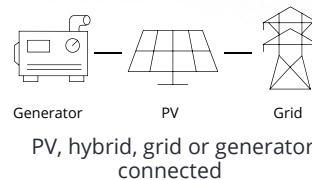







THE TOWER

UNIVERSAL POWER CABINET
UP TO 86.4kWh



One power cabinet system fits all applications. Integrates the AmpihUB and Battery Packs into a pre-wired cabinet with bus-bar for incredibly easy and quick installation. Manage cyclic charges, demand response, frequency regulation, reduce operating costs, mitigate the risk of brown-outs and black-outs and cyber threats while increasing the value of your property.



-  Battery protection and balancing
-  Off-grid, hybrid, grid or generator connected
-  Significantly reduce electricity costs
-  Reliable back-up power in the event of grid failure
-  Flexible and modular configurations

CONFIGURATIONS

Different configuration options
for batteries and inverters.

NCPB48-100BP-
NANO CRYSTAL NCPB
48V 100Ah



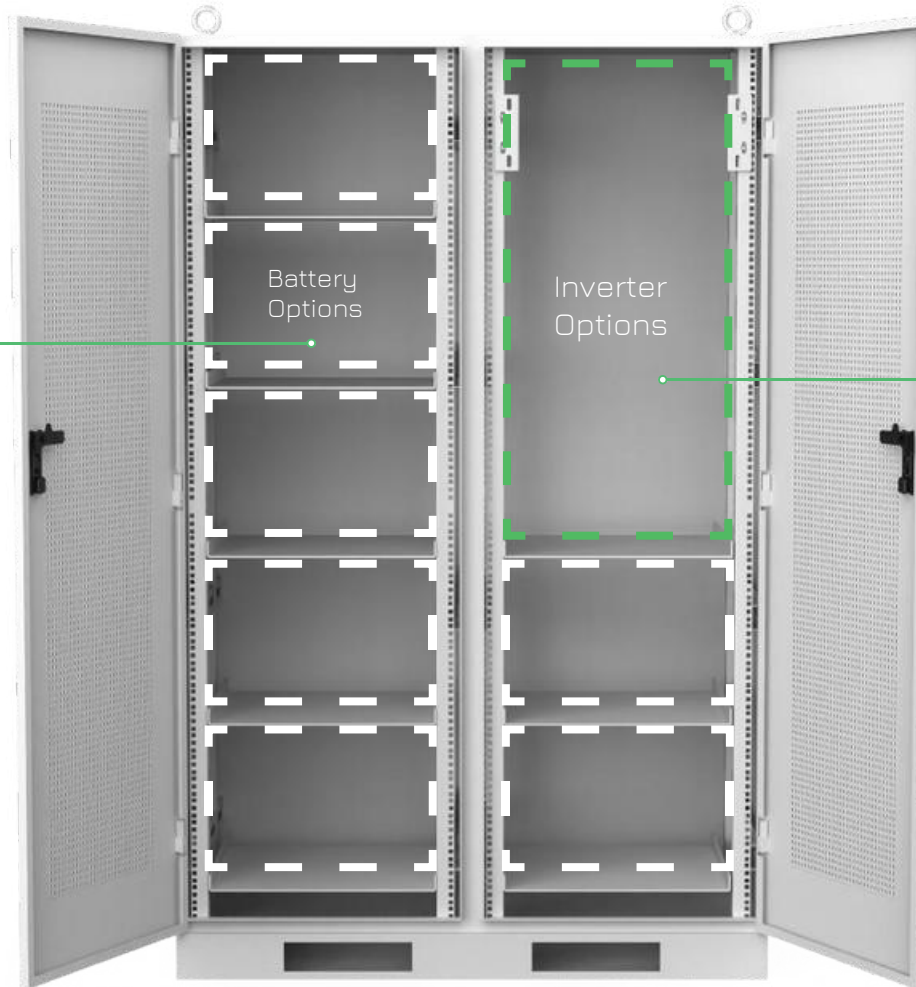
NCPB48-200BP
NANO CRYSTAL NCPB
48V 200Ah



NCTB48-50BP
NANO CRYSTAL NCPB
48V 50Ah



NCTB48-65BP
NANO CRISTA NCPB
48V 50Ah



AMPIHUB™ - 3PH12
3-Phase 12kW Inverter



AMPIHUB™ - 1TC8
Single-Phase 8kW Inverter



AMPITOWER™ CABINET

MECHANICAL SPECIFICATIONS

MODEL	AMPITOWER-1CAB-
INVERTER / CHARGER / MPPT / EMS / BMS / STRING MANAGER / ACTIVE BALANCER / COMMUNICATIONS	I AMPIHUB-3PH12
TOTAL POWER	Up to 76.8kWh per system
PV MAX DC INPUT POWER	15.6kW
BATTERY VOLTAGE	48V
BMS	Local & Ampowr Cosmos Automatic Active Balancing
WEIGHT	< 850kg (1.653lbs)
INSTALLATION MODE	Prefabricated
CABINET MATERIAL	Galvanized steel, powder coated
CABLE ENTRY DETAIL	Front side bottom power
INNER RACK	10U, 19-inch rack
PROTECTION LEVEL	IP52
COOLING MODE	Smart Cooling
INPUT AC VOLTAGE	400V, (3-phase)
OUTPUT VOLTAGE	50/60Hz; 230/400Vac
OUTPUT CAPACITY	12kw
DIMENSIONS	W 1200mm x H 1900mm x D 600mm (W 47.2in x H 74.8in x D 23.6in)



AMPIHUB™

SINGLE-PHASE, 8KW INVERTER

One universal power management hub (inverter, charger, mppt, ems, bms, string manager, active balancer and communications)

BATTERY INPUT DATA

MODEL	AMPIHUB-1PH8
BATTERY TYPE	(Nano) Crystal Batteries
BATTERY VOLTAGE RANGE	40-60V
MAX. CHARGING CURRENT	190A
MAX. DISCHARGING CURRENT	190A
CHARGING CURVE	3 Stages / Equalization
EXTERNAL TEMPERATURE SENSOR	Optional
CHARGING STRATEGY	Self adaptation to BMS

PV STRING DATA

MAX. DC INPUT POWER	10.400W
PV INPUT VOLTAGE	370V (100V-500V)
MPPT RANGE	125-425V
START-UP VOLTAGE	150V
PV INPUT CURRENT	18A +
NO. MPPT TRACKERS	18A 2
NO. OF STRINGS PER MPPT TRACKER	2 + 2

AC OUTPUT DATA

RATED AC OUTPUT & UPS POWER	8000W
MAX. AC OUTPUT POWER	8800W
PEAK POWER (OFF GRID)	2x of rated power, 10S
AC OUTPUT RATED CURRENT	35A
MAX AC CURRENT	40A
MAX. CONTINUOUS AC PASSTHROUGH	50A
POWER FACTOR	0.8 leading to 0.8 lagging
OUTPUT FREQUENCY & VOLTAGE	50 / 60HZ; 120 / 240Vac (split-phase, 208Vac (2/3 phase); 230Vac (single phase) Split-phase; 2-/3 phase; Single-phase
GRID TYPE	Single-phase
CURRENT HARMONIC DISTORTION	THD <3% (Linear load) <1.5%

EFFICIENCY

MAX. EFFICIENCY	97.60
EURO EFFICIENCY	%
MPPT EFFICIENCY	97.90%
	%

PROTECTION

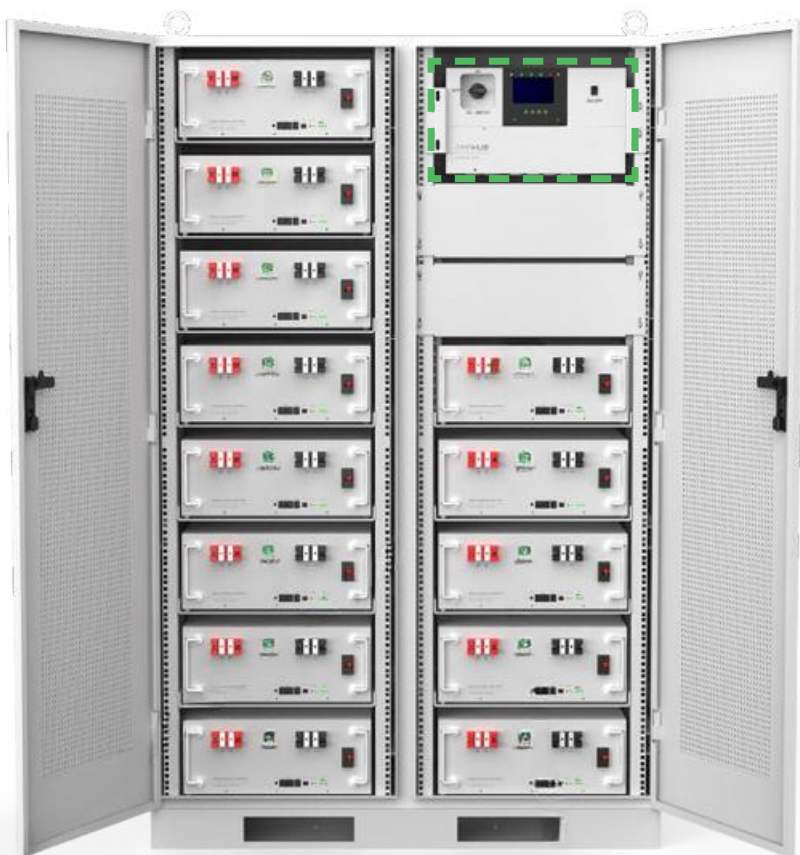
PV ARC FAULTY DETECTION	Integrate
PV INPUT LIGHTNING PROTECTION	d
ANTI-ISLANDING PROTECTION	Integrate
PV STRING INPUT REVERSE POLARITY PROTECTION	d
INSULATION RESISTOR DETECTION	Integrate
RESIDUAL CURRENT MONITORING UNIT	Integrate
OUTPUT OVER CURRENT PROTECTION	Integrate
OUTPUT SHORTED PROTECTION	d
SURGE PROTECTION	Integrate / AC Type II / DC Type II

GENERAL DATA

COOLING	Smart Cooling
NOISE	<30Db
COMMUNICATION WITH BMS	RS485; CAN
WEIGHT	42kg (93lbs)
SIZE	W 594mm x H 365.8mm x D 482mm (W 23.4in x H 14.4in x D 19in)
PROTECTION DEGREE	IP65
INSTALLATION TYPE	Desktop installation
WARRANTY	5 years

CERTIFICATIONS & STANDARDS

GRID REGULATION	UL1741; IEEE1547; RULE21; AS4777; NRS2017; G98; G99
SAFETY REGULATION	IEC62109-1, IEC62109-2
EMC	EN61000-6-1; EN61000-6-3; FCC 15 Class B



 SAFE, RESILIENT AND RELIABLE

 HIGH POWER CAPABILITIES

 OFF-GRID, HYBRID, GRID OR GENERATOR CONNECTED

 FLEXIBLE AND MODULAR CONFIGURATIONS

 ALL IN ONE SOLUTION


AMPIHUB-3PH12

3-PHASE, 12KW INVERTER

Let your inverter selection bring the ultimate power of your system to life for years to come. AmpIHUB is a universal power management hub.



 SAFE, RESILIENT AND RELIABLE

 OFF GRID, HYBRID OR GENERATOR CONNECTED

 HIGH POWER CAPABILITIES

 ALL IN ONE SOLUTION

 FLEXIBLE AND MODULAR CONFIGURATIONS

BATTERY INPUT DATA

BATTERY TYPE	(Nano) Crystal
BATTERY VOLTAGE RANGE (V)	Batteries 40-60V
MAX. CHARGING CURRENT (A)	240A
MAX. DISCHARGING CURRENT (A)	240A
CHARGING CURVE	3 Stages / Equalization
EXTERNAL TEMPERATURE SENSOR	Yes
CHARGING STRATEGY FOR LI-LON BATTERY	Self-adaption to BMS

AC OUTPUT DATA

RATED AC OUTPUT AND UPS POWER (W)	12000
MAX. AC OUTPUT POWER(W)	13200
PEAK POWER(OFF GRID)	2 times of rated power, 10 S
AC OUTPUT RATED CURRENT (A)	18A
MAX. AC CURRENT (A)	27A
MAX. CONTINUOUS PASSTHROUGH (A)	50A
OUTPUT FREQUENCY AND VOLTAGE	50/60Hz; 230/400Vac (Three phase)
GRID TYPE	Three Phase
CURRENT HARMONIC DISTORTION	THD<3% (Linear load<1.5%)

GENERAL DATA

OPERATING TEMPERATURE RANGE °C	-25~60°C, >45°C Derating
COOLING	Smart cooling
NOISE (DB)	<55 dB
COMMUNICATION WITH BMS	RS485; CAN
WEIGHT (KG)	34.5
SIZE (W X H X D)	422mm x 658mm x 281mm (16.6in x 25.9in x 11.06in)
	IP65
PROTECTION DEGREE	Wall-mounted
INSTALLATION STYLE	5 years
WARRANTY	

EFFICIENCY

MAX. EFFICIENCY	97.60%
EURO EFFICIENCY	97.00%
MPPT EFFICIENCY	99.90%

CERTIFICATIONS AND STANDARDS

GRID REGULATION	VDE 0126, AS4777, NRS2017, G98, G99, IEC61683, IEC62116, IEC61727
SAFETY REGULATION	IEC62109-1, IEC62109-2
EMC	EN61000-6-1, EN61000-6-3, FCC 15 class B

PROTECTION

PV ARC FAULT DETECTION	Integrate
PV INPUT LIGHTNING PROTECTION	d
ANTI-ISLANDING PROTECTION	Integrate
PV STRING INPUT REVERSE POLARITY PROTECTION	d
INSULATION RESISTOR DETECTION	Integrate
RESIDUAL CURRENT MONITORING UNIT	Integrated
OUTPUT OVER CURRENT PROTECTION	Integrated
OUTPUT SHORTED PROTECTION	Integrated
OUTPUT OVER VOLTAGE PROTECTION	DC Type II / AC Type II

PV STRING INPUT DATA

MAX. DC INPUT POWER (W)V	15600W
PV INPUT VOLTAGE (V)	550V
MPPT RANGE (V)	(150V~800V)
START-UP VOLTAGE (V)	200V-650V
PV INPUT CURRENT (A)	150V
MAX.PV ISC (A)	26A+13A
NO. OF MPPT TRACKERS	34A+17A
NO. OF STRINGS PER MPPT TRACKER	2
	2+1

NCPB 48-100BP

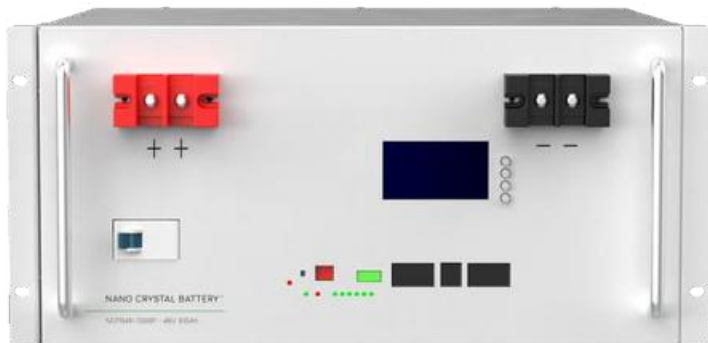
NANO CRYSTAL NCPB BATTERY™ PACK

Let your battery pack selection bring the ultimate power of your system to life for years to come.

Nano Crystal™ NCPB Battery Packs are unique, powerful and a perfect fit for critical applications. The modular and lightweight design allows the battery packs to be easily integrated into energy storage systems.

Nano Crystal™ NCPB Battery Packs have a high energy density with 100% of their capacity available while providing a safe, reliable and powerful performance.

Ampowr offers simple, unparalleled drop-in high performance Nano Crystal Battery Packs, built for use in variety of power systems worldwide.



TECHNICAL SPECIFICATIONS

COMBINATION METHOD	15S2P
RATED CAPACITY	Typical 100Ah, Min. 100Ah
OPERATING VOLTAGE	49.5 - 50.5V
DISCHARGE CUT-OFF	40.5 - 42.5V
CHARGING VOLTAGE	53.2 - 54V
INTERNAL IMPEDANCE *	≤ 100mΩ
STANDARD CHARGE **	Constant current 20A Constant voltage 53.2 - 54V 0.01CA cut-off
STANDARD DISCHARGE	Constant current 20A End voltage - 40.5 - 42.5V

MAX CONTINUOUS CHARGE / DISCHARGE CURRENT	100A / 100A
OPERATING TEMPERATURE RANGE ***	Charge: 0°C - 45°C (32°F - 113°F) Discharge : -20°C - 55°C (-4°F - 131°F)
STORAGE TEMPERATURE RANGE	< 12 months: 10°C - 35°C (50°F - 95°F)
WEIGHT	< 3 months: 10°C - 45°C (50°F - 113°F)
DIMENSIONS (W X H X D)	< 7 days: 20°C - 65°C (68°F - 149°F) 44kg (97 lbs) including case
VOLUMETRIC ENERGY	442mm x 220mm x 410mm
GRAVIMETRIC SPECIFIC ENERGY	17.4in x 8.7in x 16.1in 98.1WH / KG

* Internal resistance measured at AC, 1KH z after 50% charge.
 ** Charge time approximately 6 hours.
 *** 60±25% R.H. Bare Cell

 SAFE, RESILIENT AND RELIABLE

 LONG BATTERY LIFETIME & MAINTENANCE FREE

 HIGH ENERGY DENSITY

 FAST CHARGE CAPABILITY
1C CHARGE

 19" RACK MOUNTING OPTION,
MODULAR DESIGN AND
LIGHT WEIGHT

NCPB 48-200BP

NANO CRYSTAL NCPB BATTERY™ PACK

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TECHNICAL SPECIFICATIONS

COMBINATION METHOD	15S2P	MAX CONTINUOUS CHARGE / DISCHARGE CURRENT	100A / 100A
RATED CAPACITY	Typical 200Ah, Min. 100Ah	OPERATING TEMPERATURE RANGE ***	Charge: 0 °C - 45 °C (32 °F - 113 °F) Discharge : -20 °C - 55 °C (-4 °F - 131 °F)
OPERATING VOLTAGE	49.5 - 50.5V	STORAGE TEMPERATURE RANGE	< 12 months: 10 °C - 35 °C (50 °F - 95 °F) < 3 months: 10 °C - 45 °C (50 °F - 113 °F) < 7 days: 20 °C - 65 °C (68 °F - 149 °F)
DISCHARGE CUT-OFF	40.5 - 42.5V	WEIGHT	86kg (189.6 lbs) including case
CHARGING VOLTAGE	53.2 - 54V	DIMENSIONS (W X H X D)	442mm x 250mm x 450mm 17.4in x 9.8in x 17.2in
INTERNAL IMPEDANCE *	≤ 50mΩ	VOLUMETRIC ENERGY	183 WH / L
STANDARD CHARGE **	Constant current 40A Constant voltage 53.2 - 54V 0.01CA cut-off	GRAVIMETRIC SPECIFIC ENERGY	106 WH / KG
STANDARD DISCHARGE	Constant current 40A End voltage - 40.5 - 42.5V		

* Internal resistance measured at AC, 1KH z after 50% charge.
 ** Charge time approximately 6 hours.
 *** 60±25% R.H. Bare Cell



SAFE, RESILIENT AND RELIABLE



LONG BATTERY LIFETIME & MAINTENANCE FREE



HIGH ENERGY DENSITY



FAST CHARGE CAPABILITY
1C CHARGE



19" RACK MOUNTING OPTION,
MODULAR DESIGN AND
LIGHT WEIGHT

NCTB 48-50BP

NANO CRYSTAL NCTB BATTERY™ PACK

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Ampowr offers simple, unparalleled drop-in high performance Nano Crystal Battery Packs, built for use in variety of power systems worldwide.


TECHNICAL SPECIFICATIONS


NOMINAL VOLTAGE	48V
RATED CAPACITY	50Ah
ENERGY	2496Wh
RESISTANCE	≤ 65mΩ
EFFICIENCY	0.99
CYCLE LIFE	>10,000 cycles @1C, 80%
SELF DISCHARGE	DOD 2% per Month
MAX. MODULES IN SERIES/ PARALLEL	40P / 20S
CONTINUOUS DISCHARGE CURRENT	100A
PULSE DISCHARGE CURRENT	200A
REC. VOLT. DISCONNECT	(<1S) 30V
BMS DISCHARGE CUT-OFF VOLTAGE	30V
RECONNECT VOLTAGE	40V
SHORT CIRCUIT PROTECTION	200-500us

DISCHARGE TEMP.	-40°C to 60°C (-40°F - 140°F)
CHARGE TEMP.	-40°C to 60°C (-40°F - 140°F)
STORAGE TEMP.	-10°C to 35°C (14°F - 95°F)
BMS HIGH TEMP. CUT-OFF	75°C (167°F)
DIMENSION (W×D×H)	442mm x 483.5mm x 178mm 17.4in x 19in x 7in
WEIGHT	45kg (99.2lbs)
TERMINAL TYPE	M6
BATTERY HOUSING	Cold rolled steel sheet
HOUSING PROTECTION	IP20
CELL TYPE-CHEMISTRY	LTO Cell
COMMUNICATION	RS485

CHARGE METHOD	CC-CV
CHARGE VOLTAGE	55V-57V
REC. FLOAT VOLTAGE	55V
REC. CHARGE CURRENT	25A
MAXIMUM CHARGE CURRENT	100A
BMS CHARGE CUT-OFF VOLTAGE	57V

 SAFE, RESILIENT AND RELIABLE

 LONG CYCLE LIFE OPTIONS,
UP TO 25,000 CYCLES
FAST CHARGING, WIDE

 TEMPERATURE RANGE

 EXTREME LONG BATTERY
LIFETIME & MAINTENANCE FREE

 19" RACK MOUNTING OPTION,
MODULAR DESIGN

NCTB 48-65BP

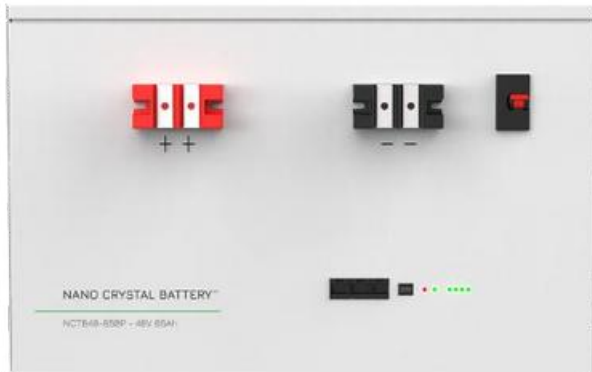
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TECHNICAL SPECIFICATIONS

NOMINAL VOLTAGE	48V
RATED CAPACITY	65Ah
ENERGY	3120Wh
RESISTANCE	≤ 65mΩ
EFFICIENCY	0.99
CYCLE LIFE	>10,000 cycles @1C, 80%
SELF DISCHARGE	DOD 2% per Month
MAX. MODULES IN SERIES/ PARALLEL	20S/50P


CONTINUOUS DISCHARGE CURRENT	100A
PULSE DISCHARGE CURRENT	120A
REC. VOLT. DISCONNECT	(<1S) 30V
BMS DISCHARGE CUT-OFF VOLTAGE	36V
RECONNECT VOLTAGE	40V
SHORT CIRCUIT PROTECTION	200-500us

DISCHARGE TEMP.	-40°C to 60°C (-40°F - 140°F)
CHARGE TEMP.	-40°C to 60°C (-40°F - 140°F)
STORAGE TEMP.	-10°C to 35°C (14°F - 95°F)
BMS HIGH TEMP. CUT-OFF	65°C (149°F)

DIMENSION (W×D×H)	475mm x 400mm x 300mm 18.7in x 15.8in x 11.8in
WEIGHT	55kg (121.2lbs)
TERMINAL TYPE	M6
BATTERY HOUSING	Cold rolled steel sheet
HOUSING PROTECTION	IP20
CELL TYPE-CHEMISTRY	LTO Cell
COMMUNICATION	RS485

CHARGE METHOD	CC-CV
CHARGE VOLTAGE	55V-57V
REC. FLOAT VOLTAGE	55V
REC. CHARGE CURRENT	33A
MAXIMUM CHARGE CURRENT	100A
BMS CHARGE CUT-OFF VOLTAGE	57V

 SAFE, RESILIENT AND RELIABLE

 LONG CYCLE LIFE OPTIONS,
UP TO 25,000 CYCLES

 WIDE TEMPERATURE RANGE

 EXTREME LONG BATTERY
LIFETIME & MAINTENANCE FREE

 19" RACK MOUNTING OPTION,
MODULAR DESIGN