



starkstrom

a Progility company

Powering Healthcare

+44 (0)20 8868 3732

www.starkstrom.com

TECHNICAL DATA SHEET B8033 FXS 30-40-50-60kVA 3Ph (In) - 3Ph (Out)

GENERAL INFORMATION

POWER		kVA	30	40	50	60
UPS Type			ON LINE – Double Conversion			
Nominal output power (cosφ = 0,9) (* at 20 °C ** at 40 °C)		kVA	30	40	50	60 (*) 54(**)
Nominal output power (cosφ = 1) (* at 20 °C ** at 40 °C)		kW	27	36	45	54 (*) 48 (**)
Efficiency (AC ÷ AC) (ON LINE - Double Conversion)	@25% load	%	> 88			
	@50% load		> 90			
	@75% load		> 91			
	@100% load		> 92			
Efficiency (AC ÷ AC) (ECO MODE)		%	> 98			
Heat dissipation at nominal load		kW kcal/h	2,34 2,01	3,13 2,69	3,15 2,71	4.21 3,62
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 "IEC EN 62040-3" 1% power derating every 100m above 1000m up to max 2000m			
Ventilation			Forced			
Requested cooling air volume		m ³ /h	800	900	1100	1100
Audible noise level (according to IEC EN 62040-3)		dB	< 52 db		< 57 db	
Standard battery type lead acid		n° cells	2 x 180 2 x 186			
Protection degree			IP 20			
Electromagnetic compatibility			According to "IEC EN 62040-2" (CE marking)			
Safety			IEC EN 62040-1			
Test and performance			IEC EN 62040-3			
Paint			RAL 7016			
Accessibility			Front and top			
Installation			10 from the wall			
Dimensions (without battery)		mm	W = 450 D = 670 H = 1200			
Dimensions (with battery)		mm	L = 450 P = 670 H=1730		N/A	
Weight (without battery)		kg	140		170	
Weight (with battery)		kg	350		N/A	
Static load (without battery)		kg/m ²	464		563	
Static load (with battery)		kg/m ²	1160		N/A	
Input/Output cable connection			Bottom front side			
Transport			By wheels			



www.starkstrom.com

256 Field End Road, Eastcote, Ruislip, Middlesex, HA4 9UW, UK

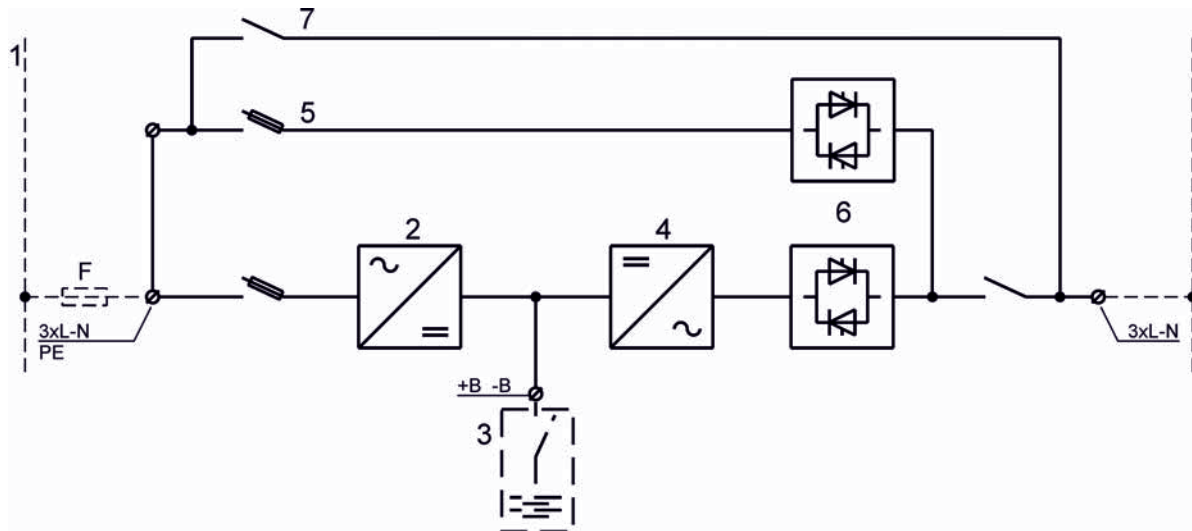
Tel +44 (0) 20 8868 3732

Fax +44 (0) 20 8868 3736



Transport mechanical stress		According to "IEC EN 62040-3"
Design standards		"IEC EN 62040" "ISO 9001:2008" - "ISO 14001"
Free contact interface SRC voltage		On request
Serial communication interface		Standard: RS232 - USB Optional: RS485 (ModBus protocol)
Parallel configuration (optional)		Up to 5+1 (Redundant parallel) Up to 6 (Power parallel)

BLOCK DIAGRAM



1. Common input rectifier and bypass
2. Rectifier and battery charger
3. Optional internal battery: 9Ah 12V – 60 or 62 batteries; only for 30kVA and 40kVA
4. Optional external battery
5. Inverter
6. Bypass, Emergency line (optional with backfeed contactor).
7. Inverter (SSI) and by-pass (SSB) static switch



UPS INPUT: RECTIFIER AND BATTERY CHARGER

POWER		kVA	30	40	50	60
Ingresso	Three-phase + Neutral					
Nominal input voltage		Vac	400			
Tolerance		%	-20/+15			
Input frequency		Hz	50 – 60			
Tolerance			±5			
Input power factor			> 0,99			
Harmonic distortion in Input current THD at nominal voltage and THDV <0,5%	@25% load @50% load @75% load @100% load	%	< 14 < 7 < 5 < 4			
DC output voltage accuracy		%	+/- 1%			
DC output voltage ripple		% rms	1% rms			
Battery recharging characteristic			IU (DIN 41773)			
Maximum recharging current at nominal load		A	10	8	15	15
Bridge rectifier type			IGBT PFC			
Input protection			Extraprapid fuses			
Inrush input current		A	< maximum nominal current			
Earth leakage current		mA	< 22 mA		< 88 mA	
Nominal current absorbed from mains (at nominal load and battery charged)		A	43	56	72	86
Maximum current absorbed from mains (at nom. Load, max. recharging current and nominal. input voltage)		A	54	66	89	103
Settable walk-in		sec	Sectable from 5" to 30"			
Settable hold-off		sec	Sectable from 1" to 300"			

BATTERY

POWER	kVA	30	40	50	60
Maximum internal battery in extended cabinet		60 o 62 batteries 9Ah		N/A	N/A
Standard type		Maintenance free			
Cells number (settable)		2x180 or 2x186			
Floating voltage at 25°C (settable)	Vdc	2x406 or 2x418			
Minimum battery discharge voltage	Vdc	Settable			
Inverter input power (at nominal load)	kW	28,58	38,25	47,37	56,84
Inverter input current (at nominal load and minimum Vdc)	A	40,5	54	67	81
Battery Protection (external to the UPS)		Fuses			
Battery Test		Included as standard			



www.starkstrom.com

256 Field End Road, Eastcote, Ruislip, Middlesex, HA4 9UW, UK
Tel +44 (0) 20 8868 3732 Fax +44 (0) 20 8868 3736



UPS OUTPUT: INVERTER

POWER	kVA	30	40	50	60
Inverter Bridge		Modular IGBT (transformerless)			
Nominal output power (cosφ = 0,9) (* at 20 °C ** at 40 °C)	kVA	30	40	50	60 (*) 54(**)
Nominal output power (cosφ = 1) (* at 20 °C ** at 40 °C)	kW	27	36	45	54 (*) 48 (**)
Efficiency (DC ÷ AC)	%	> 95			
Output		Three-phase + Neutral			
Nominal output voltage (selectable)	Vac	380-400-415			
Output voltage stability - Static (balanced Load) - Static (unbalanced Load) - Dynamic (step load 20%÷100%÷20%) - Output voltage recovery time (after step load) - IEC EN 62040-3	% % % ms	± 1 ± 2 ± 5 < 20 Class 1			
Angle phase precision - balanced Load) - 100% unbalanced	°	± 1			
Output frequency (selectable)	Hz	50 - 60			
Output frequency stability - Free running quartz oscillator - Inverter sync. with mains - Slew rate	Hz Hz Hz/s	± 0,001 ± 2 (other on request) ± 1			
Nominal Output Current (@ 400 Vac output) Cosφ 0,9 (inductive e capacitive) (* at 20 °C ** at 40 °C)	A	44	58	73	87* 78**
Nominal Output Current (@ 400 Vac output) Cosφ 1 (purely resistive load) (* at 20 °C ** at 40 °C)	A	39	52	65	78* 70**
Overload capability		125% for 10 min 125%/150% for 30 sec >150% for 10 sec			
Short circuit current	A	70	94	130	156
Short circuit characteristic		Elect. short circuit protection, current limited at above values. Automatic stop after 5 seconds			
Selectivity		Within ½ cycle (Fuse GL 20% In)			
Output waveform		Sinusoidal			
Output harmonic distortion THD% - Linear Load - Non Linear Load - IEC EN 62040-3	%	< 1 < 5 Fully compliant			
Max crest factor without derating		3 : 1			



www.starkstrom.com

256 Field End Road, Eastcote, Ruislip, Middlesex, HA4 9UW, UK
Tel +44 (0) 20 8868 3732 Fax +44 (0) 20 8868 3736



UPS OUTPUT: BY PASS

Automatic static by-pass		Electronic thyristor switch
Protection		Fuses
Input	Vac	Three-phase + Neutral
Nominal Voltage (selectable)	Vac	380-400-415
Range	%	±10
Nominal Frequency (selectable)	Hz	50-60
Range	%	±(1÷5) ±10 adjustable
Transfer mode		Without break
Transfer inverter → automatic bypass		In case of : - Short circuit - Battery end of discharge - Inverter test - Inverter not operating
Retransfer automatic bypass → inverter		- Automatic - Block on bypass after 6 transfers within 2 minutes, reset by front panel
Overload Capability	%	150 continuously 1000 for 1 cycle
Manual By-Pass		Standard: - Electronically controlled - No break
Back feed protection		Optional



www.starkstrom.com

256 Field End Road, Eastcote, Ruislip, Middlesex, HA4 9UW, UK
Tel +44 (0) 20 8868 3732 Fax +44 (0) 20 8868 3736



OPTIONS

1. BATTERY TEMPERATURE VOLTAGE COMPENSATION
2. INSULATION TRANSFORMER ON BY-PASS
3. SEPARATED INPUT KIT
4. VOLTAGE ADAPTATION AUTO-TRANSFORMERS
5. BACK FEED PROTECTION
6. RELAY CARD (Eight signals Alarms/Statuses), Free relay contact
7. SERIAL INTERFACE RS-485 (MOD-BUS protocol)
8. SNMP ADAPTER
9. REMOTE MONITORING PANEL
10. PARALLEL CARD INTERFACE KIT
11. INTERNAL BATTERIES EXTENSION (MAX 60 o 62 BATTERIES 9Ah 12V) ONLY FOR UPS 30KVA AND UPS 40KVA
12. EXTERNAL BATTERY CABINET
13. WALL MOUNTED FUSED SWITCH BOX
14. SPECIAL PAINT
15. DIESEL GENERATOR
16. EXTERNAL EPO AUXILIARY CONTACT
17. EXTERNAL MCB AUXILIARY CONTACT

OTHER SOFTWARE SELECTABLE FEATURES

1. OFF-LINE
2. RECTIFIER WALK-IN TIME
3. RECTIFIER DELAY ON STARTUP (HOLD-OFF TIME)
4. FREQUENCY CONVERTER MODE



www.starkstrom.com

256 Field End Road, Eastcote, Ruislip, Middlesex, HA4 9UW, UK
Tel +44 (0) 20 8868 3732 Fax +44 (0) 20 8868 3736

