

Product Features:

- ❖ Hot pluggable
- ❖ N+1 Redundancy
- ❖ Automatic battery charging
- ❖ Controlled, measured and reported by RS 485 or 422 , TCP/IP
- ❖ Modular design for accommodating high power applications
- ❖ Low voltage disconnect for the battery protection (BLVD), LLVD (Option)
- ❖ Temper: System and Battery Sensor.



Input Specifications:

VOLTAGE	1P3W 220VAC or 3P4W 380VAC $\pm 20\%$ (Nominal)
RANGE	85VAC ~ 295VAC
FREQUENCY	44-66Hz
PROTECTION	Under & Over voltage
EFFICIENCY	96% Typical

General Specifications:

OPERATING TEMP	-40°C ~ +75°C (Derating above +55°C)
STORAGE TEMP	-40°C ~ +85°C
OPERATING HUMIDITY	5% ~ 90% (Non-Condensing)
STORAGE HUMIDITY	5% ~ 95% (Non-Condensing)
COOLING	Fan cooling
ALTITUDE	0~10,000 Feet
RELIABILITY	>350,000 Hrs MTBF (Tambient: 25°C)
SIZE (W×D×H)	446mm X 402mm X 89mm (Shelf)

Output Specifications:

OUTPUT VOLTAGE	Default -54.0VDC
OUTPUT CURRENT	6KWatt Max (3 modules)
ADJUSTMENT RANGE	-43.5VDC ~ -58VDC
LINE REGULATION	$\pm 0.5\%$ Max
LOAD REGULATION	$\pm 0.5\%$ Max
TEMP REGULATION	$\pm 0.5\%$ Max
NOISE	$\leq 250\text{mVp-p}$
SETPOINT ACCURACY	$\pm 0.5\%$
OVER CURRENT	101~110%
PROTECTION	-59VDC over Thermal Shutdown Battery Temp. Compensation

Electromagnetic Compatibility:

EMISSIONS	EN55022 Level A (Conducted)
ELECTROSTATIC DISCHARGE	EN61000-4-2, 4KV Contact / 8KV Air
RADIATED SUSCEPTIBILITY	EN61000-4-3, 26-1000MHz, 10V/M, 80%AM
EFT/BURSTS	EN61000-4-4, 2KV
SURGE	EN61000-4-5
CONDUCTED IMMUNITY	EN61000-4-6, 0.15-800MHz, 10V 80%
VOLTAGE DIPS	EN61000-4-10, 95% Dip&10ms, 30% Dip&500ms
VOLTAGE INTERRUPTIONS	EN61000-4-11, 95% reduction, 5ms
FLUCTUATIONS & FLICKER	EN61000-3-3

Status & Control signal:

COMMUNICATION INTERFACE	CAN
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Standards & Approvals:

UL/CUL	60950-1
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Product Features:

- DSP Control
- Hot pluggable
- Modular design
- 1U Rack mountable
- LED Alarm indicated
- Energy saving operation
- World wide safety approval
- Constant electric power control



Input Specifications:

VOLTAGE	1Ø220VAC (85~295VAC)
FREQUENCY	44-66Hz
INRUSH CURRENT	20A @ 220VAC
PROTECTION	Mains fuse in both lines
LEAKAGE	3.5mA Max @ 264VAC
EFFICIENCY	Typical 96%
POWER FACTOR	Typical 0.99 at 50% load or more
PROTECTION	Input under voltage, Overvoltage

General Specifications:

OPERATING TEMP	-40°C to +75°C (Derating above +55°C)
STORAGE TEMP	-40°C to +85°C
OPERATING HUMIDITY	5% to 90% (Non-condensing)
STORAGE HUMIDITY	5% to 95% (Non-condensing)
COOLING	Controlled Fan in a module
VIBRATION	10-55Hz, 2G, 3min period/60 min each (3axes)
RELIABILITY	>350,000 Hrs MTBF (Tambient: 25°C)
SHOCK	20G Peak Acceleration
SIZE (W×D×H)	108.2mm × 321.7mm × 41.0mm

Output Specifications:

OUTPUT VOLTAGE	54.0VDC
OUTPUT CURRENT	37A (2000W Max)
ADJUSTMENT RANGE	43.5~58VDC
LINE REGULATION	±0.5% Max over entire input range
LOAD REGULATION	±0.5% Max
TEMP REGULATION	±0.5% Max
NOISE	≤ 250mVp-p
SETPOINT ACCURACY	±0.5%
PROTECTION	Overvoltage, Power derating, Thermal shutdown

Electromagnetic Compatibility

EMISSIONS	EN55022 Level A (Conducted)
EMC	EN 300 386:2001 class B
ELECTROSTATIC DISCHARGE	EN61000-4-2, 4KV Contact / 8KV Air
RADIATED SUSCEPTIBILITY	EN61000-4-3, 26-1000MHz, 10V/M, 80%AM
EFT/BURSTS	EN61000-4-4, 2KV
SURGE	EN61000-4-5
CONDUCTED IMMUNITY	EN61000-4-6, 0.15-800MHz, 10V 80%
VOLTAGE DIPS	EN61000-4-10, 95% Dip&10ms, 30% Dip&500ms
VOLTAGE INTERRUPTIONS	EN61000-4-11, 95% reduction, 5ms
FLUCTUATIONS & FLICKER	EN61000-3-3

Status & Control signals:

COMMUNICATION	CAN
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PRODUCT FEATURES :

- RS 232 interface for PC connection, TCP/IP, SNMP
- Adjustable Output Voltage
- Float/Equal Charging Mode Exchangeable
- Battery Charging Current Limiting
- AC Input High/Low Voltage Alarm
- Temperature Compensated Charge Voltage for increased battery Lifetime



Display :

- The status of the rectifier system is displayed on the LCD the control unit:
 - Output voltage/input voltage
 - Output current/battery charge/discharge current
 - Battery Temperature/ Rectifier Temperature
 - Rectifier system setup value and alarms
 - Display output currents for individual rectifier modules, the battery set and the total output

Analog Measurements (Tolerance : Full Scale $\pm 0.5\%$) :

- Rectifier input AC voltage
- Rectifier output DC voltage
- Rectifier load current
- Rectifier battery charge/discharge current
- Battery enclosure temperature, Battery charge current
- Battery Temperature /Rectifier temperature

CONTROLLER UNIT FUNCTION :

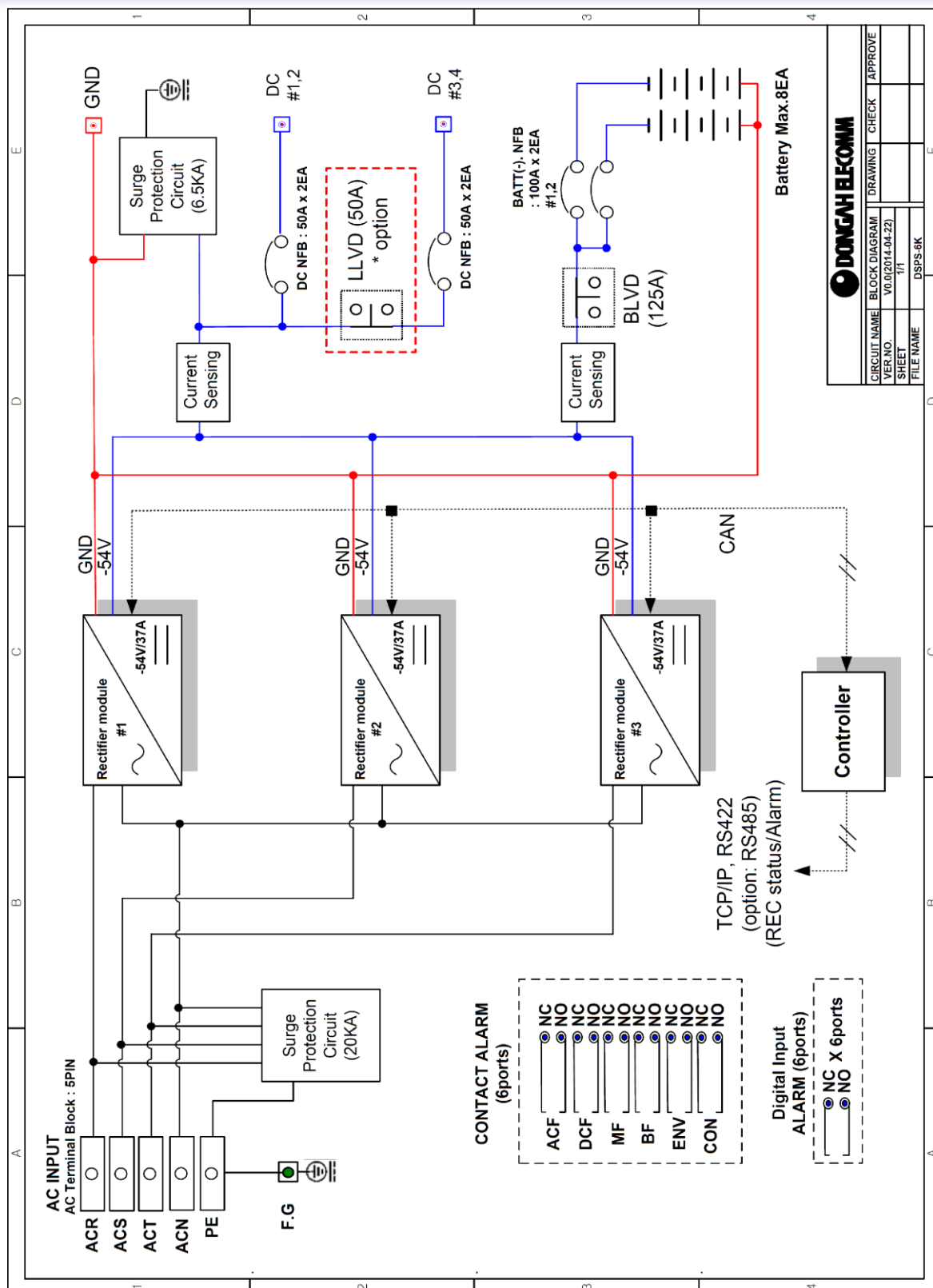
- Setting of Battery Temperature Compensation Curve
- Failure of the rectifier controller shall not affect the operation of the rectifiers in the system
- The Control unit which sees can be stored and displayed 2000 event alarm log
- Digital Input Alarm 6EA (User Defined alarms)
- Dry Contact Alarm 6EA (User Defined alarms)

CPU :

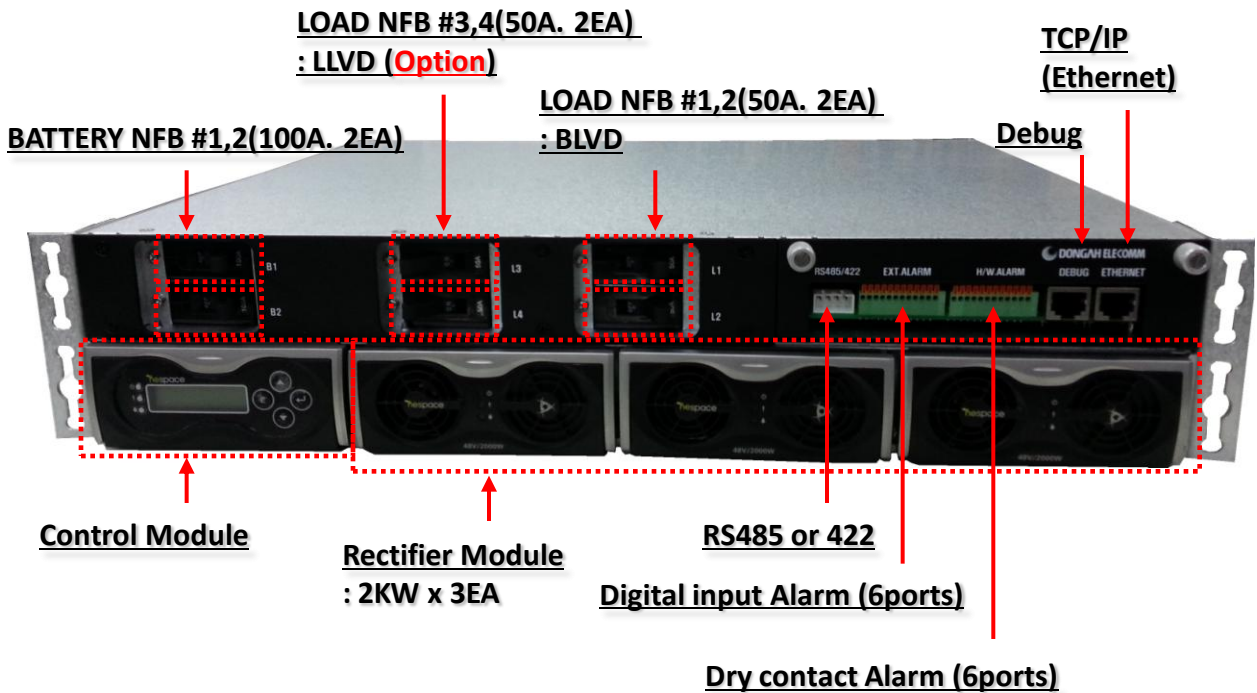
- Coretex-M4 Core
- CPU Clock – Up to 150MHz
- 32ch DMA, 16KB cache, DSP, floating-point unit
- Memory
 - : Flash 1MB / RAM128KB / EEPROM
 - / Flax RAM, Flax NVM
- Ethernet, UART, RS485
- Support RTOS

Interface :

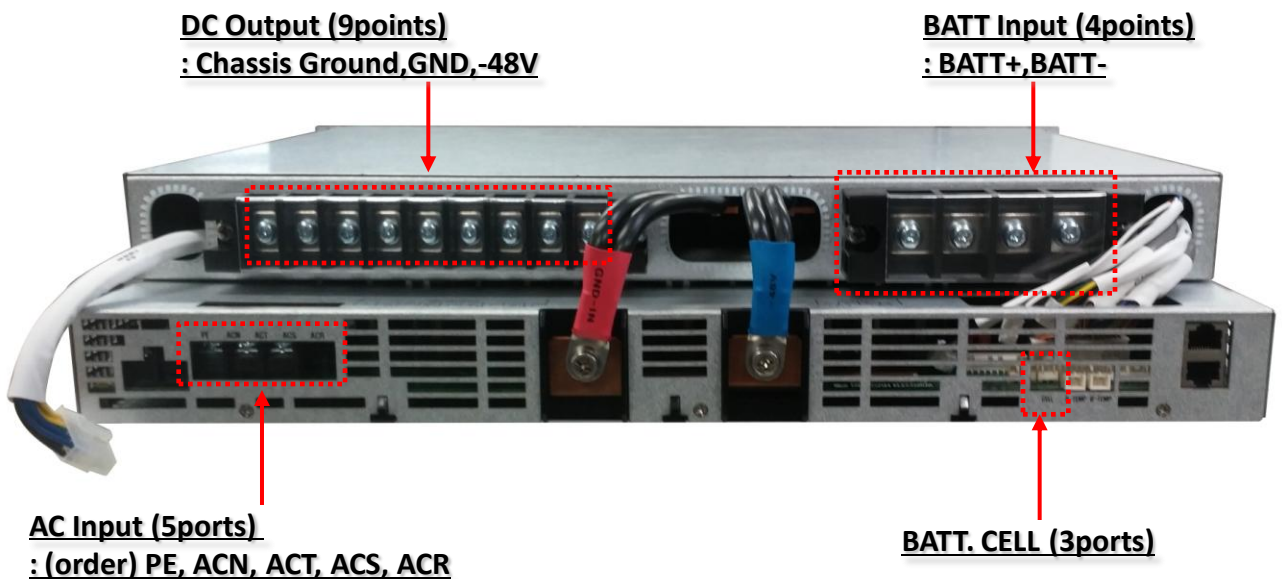
- RS232
 - Baud Rate : 57600 bps
 - Data Bits : 8Bit / Stop Bits : 1Bit / Parity Bits : N
- LAN
 - Hardwired TCP/IP protocol(TCP/UDP/ICMP/Ethernet)
 - 10BaseT/100BaseTX Ethernet MAC/PHY Embedded
 - Auto Negotiation(Full and half duplex, 10/100-Based)
 - Auto MDI/MDIX(Straight-through or Crossover)



Front View:

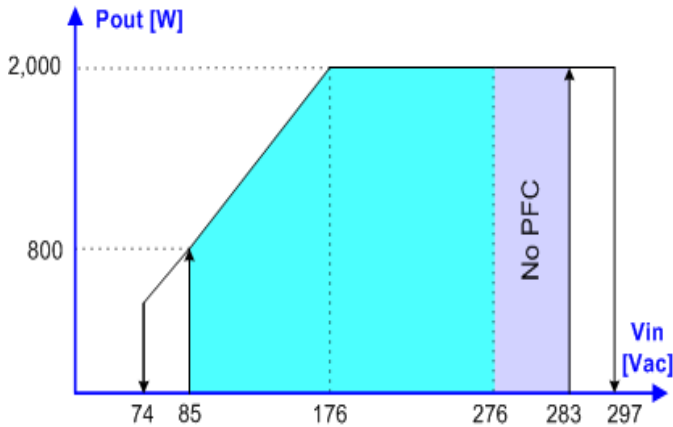


Rear View:



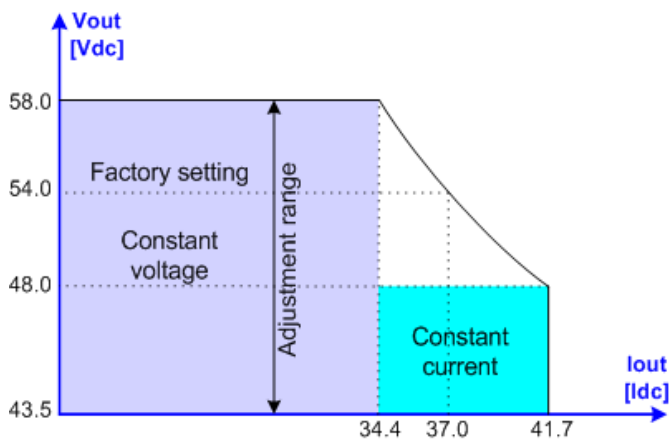
- **DC & BATT Distribution**
- **The capacity of the changeable**

AC Input:



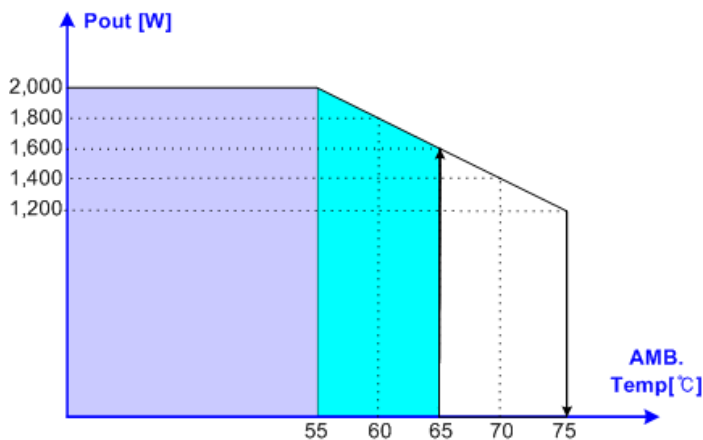
- Voltage range : 75Vac ~ 296Vac
- Constant power range (Max 2KW)
: 176Vac~ 296Vac
- Shut-down. Voltage
 - OVP : 297Vac (recovery 283Vac)
 - UVP : 74Vac (recovery 85Vac)

DC Output:



- Voltage range : -43.5Vdc ~ -58.0Vdc
- Constant power range (Max 2KW)
: -48.0Vdc ~ -54.0Vdc

Temperature:



- Operating temperature : -30°C ~ 75°C
- Constant power range (Max 2KW)
: -30°C ~ 55°C
- Shut-down. Temperature (Tolerance: $\pm 5^\circ\text{C}$)
: 75°C (recovery 65°C)