

H⁴ Hybrid Power System

Technical Specifications, October 2025

All specifications are preliminary and subject to change

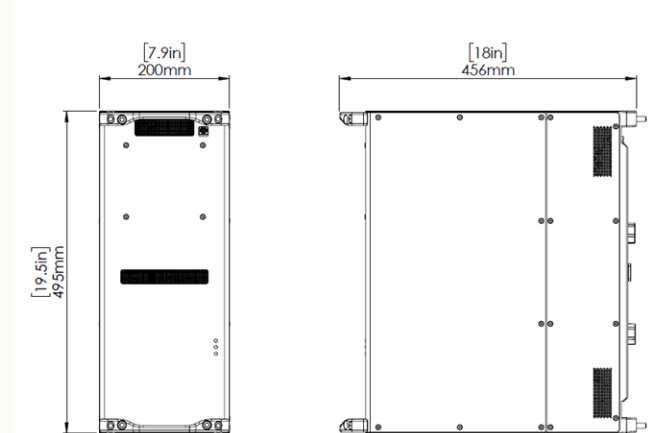
10kW Inverter tech specs

H⁴V10000

Category	Specification	Unit	Value	Notes
Inverter	Input voltage range	V DC	20-30	
	Nominal battery voltage	V DC	25.6	
	Output voltage	V AC	230	±2%
	Output frequency	Hz	50/60	±0.01%
	Continuous output at 25°C	W	10000	At unity power factor
	Continuous output at 40°C	W	10000	At unity power factor
	Continuous output at 65°C	W	TBA	At unity power factor
	Peak power	W	16000	3 secs
	Input current	A DC	404	
	Maximum continuous Output current	A AC	44	
	Power factor range		-1 to 1	
	Maximum output fault current	A	100	
	Maximum efficiency	%	97	
	Zero load power	W	20	Ideally, TBA
	AC Output Connector		Proprietary	Connection to Rack
	Solar charge input voltage	V DC	100	
	Solar charge input max current	A	250	
	Solar charge input connector		Proprietary	
	Fan speed	RPM	0-13000	Automatically controlled
Communications	NMEA2000		Yes	Micro-C
	USB		Yes	USB-A
	Ethernet		Yes	10/100
	Fibre Optic		Yes	IF-D91B "Connector less" Generator controller
Physical	Dimensions	HxWxD mm	495x200x456	Does not include rack
	Weight	kg	24	
Environmental	Protection		IP20	
	Operating temp - Full power	°C	-30 to +45	
	Operating temp	°C	-30 to +60	
	Operating humidity	%	TBA	
	Storage temp	°C	-40 to +80	
Standards & Compliance	Safety		EN 62477-1	
	Emissions		IEC 60945	
	RoHS		IEC 63000	
	ABYC		E-11, A-31	
			EESS AS/NZS 4417.2 –	
	RCM		Level 1 equipment	



Dimensional Drawing



Placeholder (this is the battery)

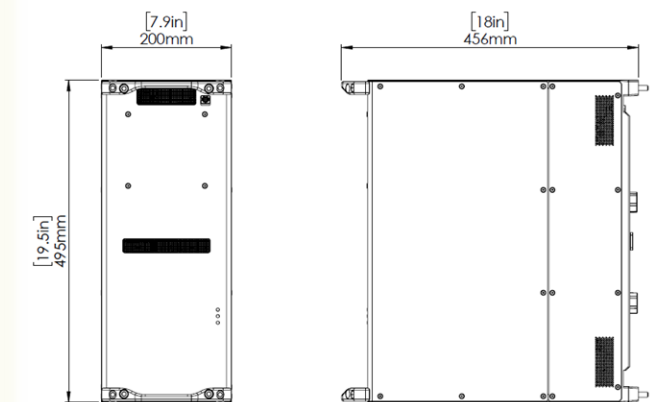
200A battery charger tech specs

H⁴C200

Category	Specification	Unit	Value	Notes
Charger	Max Charge Current	A DC 200		
	Max Alternator Input current (x2)	A 250		
	Full load consumption	W 5000		
	Alternator Input disconnect switches	Yes		
	Alternator Input load dump protection	Yes		
	Alternator input needs extnal protection module	Yes		
	Alternator Input connector			Note the connector type
Shore Power Input	Fan speed	RPM 0-13000		Automatically controlled
	Input Voltage	V AC 85-264		
	Input Frequency	Hz 50/60		
	Max input current	A 22		
	Shore power input connector	Proprietary		Connection to Rack
	Isolation transformer	Built in		External transformer not required
	Dimensions	HxWxD mm	495x200x456	Does not include rack
Physical	Weight	kg	24	TBD
	Protection	IP20		May be able to increase to IP30
Environmental	Operating temp - Full power	°C	-30 to +45	
	Operating temp	°C	-30 to +60	
	Operating humidity	%	TBA	
	Storage temp	°C	-40 to +80	
			EN 62477-1 / EN 60335-2-29	
			IEC 60945	
Standards & Compliance	Safety		IEC 63000	
	Emissions		E-11, A-31	
	RoHS		EESS AS/NZS 4417.2 – Level 1 equipment	
	ABYC			
	RCM			



Dimensional Drawing



Placeholder (this is the battery)

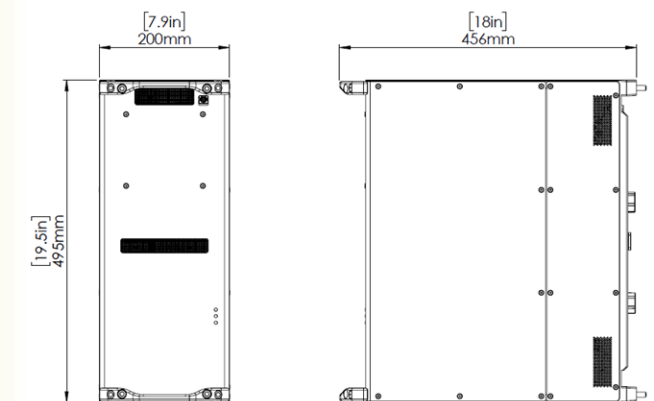
8kWh battery tech specs

H⁴B8000

Category	Specification	Unit	Value	Notes
Battery	Nominal voltage		V 25.6	
	No load voltage, fully charged		V 26.4	
	Nominal capacity (Cn)		Ah 314	
	Nominal energy		Wh 8000	
	Chemistry		LiFePO4	
	Cell type		Prismatic	
	BMS		Yes	Built in
	Battery fuse		Yes	Built in
	Safety Disconnect switch (x2)		Yes	Built in
	Current measurement shunt		Yes	Built in
Physical	Dimensions	HxWxD mm	495x200x456	Does not include rack
	Weight	kg	65	
Environmental	Protection		IP55	
	Operating temp (discharge)		°C -30 to +60	
	Operating temp (charge)		°C 0 to +60	
	Operating humidity		% TBA	
	Storage temp (recommended)		°C -20 to +35	
Logging	Temperature logging		°C	Log temp per degree change for lifetime of battery
Standards & Compliance	Batteries		IEC 62619, IEC 62620	
	Small Craft Lithium Ion Batteries		ISO 23625	
	Emissions		IEC 60945	
	Transport		UN38.3	
	RoHS		IEC 63000	
	ABYC		E-10, E-11, E13	
	RCM		AS/NZS 3004.2:2014 – Section 2.9.3	



Dimensional Drawing

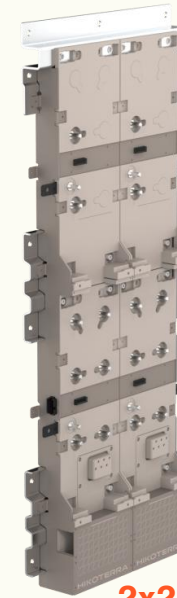


Mounting rack configs & tech specs

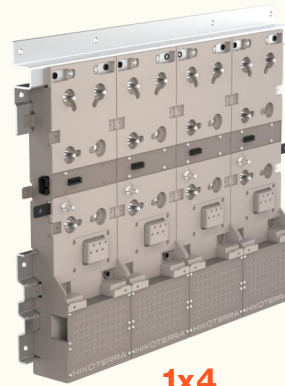
Category	Specification	Unit	Value	Notes
Capacity	Minimum height		1 slots	
	Maximum height		2 slots	
	Minimum width		3 slots	
	Maximum width		8 slots	
	Minimum Capacity 5kW inverter		3 slots	1x 5kW inverter, 1x charger, 1x battery
	Minimum Capacity 10kW inverter		4 slots	1x 10kW inverter, 1x charger, 2x battery
	Maximum capacity		16 slots	
	Minimum Inverters		1	
	Max inverters single phase		2	
	Max inverters three phase		3	
	Minimum charger		1	
	Maximum charger		2	
	Minimum batteries per 5kW inverter		1	
	Minium batteries per 10kW inverter		2	
	Maximum batteries		12	96 kWh
	DC Connection studs		M6/M8/M10	
Dimensions	2x2 Rack (incl. Modules)	HxWxD mm	1319x522x512	Some clearances for heat and cable bend radius will be required
	1x4 Rack (incl. Modules)	HxWxD mm	746x946x512	Some clearances for heat and cable bend radius will be required
	Additional width per rack slot	mm	212	
	Other rack configurations	TBA	TBA	Other rack configuration dimensions pending
Standards & Compliance	Safety		IEC 60335-1	
	Emissions		IEC 60945	
	RoHS		IEC 63000	
	ABYC		E-11	
	RCM		EESS AS/NZS 4417.2 – Level 1 equipment	
	AS/NZS		AS/NZS 60335.1 & AS/NZS 3004.2:2014	



2x4

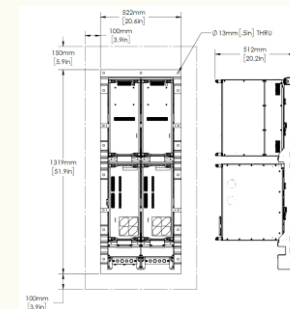


2x2

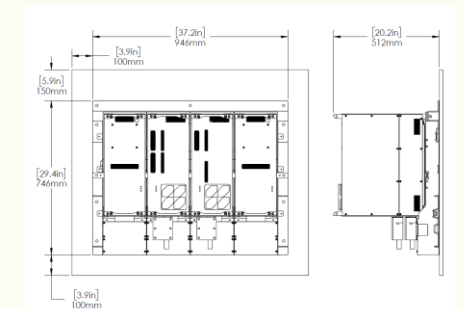


1x4

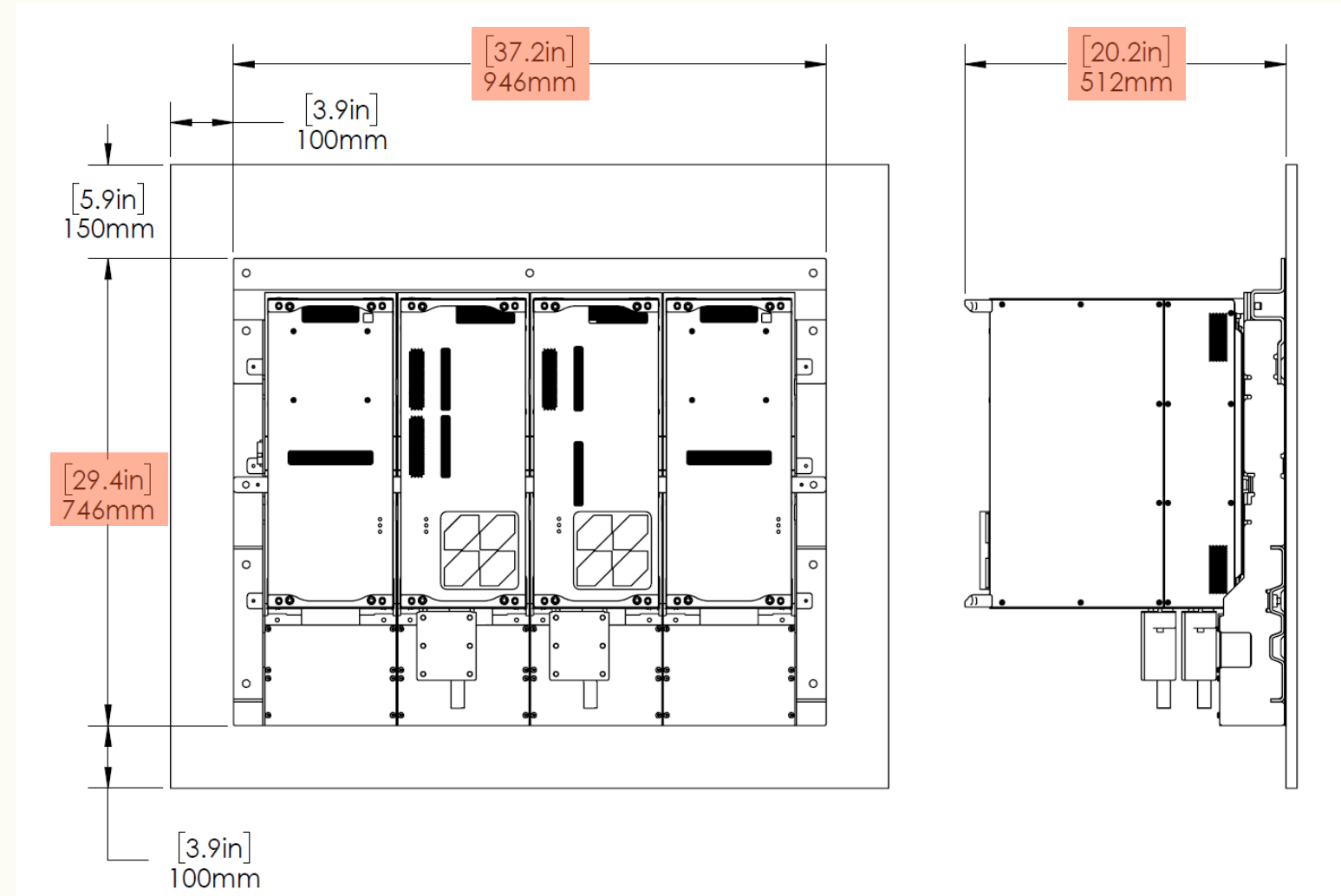
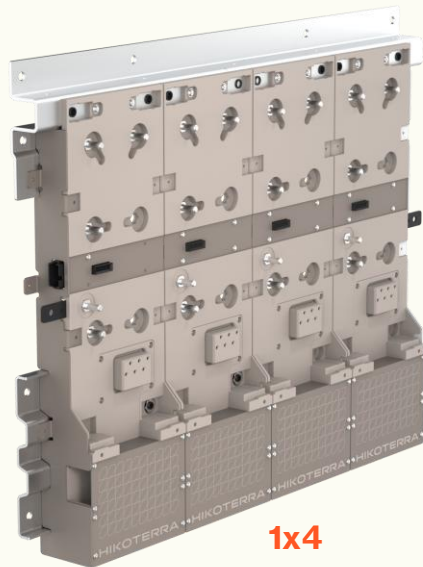
Dimensional Drawing 2x2



Dimensional Drawing 1x4



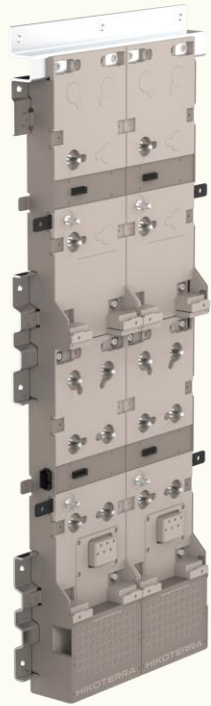
Example system dimensions 1x4



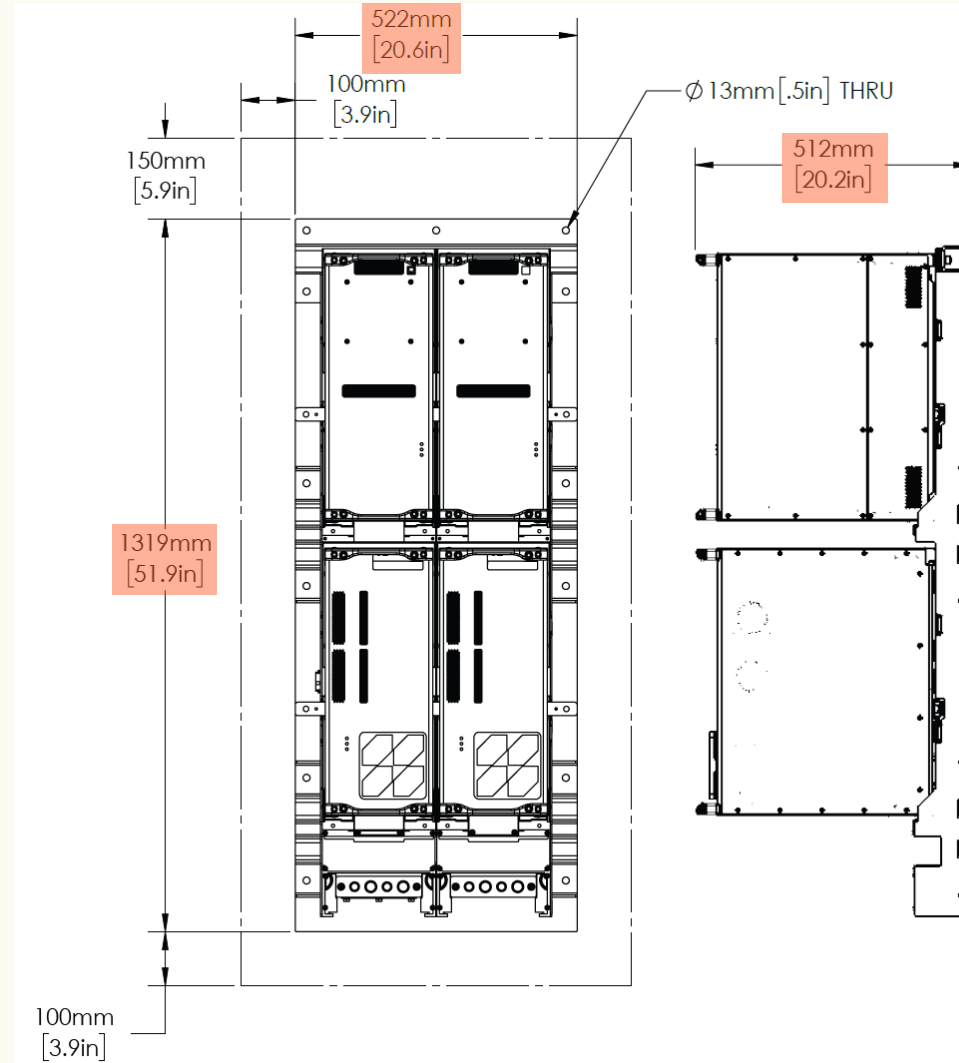
1x4 Rack(incl. Modules)

HxWxD mm 746x946x512

Example system dimensions 2x2



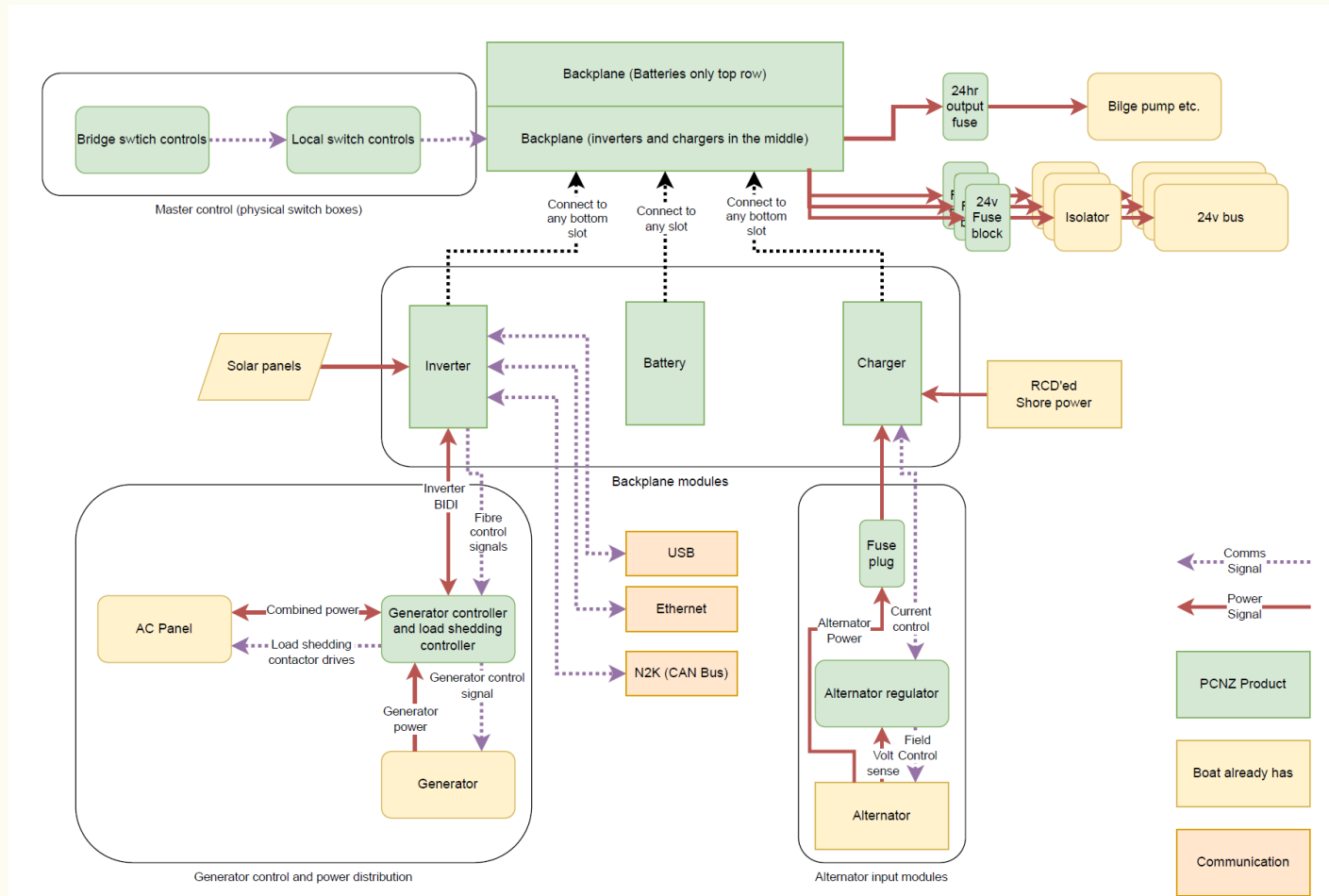
2x2



2x2 Rack(incl. Modules)

HxWxD mm 1319x522x512

Functional Block Diagram





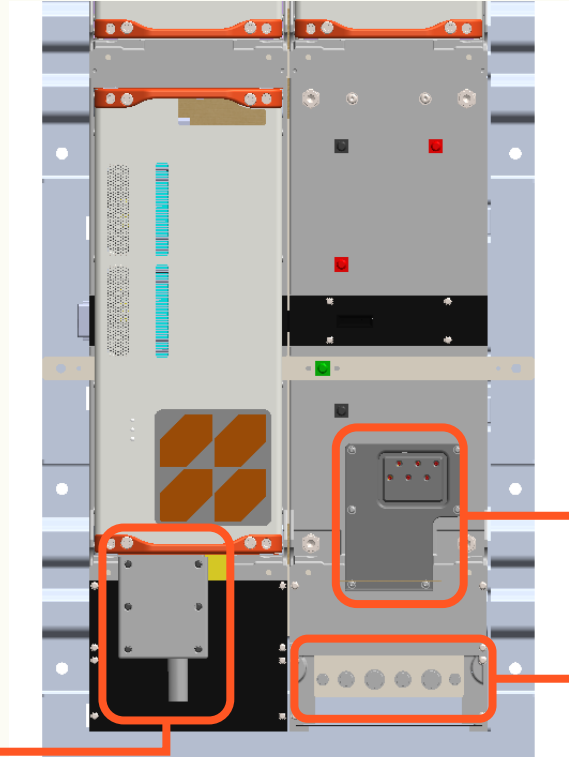
AC & DC Connections

AC & DC In

AC in. Shore power to charger

DC in. Alternator to charger.

DC in. Solar to inverter



AC Out

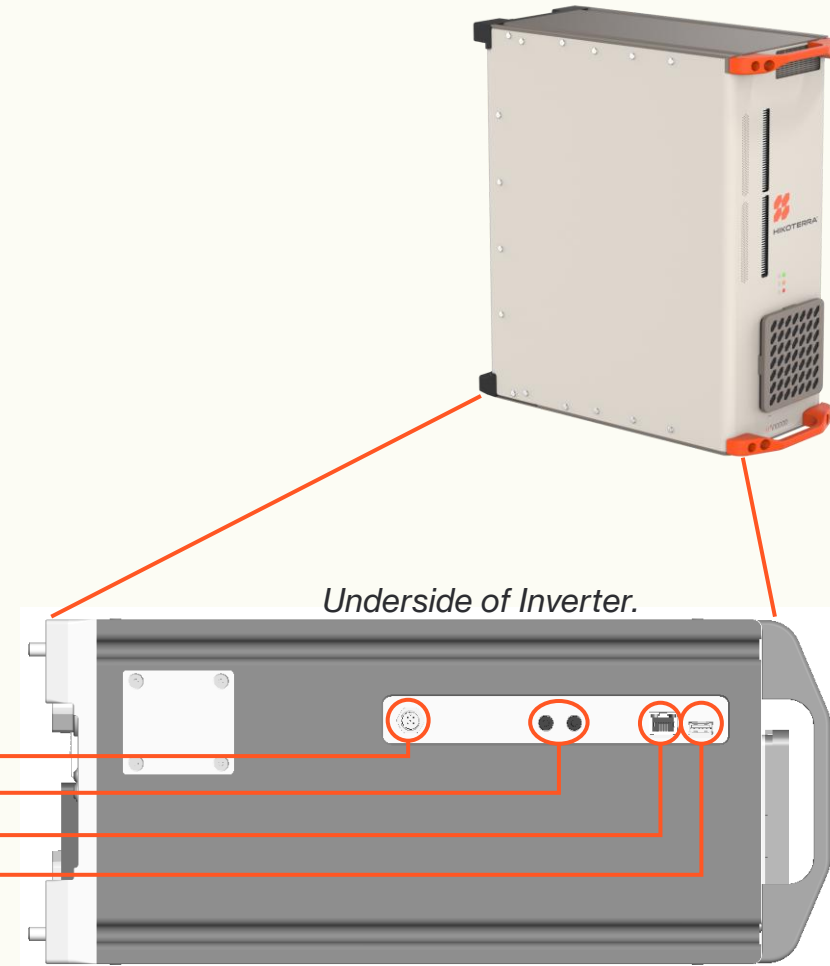
DC Out
(6/8/10mm)



Comms & I/O

All accessible comms on Inverter.

Port	Connector	Function
NMEA2000	Micro C	NMEA2000 communication for MFD Integration
Fibre Optic	IF-D91B	"Connector less" Generator controller
Ethernet	RJ45 10/100	Configuration & connection to comms gateway
USB	USB-A	SW Updates via USB stick, configuration, logging



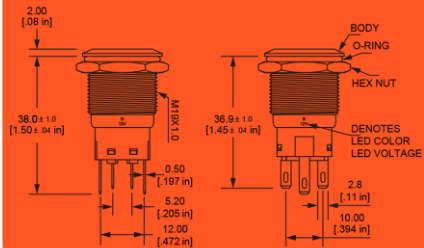


Control panel & switches

Function	Control	Location	Note
System Enable	AC&DC	Rack	Within 1m of rack
DC Isolator	DC	Bridge	Controls an ML downstream of 24hr circuit
AC Enable	AC&DC	Bridge	Controls inverter output, on/off
Alarm Mute	Alarm	Bridge	Mutes alarm
Alarm buzzer	Alarm	Bridge	

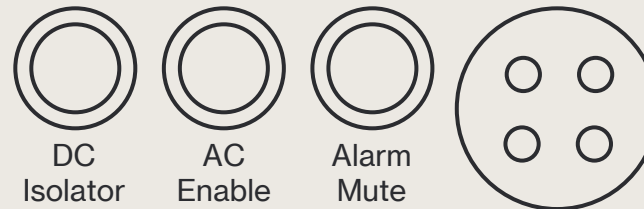
Recommended Switch

Langir L19A

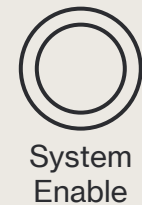


Gold contacts required

Bridge



Rack

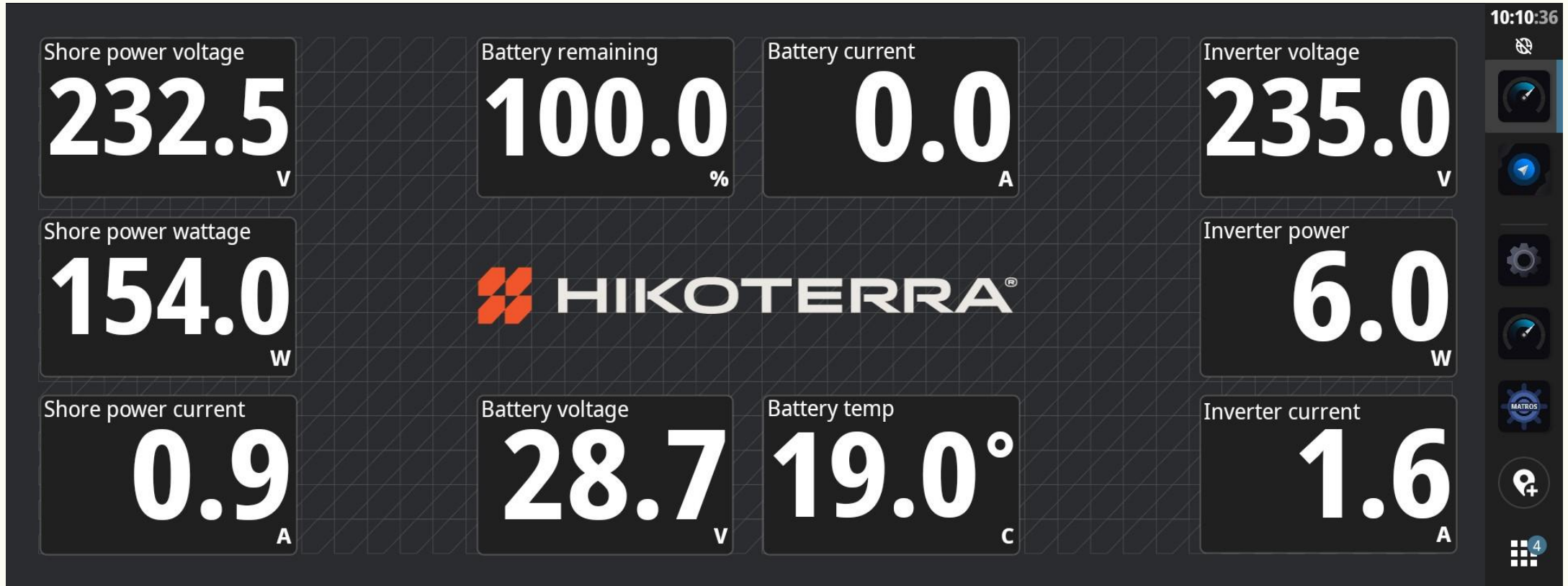


Deutsch
connector

Integration, NMEA2000-Supported PGN's

PGN	Description
59392	ISO_ACKNOWLEDGEMENT
59904	ISO_REQUEST
60416	ISO_TRANSPORT_PROTOCOL
60928	ADDRESS_CLAIMED
65240	ISO_COMMANDED_ADDRESS
126208	COMMAND_GROUP_FUNCTION
126464	PGN_LIST
126983	ALERT
126984	ALERT_RESPONSE
126992	SYSTEM_TIME
126993	CONFIGURATION_INFORMATION
127491	ELECTRIC_ENERGY_STORAGE_STATUS_DYNAMIC
127503	AC_INPUT_STATUS
127504	AC_OUTPUT_STATUS
127506	DC_DETAILED_STATUS
127507	CHARGER_STATUS
127508	BATTERY_STATUS
127509	INVERTER_STATUS
127510	CHARGER_CONFIGURATION_STATUS
127511	INVERTER_CONFIGURATION_STATUS
127512	AGS_CONFIGURATION_STATUS
127513	BATTERY_CONFIGURATION_STATUS
127514	AGS_STATUS
127744	AC_POWER_CURRENT_PHASE_A
127747	AC_VOLTAGE_FREQUENCY_PHASE_A
127750	CONVERTER_STATUS
127751	DC_VOLTAGE_CURRENT
129033	LOCAL_TIME_OFFSET
130060	LABEL
130567	WATERMAKER
127502	SWITCH BANK CONTROL (backlog)
127501	BINARY STATUS REPORT (backlog)

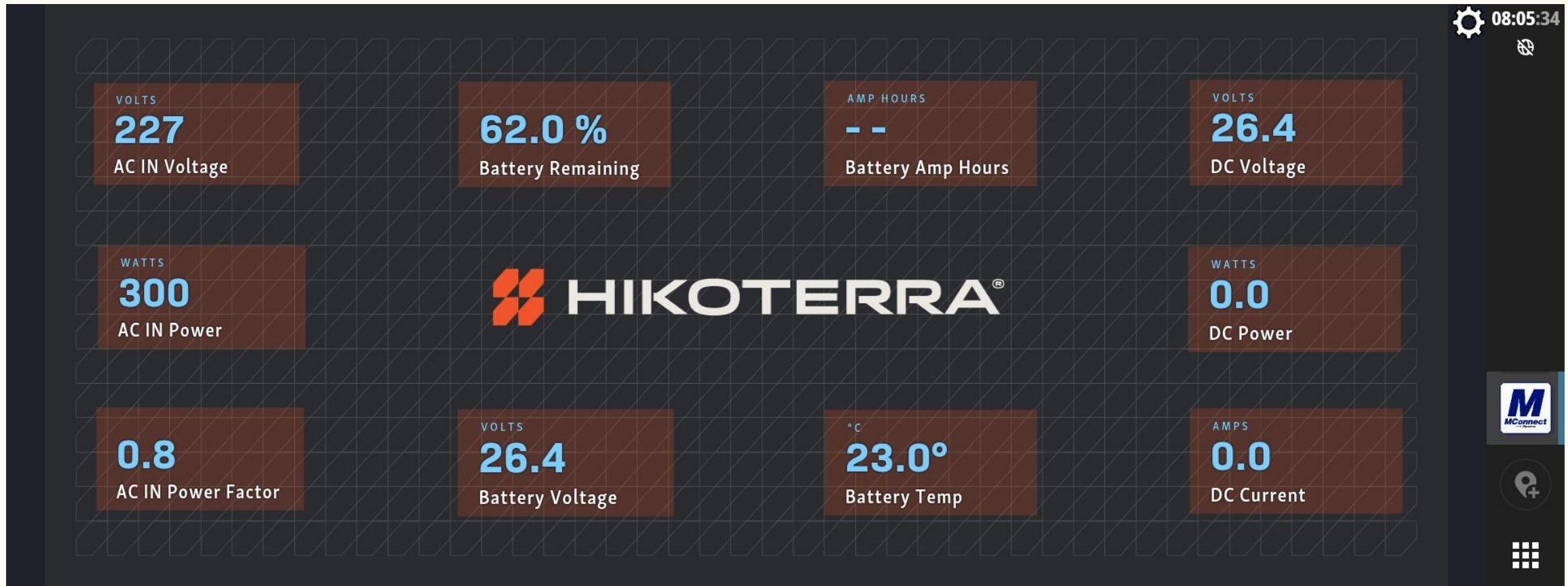
MFD Integration, NMEA2000, Simrad NSX



Screenshot taken from H⁴ system & Simrad NSX 15UW

MFD Integration-HTML5-Maretron MConnect

Maretron MConnect, connected via ethernet to Simrad NSX, also compatible with most MFD's



Screenshot taken from H⁴ system & Simrad NSX 15UW

System configuration-H4 system connected via NMEA2000 to MConnect WSV100, MConnect connected to Simrad MFD via ethernet. Gauges & graphics on M-Connect editable by installer using Maretron built in editor. Richer graphics are available over our basic example. More info at <https://www.maretron.com/products/mconnect/>