• Online double conversion technology with DSP control

SPECTRA is applied online double conversión technology to effectively insulate against network disturbances and enable higher load uptime. A Digital Signal Processor (DSP) control provides an improved solution with high performance.

• Advanced control with Adaptive Feed Forward Cancellation (AFC) technology for very low harmonic distortion

By cancelling input current and output voltage .harmonics, the harmful effects of harmonic injection into the power network is eliminated and it will enhance load integrity.

• Very low input current distortion (THDi < 1%)

AFC cells are used to achieve extremely low distortion values. Low input current distortion rat THDi < 1% at full load and also THDi < 5% with very small load (10% of load). This will avoid the distortion of the electrical network upstream of the UPS, resulting in savings from the optimal use of the cables and protection devices in the electrical network.

• Input power factor 0.99 at 10% load

Lower power losses would result in reduced consumption, lower operation and maintenance costs.

• Output efficiency up to 95%

Applied with DSP controller and the forth generation IGBT transistors, the UPS can achieve high efficiency of up to 95%. It will save consumed energy due to lower heat losses and make a longer lifespan for the critical components of the unit.

• Space-saving compact design

The use of transformerless technology allows a considerable reduction of the weight and volume of the units.

• Over 60% materials recyclable

The UPS uses more than 60% recyclable materials for being more respectful of the environment.

• Front access makes maintenance and replacement easily

An important consideration has been given to allow generous access to the unit's electronic cards and power components. All the boards are accessible by front panel for easily maintenance and replacement.

• Highly flexibility in single phase/ three-phase set-ups

The UPS is a unit with high flexibility in adapting inputs and outputs, and may easily be set up depending on the requirements of the facility. .

Three-phase input / Three-phase output (III/III) .
Three-phase input / Single phase output (III/I) .
Single phase input / Single phase output (I/I) .
Single phase input / Three-phase output (I/III)

• Parallel redundant operation with up to 4 units

Up to 4 units in parallel can be operated without additional hardware, to accommodate increases in power demand as well as to attain power redundancy with high system integrity.

• Variety of communications and options available

The UPS has provided the following standard communication selections:

. Relay interface . RS-232/485 port
. 1 x SNMP slot
. Modbus RTU / SEC protocol
. 2 x connectors for parallel connection

• Remaining backup time calculation

By using powerful algorithms, an estimated remaining backup time can be calculated and help users for further arrangement in the event of a prolonged power outage.

Spectra 7100 Series 3p/3p Online UPS Selection Guide

MODEL	7.5 K	10 K	15 K	20 K	30 K	40 K
PHASE			3 phase in / 3 phase out			
CAPACITY	7.5 kVA /6kW	10 kVA /8kW	15 kVA /12kW	20 kVA /16kW	30 kVA /24kW	40 kVA /32kW
INPUT						
Nominal Voltage	3 x 208V (3Ph + N)					
Acceptable Voltage Range	+15% or –20%					
Frequency	50/60 Hz ± 5 %					
Total Harmonic Distortion (THDi)	< 1.5% @ 100% load < 2.5% @ 50% load < 6.0% @ 10% load		< 1.0% @ 100% load < 2.0% @ 50% load < 5.0% @ 10% load			
Current Limitation	High overload: PFC Limit (discharging batteries)					
Power Factor	1.0					
INVERTER						
Nominal Voltage	3 x 208V (3Ph + N)					
Precision	Stationary: ±1% ; Transitory: ±2% (load variations 100-0-100%)					
Frequency	50/60 Hz synchronised ±4 % With mains absent ±0.05%					
Max. Synchronisation Speed	±1 Hz/s					
Waveform	Pure Sinewave					
Total Harmonic Distortion (THDv)	<0.5% (Linear Load) ; <1.5% (Non-linear Load)					
Phase Displacement	120º ±1% (balanced load) ; 120º ±2% (imbalances 50% of the load)					
Dynamic Recovery Time	10 ms. at 98 % of the static value					
Admissible Overload	125% for 10 min., 150% for 60 s					
Admissible Crest Factor	3.4 : 1		3.2 :1			2.8 : 1
Admissible Power Factor	0.7 inductive to 0.7 capacitive					
Imbalance Output Voltage @ 100% Unbalanced Loadt	<1%					
Current Limit	High overload, short-circuit: RMS Voltage Limit ; High Crest-Factor current: Peak Voltage Limit					
STATIC BYPASS						
Type	Solid state					
Voltage	3 x 208V (3Ph + N)					
Frequency	50/60 Hz					
Activation Criterion	Microprocessor control					
Transfer Time	Zero					
Admissible Overload	400% for 10 sec.					
Transfer to Bypass	Immediate, for overloads above 150%					
Retransfer	Automatic after alarm clear					
MAINTENANCE BYPASS						
Type	Without interruption					
Voltage	3 x 208V (3Ph + N))					
Frequency	50/60 Hz					
Overall Efficiency (Line mode)	90.5%	91.0%	92.0%	92.5%	93.0%	94.0%
PHYSICAL						
Dimension, D x W x H(mm)	700 x 450 x 1100		805 x 590 x 1320			
Net Weight (kgs)	120		190		200	300
Built-in Battery Type (2x19)	12V 7Ah	12V 9Ah	12V 12Ah	12V 18Ah	-	
Back-up Time (minutes)	14	11	12	9	-	
Net Weight (w/built-in batteries) (Kg)	240	260	350	430	-	

* Product specifications are subject to change without further notice

External Battery Cabinet

	Type 1	Type 2
Dimensions, D x W x H (mm)	700 x 450 x 1100	805 x 590 x 1320
Built-in Battery Type	12V 26Ah	12V 40Ah
Battery Numbers	38 pcs (2 x 19)	
Net Weight (Kg)	380	610

* Product specifications are subject to change without further notice