

Eaton 9PHD Marine UPS 30–200 kW

TECHNICAL SPECIFICATIONS

General	
UPS output power rating (1.0 p.f.)	30, 40, 50, 80, 100, 120, 150, 160, 200 kW
Efficiency in double conversion mode	Up to 97%
Efficiency in Energy Saver System (ESS)	> 99%
Inverter/rectifier topology	Transformer-free IGBT with PWM
Audible noise	30–50 kW: < 60 dBA
	80–200 kW: < 65 dBA
	ESS operation: < 47 dBA
Ambient temperature	0°C to 45°C at sea level, higher temperatures are optional
Ingress protection	IP23, Optional: IP33; IP54
Input	
Input wiring	3ph + N + PE / 3ph + PE
Nominal voltage rating (configurable)	380 V-480 V, 50/60 Hz
With optional transformer	208 V- 690 V, 50/60 Hz
Input voltage range	Rectifier input + 20%, if voltage > 440 V +10% Low -15% at 100% load, -40% at 50% load without battery discharge Bypass +10% - (-15%)
Input frequency range	40-72 Hz
Input Power Factor	0.99
Input ITHD	30 kW: < 4.5%
	40-200 kW: < 3%
Soft start capability	Yes
Internal backfeed protection	Yes
Battery	
Battery type	VRLA, Ni-Cd
Charging method	ABM technology or Float
Temperature compensation	Optional
Battery nominal voltage (VRLA)	From 432 V (36 x 12 V, 216 cells) to 480 V (40 x 12 V, 240 cells) Note: Strings with different battery voltage may not be paralleled!
Charging current maximum*	30–50 kW 29.3 A
	80–100 kW 58.6 A
	120–150 kW 87.9 A
	160–200 kW 117.2 A
Battery start capability	Yes

* when load level ≤ 40 kW/UPM

Output	
Output wiring	3ph + N + PE/ 3ph + PE
Nominal voltage rating (configurable)	380 V-480 V, 50/60 Hz
With optional transformer	208 V- 690 V, 50/60 Hz
Output UTHD	< 1% (100% linear load)
	< 5% (reference non-linear load)
Rated output power factor	1.0
Permitted load power factor	0.8 lagging - 0.8 leading
Overload on inverter	10 min 102-110%;
	60 sec 111-125%;
	10 sec 126-150%
	300 ms > 150%.
Overload when bypass available	On battery mode 300 ms > 126%
	Continuous < 125%, 10 ms 1000% Note: Bypass fuses may limit the overload capability!

Accessories

Accessories for UPS:

Internal transformers; Cabinet protection IP33, IP54; ATS automatic transfer switch; Single feed kit; Earth fault monitoring; 24V Emergency Power Off (EPO); Special system voltages

Accessory cabinets:

Marine battery cabinets with long-life batteries; Matching transformer cabinet for one or two transformers; External maintenance bypass switch.

Communication options:

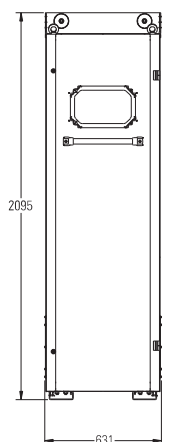
Web/SNMP; ModBus/Jbus; Industrial Relay

Communications	
MiniSlot	4 communication bays
Serial ports	Built-in host and device USB
Relay inputs/outputs	5 relay inputs and dedicated EPO
	1 relay output

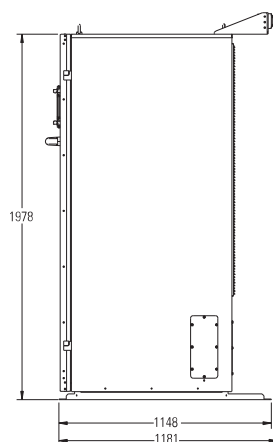
Compliance with standards

Safety (CB certified)	IEC 62040-1
EMC	IEC 62040-2
Performance	IEC 62040-3
Marine class certificates are available from any class example: DNV, ABS, Lloyds Register Bueray Veritas etc	

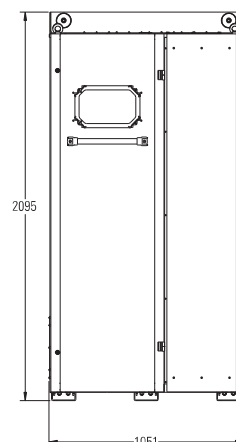
Due to continuous product improvement programmes, specifications are subject to change without notice.



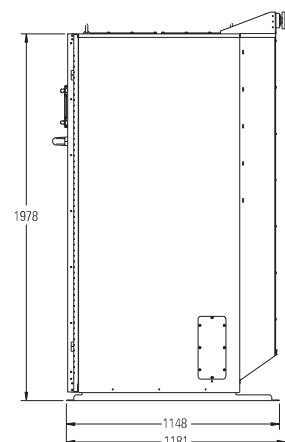
Eaton 9PHD Marine 30 kW–100 kW



Rear Exhaust



Eaton 9PHD Marine 80 kW–200 kW



Top Exhaust