## **SMARTXL**

10 kVA ~ 120 kVA (3:3) PF 0.9



## Features

- Online double-conversion with full DSP control
- IGBT inverter with output isolation transformer
- 100% unbalance load capability
- Output power factor 0.9
- Generator compatible
- Support battery cold start and auto-restart when mains power is restored
- ECO mode operation for energy saving
- Superior protection
- 7 inches LCD touch screen friendly human & machine interface
- Front access makes maintenance and replacement s im p lifie d( 7 1 r · k V A)
- Intelligent self-diagnosing function, all kinds of failure protection, large capability of history records storage
- High MTBF (> 200,000 h)
- Low MTTR (< 0.5 h)
- Standard emergency power off (EPO)
- Standard RS232, RS485, dry contacts communication port
- Optional SNMP communication port
- Optional N+X redundancy parallel up to 6 units
- Optional input filter to improve input power factor

## Specifications

	SMART XL10	SMART XL15	SMART XL20	SMART XL30	SMART XL40	SMART XL60	SMART XL80	SMART XL100	SMART XL12	
Capacity	10 kVA / 9 kW	15 kVA / 13.5 kW	20 kVA / 18 kW	30 kVA / 27 kW	40 kVA / 36 kW	60 kVA / 54 kW	80 kVA / 72 kW	100 kVA / 90 kW	120 kVA / 108 kW	
INPUT										
Input wiring	Three-phase five-wire (3 Φ + N + PE)									
Rated voltage	380 / 400 / 415 Vac									
Voltage range	285~475V									
Rated frequency	50 / 60 Hz									
Frequency range	(50/60)±5H z									
Power factor	≥ 0.95 (with filter)									
Delayed start of rectifier				10 s (	(1 ~ 300 set	table)				
Bypass voltage range				± 2	20% (settab	ole)				
OUTPUT										
Output wiring			Т	hree-phase	e five-wire (	$3\Phi + N + P$	E)			
Rated voltage				380	) / 400 / 415	Vac				
Output voltage regulation					± 1%					
Output frequency regulation				50 / 60 Hz :	± 0.1% in b	attery mode	е			
Waveform					Sinusoida					
Power factor					0.9					
Voltage distortion (THDv)	≤ 1% (linear load), ≤ 5% (non-linear load)									
Crest factor	3:1									
Overload			105% ~	1 10% for 6	0 min, 110	% ~ 1 25% fo	or 10 min			
BATTERIES					·					
DC Voltage	Lead acid battery: 360Vdc Lithium iron phosphate battery: 384 Vdc									
	Lead acid battery: 12 V x 3 0 pcs (support 28~32 pcs)									
		Lead acid battery: 2 V x 1 80 pcs (support 168~192 pcs)								
Number of batteries				battery: 2 V			8~192 pcs)			
Number of batteries		Lithiur		battery: 2 V		support 16 20 pcs (su	8~192 pcs)			
Number of batteries  Charging current	Charg		n iron phos	battery: 2 V phate batte	ry: 3.2 V x 1	20 pcs (su	8~192 pcs) pport 112/1		ettable)	
	Charg		n iron phos	battery: 2 V phate batte	ry: 3.2 V x 1	20 pcs (su	8~192 pcs) pport 112/1	20 pcs)	ettable)	
Charging current	Charg		n iron phos ettable) × b	battery: 2 V phate batte attery capa	ry: 3.2 V x 1 city (settab	20 pcs (su	8~192 pcs) pport 112/1 er of battery	20 pcs)	ettable)	
Charging current SYSTEM			n iron phos ettable) × b	battery: 2 V phate batte attery capa	ry: 3.2 V x 1 city (settab	20 pcs (sul	8~192 pcs) pport 112/1 er of battery	20 pcs)	ettable)	
Charging current  SYSTEM  Efficiency		ing rate (se	n iron phos ettable) × b In lin	battery: 2 V phate batte attery capa e mode: Ma	ry: 3.2 V x 1 city (settab ax. 93%; EC	20 pcs (suple) × n umber	8~192 pcs) pport 112/1 er of battery 98%	20 pcs)	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections		ing rate (se	iron phos ettable) × b In lin	battery: 2 V phate batte attery capa e mode: Ma	ry: 3.2 V x 1 city (settab ax. 93%; EC 6 dervoltage.	20 pcs (suple) × n umber	8~192 pcs) pport 112/1 er of battery 98%	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections		ing rate (se	iron phos ettable) × b In lin	battery: 2 V phate batte attery capa e mode: Ma voltage, unc	ry: 3.2 V x 1 city (settab ax. 93%; EC 6 dervoltage.	20 pcs (suple) × n umber CO mode: ≥ low battery adard), SNM	8~192 pcs) pport 112/1 er of battery 98%	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications		ing rate (se	iron phos ettable) × b In lin	battery: 2 V phate batte attery capa e mode: Ma voltage, unc	ry: 3.2 V x 1 city (settab ax. 93%; EC 6 dervoltage. ntacts (star	20 pcs (suple) × n umber 20 mode: ≥  CO mode: ≥  low battery ndard), SNM2	8~192 pcs) pport 112/1 er of battery 98%	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI		ing rate (se	iron phos ettable) × b In lin	battery: 2 V phate batte attery capa e mode: Ma voltage, unc 185 / dry col	ry: 3.2 V x 1 city (settab ax. 93%; EC 6 dervoltage. ntacts (star EN62040-2	20 pcs (suple) × n umbo CO mode: ≥ low battery ndard), SNM 2 (ESD)	8~192 pcs) pport 112/1 er of battery 98%	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications		ing rate (se	iron phos ettable) × b In lin	battery: 2 V phate batte attery capa e mode: Ma  voltage, und 185 / dry con IEC6 IEC6	ry: 3.2 V x 1 city (settab ax. 93%; EC 6 dervoltage. intacts (star EN62040-2 1000-4-2 61000-4-3	20 pcs (suple) × n umbo CO mode: ≥ low battery ndard), SNM 2 (ESD) (RS)	8~192 pcs) pport 112/1 er of battery 98%	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI		ing rate (se	iron phos ettable) × b In lin	battery: 2 V phate batte attery capa e mode: Ma  voltage, unc 185 / dry con IEC6 IEC6 IEC6	ry: 3.2 V x 1 city (settab ax. 93%; EC 6 dervoltage. ntacts (star EN62040-2	20 pcs (suple) × n umbo CO mode: ≥ low battery ndard), SNM 2 (ESD) (RS) (EFT)	8~192 pcs) pport 112/1 er of battery 98%	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI		ing rate (se	iron phos ettable) × b In lin	battery: 2 V phate batte attery capa e mode: Ma  voltage, unc 185 / dry con IEC6 IEC6 IEC6	ry: 3.2 V x 1 city (settab ax. 93%; EC 6 dervoltage. ntacts (star EN62040-2 1000-4-2 51000-4-3 1000-4-4	20 pcs (suple) × n umbo CO mode: ≥ low battery ndard), SNM 2 (ESD) (RS) (EFT)	8~192 pcs) pport 112/1 er of battery 98%	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI  EMS		ing rate (se	iron phos ettable) × b In lin	battery: 2 V phate batte attery capa e mode: Ma  voltage, unc 185 / dry con IEC6 IEC6 IEC6	ry: 3.2 V x 1 city (settab ax. 93%; EC 6 dervoltage. ntacts (star EN62040-2 1000-4-2 51000-4-3 1000-4-4	20 pcs (suple) × n umbo CO mode: ≥ low battery ndard), SNM 2 (ESD) (RS) (EFT)	8~192 pcs) pport 112/1 er of battery 98%	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI  EMS  OTHERS		ing rate (se	iron phos ettable) × b In lin	battery: 2 V phate batte attery capa e mode: Ma voltage, unc 185 / dry con IEC6 IEC6 IEC61	ry: 3.2 V x 1 city (settab ax. 93%; EC 6 dervoltage. ntacts (star EN62040-2 1000-4-2 1000-4-3 1000-4-5 (settable)	20 pcs (suple) × n umber CO mode: ≥ low battery ndard), SNM 2 (ESD) (RS) (EFT) surge)	8~192 pcs) pport 112/1 er of battery 98%	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI  EMS  OTHERS  Operating temperature		ing rate (se	iron phos ettable) × b In lin	battery: 2 V phate batte attery capa e mode: Ma  voltage, unc 185 / dry con IEC6 IEC6 IEC61	ry: 3.2 V x 1 city (settab  ax. 93%; EC 6 dervoltage. ntacts (star EN62040-4 1000-4-2 1000-4-3 1000-4-5 000-4-5 0 ~ 40°C	20 pcs (sur le)×n umber CO mode: ≥ low battery ndard), SNM 2 (ESD) (RS) (EFT) surge)	8~192 pcs) pport 112/1 er of battery 98%	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI  EMS  OTHERS  Operating temperature  Storage temperature		ing rate (se	In iron phos In lin	battery: 2 V phate batte attery capa e mode: Ma  voltage, unc 185 / dry col 1EC6 1EC6 1EC61  -25°C ~ 5: 0 ~ 95%	ry: 3.2 V x 1 city (settab  ax. 93%; EC 6 dervoltage. ntacts (star EN62040-2 1000-4-2 01000-4-5 01000-4-5 0000-4-5 0000-4-5 0000-4-5 0000-4-5 0000-4-5 0000-4-5 0000-4-5 0000-4-5 0000-4-5 00000-4-5 00000-4-5 0000000000	20 pcs (sulle) × n umber  CO mode: ≥  low battery ndard), SNM  2 (ESD) (RS) (EFT) surge)  t batteries) densing)	8~192 pcs) pport 112/1 er of battery 98% //, overtemp //P (optiona	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI  EMS  OTHERS  Operating temperature  Storage temperature  Relative humidity  Altitude		ing rate (se	In iron phos In lin	battery: 2 V phate batte attery capa e mode: Ma  voltage, unc 185 / dry col 1EC6 1EC6 1EC61  -25°C ~ 5: 0 ~ 95%	ry: 3.2 V x 1 city (settab  ax. 93%; EC 6 dervoltage. ntacts (star EN62040-2 1000-4-2 01000-4-3 1000-4-5 000-4-5 0 ~ 40°C 5°C (withou 6 (non-conc g 1% for eac	20 pcs (sur le)×n umber CO mode: ≥ low battery ndard), SNM 2 (ESD) (RS) (EFT) surge)	8~192 pcs) pport 112/1 er of battery 98% //, overtemp //P (optiona	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI  EMS  OTHERS  Operating temperature  Storage temperature  Relative humidity  Altitude  IP rating		ing rate (se	In iron phos In lin	battery: 2 V phate batte attery capa e mode: Ma  voltage, unc 185 / dry col 1EC6 1EC6 1EC61  -25°C ~ 5: 0 ~ 95%	ry: 3.2 V x 1 city (settab  ax. 93%; EC 6 dervoltage. ntacts (star EN62040-2 1000-4-2 01000-4-3 1000-4-5 000-4-5 0000-4-5 00000-4-5 0000000000	20 pcs (sulle) × n umber  CO mode: ≥  low battery ndard), SNM  2 (ESD) (RS) (EFT) surge)  t batteries) densing)	8~192 pcs) pport 112/1 er of battery 98% //, overtemp //P (optiona	20 pcs) y groups (se erature, fan	,	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI  EMS  OTHERS  Operating temperature  Storage temperature  Relative humidity  Altitude		ing rate (se	In iron phos In lin	battery: 2 V phate batte attery capa e mode: Ma voltage, unc 185 / dry col 1EC6 1EC6 1EC61  -25°C ~ 5: 0 ~ 95% m (derating	ry: 3.2 V x 1 city (settab  ax. 93%; EC 6 dervoltage. ntacts (star EN62040-2 1000-4-2 01000-4-3 1000-4-5 000-4-5 0 ~ 40°C 5°C (withou 6 (non-conc g 1% for eac	20 pcs (sulle) × n umber  CO mode: ≥  low battery ndard), SNM  2 (ESD) (RS) (EFT) surge)  t batteries) densing)	8~192 pcs) pport 112/1 er of battery 98%  7, overtemp MP (optiona	20 pcs) y groups (se erature, fan	failure	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI  EMS  OTHERS  Operating temperature  Storage temperature  Relative humidity  Altitude  IP rating  Noise level at 1 m  Dimensions		circuit, over	niron phos  In lin  Pload, overv  RS232 / RS4	battery: 2 V phate batte attery capa e mode: Ma  voltage, unc 185 / dry con  IEC6 IEC6 IEC61  -25°C ~ 5: 0 ~ 95% m (derating)	ry: 3.2 V x 1 city (settab  ax. 93%; EC 6 dervoltage. ntacts (star EN62040-2 1000-4-2 01000-4-3 1000-4-5 000-4-5 0000-4-5 00000-4-5 0000000000	20 pcs (sur le) × n umber  CO mode: ≥  low battery ndard), SNM 2 (ESD) (RS) (EFT) surge)  t batteries) densing) ch additiona	8~192 pcs) pport 112/1 er of battery 98%  7, overtemp MP (optiona	20 pcs) y groups (se	failure	
Charging current  SYSTEM  Efficiency  Max. number of parallel connections  Protections  Communications  EMI  EMS  OTHERS  Operating temperature  Storage temperature  Relative humidity  Altitude  IP rating  Noise level at 1 m  Dimensions  (W × D × H) (mm)  Packaged dimensions		circuit, over	miron phos  In lin  rload, overv  RS232 / RS4  ≤ 1000	battery: 2 V phate batte attery capa e mode: Ma  voltage, unc 185 / dry con  IEC6 IEC6 IEC61  -25°C ~ 5: 0 ~ 95% m (derating)	ry: 3.2 V x 1 city (settab  ax. 93%; EC 6 dervoltage. ntacts (star EN62040-2 1000-4-2 01000-4-3 1000-4-5 000-4-5 0000-4-5 00000-4-5 0000000000	20 pcs (suple) × n umber 20 mode: ≥ 20 mode	8~192 pcs) pport 112/1 er of battery 98%  7, overtemp MP (optiona	20 pcs) y groups (see erature, fan I)  × 800 × 170	failure	

- All specifications are subject to change without notice.
- Custom-made specifications are acceptable.
- This product is applicable to industrial, commercial, financial, rail transit and other industries applications, but not available for life support systems.
   For critical systems related to public safety or significant economic benefits, dual power system is required to power the load.