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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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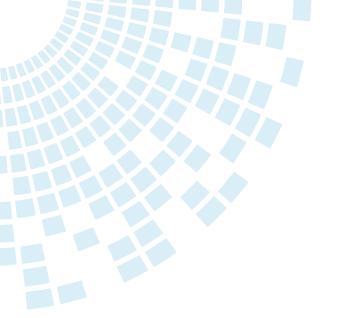
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# Bel Power Solutions for Datacenters



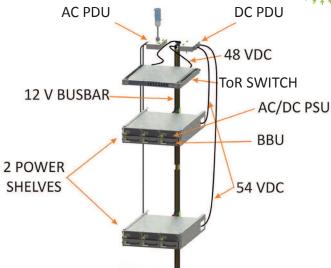


## **Open Compute V2 Power Shelf & V2 Power Module**

Bel Power Solutions 6600 W stand-alone V2 Power Shelf is powered from three-phase AC line, hosting three 3300 W (N + 1) hot-swappable single-phase V2 Power Modules.







#### **Features & Benefits**

- Titanium Efficiency > 95.9 % @ 277 Vac, 50% load
- High Power quality (Power Factor and THD)
- Redundant (2+1) output 6600 W / 12.6 Vdc with active current sharing
- Redundant (2+1) auxiliary output 600W / 54 Vdc
- Houses 3 x 3300W power supply units (PSU)
- Houses 3 x 3600W Lithium Ion Battery back-up units (BBU)
- 52.5 V input battery back-up / charger for lithium Ion battery pack
- 3-Phase 200 Vac 277 Vac Input to shelf
- Hot-plug capable
- Digital control for improved performance
- RS485 communication interface for control, programming & monitoring
- Status LED with fault signaling



#### **240 Vac Power Distribution Unit**

AC Distribution YSD.00152 EU



#### **277 Vac Power Distribution Unit**

AC Distribution YSD.00162 US



#### **DC-DC Distribution Unit**

DC-DC Distribution YSD.00134



	NA, 277/480	EU, 240/415	NA, 208	NA, 277 CS	NA, 277 30A	DC PDU
Bel P/N	YSD.00162	YSD.00152	YSD.00217	YSD.00219	YSD.00218	YSD.00134
Input Voltage	277/480, 3P5W	240/415, 3P5W	208, 3P4W	277, 1P3W	277/480, 3P5W	54Vdc
Surge Circuit	Yes	Yes	No	No	Yes	No
Input Plug Type	L22-20P	IEC-309	L21-30P	L7-20P	L22-30P	N/A
Connector	HBL2521		HBL2811	HBL2331	HBL2821	
Wire Gauge	12 AWG	10 AWG	10 AWG	12 AWG	10 AWG	14 AWG
Style	2 in / 2 out	1 in / 2 out	2 in / 2 out	1 in / 1 out	1 in / 2 out	0 in / 2 out

## 3 kW Platinum & Titanium Efficiency Power Modules (AC-DC)

Converts 90-300 Vac main power into a main output of 12 Vdc for powering intermediate bus architectures (IBA) in high performance and reliability servers, routers & network switches.

#### **Features & Benefits**

- Platinum+ Grade Efficiency
- Input Voltage Range: 90 to 300 Vac, 240 to 400 Vdc
- Rated Power: 3000W (Vin > 180 Vac, Vin > 192 Vdc), 1400 W (Vin > 90 Vac)
- Standby Output (always present): 12 V / 5.0A
- Hold-up Time: ≥ 12 msec
- Communication: Physical Layer I<sup>2</sup>C, Protocol Layer PMBus™
- Redundant Operation: Analog Current Share (244 A Ishare voltage = 8 V)
- Form Factor: 1U x 69 x 555 mm



#### **SPSPFE3** Power Shelves

SPSPFE3 power shelves provide rectification, system management, power distribution while maintaining high reliability & offering flexibility for future expansion.

#### **Features & Benefits**

- Three versions of power shelf available:
  - EU: SPSPFE3-02G: 3-phase 400/480 Vac line to line input with Neutral line
  - US: SPSPFE3-03G: 3-phase 208 Vac line to line input, without Neutral line
  - EU: SPSPFE3-04G: 3-phase, 400 Vac line to line input with Neutral line
- Holds six 3 kW power modules in either 5+1 or 3+3 configurations
- AC input at the rear
- I<sup>2</sup>C communication with I<sup>2</sup>C Multiplexer
- +12 VSB output at the rear with:
  - three sets of busbar blades for SPSPFE3-02G / SPSPFE3-03G
    one set of busbar blades for SPSPFE3-04G
- Form Factor: 46.5 x 436 x 650 mm
- Adaptor mouning brackets available: 19" or 21"
- Compatible with the Open Compute rack design



### 3 kW DC/DC Front End

I<sup>2</sup>C communication interface for control, programming and monitoring with PMBus™ protocol front to back airflow

#### **Features & Benefits**

- High efficiency >95%
- Wide input range: 39-72 Vdc
- 12.3 Vdc Output (244 A) / 12 Vdc Standby (2 A)
- Parallel operation with active analog current sharing
- Full digital controls for improved performance
- Small/Slim form factor: 79 x 42 x 555 mm



## 1 OU / 15 kW N+1 DC/DC Shelf + Controller

The 6-position single busbar shelf

#### **Features & Benefits**

- 6 x 3000 W DC/DC power-modules
- Shelf compatible to OCP standard (534 mm wide)
- Height = 46 mm < 1 OpenU
- Single-Busbar as in OCP V2
- 400 A Input DC connector: TBD
- Hot Swap controller with Ethernet communication (RJ45)
- CAN bus I/O on the back of the shelf in order to communicate with BBU (2xRJ45)



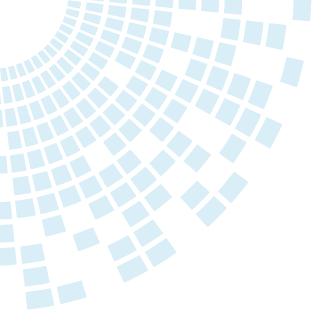
Shelf provides 12 V backup power during AC outage

#### Features & Benefits

- 15 kW (+ 5 kW) full load for 60 s (battery EOL)
- Includes 4 BBU and 4 Charger/Dischargers
- Battery is fully isolated from 12 V busbar for maximum reliability
- All modules are hot-swappable-Senses optionally AC lines for faster AC outage detection
- The shelf includes automatic life battery test diagnostic with EOL signal
- A controller with Ethernet communication (on front panel) is included in theshelf (optional)
- Isolated CAN bus / PMBus available on the back of the shelf
- This BBU shelf independently works in conjunction with any power solution installed in the open rack







## **About Bel High Power Solutions**

Bel Power Solutions provides leading OCP power conversion modules and shelves. The Bel Power Shelves provide rectification, system management and power distribution, while maintaining high reliability and offering flexibility for future expansion. We continue to push for leading edge power solutions for OCP IT-Racks to Datacenters.

Bel Power Solutions is certified to both ISO9001 as well as ISO14001.





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