

PROJECT:

DISTRIBUTOR:

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CONTRACTOR:

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**STANPRO**

**SPEC SHEET**

## FEATURES AND SPECIFICATIONS

### CIRCUITRY

- Dual-conversion, online topology (AC → DC → AC)
- Rectifier converts incoming AC to DC for inverter supply and battery charging
- Inverter delivers regulated, isolated AC output
- Full galvanic isolation providing a fully isolated and referenced output
- Eliminates induced voltages, neutral noise, and common-mode/normal-mode interference
- Wide input voltage range prevents unnecessary battery discharge
- Continuous monitoring and conditioning of incoming power
- Corrects under-voltage, over-voltage, sags, spikes, and power disturbances
- Pure sine wave output with low harmonic distortion at rated voltage
- High efficiency operation enabled by IGBT technology and IPRO control
- High Efficiency Mode automatically switches between online and bypass modes
- Automatic return to online mode in under one second when irregularities are detected
- DSP-based digital control
- CPU-based control with flash memory architecture
- Advanced battery management prevents overcharging and deep discharging
- Automatic battery testing and boost charging for balanced recharge
- Built-in protection against short circuit, over-temperature, over-voltage, overload, and back feed
- SNMP-based remote monitoring and management (included)
- Real-time graphical monitoring, event logging, and statistical reporting
- Remote alerts via SMS, email, network management systems
- Optional 12-pulse rectifier for units under 60 kVA (standard 6-pulse otherwise)

### MECHANICAL

- Three-phase UPS designed for centralized power protection and distribution
- Modular, slide-out construction for major components (rectifier, inverter, static switch)
- Mean time to repair under 30 minutes; supports easy field upgrades
- Supports external battery cabinets for extended runtime
- Designed for industrial environments and unstable generator operation
- Front-accessible LCD display and control interface
- All operating parameters viewable without opening the front door
- Inverter power switch mechanically protected behind a locked front door
- Flexible system configuration options to meet site-specific installation requirements

### COMPLIANCES

- cUL to CSA 22.2 #141
- Meets requirements of ICES-005

## ORDERING GUIDE

Series Runtimes (minutes)	Input Voltage (VAC)	Capacity Ratings (KW)	Output Voltage (VAC)	1 Monitor	Output Distribution	# of Breakers	Option
SNB30 SNB60 SNB90 SNB120	BA - 208/120 KE - 480/277 SH - 600/347	8 12 16 24 32 40 48	BA - 208/120 KE - 480/277 SH - 600/347	1 - SNMP with TCP/IP, BAC-net/IP	0 - No cabinet Normally ON 1 - Distribution cabinet 2 - Distribution Cabinet w/ Normally OFF bus 3 - No cabinet Normally OFF	Blank - No breaker 1 2 3 4 5 6 7 8 9 10 11+ <sup>1</sup>	MIP - Modbus TCP

<sup>1</sup> Contacter le fournisseur pour plus de détails

## GENERAL DATA

Topology		True On-Line, Dual Conversion						
Nominal Output at PF=0.8 (kW)		8	12	16	24	32	40	48
Overall Efficiency (%)	100% load, 0.9 PF	90	90	90	90	90	90	90
	50% load, 0.9 PF	88	88	88	88	88	88	88
True Galvanic Isolation from Input to Output		Yes						
Heat Rejection at 100% Load, 0.9 PF and Charged Battery (BTU/hr (kW))		3 000 (0.89)	4 500 (1.3)	6 100 (1.8)	9 100 (2.7)	12 100 (3.6)	15 200 (4.4)	18 200 (5.3)
Audible Noise Level (at 1m)	dB (A)	< 65 at 1m						
Operating Temperature Range	ELI	0°C to 40°C (32°F to 104°F)						
	Battery	Optimum 20°C to 25°C (68°F to 77°F) Higher temperatures reduce battery life expectancy.						
Storage Temperature Range	ELI	-20°C to 40°C (-4°F to 104°F)						
	Battery	-20°C to 40°C (-4°F to 104°F)						
	VLRA Storage Period	Storage time is 6 months at 25°C (77°F). Higher temperatures reduce battery storage time. Refer to Installation Manual Section 3.3 for details.						
Relative Humidity		0% to 90%, non-condensing						
Maximum Altitude	Without Derating	<1 500m (5 000ft) No derating						
Enclosure	Type	Indoor (NEMA 1) [Drip shield standard]						
	Safety	Internal dead front construction						
	Cooling	Forced air						
	Colour	ELI: RAL7035, BBU: Pantone 2965U + Pantone Cool Gray 5°C)						
Installation	Rigging	Suitable for handling by forklift						
	Mounting	Casters and leveling feet [Optional seismic rated mounting available]						
Installation and Maintenance Access		Front access required for normal maintenance						
	Conduit Access	Bottom entry standard [Optional top entry]						
Electrostatic Discharge Immunity		4kV contact / 8kV air discharge						

## RECTIFIER

<b>Configuration</b>		6 Pulse standard, 12 pulse optional						
<b>Efficiency</b>		96%						
<b>Input</b>	Voltage	208/120, 480/277, 600/347 VAC 3P4W + Ground, (± 20% without battery discharge)						
	Frequency	45 - 65 Hz						
	Power Factor	0.8 at full load						
	Inrush Current	Limited by soft-start circuit						
	Power Walk-in	20 Seconds						
<b>Output</b>	Voltage	208/120, 480/277, 600/347 VAC 3P4W + Ground						
	Output Voltage Tolerance	± 1%						
	DC Ripple Voltage	± 0.5%						
	DC Ripple Current	Max. 5% of battery capacity expressed in amps						
<b>Nominal Output at PF=0.8 (kW)</b>		8	12	16	24	32	40	48
<b>Nominal Input Current(A)1</b>	Vin = 208/120	36	54	71	107	142	178	213
	Vin = 480/277	16	24	31	47	62	77	93
	Vin = 600/347	13	19	25	37	50	62	74
<b>Maximum Current THD</b>		12 Pulse with filter: 9%; 6 Pulse: 30%						

## BATTERY

<b>Nominal Output at PF=0.8 (kW)</b>	8	12	16	24	32	40	48
<b>Battery Compatibility</b>	Sealed lead-acid						
<b>Number of Cells</b>	174 Cells						
<b>Voltage Range</b>	295 - 406 VDC						
<b>Float Voltage at 20°C</b>	392 VDC						
<b>Low voltage Level</b>	320 VDC						
<b>Minimum Discharge Voltage</b>	295 VDC						
<b>Boost Charge Voltage</b>	406 VDC (Disabled by default)						
<b>Maximum Charge Current (ADC)</b>	3	4	5	8	10	13	15
<b>Recharge Time for 90-minute Battery to 90% Capacity</b>	Less than 10 Hours						
<b>Battery Ground Fault Detection</b>	Optional						
<b>Automatic and Manual Battery Test</b>	Standard						

## INVERTER

<b>Nominal Output at PF=0.8 (kW)</b>		8	12	16	24	32	40	48
<b>DC voltage Input Range</b>		295 - 420VDC						
<b>Nominal Output Voltage</b>		208/120VAC or 480/277 and 600/347VAC, L-L VAC 3 phase, 4 wire + ground						
<b>Maximum Output Wattage (kW)</b>		8	12	16	24	32	40	48
<b>Nominal Output Current (A) (Linear Load)</b>	Vout = 120/208 VAC	28	42	56	84	112	139	167
	Vout = 277/480 VAC	12	19	25	37	49	61	73
	Vout = 347/600 VAC	10	15	20	29	39	48	58
<b>Inverter Bridge</b>		IGBT technology via Pulse Width Modulating						
<b>Output Isolation Transformer</b>		Standard						
<b>Output Power Factor</b>		0.8						
<b>Frequency Lock Range</b>		50 / 60 Hz $\pm$ 7%						
<b>Output Waveform</b>		True Sine Wave						
<b>Output Voltage Tolerance</b>	Static	$\pm$ 1%						
	Load step 0% - 100% - 0%	< $\pm$ 20%, recovering to within $\pm$ 3% in 3 cycles						
	Load step 0% - 50% - 0%	< $\pm$ 10%, recovering to within $\pm$ 3% in 3 cycles						
	100% unbalanced load (Ph-N)	$\pm$ 3%						
<b>Output Voltage Distortion</b>	100% linear load	< 2% THD maximum						
	100% non-linear load	< 3% THD maximum						
<b>Crest Factor Capability</b>		> 3:1						
<b>Phase Displacement</b>	100% balanced load	120° $\pm$ 1%						
	100% unbalanced load	120° $\pm$ 5%						
<b>Output Frequency</b>	Free running	50 / 60 Hz $\pm$ 0.1 Hz						
<b>Overload Capability</b>	< 110%	Continuous						
	110 - 125%	15 Minutes						
	125 - 150%	5 Minutes						
	> 150%	30 Seconds						
<b>Efficiency (100% Load)</b>		94%	94%	94%	94%	94%	94%	94%

## STATIC BYPASS

<b>Input Configuration</b>		Common to rectifier (standard) or dual input (optional)	
<b>Primary Components</b>		Full load rated static switch, back-feed protection and internal maintenance by-pass	
<b>Voltage Range</b>		$\pm$ 20% of input voltage (line to neutral)	
<b>Frequency Range</b>		45 - 55 Hz / 55 - 65 Hz	
<b>Efficiency</b>		98%	
<b>Transfers Time</b>	Inverter to bypass	0 ms	
	Bypass to inverter	0 ms	
<b>Overload Capability</b>	200% of ELI rating	10 Seconds	
	400% of ELI rating	1 Second	
<b>Short Circuit Capability</b>		1 000% for 50 ms (non-repetitive)	
<b>Isolation Transformer</b>		Yes	

## EXTERNAL INTERFACE

<b>Serial Communication</b>	RS-232 & RS-485
<b>Ethernet Communications</b>	SNMP, Modbus TCP/IP integrated
<b>Other</b>	AS400 Dry Contacts
<b>Input Signals</b>	Emergency Power Off contacts provided (optional switch)

## FRONT PANEL CONTROLS, SIGNALS & ALARMS

<b>Active mimic Diagram</b>	Represents the operational status of the system, with integrated LEDs and power flow indicators.
<b>LED display</b>	Displays operational and fault conditions
<b>Audible alarm</b>	Audible signal active when any alarm condition is present.
<b>LCD Display</b>	Display of metering functions and event history (multi-language)
<b>Push-Buttons</b>	Inverter On, Inverter Off, Inverter Control, Up key, Down key, Enter key

## PHYSICAL DATA

Nominal Output at PF=0.8 (kW)			8	12	16	24	32	40	48	
<b>Inverter Cabinet</b>	Dimension	W x D x H	635 mm x 889 mm x 1 803 mm (25" x 35" x 71")							
	Weight		380 kg (838 lbs)	415 kg (915 lbs)	450 kg (992 lbs)	580 kg (1 279 lbs)	650 kg (1 433 lbs)	710 kg (1 565 lbs)	780 kg (1 716 lbs)	
<b>Battery Cabinet</b>	Dimension	W x D x H	1 Cabinet (8,12, 16, 24, & 32 kW): (52" x 34" x 76")					2 Cabinets (40 & 48 kW): 1 321 mm x 864 mm x 1 930 mm (52" x 34" x 76")		
	Weight		814 kg (1 795 lbs)	1 000 kg (2 205 lbs)	1 204 kg (2 655 lbs)	1 398 kg (3 083 lbs)	1 764 kg (3 890 lbs)	2 Cabinets: 1 398 kg (3 083 lbs)		