

TECHNICAL DATA SHEET

B9000FXS 60-80-100-125-160 kVA

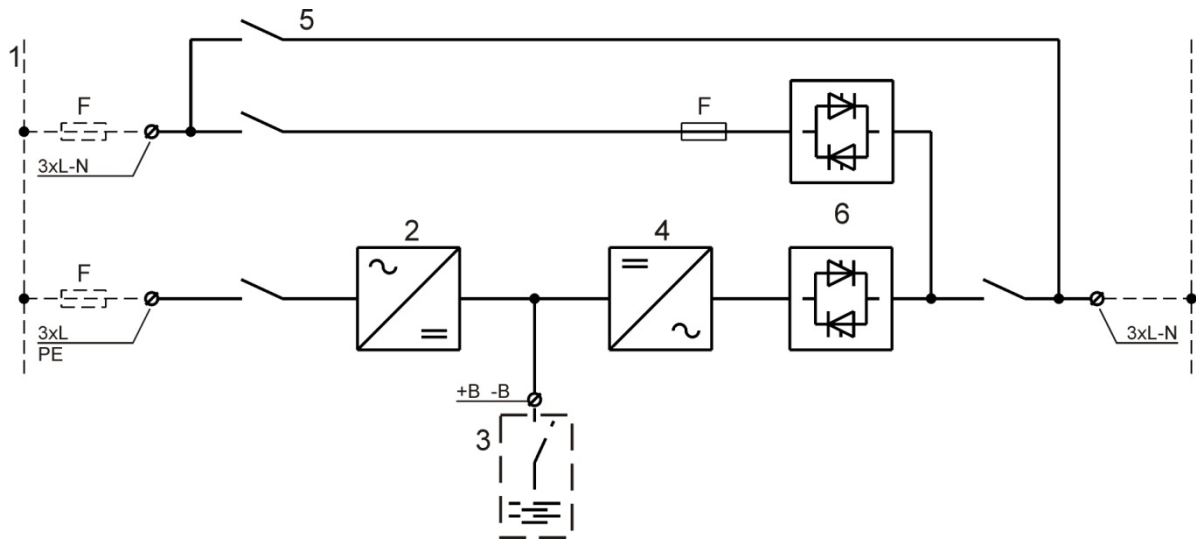
GENERAL INFORMATION

POWER		kVA	60	80	100	125	160
UPS Type		ON LINE – Double Conversion					
Nominal output power (Cosφ 0.9)		kVA	60	80	100	125	160
Nominal output power (Cosφ 1.0)		kW	54	72	90	112.5	144
Efficiency (AC ÷ AC) * (ON LINE - Double Conversion) * Certified by TÜV NORD GmbH	@25% load	%	> 92				
	@50% load						
	@75% load						
	@100% load						
Efficiency (AC ÷ AC) (Eco Mode)		%	> 98				
Heat dissipation at nominal load and voltage		kW	4.3	5.3	6.6	8.3	10.6
		kcal/h x 1000	3.7	4.5	5.6	7.1	9.0
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 "IEC62040-3", 1% power derating every 100m above 1000m, up to max 2000m					
Ventilation		Forced					
Requested cooling air volume		m ³ /h	1600	1800	2100	2300	2500
Audible noise level (according to IEC EN 62040-3)		dB	< 60				
Standard battery type lead acid		n° cells	300 – 312 adjustable				
Protection degree		IP 20					
Electromagnetic compatibility EMI		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 access for service					
Installation		Also against wall and/or side-by-side					
Dimensions		mm	W = 815 D = 825 H = 1670				
Weight (without battery)		kg	570	600	625	660	715
Static load (without battery)		kg/m ²	808	851	886	936	1014
Input/Output cable connection		Bottom Side (Top Side on Request)					
Transport		Base provided for forklift handling					
Transport mechanical stress		According to "IEC EN 62040-3"					
Design standards		"IEC EN 62040" "ISO 9001:2008" - "ISO 14001"					

Rev.	Descrizione Description	Data Date	Emesso Issued	Approvato Approved	Lingua Language	Pagina Page	di Pag. of Pag.
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Codice / Code						JUD413719	

Free contact interface		Standard to remotize the following contact: EPO – MCB – BCB – DIESEL MODE
Serial communication interface		Standard: RS232 - USB Optional: RS485 (Mod-Bus protocol)
Parallel configuration (optional)		Up to 5+1 (redundant parallel) Up to 6 (power parallel)

BLOCK DIAGRAM



1. Input mains (separate for by-pass and rectifier)
2. Rectifier and battery charger
3. External battery
4. Inverter
5. Emergency line (by-pass) with optional backfeed contactor
6. Inverter (SSI) and by-pass (SSB) static switch

UPS INPUT: RECTIFIER AND BATTERY CHARGER

POWER		kVA	60	80	100	125	160
Input			Three-phase				
Nominal input voltage		Vac	400				
Range		%	-20/+15				
Input frequency		Hz	50 – 60				
Range			±5				
Input power factor			> 0.99				
Input current THD at nominal voltage and THDV <0.5% *		@25% load @50% load @75% load @100% load	< 10 < 7 < 5 < 3				
* Certified by TÜV NORD GmbH							
DC output voltage accuracy		%	±1				
DC output voltage ripple		% rms	1				
Battery recharging characteristic			IU (DIN 41773)				
Maximum recharging current		A	15	15	15	20	20
- at nominal load							
- with DCM function (max current)			50	50	100	100	100
AC-DC converter type			PFC IGBT				
Input protection			Fuses				
Nominal current absorbed from mains (at nominal load and battery charged)		A	83	111	138	173	221
Maximum current absorbed from mains (at nom. load, nom. voltage and max. recharging current)		A	99	127	156	196	246
Sectable walk-in		sec	Sectable from 5" to 30"				
Sectable hold-off		sec	Sectable from 1" to 300"				

BATTERY

POWER		kVA	60	80	100	125	160
Type (standard) other on request			Lead Sealed maintenance free				
Number of Cells			300 – 312 adjustable				
Floating voltage at 25°C		Vdc	680 for 300 cells , 707 for 312 cells (adjustable)				
Minimum discharge voltage		Vdc	496 for 300 cells , 516 for 312 cells (adjustable)				
Inverter input power (at nominal Load)		kW	56	75	93	117	149
Inverter input current (at nominal load-minimum Vdc)		A	114	152	188	235	300
Battery Protection (external to the UPS)			Wall mounted fused switch box on request				
Battery Test			Included as standard				

UPS OUTPUT: INVERTER

POWER		kVA	60	80	100	125	160
Inverter Bridge			IGBT (High Frequency PWM)				
Nominal output power (Cosφ 0.9)		kVA	60	80	100	125	160
Nominal output power (Cosφ 1.0)		kW	54	72	90	112.5	144
Efficiency (DC ÷ AC)	@25% load	%	> 92				
	@50% load		> 96				
	@75% load		> 96				
	@100% load		> 96				
Output			Three-phase + Neutral				
Nominal Output Voltage (selectable)		Vac	380-400-415				
Output Voltage Stability							
- Static (Balanced Load)		%	± 1				
- Static (Unbalanced Load)		%	± 2				
- Dynamic (Step Load 20%÷ 100% ÷20%)		%	± 5				
- Output Volt. Recovery Time(after step load)		ms	< 20				
- IEC EN 62040-3			Class 1				
Phase Angle Accuracy							
- Balanced Load		°	± 1				
- 100% Unbalanced Load			± 1				
Output Frequency (selectable)		Hz	50 - 60				
Output Frequency Stability							
- Free Running Quartz Oscillator		Hz	± 0,001				
- Inverter Sync. with Mains		Hz	± 2 (other on request)				
- Slew rate		Hz/s	1				
Nominal Output Current (@ 400 Vac output)							
- Cosφ 0.9 (leading and lagging)		A	87	116	145	181	232
- Cosφ 1 (purely resistive load)			78	104	130	163	209
Overload Capability			10 min	>100%...125%			
			1 min	>125%...150%			
			10 s	>150%...199%			
			100ms	at 200%			
Short Circuit Current		A	140	186	232	290	372
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							
- Linear Load		%	< 1				
- Non Linear Load			< 5				
- IEC EN 62040-3			Fully compliant				
Max Crest Factor without derating			3 : 1				

UPS OUTPUT: BY PASS

Automatic static by-pass		Electronic Thyristor Switch
Protection		Fuses
Bypass	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 : <ul style="list-style-type: none"> - Static Switch test - Inverter test - Inverter not operating - Battery end of discharge
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: <ul style="list-style-type: none"> - Electronically controlled - No break

OPTIONS

1. BATTERY TEMPERATURE VOLTAGE COMPENSATION
2. INSULATION TRANSFORMER ON BY-PASS
3. VOLTAGE ADAPTATION AUTO-TRANSFORMERS
4. RELAY CARD (Eight signals Alarms/Statuses), Free relay contact
5. SERIAL INTERFACE RS-485 (MOD-BUS protocol)
6. SNMP ADAPTER
7. REMOTE MONITORING PANEL
8. PARALLEL CARD INTERFACE KIT
9. EXTERNAL BATTERY CABINET
10. WALL MOUNTED FUSED SWITCH BOX
11. IN/OUT TOP CABLE ENTRY
12. SPECIAL PAINT
13. LOAD-SYNC BUS CARD INTERFACE KIT
14. BACK FEED PROTECTION

OTHER SOFTWARE SELECTABLE FEATURES

1. DIESEL-MODE
2. ECO-MODE
3. BOOST-CHARGE
4. RECTIFIER WALK-IN TIME
5. RECTIFIER DELAY ON STARTUP (HOLD-OFF TIME)
6. FREQUENCY CONVERTER MODE
7. DCM FUNCTION