

**APC<sup>®</sup>**

**American Power Conversion**

# SPECIFICATION UPS APC

## Easy UPS 3-Phase Modular 50-250 kW (400V) UPS



Main		Input	
Main Input Voltage	400 V	Network frequency	40...70 Hz
Main Output Voltage	400 V	Max input current	95 A
Rated power in W	50 kW	Max short time withstand	35 kA
Rated power in VA	50 kVA	Input harmonic distortion	Less than 3% for full load
Battery type	VRLA	Load PF	Form 0.7 leading to 0.7 lagging without any derating
Batteries & Runtime		Output	
Battery Voltage	480...576 VDC	Maximum configurable power in W	250 kW
Max Current	130A	Output frequency	50...60 Hz
General		UPS type	Double conversation online
Bypass Voltage tolerance	+/- 10%	Output harmonic distortion	< 1% linear load and < 3% non-linear load
Max bypass input current	74A	Maximum configurable power in VA	250 kVA
Number of power module	1	Conformance	
Number of power module free	5	Standards	IEC 62040-1 safety
Redundant	Yes		IEC 62040-2
Physical			IEC 62040-3
Colour	Black		IEC 61641
Height	199.1 cm		
Width	60 cm		
Depth	85 cm		
Net weight	251 kg		
USB compatible	Yes		

# SPECIFICATION UPS APC

## Galaxy VS 10–150 kW 380/400/415 V



	Galaxy VS for external batteries	Galaxy VS with internal smart battery modules		
400 V	20–150 kW	10–20 kW	10–50 kW	20–100 kW
N+1 redundancy option*	Yes	No	No	Yes
Scalability option*	Yes	No	No	No
Dimensions (HxW)	1500 x 530 mm	1500 x 350 mm	1500 x 530 mm	1970 x 530 mm
Battery type	External. Compatible with Lithium-ion and lead-acid (VRLA)	7Ah (VRLA)	9Ah (VRLA) Standard or long life	9Ah (VRLA) Standard or long life
Battery strings in UPS (maximum)	–	2	4	5
Ingress protection level	IP21 (IP22 and IP52 options)	IP20	IP20	IP20
Special features:	Large cabling section provides convenient access, connection, and installation.  Models with Live Swap capability and scalability available.	Models with Live Swap capability available.	Compatible with external modular battery cabinets (up to 6 battery strings).  Models with Live Swap capability available.	Compatible with external modular battery cabinets (up to 9 battery strings).  Models with Live Swap capability available.

# SPECIFICATION UPS APC

## Galaxy VS

10–150 kW 380/400/415 V



<b>Galaxy VS</b>	<b>400 V</b>
Topology	On-line double conversion
Nominal power (kW)	10–150 kW (parallel up to 600 kW) [4 UPSs in parallel]
<b>Key features</b>	
Scalability option	50–150 kW
N+1 redundancy option	20–50 kW N+1
Modular elements	Power modules with Live Swap, static switch module, smart battery modules, intelligence module
Display	Color touch screen, 4.3 inches, status LED, mimic on display
High priority for C&I	Network management card included with ethernet (SNMP) and modbus. 8 dry contacts (4 inputs, 4 outputs)
Maintenance bypass	Internal maintenance bypass. Optional maintenance bypass panel
Parallel capability	Simplified 1+1 parallel (for redundancy); Up to 4 UPSs in parallel for capacity or redundancy
<b>Efficiency</b>	
Double conversion mode	Up to 97%
ECO mode	Up to 99%
ECO conversion mode	Up to 99%
<b>Input</b>	
Nominal input voltage	380 / 400 / 415 V
Input voltage range (phase to phase)	+/-15%
Single mains/dual mains	Single mains as standard. Easily converted to dual mains
Input frequency	40–70 Hz
Input power factor	IEC power factor: >0.99 @ load >25%, >0.95 @ load > 15%
Maximum short-circuit rating	65 kA
Backfeed protection	Included
<b>Output</b>	
Nominal output voltages	380 / 400 / 415 V
Load power factor	PF=1 (0.7 leading to 0.7 lagging without derating)
Voltage regulation	+/- 1%
Frequency	50/60 Hz +/-0.1% free running
Overload	1 min @ 150%; 10 min @ 125%
Output THDU on linear load	<1%
<b>Battery type</b>	
Nominal battery voltage, UPS for external batteries	480–576 V (at ratings 50 kW, 100 kW, 150 kW); 60 kW: 432–576; 384–576 V (at other ratings, including 60 kW and 120 kW)
Nominal battery voltage, UPS with internal batteries	480 VDC
Charging power	Charging power in % of output power at 0–40% load: 80%; Charging power in % of output power at 100% load: 20%

# SPECIFICATION UPS APC

## Galaxy VM

160-200 kVA (400 V)



<b>Normal AC supply input</b>	
Input voltage (V)	250-600 V
<b>Normal and bypass AC inputs</b>	
Frequency (Hz)	40-70 Hz
Input power factor	0.99
THDI	< 3% full load
<b>Bypass AC input</b>	
Input voltage range	342-457 V
Frequency	50 Hz or 60 Hz
<b>Output</b>	
Phase-to-phase output voltage (V)	380/400/415 V
Load power factor	0.9 (0.7 leading to 0.5 lagging without de-rating)
Output frequency	50/60 Hz +/- 0.1% (free-running)
<b>Overload capacity utility</b>	
operation at 40 °C	150% for 1 minute and 125% for 10 minutes
Output voltage regulation	+/- 1%
Total harmonic distortion (THDU)	< 2% at 100% linear load; < 3% at 100% nonlinear load
Output voltage tolerance	Symmetric load (0 – 100%): +/- 1% static; asymmetric load: +/- 3% static
<b>Overall efficiency</b>	
eConversion mode (meets EN62040-3 Class 1)	Up to 99% (meets EN62040-3 Class 1)
Efficiency at full load (AC-AC) at 100% load	Up to 96.5%
Standard ECO mode	Up to 99%
<b>Communication and management</b>	
Control panel	Multifunction 7" touch-screen color LCD display with built-in NMC, modbus (SCADA and ION-E), two empty NMC card slots

# SPECIFICATION UPS APC

## Galaxy VL

200 – 500 kW (400/480 V)



Galaxy VL	Features
Nominal power rating (kVA = kW)	200, 300, 400, 500
Scalability	From 200 kW to 500 kW with 50 kW power module increments
N+1 power ratings	Up to 450 kW N+1
Technical rating	500 kW
Topology	On-line double conversion, UL-verified ECOConversion
Key features	
Modular design	Power module, control module, power supply unit
3rd-party verified Live Swap	Power module
Display	7-inch color touch display, mimic diagram on display
Cabinet Type	Standalone, White (RAL9003)
Efficiency	
Double conversion mode	> 97%
ECOConversion	Up to 99%
ECO mode	Up to 99%
Input	
Rated voltage	380/400/415/440/480 VAC
Input voltage range (phase to phase)	331-552 V
Single mains/dual mains	Single mains as standard. Easily converted to dual mains.
Input current total harmonic distortion (THDI)	<3%
Input power factor	>0.99 at load >25%
Cable entry	Top as standard. Optional bottom cable entry cabinet available.
Short circuit withstand	65 kA Icw
Output	
Nominal output voltages	380/400/415/440/480 VAC
Load power factor	PF=1 @ 40C (104F) without derating
Voltage regulation	+/- 1% (symmetrical load)
Frequency	50/60Hz +/-0.1% free running
Overload normal operation	1 min @ 150%; 10 min @ 125% (110% continuous at 30C (86F))
Overload battery operation	1 min @ 125%
Output THDU on linear load	<1%
Output THDU on non-linear load	<3%
Output Voltage classification	VFI-SS-111

# SPECIFICATION UPS APC

## Galaxy VX

500 kW to 1500 kW 380 V /  
400 V / 415 V / 440 V / 480 V



<b>Galaxy VX Technical Specs</b>	<b>500 kW to 1500 kW UPS</b>
<b>Topology</b>	On-line double conversion with eConversion mode
<b>Nominal power (kW)</b>	500-1250 kW (1250 kW input/output cabinet) 500-1500 kW (1500 kW input/output cabinet)
<b>Technical Power Ratings</b>	500 kW, 625 kW, 750 kW, 800 kW, 1000 kW, 1100 kW, 1250 kW, 1500 kW
<b>Parallel capability</b>	Up to 4 units (N+1)
<b>Input</b>	
<b>Rectifier Type</b>	IGBT active rectifier
<b>Nominal input voltage</b>	380 V / 400 V / 415 V / 440 V / 480 V, 3-wire (3PH + PE) or 4-wire (3PH + PE + N) (600 V with optional external transformer)
<b>Input voltage range</b>	20% / -15%
<b>Single mains/dual mains</b>	Single mains as standard. Easily converted to dual mains
<b>Input connection</b>	Single or dual feed
<b>Input frequency</b>	50 or 60 Hz nominal (40-70 Hz)
<b>Input Current Total Harmonic Distortion (THDI)</b>	< 3% @ 100% load
<b>Input power factor</b>	> 0.99
<b>Walk-in</b>	0 to 300s (configurable)
<b>Short Circuit Withstand Rating</b>	100 kA
<b>Output</b>	
<b>Inverter Type</b>	4 Level IGBT, high efficiency, transformerless
<b>Nominal output voltages</b>	380 V / 400 V / 415 V / 440 V / 480 V, 3-wire (3PH + PE) or 4-wire (3PH + PE + N) (600 V with optional external transformer)
<b>Load power factor</b>	0.7 leading to 0.5 lagging without UPS derating
<b>Voltage regulation</b>	+/- 1%
<b>Frequency</b>	50/60 Hz +/-0.1% free running
<b>Overload in Normal Operation (at 40 °C)</b>	Continuous up to 110% 10 minutes up to 125% 1 minute up to 150%
<b>Output THDU on linear load</b>	<2% at 100% linear load; <3% at 100% nonlinear load
<b>Output Power Factor</b>	1.0 kVA = kW

# SPECIFICATION UPS APC

## Easy UPS 3S



	Easy UPS 3S for external batteries		Easy UPS 3S with internal batteries	
UPS rating	10-15 kVA	20-40 kVA	10-20kVA	30-40kVA
Dimensions (HxWxD)	530 x 250 x 700 mm	770 x 250 x 800 mm	1400 x 380 x 928 mm	1400 x 500 x 928 mm
Batteries	VRLA: external classic battery cabinet		VRLA: internal modular battery strings	
IP level	IP20			
Special features	10-30 kVA: 3:3 or 3:1-phase UPS available 40 kVA: 3:3-phase UPS available			



# SPECIFICATION UPS APC

## Easy UPS 3S technical specifications

Rated Power (kVA/kW)					
Easy UPS 3:1	10/10	15/15	20/20	30/30	
Easy UPS 3:3	10/10	15/15	20/20	30/30	40/40
Normal AC supply input					
Input voltage (V)	380/400/415 V (3-phase + Neutral)				
Frequency (Hz)	45 – 65 Hz				
Input power factor	>0.99				
THDI	<3% for 10 kVA UPS, <4% for 15-40 kVA UPS				
Input voltage range	304 to 477 V at full load				
Dual mains input	Yes (default: single mains input)				
Output					
Nominal output voltage (V)	3:1 – 220/230/240 V				
	3:3 – 380/400/415 V				
Efficiency: Double conversion mode	Up to 96%				
Efficiency: ECO mode	Up to 99%				
Overload capacity in normal operation	130% for 10 minutes and 130-150% for one minute				
Output voltage tolerance	+/-1%				
Communication and management					
Communication interface	RS232, RS485, USB, dry contact, Modbus TCP/IP, optional network card				
Control panel	Multi-function LCD, status and display console				

# SPECIFICATION UPS APC

Rated Power (kVA/kW)					
Easy UPS 3:1	10/10	15/15	20/20	30/30	
Easy UPS 3:3	10/10	15/15	20/20	30/30	40/40
<b>Weights and dimensions</b>					
UPS for external batteries, unpackaged/ shipping dimensions (H x W x D, mm)	530 x 250 x 700 mm/ 772 x 400 x 857 mm	530 x 250 x 700 mm/ 772 x 400 x 857 mm	770 x 250 x 800 mm/ 1015 x 400 x 982 mm	770 x 250 x 800 mm/ 1015 x 400 x 982 mm	770 x 250 x 900 mm/ 1015 x 400 x 1050 mm
UPS for internal batteries, without batteries, unpackaged, shipping dimensions (H x W x D, mm)	1400 x 380 x 928 mm/ 1640 x 563 x 1014 mm	1400 x 380 x 928 mm/ 1640 x 563 x 1014 mm	1400 x 380 x 928 mm/ 1640 x 563 x 1014 mm	1400 x 500 x 969 mm/ 1640 x 683 x 1114 mm	1400 x 500 x 969 mm/ 1640 x 683 x 1114 mm
UPS for external batteries, unpackaged/shipping weight (kg)	36/50	36/50	58/75	60/77	70/86
UPS for internal batteries, without batteries, unpackaged/shipping weight (kg)	112/145	112/145	122/158	152/190	158/195
Battery string (1 string/4 modules), unpackaged/shipping weight (kg)	27 kg per module/28 kg per module				
<b>Regulatory</b>					
Safety	IEC/EN62040-1-1		Performance	IEC 62040-3	
EMC/EMI/RFI	IEC 62040-2		Environmental	IEC 62040-4	
Markings	CE, RCM, EAC, WEEE				
<b>Battery type</b>					
Battery type	VRLA				
Nominal DC bus (100% load)	+/-192 to +/-240				
Charging power in % of output power (selectable)	1-20%				

# SPECIFICATION UPS APC

## Easy UPS 3M



	Easy UPS 3M for external batteries			Easy UPS 3M with internal batteries
<b>UPS rating</b>	60-100 kVA	120-160 kVA	200 kVA	60-80 kVA
<b>Dimensions (HxWxD)</b>	915 x 360 x 850 mm	1300 x 500 x 850 mm	1300 x 600 x 850 mm	1970 x 600 x 928 mm
<b>Batteries</b>	VRLA: external classic battery cabinet Li-ion: Galaxy Lithium-ion Battery Cabinet			VRLA: internal modular battery strings
<b>IP level</b>	IP20 (IP30 with optional kit)			

# SPECIFICATION UPS APC

## Easy UPS 3M technical specifications

Rated Power (kVA/kW)	60/60	80/80	100/100	120/120	160/160	200/200
Normal AC supply input						
Input voltage (V)	380/400/415 V (3-phase + Neutral + PE)					
Frequency (Hz)	40–70 Hz					
Input power factor	>0.99					
THDI	<3% at full linear load					
Input voltage range	342 to 477 V at full load at 40°C**					
Dual mains input	Yes (default: single mains input)					
Output						
Nominal output voltage (V)	3:3 – 380/400/415 V					
Efficiency: Double conversion mode	Up to 95.5%					
Efficiency: ECO mode	Up to 99%					
Overload capacity in normal operation	125% for 10 minutes, 150% for 1 minute*					
Output voltage tolerance	+/-1%					
Communication and management						
Communication interface	RS485, USB, Dry contact, Modbus TCP/IP (SNMP optional)					
Control panel	Five inch touchscreen LCD, status, and display console					

# SPECIFICATION UPS APC

Rated Power (kVA/kW)	60/60	80/80	100/100	120/120	160/160	200/200
Weights and dimensions						
UPS for external batteries, unpackaged/ shipping dimensions (H x W x D, mm)	915 x 360 x 850 mm/ 1140 x 475 x 965 mm	915 x 360 x 850 mm/ 1140 x 475 x 965 mm	915 x 360 x 850 mm/ 1140 x 475 x 965 mm	1300 x 500 x 850 mm/ 1500 x 625 x 975 mm	1300 x 500 x 850 mm/ 1500 x 625 x 975 mm	1300 x 600 x 850 mm/ 1500 x 725 x 975 mm
UPS with internal batteries, unpackaged/shipping dimensions (HxWxD, mm)	1970 x 600 x 1000mm/ 2102 x 750 x 1125mm	1970 x 600 x 1000mm/ 2102 x 750 x 1125mm				
UPS for external batteries, unpackaged/shipping, weights (kg)	109/133	140/164	145/169	193/223	227/257	304/338
UPS for internal batteries, without batteries, unpackaged/shipping weight (kg)	311 (360)	339 (387)				
Regulatory						
Safety	IEC/EN 62040-1		Performance		IEC62040-3	
EMC/EMI/RFI	IEC 62040-2		Environmental		IEC 62040-4	
Markings	CE TUV					
Battery type						
Battery type	UPS with internal batteries: VRLA; UPS for external batteries: VRLA or Lithium-ion					
Nominal DC Bus (100% load)	+/-216 to +/-300					
Charging power in % of output power (selectable)	for external batteries: 1-20% with internal batteries: 1-16%	for external batteries: 1-30% with internal batteries: 1-24%	for external batteries: 1-24%	for external batteries: 1-20%	for external batteries: 1-22.5%	for external batteries: 1-24%

# SPECIFICATION UPS APC

## Galaxy VL

200 – 500 kW (400/480 V)



Rated Power (kVA/kW)*	250 kVA/250 kW	300 kVA/300 kW	400 kVA/400 kW	500 kVA/500 kW	600 kVA/600 kW
<b>Input</b>					
Input voltage (V)	380/400/415 V (Three-phase + Neutral + PE)				
Frequency (Hz)	40–70 Hz				
Input power factor	>0.99				
THDI	<3%				
Input voltage range	323 – 477V				
Dual mains input	Yes (default: single mains input)				
<b>Output</b>					
Parallel	Up to 5 UPSs for capacity (or 5 + 1 for redundancy)				
Nominal output voltage (V)	380/400/415 V				
Efficiency: Double conversion mode	Up to 96%				
ECO mode	99%				
Overload capacity in normal operation	150% for 1 minute, 125% for 10 minutes, 105% continuous				
Output voltage tolerance	+/-1%				
Load Power Factor compatibility	From 0.5 leading to 0.5 lagging				
<b>Communication and management</b>					
Communication interface	RS485, dry contacts, Ethernet (SNMP, Modbus, TCP/IP)				
Control panel	7-inch touchscreen LCD, status, and display console				
<b>Weights and dimensions</b>					
UPS, unpackaged/dimensions (H x W x D mm)	1970 x 600 x 850 mm			1970 x 1000 x 850 mm	
UPS, unpackaged weight (kg)	425 kg	465 kg	560 kg	640 kg	720 kg
<b>Regulatory</b>					
Safety	IEC/EN 62040-1				
EMC	IEC/EN 62040-2				
Performance	IEC/EN 62040-3				
Marking	CE				
<b>Battery type</b>					
Battery type	VRLA				
Number of batteries	36 - 50				
Charging power in % of output power (selectable)	26%			24%	
<b>Environmental</b>					
Relative humidity	0 to 95% non-condensing				
Operating elevation	0 to 1500 m without derating				
Audible noise at 1m from unit	70db			72db	
Protection class	IP20				