

The 12.5kW power shelf is a 6-slot chassis that receives dual-input, 3-phase power and provides stable DC output power (1000A at 12.5VDC). This power shelf supports up to 6 high-power, hot-swappable Power Supply Units for 5+1 redundant operation.

Key Features

- Dual input connection with AC for each input source
- Supplies power up to 12.5kW, 5+1 redundant operation
- 2.5 OU (Open U) shelf accepts up to 6 hot-swappable 2.5kW Power Supply Units (PSUs) for 5+1 redundant operation
- 19-inch shelf with a height of 2.5 OU, 4.77 inches (117 mm)
- Supports 4x C13 outlets for external AC load
- Supports 1 set of bus bars to deliver DC power to load
- Optional Power Shelf Controller provides remote on/off capability of PSUs along with real-time monitoring and control
- Communication with Li-ion Battery Backup System (BBS)
- Optional air dam bracket and two adapter brackets to fit 21-inch OCP rack



Specifications

Electrical	PF-2123-1LDM	PF-2123-1LDN
Maximum Output Power	12.5kW (12.5VDC / 1000A)	
Input	3-phase, 5-wire 346 / 360 / 380 / 400 / 415VAC	3-phase, 4-wire 200 / 208 / 220 / 230 / 240VAC
Output	12.5kW (12.5VDC / 1000A)	
Frequency	50Hz to 60Hz	
Communications	CAN, PMBus 1.2	
EMI	EN55022, CISPR 22: Conducted Emission, Class A EN55022, CISPR 22: Radiated Emission, Class A	
Physical	PF-2123-1LDM	PF-2123-1LDN
Dimensions (H x W x D)	4.77" x 19" x 27" (117 mm x 447 mm x 650 mm)	
Weight	45.2 lbs (20.5 kg) without PSUs	53.8 lbs (24.4 kg) without PSUs
Form Factor	19" IEC or 21" OCP Rack Mount	

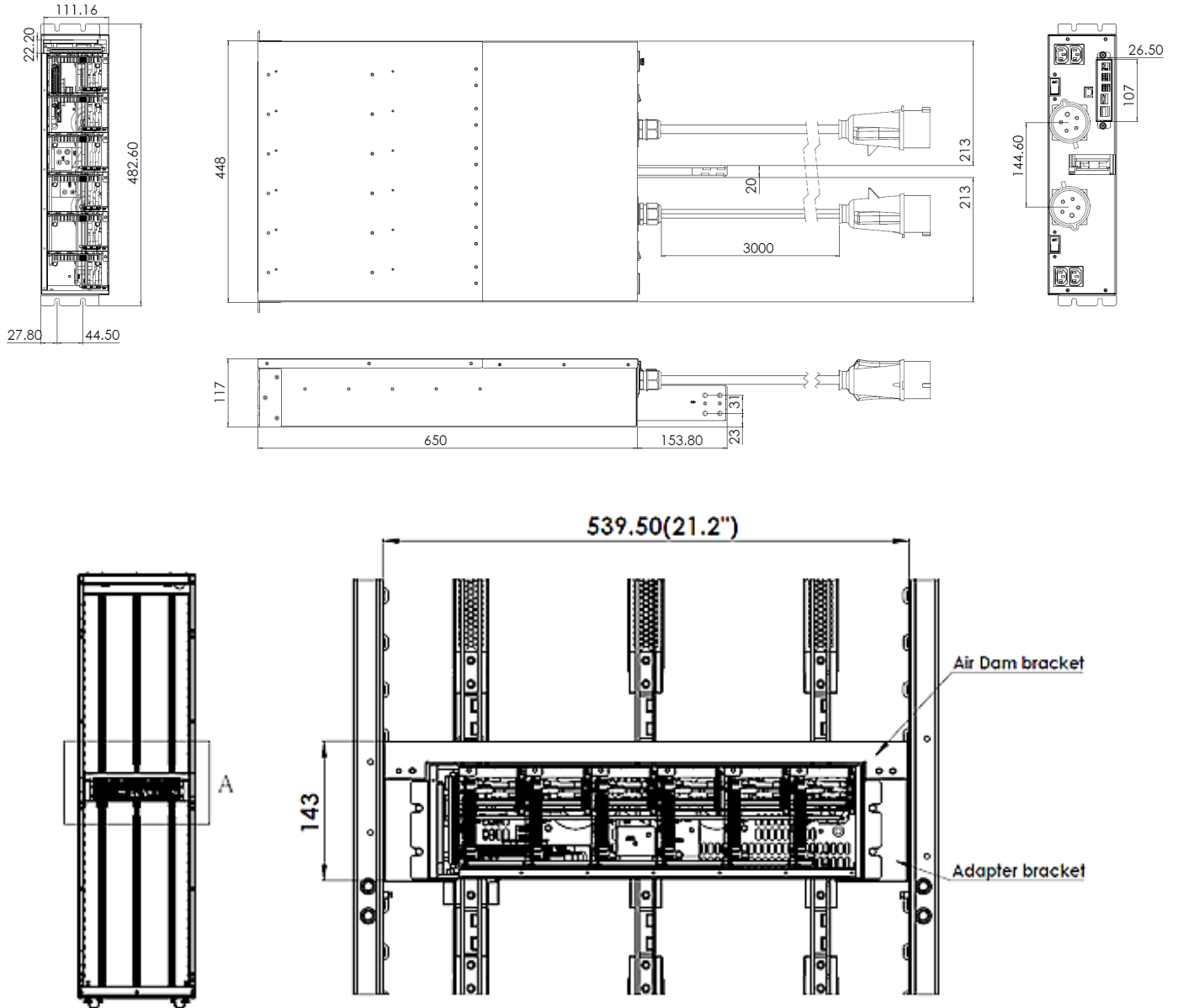
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Specifications

Environment	PF-2123-1LDM	PF-2123-1LDN
Temperature	Operating: 0°C – 50°C, Storage: -40°C – 85°C	
Humidity	10% – 95% relative (non-condensing)	
Altitude	Operating: 0 m – 3050 m	
Acoustic	90.5dB at 1 m	
General	PF-2123-1LDM	PF-2123-1LDN
EMC Approvals	CE (EU)	FCC (USA) ICES (Canada)
Safety Approvals	RoHS UL60950-1 IEC60950-1 International CB (EU) TUV(EU)	RoHS UL60950-1 IEC60950-1 International UL (USA) cUL (Canada)
Mounting Hardware	2 brackets (built-in), optional air dam bracket and two adapter brackets	
Warranty	3 Years	

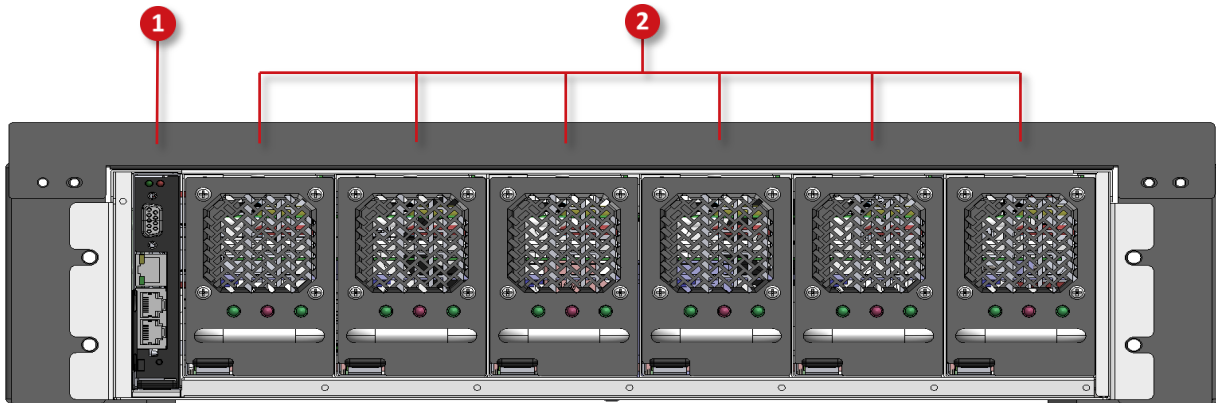
Mechanical



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Front Panel

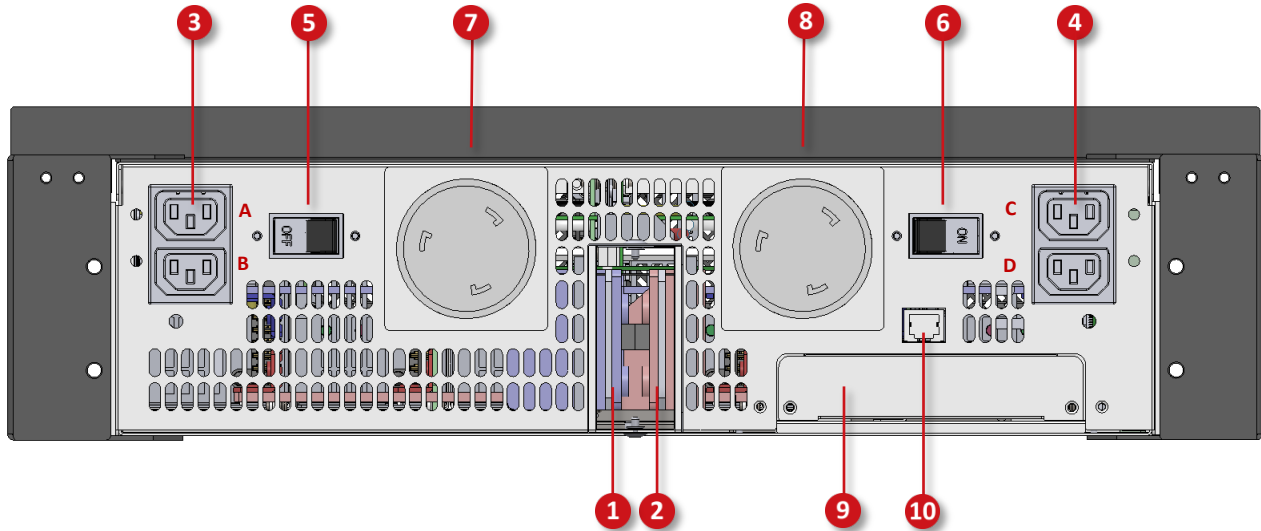


<p>1</p>	<p>Power Shelf Controller Port</p>	<p>Supports optional RMC to enable communication with Power Shelf</p>
<p>2</p>	<p>Power Supply Units (PSUs)</p>	<p>Single phase 200V to 240V input / 12.5V, 200A output for each Power Supply Unit</p>

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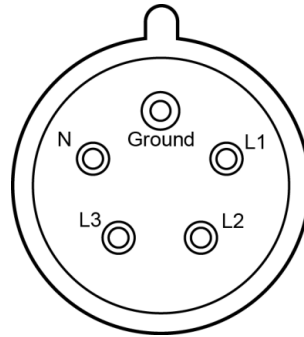
Rear Panel



1	BUSBAR for GND	Negative output voltage
2	BUSBAR for +12.5V	Positive output voltage
3	C13 Receptacle	Plug A / B is Single-phase AC1 source outlet connect to L3/N, AC Range 200 to 240VAC
4	C13 Receptacle	Plug C / D is Single-phase AC2 source outlet connect to L1/N, AC Range 200 to 240VAC
5	Circuit Breaker	20A CB for single-phase AC1_L3 output (C13 receptacle)
6	Circuit Breaker	20A CB for single-phase AC2_L1 output (C13 receptacle)
7	Input AC1 Cable gland	<ul style="list-style-type: none"> PF-2123-1LDM:3P5W AC input plug including power line L1, L2, L3, FG, N PF-2123-1LDN:3P4W AC input plug including power line L1, L2, L3, FG
8	Input AC2 Cable gland	<ul style="list-style-type: none"> PF-2123-1LDM:3P5W AC input plug including power line L1, L2, L3, FG, N PF-2123-1LDN:3P4W AC input plug including power line L1, L2, L3, FG
9	Reserved	Reserved for future use
10	Communication Port	Communication port to the Battery Backup System (BBS)

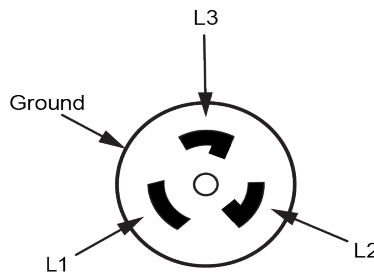
Power Input Plug

AC Input Plug for PF-2123-1LDM model: The input cable contains AC power for L1, L2, L3, Frame Ground, and Neutral. The connector is P/N C532P6S by HUBBELL.



Description	L1-L2	L2-L3	L1-L3
3PH-5Wire / Y-380VAC	380VAC	380VAC	380VAC
3PH-5Wire / Y-415VAC	415VAC	415VAC	415VAC

AC Input Plug for PF-2123-1LDN model: The input cable contains AC power for L1, L2, L3, and Frame Ground. The connector is P/N CS8365L by HUBBELL.



Description	L1-L2	L2-L3	L1-L3
3PH-4Wire / Δ-208VAC	208VAC	208VAC	208VAC
3PH-4Wire / Δ-240VAC	240VAC	240VAC	240VAC

AC Power Cord

3 meters in length, 40A for 200V–240V input and 32A for 346V–415V input.

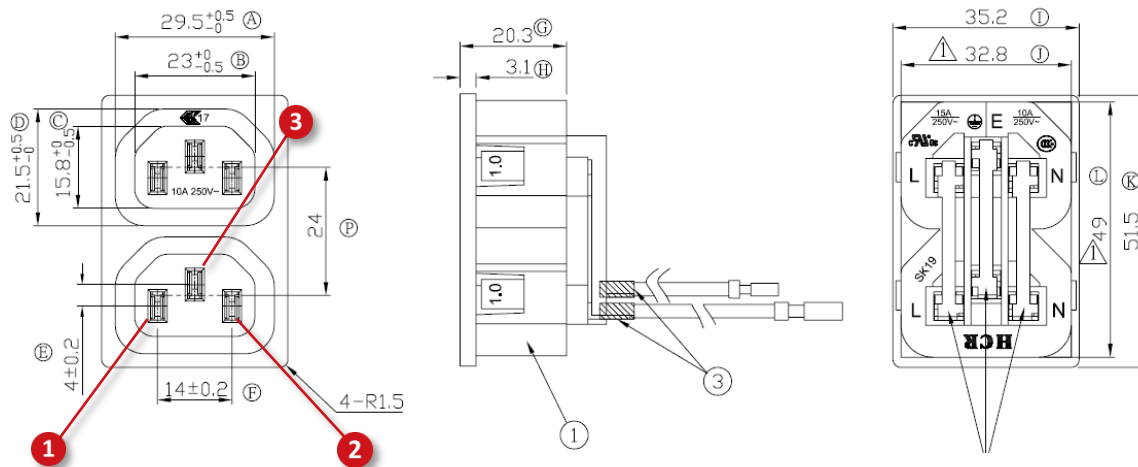
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Single Phase AC Outlet

AC output socket: IEC60320, C13 or equivalent, 2 sets with each 20A circuit breaker to connect with AC output socket. Each set can provide 10A maximum output current. AC output voltage is bypassed from the AC input connector.

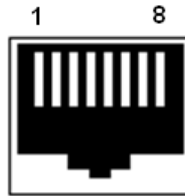
Description	1 PH (C13)-N
3PH-5Wire / Y-380VAC	220VAC
3PH-5Wire / Y-400VAC	230VAC



1	N	AC Neutral
2	L	AC Line
3	FG	Frame Ground

RJ45 Communication Ports

The Power shelf can pass AC source and Bus voltage (12.5V) information to the Battery Backup System (BBS) through the RJ45 communication port and send an On/Off command to the BBS.



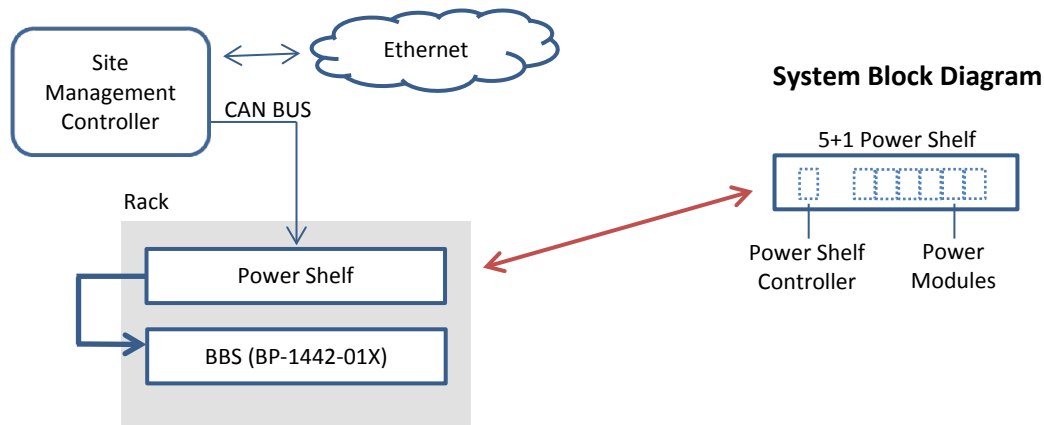
Pin 1	BBS_I2C_SCL	Serial Clock Line (SCL) in I ² C
Pin 2	BBS_SGND	Signal Ground
Pin 3	BBS_I2C_SDA	Serial Data Line (SDA) in I ² C
Pin 4	BBS_PRESENT	Low Level: no Battery Backup Unit (BBU) exists in shelf High Level: at least one BBU exists in shelf
Pin 5	BBS_ON	Low Level: BBU goes into online mode and the output voltage discharge is 12VDC High Level: BBU goes into offline mode and the output voltage discharge is 12.6VDC
Pin 6	Reserved	Reserved
Pin 7	BBS_AC_GOOD	Low Level: AC source is acceptable High Level: AC source is lost or unbalanced
Pin 8	BBS_PS_KILL	Low Level: battery charges in online or offline mode High Level: Idle mode; disables the Battery Backup System

Note: Low Level means voltage range is 0 to 0.8V; High Level means voltage range is 2.45 to 3.45V

Three-Phase Power Shelf System Components

The system provides a comprehensive power management and battery backup capability based on existing building block with configuration flexibility to suit specific power, size, and run-time requirements. The table below provides additional information on the building block available to create a customized power solution. Please visit our website for more in-depth information or contact your local Lite-On PSS representative for support.

Component	Model Number	Description
Power Shelf	PF-2123-1LDM	12.5KW (5+1), 3 Phase, 5-wire connection, 2.5U Power Shelf with 6 pcs power module slots and one Power Shelf Controller slot
Power Shelf	PF-2123-1LDN	12.5KW (5+1), 3 Phase, 4-wire connection, 2.5U Power Shelf with 6 pcs power module slots and one Power Shelf Controller slot
Power Module	PS-2252-1QDU	2.5kW Hot-Swappable Power Module
Battery Backup System	BP-1442-01X	4.4KW 1U Battery Backup System (BBS) with 4 slots
Battery Backup Unit	BM-1112-01X	1.1kW Battery Backup Unit
Power Shelf Controller	CM-12CP-010U	Power shelf management and control
Site Management Controller	CP-13EC-010U	Rack management and control
21" OCP Rack	KT-2141-121	21-inch Open Frame Rack



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