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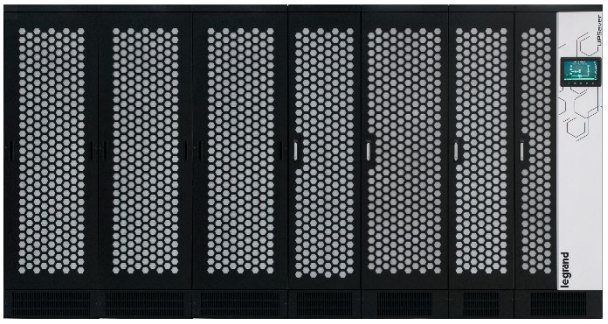
UPSaver 1340kVA



1. TECHNICAL FEATURES

General Features	
Power (kVA)	1340
UPS Topology	ON LINE - Double Conversion
Nominal output power (kW, PF=1) (1)	1340
Efficiency* (VFI) (%) @25% load @50% load @75% load @100% load	 97,0 97,2 96,8 96,4
Weighted VFI efficiency (%)	97,05
AC/AC efficiency (%) (VFD ECO MODE - from 50% load)	98,5
AC/AC efficiency (VFD UHE - from 50% load, optional mode)	99
Heat loss @1340kW (VFI) (kW) (Fully charged battery)	50
Heat loss @1340kW (VFI) (kW) (Battery in charge@max charge current)	60,3
Heat loss @<10% load	<14,4
UPS ambient temperature (°C)	0 ÷ 40
BATTERY ambient temperature (°C)	0 ÷ 25
UPS storage temperature (°C)	-10 ÷ 70
BATTERY storage temperature (°C)	-10 ÷ 60
Relative humidity % (non condensing)	< 95
Altitude m	< 1000 (Above Sea Level)
Power derating for altitude > 1000 m	According to IEC62040-3, 0.5% power derating each 100 m above 1000 m, up to max 2000 m
Ventilation	Forced
Requested cooling air volume (m³/h)	10000
Audible noise level (according to IEC EN 62040-3) (dB)	< 50 (UHE) < 65 (Double Conversion)
Protection degree (closed/open doors)	IP 20
Paint	RAL9005 (Black) RAL9003 (White)
Safety standard	IEC EN 62040-1
Electrimagnetic compatibility standard	IEC EN 62040-2 C3 class
Test and performance standard	IEC EN62040-3
Estimated recycled material content(%)	**32%**
Recyclability rate calculated using the method described in technical report IEC/TR 62635 (%)**	**90,2%**

Local monitoring and connectivity	
Front Panel	10" Touch screen display
Emergency Power Off	Optional local pushbutton
Auxiliary input terminals for	Remote EPO (NC input) External MBCB auxiliary contact External OCB auxiliary contact Battery CB auxiliary contact Remote bypass switch Battery charging inhibition
Communication ports	RS485 (RTU Mod-Bus protocol) 5 NC/NA volt-free contacts Optional SNMP and Modbus over TCP/IP

Dimensions and installation			
Version without redundancy			
I/O section dimensions (basic version) mm	W = 1750	D = 950	H = 2150
I/O section dimensions (full version) mm	W = 3950	D = 950	H = 2150
Top busbar entry module (optional) mm	W = 600 D = 950 H = 2150		
SBCBS, OCBS, MBCBS, OSBCBS main switches (optional) mm	W = 600 D = 950 H = 2150		
Hot Swap Distribution modules (optional) mm	W = 1000 (2x500) D = 950 H = 2150		
Power Modules dimensions mm	W = 2600	D = 970	H = 2150
UPS dimensions (basic version) mm	W = 4350	D = 970	H = 2150
UPS dimensions (full version) mm	W = 6550	D = 970	H = 2150
I/O section weight (basic version) kg	1030		
I/O section weight (full version) kg	1925		
Power Modules weight kg	2280		
UPS weight (basic version) kg	3310		
UPS weight (full version) kg	4205		
Version with "N+1 redundancy"			
I/O section dimensions (basic version) mm	W = 1750	D = 950	H = 2150
I/O section dimensions (full version) mm	W = 3950	D = 950	H = 2150
Top busbar entry module (optional) mm	W = 600 D=950 H=2150		
SBCBS, OCBS, MBCBS, OSBCBS main switches (optional) mm	W = 600 D=950 H=2150		
Hot Swap Distribution modules (optional) mm	W = 1000 (2X500) D = 950 H = 2150		
Power Modules dimensions mm	W = 3250	D = 970	H = 2150
UPS dimensions (basic version) mm	W=4350	D=970	H=2150
UPS dimensions (full version) mm	W = 6550	D = 970	H = 2150
I/O section weight (basic version) kg	1030		
I/O section weight (full version) kg	1925		
Power modules weight kg	2850		
UPS weight (basic version) kg	3880		
UPS weight (full version) kg	4775		
Weights of separated modules			
I/O section kg	1030		
Top busbar entry (optional) kg	105		
Main switches module (optional) kg	210		
Distribution module (optional) kg	290		
Power Module kg	570		
Parallel configuration (optional)	Up to 5+1 (redundant parallel) Up to 6 (power parallel) (***)		
Accessibility	Front and top access for service		
Installation	No rear and side clearance required In-row, Offset, L shape, Back to back		
Available Input/Output arrangement	Top busbar entry Top/bottom cable entry		
Handling	By forklift or manual pallet truck		
Transport mechanical stress	IEC EN 62040-3		

*Third part certificate - AC/AC BPU efficiency in typical configuration
**This value is based on data collected from a technological channel operating on an industrial basis.
It does not pre-validate the effective use of this channel for end-of-life of this product.
*** For different configurations, please contact the factory

UPSaver 1340kVA

Input: rectifier and battery charger		
Input connections		Three phase 4-wire (L1, L2, L3, N, PE)
AC/DC converter type		PFC IGBT with interleaving control
Nominal input voltage Range (Vac)		400 VAC -20/+15 %
Input frequency		50 – 60 Hz ±5 / ±10 adjustable
Input power factor	@0% load	n.a.(*)
	@10% load	> 0.8
	@25% load	> 0.98
	>25% load	> 0.99
Input capacitive power (kVAR)		20
Input current THD at nominal voltage and THDV <0.5 (%)	@25% load	< 7
	@50% load	< 5
	@75% load	< 3
	@100% load	< 3
Input fuses I^2t (A^2s)		18200000
Walk-in time (soft start duration) (s)		5'' to 30'' (configurable)
Hold-off time (start-up delay) (s)		1'' to 300'' (configurable)
DC output voltage accuracy (%)		±0.5
DC output voltage ripple (%)		< 0,2
Battery recharging characteristic		IU (DIN 41773)
Maximum recharging current (A) - at nominal load - with DCM function		 200 400
Nominal current absorbed from mains (A)(at nominal load andbbattery charged)		2006
Maximum current absorbed from mains (A) (at 100% load, 100 A max recharging current and nominal input voltage)		2245

Output: inverter		
Output connections		Three phase 4-wire (L1, L2, L3, N, PE) or 3-wire (L1, L2, L3, PE)
Inverter Bridge		3-L IGBT (High Frequency PWM)
Nominal output apparent power (kVA)		1340
Nominal output real power (kW)		1340
Output PF range without derating		0.95 leading to 0.8 lagging
Efficiency (DC/AC) (%)	@25% load	98.5
	@50%load	98.6
	@75% load	98.4
	@100% load	98.2
Nominal Output Voltage (selectable) (Vac)		380-400-415
Output Voltage Stability (%) - Static (Balanced Load) - Static (Unbalanced Load) - Dynamic (Step Load 20%÷100%÷20%) - Output Volt. Recovery Time (after step load) - IEC EN 62040-3 (ms)		 +/- 1 +/- 2 +/- 5 < 20 VFI SS 11
Phase Angle Accuracy (°) - Balanced Load - 100% Unbalanced Load		 +/- 1 +/- 2
Output Frequency (selectable) (Hz)		50 - 60
Output Frequency Stability - Free Running Quartz Oscillator (Hz) - Inverter Sync. with Mains (Hz) - Slew rate (Hz/s)		 ± 0.001 ± 2 (other on request) 1
Nominal Output Current (@ 400 Vac) (A)		1942
Overload capability		105% continuous (**) 125% for 10 minutes 150% for 1 minute
Short Circuit Current (A)		3884
Short Circuit Characteristic		Electronic short circuit protection: current limited to above value for 70 ms, then limited to 1.5 In for remaining time up to 5 s (as per IEC EN 62040-1)
Output Harmonic Distortion (%) - Linear Load - Non-linear Load - IEC EN 62040-3		 < 1 < 5 Fully compliant
Max Crest Factor without derating		3:1

Output: Automatic static byass	
Automatic static by-pass	Centralised - Thyristor Switch
Input connections	Three phase 4-wire (L1, L2, L3, N, PE)
Nominal voltage	380-400-415 Vac ±10 % (selectable)
Nominal frequency	50-60 Hz ±10% (programmable)
Bypass fuses I^2t (A^2s)	4928000
Thyristor I^2t (A^2s)	6480000
SBCB input breaker short circuit withstand (Icw) (kA)	65
Back feed protection	Output contact to trip an external device Optional shunt trip coil on SBCB
Transfer inverter → automatic bypass	In case of : - Static Switch test - Inverter test - Inverter not operating - Battery end of discharge
Retransfer automatic bypass → inverter	- Automatic -Block on bypass after 6 transfers within 2 minutes, reset by front panel
Synchronous transfer time (ms)	< 1
Asynchronous transfer time (ms)	< 10
Overload Capability	110% continuous 150% for 1 m 700% for 100 ms 1000% for 10 ms

Batteries	
VRLA	
Battery type (other on request)	VRLA
Number of Cells	360-372 (adjustable)
Floating voltage at 25°C (Vdc)	812 for 360 cells, 840 for 372 cells
Minimum discharge voltage (Vdc)	620 for 360 cells, 632 for 372 cells
Inverter input power (kW) (@100% load PF=1)	341 (333kW module) 1365 (UPS total)
Inverter input current (A) (@100% load PF=1, 620 VDC)	550 (333kW module) 2200 (UPS total)
Battery Protection (external to the UPS)	Optional wall mounted fused switch box or automatic circuit breaker
Battery Test	Manual or automatic
Li-Ion	
Battery type	Li-Ion (Ask Factory for approved models)
Floating voltage at 25°C (Vdc)	750 to 812 (adjustable)
Minimum discharge voltage (Vdc)	620 to 650 (adjustable)
Inverter input power (kW) (@100% load PF=1)	341 (333kW module) 1024 (UPS total)
Inverter input current (A) (@100% load PF=1, 620 VDC)	550 (333kW module) 1650 (UPS total)
Battery Protection (external to the UPS)	Optional DC coupling panel with string fuses or automatic circuit breaker
Battery Test	Manual or automatic

OPTIONS:
1.BATTERY CHARGING INHIBIT (DIESEL MODE)
2.RECTIFIER POWER RAMP (WALK-IN TIME)
3.RECTIFIER DELAY ON STARTUP (HOLD-OFF TIME)

UPS available layout (to be confirmed by the factory)
- Line
- Gap
- L-shape
- Back to back

* @ load %<10 %, input power factor definition is not applicable, as input power is predominantly capacitive
** at 30°C