

GENEAL INFORMATION

POWER - kVA	10	15	20	30	40
Nominal power - kW	10	15	20	30	40
UPS topology	ON LINE - double conversion				
Classification	VFI-SS-111 in accordance with IEC 62040-3				
Efficiency (AC ~ AC) - at 100 % load	≤ 93,5 %	≤ 94,5			
Efficiency ECO-Mode - %	≤ 98,75				
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 (noncondensing)	< 95%				
Altitude	< 1500 m (above sea level)				
Power derating for altitude > 1500m	max 5000 m with 1% derating for +100 m				
Ventilation	FORCED				
Audible noise level (according EN 50091)	<55dB				<58dB
Protection degree	IP 20				
Colour	black				
Display	7" Touch-screen TFT Color Monitor Display with up to 9 languages				
Accessibility	front, top and side access for service				
Installation	50 -100 cm from wall				
Dimensions W x D x H (mm)	250 x 828 x 868				
Weight (kg) (without battery)	57	63	64	71	73
Weight ups in kg (with standard battery quantity)	115/165	170	171	223	73 + 243
Built in battery quantity 9,5 Ah max.	40	40	40	60	N/A
External battery cabinet	Dimensions W x D x H (mm)				
	250 x 828 x 868				
	Weight (incl. 80 batteries)				
	243 kg				
Input/output cable connection	bottom / back side				
Movement	by wheels				
Protection	short circuit, overload, over temperature, battery low, fan fault alarm				
Communication interface	1 x USB, 1 x RS232, 2 x RS485, 2 x parallel port, 1 x coupler dry contact, 1 x REPO, 2 x intelligent slot for SNMP card (optional), relay card (optional)				
Parallel configuration	up to 4 redundant or capacity				
Separate bypass input	optional				
Connections	input and output hardwired				
Standards	safety: EN 62040-1 EMC: EN 62040-2, class C3				

INPUT: RECTIFIER and BATTERY CHARGER

POWER - kVA	10	15	20	30	40
Input configuration	3 phase + N + PE				
Nominal voltage - VAC	380-400-415 V 3ph				
Operating voltage - VAC	208~478V				
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%				
Input frequency - 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	no				
AC-DC converter type	IGBT PFC				
Max. charging current (standard ups version)	1,35 A	2,7 A	2,7 A	4,5 A	-
Max. charging current (with XL-version)	10 A	10 A	10 A	20 A	20 A
Input protection	Fuses				

BATTERY

POWER - kVA	10	15	20	30	40
Type	maintenance free				
Quantity of batteries per battery string	16/18/20				32-40
Battery DC-voltage 10 – 30 kVA	+/- 96 V, +/- 108 V, +/- 120 V, depending on the battery set				
Battery DC-voltage 40 kVA	+/- 192 V, +/- 204 V, +/- 216 V, +/- 228 V, +/- 240 V, depending on the battery set				
Battery protection (external to the UPS)	wall mounted fuse box on request				

UPS OUTPUT: INVERTER

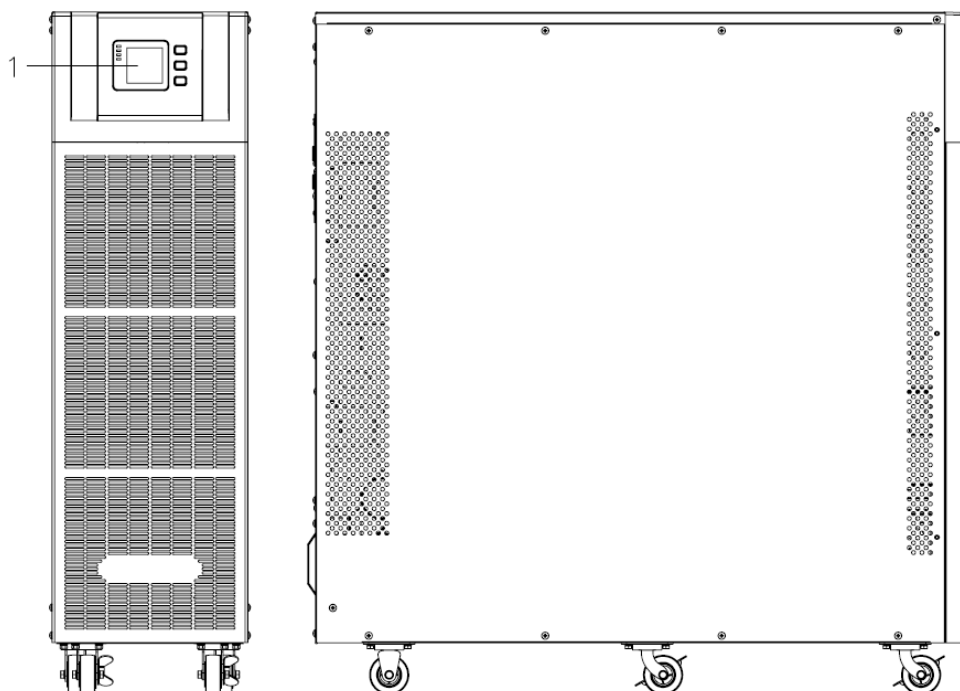
POWER - kVA	10	15	20	30	40
Inverter bridge	IGBT (transformerless)				
Nominal output power - kW	10	15	20	30	40
Power factor	1.0				
Nominal output voltage - VAC (selectable)	380 ÷ 415 3Ph + N				
Voltage regulation	+/- 1%				
Output frequency -Hz	Line Mode: synchronize with input; when input frequency >±10% (±1%/±2%/±4%/±5% optional) Battery Mode: 50/60 (±0.1) Hz				
Nominal output current - A	15	22	29	43	58

Overload capability (Inverter mode)	≤110% for 60 min., ≤125% for 10 min., ≤150% for 1 min., >150% change to bypass immediately				
Overload capability (Battery mode)	≤110%: for 10min, ≤125%: for 1min, ≤150%: for 5sec, >150% shut down UPS immediately				
Overload capability (Bypass mode)	Breaker 20A	Breaker 32A	Breaker 40A	Breaker 63A	Breaker 80°
Output waveform	sine wave				
Output harmonic distortion (THD)					
- linear load	<2%				
- nonlinear load	<5%				
Crest factor without derating	3:1				

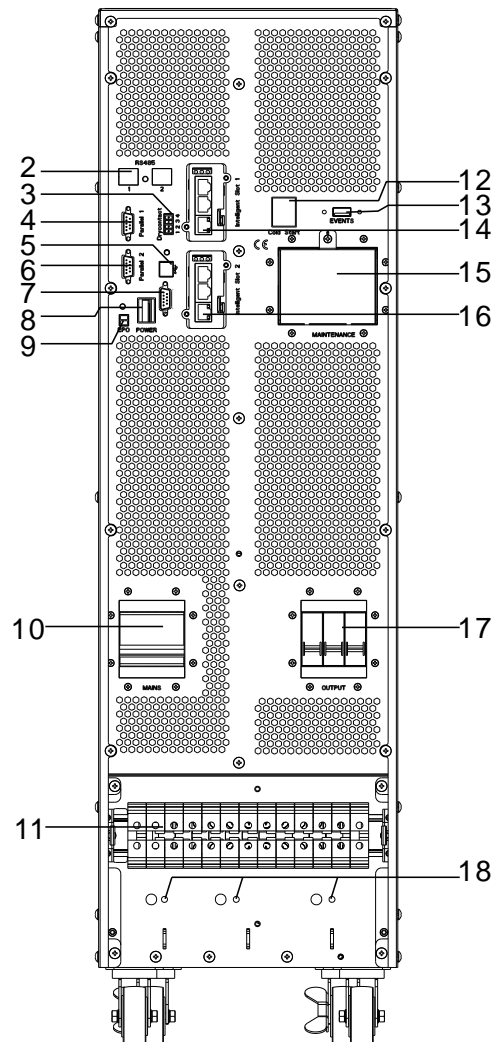
7"-Multilingual Display



Cabinet view

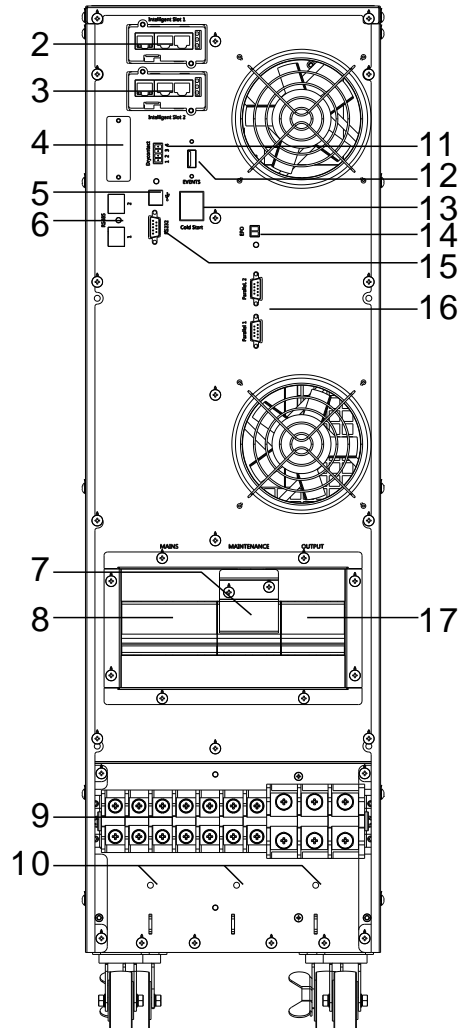


10-20kVA Rear View (terminal block without cover)



(1) LCD panel	(2) RS485 port
(3) Dry contact port	(4) Parallel port 1
(5) USB port	(6) Parallel port 2
(7) RS232	(8) Power Switch
(9) REPO port	(10) I/P Switch
(11) Terminal block	(12) Cold start button
(13) EVENTS port	(14) Intelligent Slot 1 (SNMP card/ Relay card)
(15) Maintenance switch & its cover	(16) Intelligent Slot 2 (SNMP card/ Relay card)
(17) O/P Switch	(18) Ground

30-40kVA Rear View (terminal block without cover)



(1) LCD panel	(2) Intelligent Slot 1 (SNMP card/ Relay card)
(3) Intelligent Slot 2 (SNMP card/ Relay card)	(4) Battery Power Switch
(5) USB port	(6) RS485 port
(7) Maintenance switch & its cover	(8) I/P Switch
(9) Terminal block for Input, output & battery	(10) Ground
(11) Dry contact port	(12) EVENTS port
(13) Cold start button	(14) REPO port
(15) RS232 port	(16) Parallel port
(17) O/P Switch	