact design for reliable interconnection
- Contact accept 20-30 AWG wire with insulation diameter of 1.85mm maximum
- Contact available in strip form
- PCB mount pin header assembly in both vertical and right-angle styles
- Right-angle & vertical through-hole PCB header attachment
- PCB headers are wave soldering
- UL is in process (expect in Q2 2014)



Benefits

- Compatible with Molex's¹ Micro-Fit™
- Short L/T (4 weeks)
- Price advantage
- Cable solution

Performance Characteristics

- Current rating : Up to 5A
- Insulation Resistance : 1000M Ω Min
- Voltage rating : 250V
- Insertion Force : 8.0N max.
- Withdrawal : 3.7N min.
- Durability : 100 cycles
- Operating temperature range : -40°C to +105°C

Technical Documents

- Product Spec : GS-12-1177
- Package Spec : GS-14-2359
- Application Spec : GS-20-0399

Tool information

- Ratched hand crimping tool : 10129483-001LF
- Terminal extract tool : 10129274-030LF

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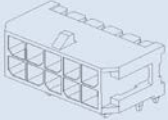
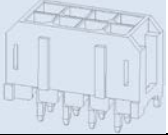
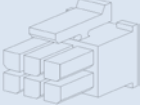
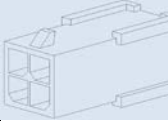
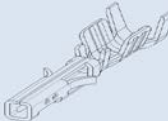
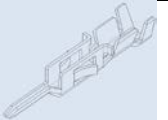
Minitek Pwr™ 3.0 Current Rating



CURRENT DERATING REFERENCE INFORMATION								
AWG	2- circuit		6- circuit		12-circuit		24-circuit	
	W-W	W-B	W-W	W-B	W-W	W-B	W-W	W-B
	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps
20	6.5	7	5	* 5.5	4.5	* 5	* 4	4.5
22	5.5	* 6	* 4	* 4.5	* 3.5	* 4	* 3	* 3.5
24	5	5.5	4	* 4.5	3	* 3.5	* 2	* 3
26	4	4.5	3	* 4	2.5	* 3.5	* 1.5	2.5
28	3	* 4	* 2	* 3	* 2	* 3	* 1	* 2
30	3	3.5	2	* 3	2	* 2.5	* 1	1

Minitek Pwr™ 3.0 (interchangeable with Molex's¹ Micro-Fit™)



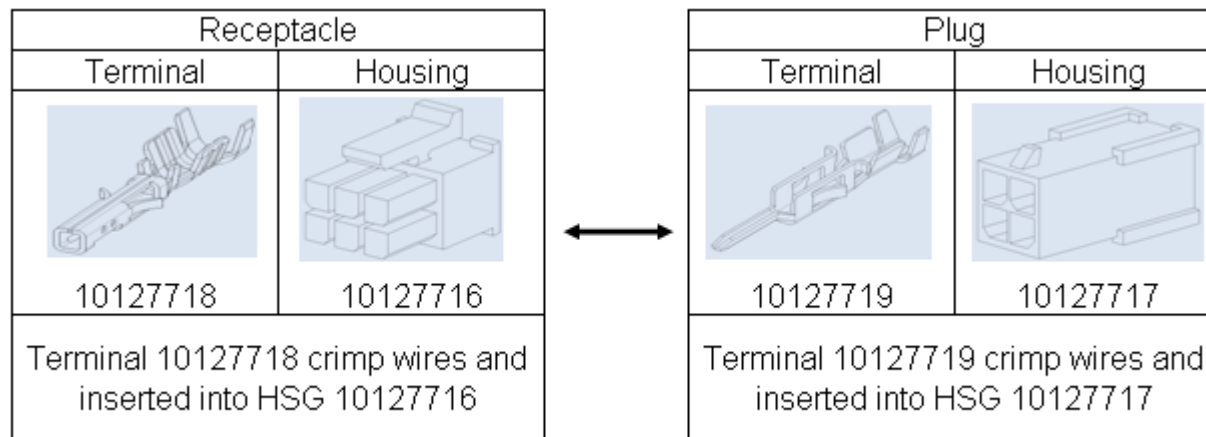
Product Description	Positions	Material	FCI P/N	Competitor Molex (Micro-Fit)	Figure
PCB Header Right Angle Through Hole	#2~#24	LCP, UL94V-0, Black color Brass Terminal	10127720	43045	
PCB Header Vertical Through Hole	#2~#24	LCP, UL94V-0, Black color Brass Terminal	10127721	43045	
Receptacle Housing	#2~#24	NYLON 66, UL94V-0, Black	10127716	43025	
Plug Housing	#2~#24	NYLON 66, UL94V-0, Black	10127717	43020	
Female Terminal	-	PhBr AWG 22~28 (OD 1.2~1.7mm)	10127718	43030	
Male Terminal	-	PhBr AWG 22~28 (OD 1.2~1.7mm)	10127719	43031	

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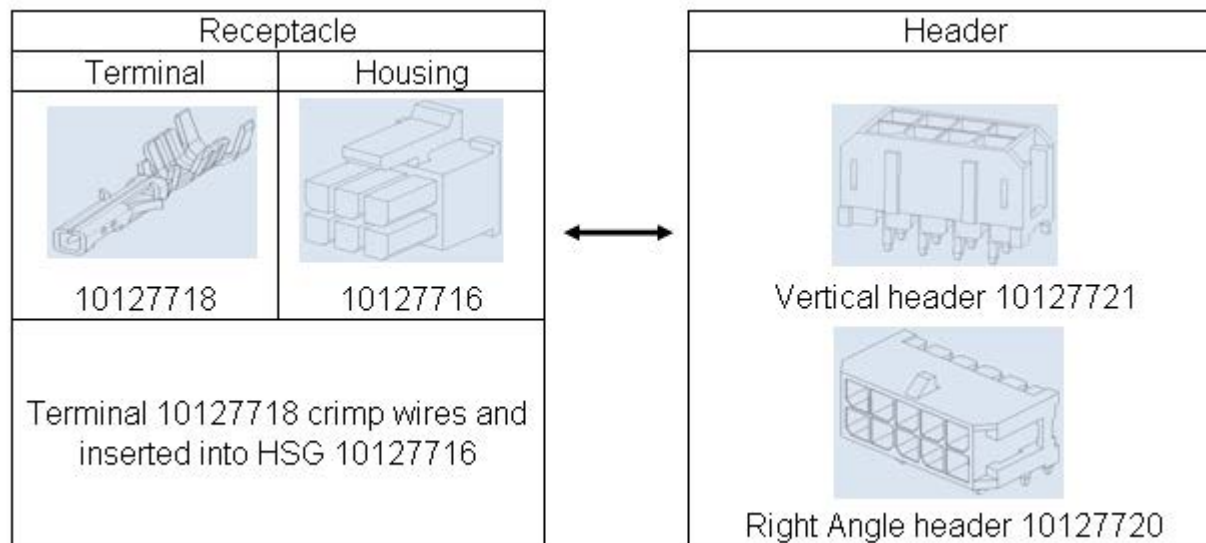
Mating application (Minitek Pwr™ 3.0)



Wire-to-Wire



Wire-to-Board



R/A Minitek Pwr™ 4.2 Cable Assembly



Product Facts

- FCI own the patent
- Wire-to-wire and Wire-to-board connectors with 4.2mm centerline.
- Dual row, 18 & 24 positions
- Application is used to Power Supply
- Available in UL94V-0 flammability rated nylon
- UL is in process

Benefits

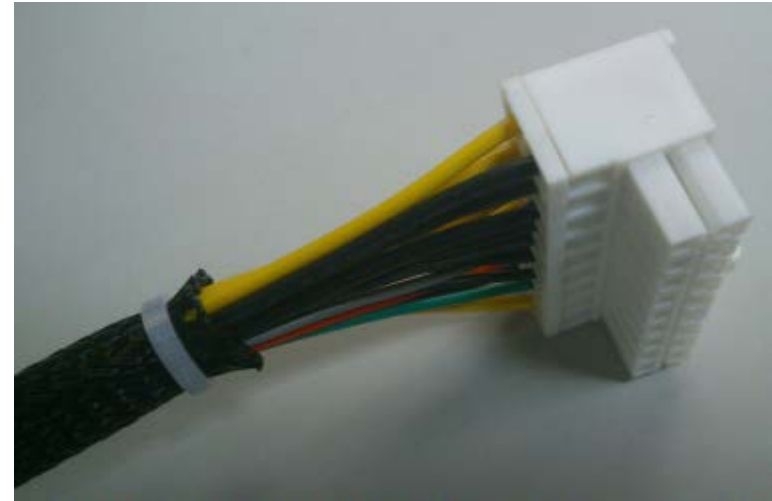
- Low profile – perfect for 1U application
- Better cable management
- Robust design
- No stress
- Better thermal venting

Performance Characteristics

- Current Rating : Up to 9A
- Insulation Resistance : 1000M Ω Min
- Voltage rating : 600V
- Insertion Force : 14.7N max.
- Withdrawal : 0.5N min.
- Durability : 30 cycles
- Operating temperature range : -40°C to +105°C

Technical Documents

- Product Spec : GS-12-1181
- Package Spec : GS-14-2362
- Application Spec : GS-20-0401



Important Message



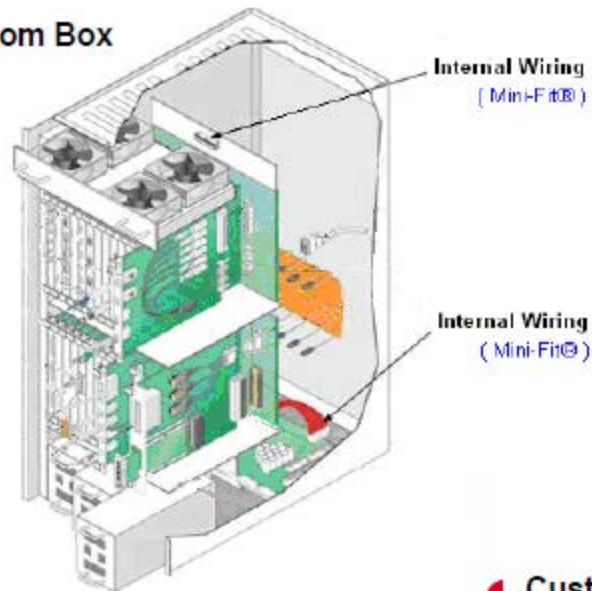
Differentiation

- Pricing
- Gold flash options
- Minitex Pwr™ 4.2 Right Angle Receptacle
- Cable assy solution

Appendix

Other applications

Generic Telecom Box



Major Communication Applications:

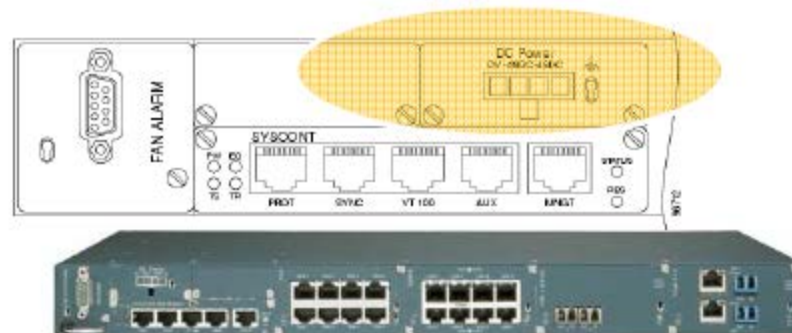
- Cellular Base Stations
- Back Plane Power Applications
- Broadcast Equipment
- Telecom Infrastructure
- Generic Telecom Box

Interface Converter



DC Power Supply connector
(plug MINI-FIT Jr.)

Customer Premises Equipment



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Application

Wire to Board

- Shrouded Headers
- CTW Housings
- CTW Contacts
 - Male & Female

Pin on socket - Dual beam

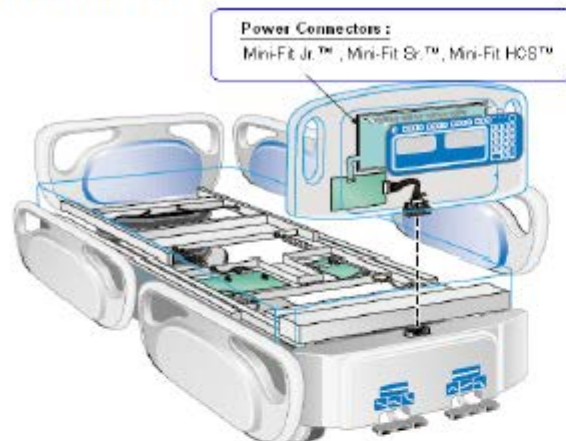
Double Row

Straight / Right Angle

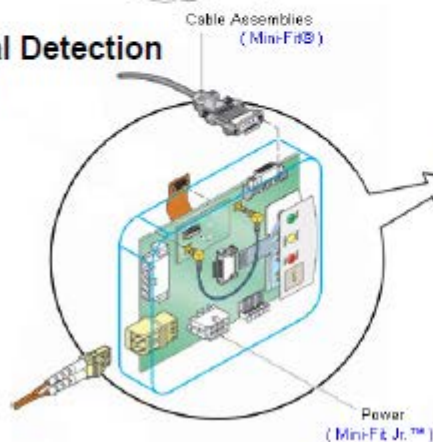


Application

■ Hospital Bed



■ Chemical Detection System

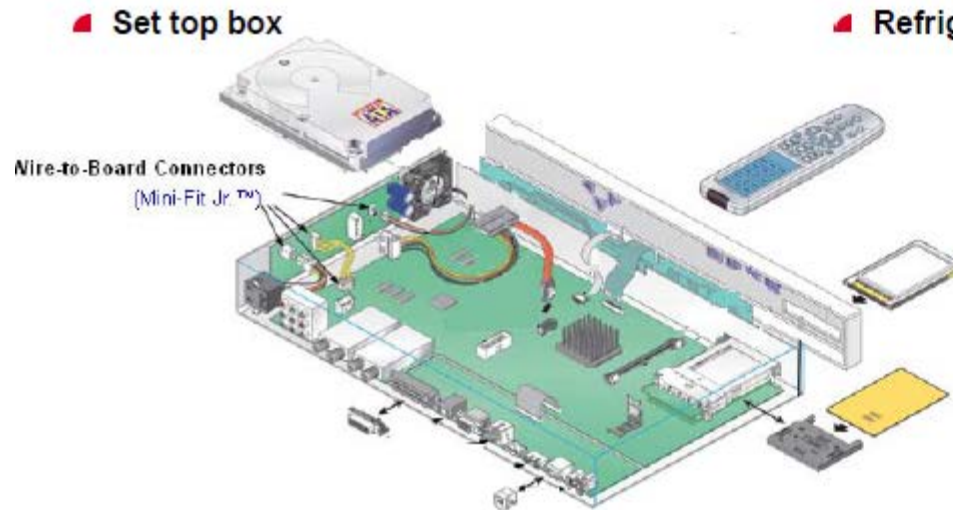


■ Common I&I Applications

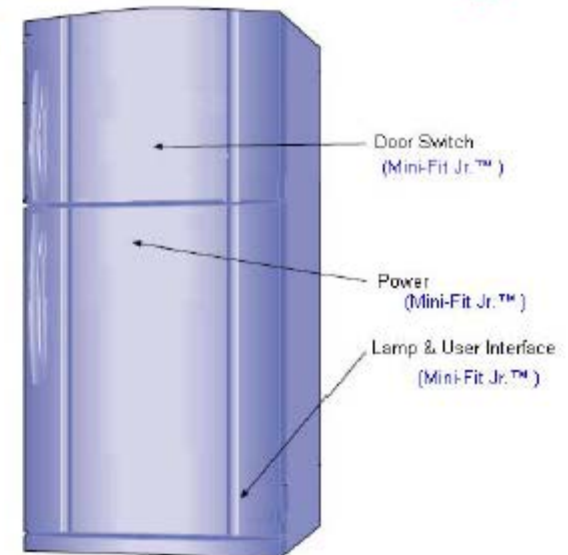
- Military Commercial Off-the-Shelf (COTS)
- Business machines
- Industrial applications
- Vending
 - Drink Dispenser Valves
 - Soft Serve Ice Cream Machines
- Industrial Equipment
 - Pressure Monitors
 - Temperature Monitors
 - Conveyor Belts Controls
- HVAC
 - Heat Pumps
 - Air Conditioners
- Recreational Vehicles
 - Golf Carts
 - Jet Skis and Snowmobiles
 - Boats
- Medical
 - CAT Scanning Equipment
 - Patient Monitors
 - MRI Systems
- Material Handling Equipment
 - Forklifts
 - Backhoes

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Application



■ Refrigerator



Other Applications

■ Display Systems

- Outdoor Stadium Scoreboards
- Road Construction Displays

■ Electrical Lighting

- Stadium Lighting
- Commercial and Industrial Light Fixtures
- Internal Truck Lighting (Inside Cab)

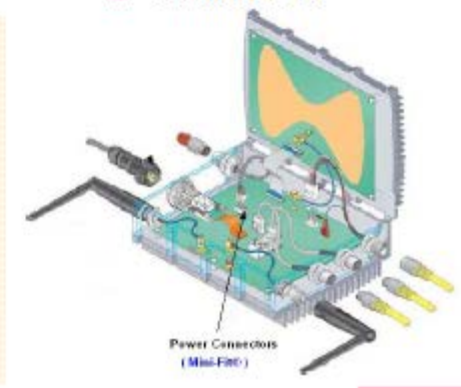
■ HVAC

- Water Heaters
- AC Units
- Heaters
- Air Handlers

■ Miscellaneous

- ATM Machines
- Air Conditioning Units

■ WiMAX Box



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Application



- 1 Vending Machine
- 2 Gas pump
- 3 Neon sign
- 4 Lighting
- 5 Telephone
- 6 Security Camera
- 7 Car Wash-Automatic Attendant
- 8 Car Wash Flow Sensor
- 9 Car Wash
- 10 Emergency Shut Off Switch



THANK YOU



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