



**CORAL UPS** IS THE INNOVATIVE POWERTRONIX UPS SERIES OFFERING UNITY OUTPUT POWER FACTOR (iec 62040) FROM 10KVA/KW TO 80KVA/KW RATING, IN A COMPACT FOOTPRINT.

100% DESIGNED AND MADE IN ITALY USING STATE OF THE ART TECHNOLOGIES AND COMPONENTS, **CORAL UPS** ADOPTS TRUE VFI ON LINE DOUBLE CONVERSION PFC TOPOLOGY RESULTING IN THE HIGHEST LEVELS OF RELIABILITY, MAXIMUM PROTECTION AND SUPERIOR POWER QUALITY FOR MISSION CRITICAL LOADS SUCH AS DATA CENTRES, MEDICAL FACILITIES, INDUSTRIAL APPLICATIONS.

WITH A TRANSFORMER FREE DESIGN **CORAL UPS** ACHIEVES TOP EFFICIENCY WHILE ACTIVE POWER FACTOR CORRECTION (PFC) PROVIDES LOW THDi  $\leq 2\%$ , SAVING IN SIZING OF UPFRONT EQUIPMENT (CABLES, SWITCHGEARS, GENERATORS).

FEATURING SUPERVISED BATTERY MANAGEMENT TO EXTEND BATTERY LIFETIME, PARALLEL CAPABILITY PREDISPOSITION TO INCREASE RELIABILITY OR ADD CAPACITY (UP TO 8 UNITS), ELIMINATING THE NEED OF EXTERNAL PARALLELING EQUIPMENT AND CABINETS, DUAL MAINS INPUT, MULTILANGUAGE LCD DISPLAY, INTELLIGENT BMS COMMUNICATION INTERFACE (DRY CONTACT & MODBUS RTU PROTOCOL BOARD) **CORAL UPS** IS COST-EFFECTIVE IDEAL AND FLEXIBLE NETWORK TOTAL PROTECTION FOR ALL TODAY MOST DEMANDING APPLICATIONS.



**MAIN TECHNICAL DATA**
**CORAL10 CORAL15 CORAL20 CORAL30 CORAL40 CORAL60 CORAL80**

UPS Topology	VFI On-Line Double Conversion						
Converter	Power factor correction PFC IGBT-based						
Inverter	High frequency IGBT inverter transformerless						
Static switch	Electronic static switch plus contactor						
Cooling	Forced air by Centrifugal fans						
Input nominal voltage	<b>3P+N</b> 380/400/415V ±20%						
Input nominal frequency	50Hz or 60Hz						
Input frequency tolerance	40 ÷ 70 Hz						
Maximum input current 3Ph+N@400V	35A	35A	50A	60A	97A	130A	162A
Power factor	0.99						
Soft start	0-100% in 30 sec. (settable)						
Backfeed protection	available UPS in built or external						
Input current distortion	THDi 2%						
Bypass nominal voltage	<b>3P+N</b> 380/400/415V						
Bypass voltage tolerance	±20% (selectable)						
Bypass factory setting	±10%						
Bypass nominal frequency	50 or 60 Hz (selectable)						
Bypass accepted overload	10In per 100ms						
Manual bypass	available with mechanical security lock						
Output active power	10kW	15kW	20kW	30kW	40kW	60kW	80kW
Nominal output voltage	<b>3P+N</b> 380/400/415V or <b>1P+N</b> 220/230/240V (10-30KW)						
Nominal output current 3ph 3Ph+N@400V	14A	22A	28A	44A	57A	86A	115A
Output power factor	1						
Output voltage static variation	± 1%						
Output voltage dynamic variation	± 5%						
Crest factor	3:1						
Output voltage distortion	≤ 2% with linear load & ≤ 5% with non linear load						
Output frequency	50Hz or 60Hz						
Output frequency stability	0.01%						
UPS system efficiency	up to 96%						
Overload	125% for 10 minutes / 150% for 60 seconds						

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Battery type	VRLA AGM (Ni-Cd on request)						
Number of elements	360						
Battery nominal voltage	720 Vdc						
Battery voltage range	600 ÷ 830 Vdc						
Battery maximum charging current	12A	20A	20A	25A	25A	30A	30A
Battery charging profile	DIN 41733						
	Charging voltage: 810Vdc						
	Temperature compensated battery charging profile						
Battery low threshold (factory setting)	640 Vdc						
Battery management & test	Supervised battery management & settable regular test						
Remote signals	Dry contact board - remote EPO						
Standard interfaces and protocol	RS232 port & MODBUS RTU + slot for communication options						
Monitoring software	UPSMan & UPSMon						
Communication options	web adapter SNMP (Generex CS121 / Megatec NetAgent)						
Parallel capability	up to 8 units (closed loop via optical fiber)						

**MECHANICAL DATA**

Case protection rating	metal case - RAL 7016 - IP20 (upgrade IP42 or IP54 on request)						
Dimensions (WxDxH mm)	390x900x900 mm			410x830x1510 mm			
Weight kg (UPS configuration 3ph @ 400V)	70kg	75kg	75kg	80kg	230kg	260kg	280kg
Noise level at 1m	≤52dB	≤54dB	≤54dB	≤58dB	≤60dB	≤60dB	≤64dB
Storing temperature	-20°C ÷ +70°C (UPS) +20°C ÷ +30°C (Battery)						
Operating temperature	+20°C ÷ +40°C						
Relative humidity	90% non condensing						
Altitude	1000m above MSL without derating (1% derating any 100m up to 2.000m)						
Ventilation	multilevel fan						
UPS moving	castors						
UPS packaging	overseas shipment suitable cartoon box on fumigated wooden pallet						
UPS packaging dimensions (WxDxH mm)	540x1080x1100 mm			700x1000x1700 mm			
UPS packaging weight (package only)	12 kg			16kg			

**STANDARDS**

European Directives: L V 2006/95/CE low voltage Directive  
 EMC 2004/108/CE electromagnetic compatibility Directive  
 Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2  
 Classification in accordance with IEC 62040-3 VFI - SS - 111

### Main electrical features

- \* Dual input mains: separated or common
- \* Genset compatibility without any additional equipment
- \* Integrated maintenance bypass
- \* Detection circuit for backfeed protection (additional backfeed device UPS built in or in external panel)
- \* Parallel capability for redundant or add capacity system configuration (up to 8 units)
- \* Distributed or shared battery for optimized energy storage and uninterrupted power during strings maintenance
- \* Battery temperature sensor and supervised battery management dual charging method profile
- \* UPS *eco-mode* functional profile for 99% efficiency
- \* Frequency converter profile with or without backup time 60Hz to 50Hz or viceversa

### Main electrical optional features

- \* UPS built in battery installation (Coral 10-30kW 60pcs\*12V/9Ah)
- \* Extended runtime in external cabinet matching UPS design (Coral 10-30kW 2\*60pcs 12V/9Ah)
- \* Extended runtime in external cabinet IP20 or open rack, complete of DC breaker
- \* UPS built in or external cabinet galvanic isolation transformer (full system isolation)
- \* UPS I/O phase configuration settable via LCD (3/3 - 3/1 - 1/1 - 1/3) (Coral 10-30kW)
- \* UPS upgrade to double independent outputs — EN 50171 standard
- \* Battery bank disconnection in case of UPS shutdown or according to BMS design
- \* BACS battery advanced care system for constant monitoring and harmonization of individual charging voltages

### UPS connectivity available features for immediate system status info

#### Real time information, real time solution!

- \* User friendly Multilanguage LCD (Russian and Chinese available)
- \* Event log access via LCD for on-site checking & event log download via open software
- \* Dry contact interface complete of 4 change-over contact outputs
- \* Serial connection interface via RS232/RS485 Modbus RTU for BMS full compatibility
- \* At-a-glance user view for simultaneous monitoring of all UPS systems connected in the same network
- \* Intelligent free slot for additional SNMP interface and ambient sensors (temperature, humidity, smoke etc...)
- \* UPS MAN & MON software for UPS managing and monitoring (opt)
- \* Remote LED panel for UPS status (opt)
- \* Remote EPO
- \* Remote UPS monitoring service 24/7 - 365 (opt)
- \* Server, PC and/or virtual machine configured shutdown
- \* e.mail/SMS/pop up UPS status information