

GENEAL INFORMATION

POWER - kVA	60	100	120	150
Nominal power - kW	60	100	120	150
UPS topology	ON LINE - double conversion			
Classification	VFI-SS-111 in accordance with IEC 62040-3			
Efficiency (AC ~ AC) - at 100 % load	≤ 95,5			
UPS ambient temperature -°C	0 ÷ 40			
Battery ambient temperature -°C	0 ÷ +20			
UPS storage temperature -°C	-25 ÷ +55			
BATTERY storage temperature -°C	-10 ÷ +40			
Relative humidity (non-condensing)	< 95%			
Altitude	< 1500 m (above sea level)			
Power derating for altitude > 1500m	max 5000 m with 1% derating for +100 m			
Ventilation	by fans			
Audible noise level (according EN 50091) in db(A)	<60	<63	<65	<66
Protection degree	IP 20			
Colour	black			
Display	7" Touch-screen TFT colour Monitor Display with up to 9 languages			
Accessibility	front and rear side access for service			
Installation	50 -100 cm from wall			
Dimensions D x W x H (mm)	828 x 250 x 868		850 x 442 x 1200	
Weight (kg) (without battery)	83	157	162	190
Standard external battery cabinet	Dimensions D x W x H (mm)		780 x 600 x 1200	
	Weight (without battery)		110 kg	
Input/output cable connection	bottom / back side			
Movement	by wheels			
Protection	short circuit, overload, over temperature, battery low, fan fault alarm			
Communication interface	USB, RS232, RS485, 2 x parallel port, REPO, 2 x intelligent slot for SNMP card (optional), relay card (optional)			
Parallel configuration	up to 6 redundant or capacity			
Separate bypass input	yes			
Connections	input and output hardwired			
Standards	safety: EN 62040-1 EMC: EN 62040-2, class C3			

INPUT: RECTIFIER and BATTERY CHARGER

POWER – kVA/kW	60	100	120	150
Input configuration	3 phase + N + PE			
Nominal voltage - VAC	380-400-415 V 3ph			
Operating voltage - VAC	138~485V			
Bypass voltage range	220Vac max. voltage: +25% (optional +10%, +15%, +20%) 230Vac max. voltage: +20% (optional +10%, +15%) 240Vac max. voltage: +15% (optional +10%) Min. voltage: -45% (optional -20%, -30%) Frequency synchronize tracing range: ±10%			
Operating frequency range - Hz	40~70			
Input power factor (@ 400 V)	> 0,99			
Input harmonic current distortion (THDI)	≤ 3 % (100%non-linear-load)			
Charging	3-level Intelligent charging mode			
Temperature compensated charging	yes			
AC-DC converter type	IGBT PFC			
Max. charging current (standard ups version)	20 A	40 A	40 A	60 A

BATTERY

POWER - kVA/kW	60	100	120	150
Type	maintenance free			
Quantity of batteries per battery string	30-50pcs			
Battery DC-voltage	Optional Voltage: ±180V/±192V/±204V/±216V/±228V/±240/±252/±264/±276/ ±288/±300Vdc(30/32/34/36/38/40/42/44/46/48/50pcs optional) 360Vdc~600Vdc (30~50 pcs, 36 pcs default, 36 and 50 pc no power derating; 32~34 pcs output power factor 0.9; 30 pcs output power factor 0.8;)			
Battery protection (external to the UPS)	wall mounted fuse box on request			

UPS OUTPUT: INVERTER

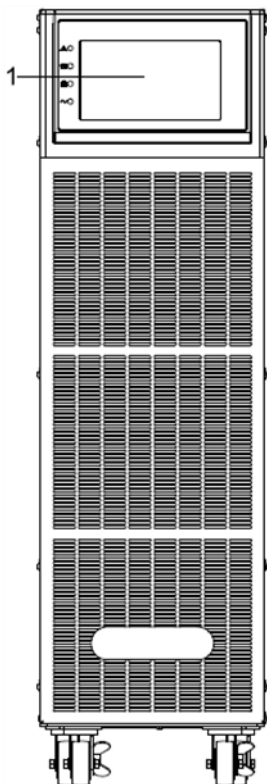
POWER - kVA/kW	60	100	120	150
Inverter bridge	IGBT (transformerless)			
Nominal output power - kW	60	100	120	150
Power factor	1.0			
Nominal output voltage - VAC (selectable)	380 ÷ 415 VAC (3Ph + N + PE)			
Voltage regulation	+/- 1%			
Output frequency -Hz	1: Line Mode: synchronize with input; when input frequency >±10%; (±1%/±2%/±4%/±5% optional) 2: Battery Mode: 50/60 (±0.1) Hz			
Nominal output current - A	86,5	144	173,1	216,5
Overload capability	≤110% for 60 min., ≤125% for 10 min., ≤150% for 1 min., >150%			
Output waveform	sine wave			
Output harmonic distortion (THD)	- linear load <2% - non-linear load <4%			

7"-Multilingual Display

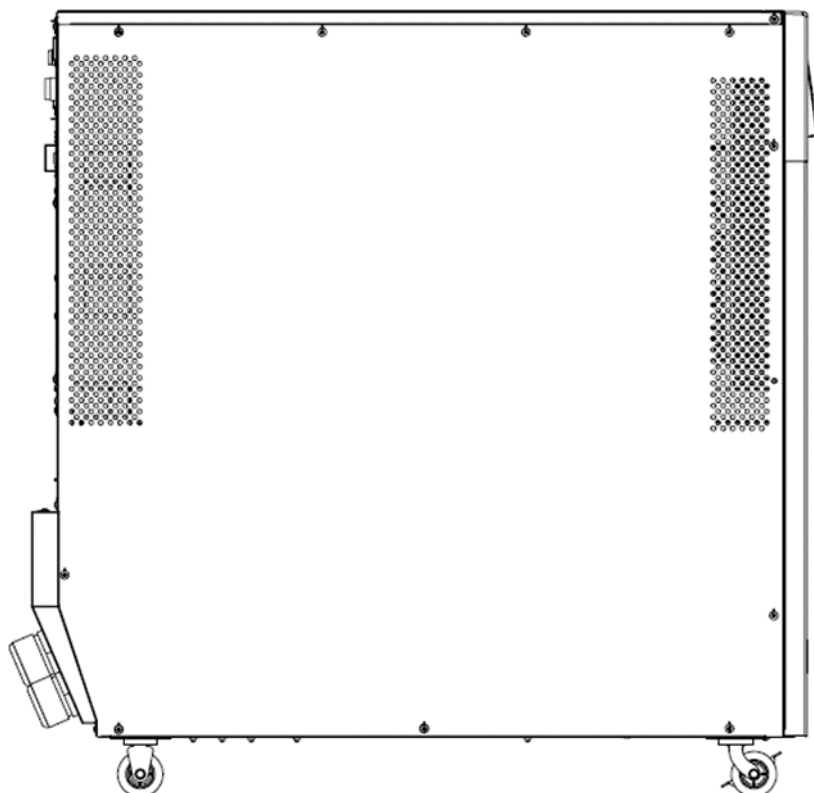


Cabinet outlook 60 kVA

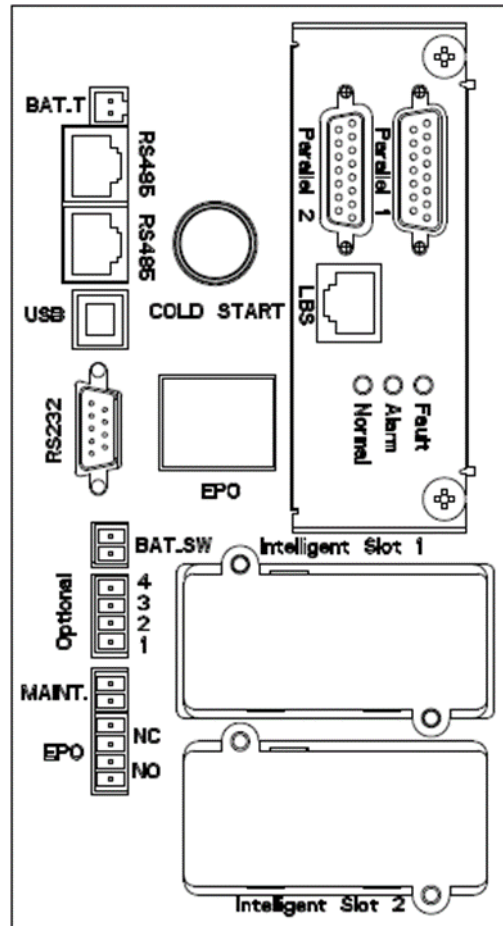
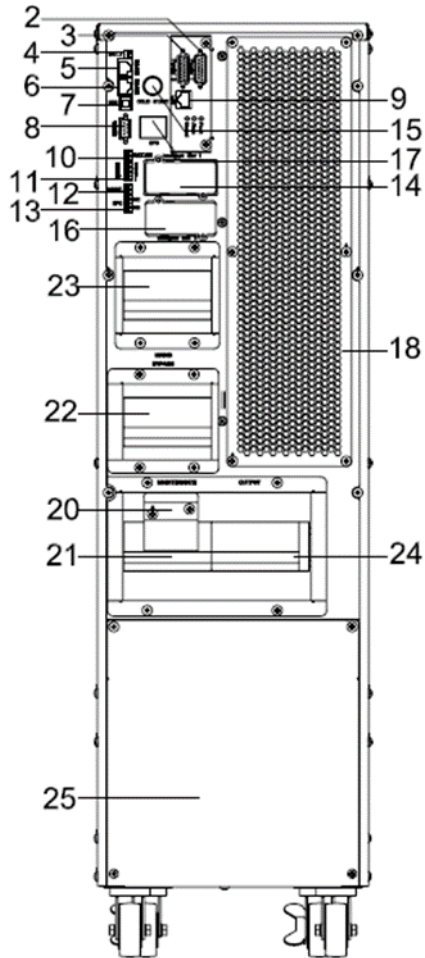
Front View



Side View

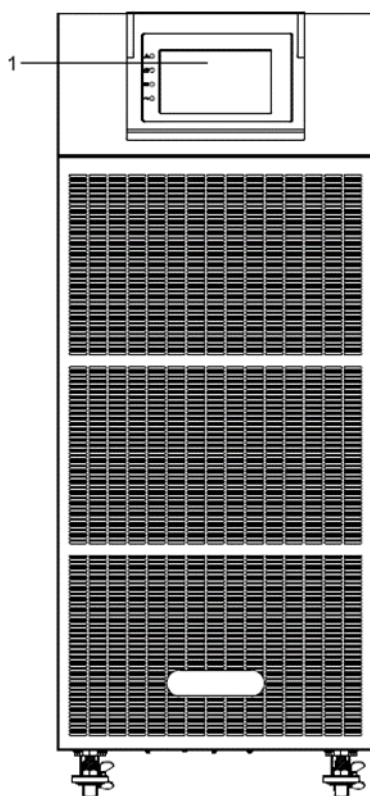


60 kVA Rear View

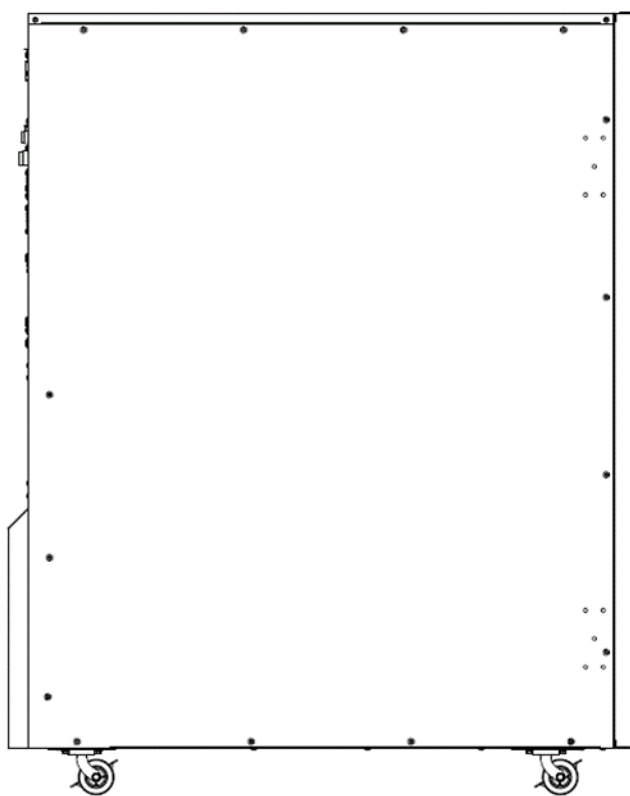


Cabinet outlook 100-150 kVA

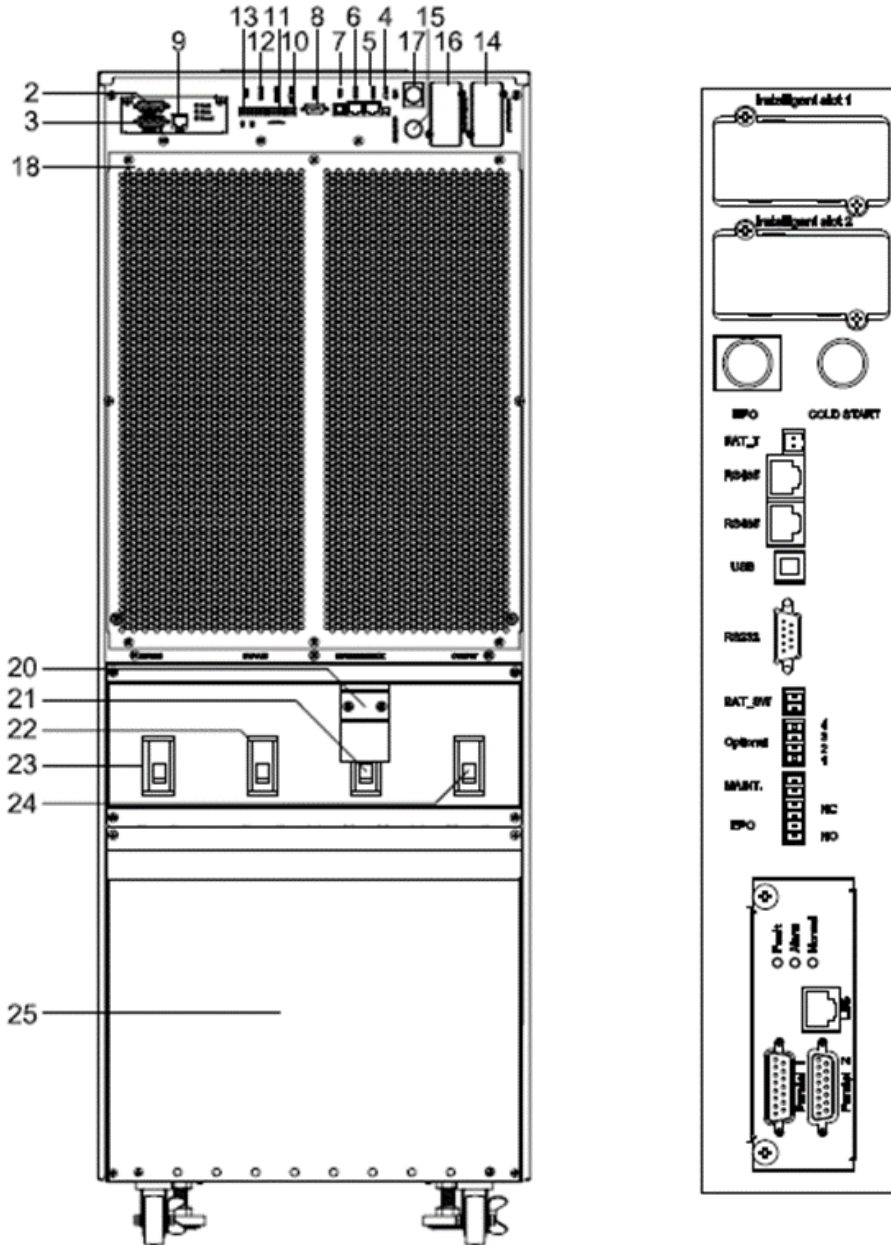
Front View



Side View



100-150 kVA Rear View



(1) LCD panel	(2) Parallel port 1
(3) Parallel port 2	(4) Temperature sensor port (for NTC)
(5) RS485 port (for RS485 temperature sensor)	(6) RS485 port (for RS485 temperature sensor)
(7) USB port	(8) RS232
(9) LBS port	(10) BAT SW : detect battery switch status
(11) Optional port (Port for feedback protection or for battery breaker driver to prevent battery over-drain after UPS shuts down)	(12) MAINTAIN-AUXSWS port
(13) REPO port	(14) Intelligent Slot 1 (SNMP card/ Relay card)
(15) Cold-start	(16) Intelligent Slot 2 (SNMP card/ Relay card)
(17) EPO button	(18) Cover for UPS Maintenance
(19) -----	(20) Maintenance breaker cover
(21) Maintenance breaker	(22) Bypass breaker
(23) Mains breaker	(24) Output breaker
(25) Terminal block cover	