



SCU **UPS M & A UPS** are market most flexible and complete power protection solutions delivering premium VFI online double conversion for IT and electrical infrastructures in corporate, medical, banking and industrial applications.

Designed and 100% MADE IN ITALY, **UPS M & A UPS** adopt PFC IGBT-based topology resulting in the highest levels of efficiency (0.99 input power factor - THDi <3%) and reliability for all mission critical loads, both for single and three-phase installations.

Input/output real time configurable on site, possibility to pack internal runtime as galvanic isolation or voltage adjusting transformer, these UPS families represent all in one solutions in compact footprint and eye-catching design horizontal scalability in redundancy, additional capacity, power backup runtime.

Featuring multilanguage LCD display, RS232 port, BMS communication interface (DRY CONTACTS & MODBUS RTU PROTOCOL), intelligent slot for SNMP adapter, **M & A UPS** are cost effective total protection customer is asking for.

TOTAL

MAIN TECHNICAL DATA	M10	AM15	A20	A30	A40
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				
Input nominal voltage	1ph 220/230/240V or 3ph 380/400/415V				
Input nominal frequency	50Hz or 60Hz				
Input frequency tolerance	40 ÷ 70 Hz				
Maximum input current 3Ph+N@400V	35A	35A	50A	60A	97A
Power factor	0.99				
Soft start	0-100% in 30 sec. (settable)				
Backfeed protection	available UPS in built or external				
Input current distortion	THDi ≤3%				
Bypass nominal voltage	1ph 220/230/240V or 3ph 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	9kW	13.5kW	18kW	27kW	36kW
Nominal output voltage	1ph 220/230/240V or 3ph 380/400/415V				
Nominal output current 1ph 1Ph+N@ 230V	43A	65A	86A	130A	172A
Nominal output current 3ph 3Ph+N@400V	14A	21A	28A	43A	57A
Output power factor	0.9				
Output voltage static variation	± 1%				
Output voltage dynamic variation	± 5%				
Crest factor	3:1				
Output voltage distortion	≤ 2% with linear load & ≤ 3% 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				

MAIN TECHNICAL DATA	M 10	M15	A20	A30	A40
Battery type	VRLA AGM or GEL / Ni-Cd				
Number of elements	360				
Battery nominal voltage	720 Vdc				
Battery voltage range	600 ÷ 830 Vdc				
Battery maximum charging current	10A	10A	16A	16A	20A
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 (optional)	up to 8 units (cloosed loop via optical fiber)				
MECHANICAL DATA					
Case protection rating	metal case - RAL 7016 - IP20 (upgade IP42 or IP54 on request)				
Dimensions (WxDxH mm)	390 x 900 x 900 mm				
Weight kg (UPS no battery)	70kg	70kg	75kg	80kg	90kg
Additional weight for internal battery	180kg				
Noise level at 1m	≤54dB	≤54dB	≤56dB	≤56dB	≤60dB
Storaging temperature	-20°C ÷ +70°C (UPS) +20°C ÷ +30°C (Battery)				
Operating temperature	+20°C ÷ +40°C				
Relative humidity	95% 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)	540x1080x1120 mm * 12kg				
STANDARDS	European Directives: LC 2014/35/EU low voltage Directive EMC 2014/30/EU electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1:2008+A1:2013; EMC IEC EN 62040-2 C2				
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)
- * 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 98% efficiency
- * Frequency converter profile with or without backup time 60Hz to 50Hz or viceversa

Main electrical optional features

- * UPS built in battery installation
- * Parallel capability for redundant or add capacity system configuration (up to 8 units)
- * Extended runtime in external cabinet matching UPS design
- * 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 or transformer based inverter design)
- * UPS I/O phase configuration settable via LCD (3/3 - 3/1 - 1/1 - 1/3)
- * UPS upgrade to double independent outputs — EN 50171 directive
- * Battery bank customized managing profile according to specific standards
- * 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
- * Remote LED panel for UPS status
- * Remote EPO
- * Remote UPS monitoring service 24/7 - 365
- * Server, PC and/or virtual machine configured shutdown
- * e.mail/SMS/pop up UPS status information