Flexus

The FLEXUS series is suitable for protecting information and telecommunications systems, information networks and critical systems in general, where the risks connected with a power supply of poor quality energy could put the continuity of activities and services at risk, entailing high costs.
The FLEXUS series is available in 10-12-15-20 kVA three-phase input and output models, with double conversion on-line technology according to the VFI-SS-111 classification, as defined by the IEC EN 62040-3 standard. Flexus has been designed and produced with state-of-the-art technologies and components, in order to guarantee maximum protection for the users powered, no impact on the supply mains and energy saving.

ZERO IMPACT SOURCE

Thanks to the technology used, Flexus can solve any problem of connection in installations where the supply mains has a limited installed power, where the UPS is also powered by a generator set or where there are problems of compatibility with loads that generate current harmonics; Flexus has indeed zero impact on the power supply source, be it the mains or a generator set:

- low distortion of input current – less than 3%
- input power factor 0.99
- power walk-in function that guarantees progressive start-up of the rectifier
- delayed switching-on function, to restart the rectifier igniters when the mains returns, in case of systems with various UPS

The Flexus also acts a filter and phase-shift mechanism in respect of the supply mains ahead of the UPS, since it removes the harmonic components and the reactive power generated by the users powered.

BATTERY CARE SYSTEM

Management of the batteries is fundamental to guaranteeing operation of the power supply unit under emergency conditions. The Battery Care System consists of a series of functions and performances that permit management of the storage batteries in such a way as to obtain the best performance and to extend battery life.

Battery recharge: Flexus is suitable for working with hermetically sealed (VRLA), AGM and GEL lead batteries, and open-vase and Nickel-Cadmium batteries. According to the type of battery, various recharge methods are available.

- One-level recharge, typical for the most commonly used VRLA AGM batteries
- Two voltage levels recharge according the IU characteristic
- Charge block system to reduce consumption of the electrolyte and further extend the life of VRLA batteries.

Compensation of the recharge voltage according to temperature in order to avoid excessive charges and battery overheating.
Battery Test in order to detect any fall-off in performance or failure of the batteries in good time.
Protection against deep discharges: in case of long low load discharges, the end-of-discharge voltage tension will be increased, as prescribed by the battery manufacturers, in order to avoid damage to or a drop in performance of the storage batteries.
Ripple Current: the recharge ripple current (residual AC component) is one of the most important causes that reduce battery reliability and life. Flexus, thanks to the high-frequency battery charger, reduces this value to negligible levels, extending battery life and maintaining high performance for a long time.
Wide voltage range: the rectifier is made to be operated with a wide range of values of the input voltage (up to -40% with half load), reducing the need to discharge the batteries and, as a result, extending battery life.

LOW MANAGEMENT COST

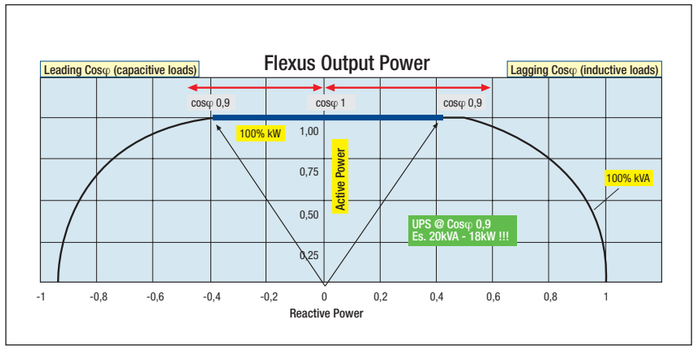
The technology used and the choice of high performance components mean that Flexus can obtain exceptional performance and efficiency levels, from a very low footprint and dimensions:

- the lowest footprint in this category, only 0.26 sq. m. for 20kVA Flexus, batteries included
- high performance up to 94% that permits 35% of the energy dissipated in one year to be saved, compared to similar products present on the market (with average performance 91%). This exceptional performance value makes it possible to recover the initial investment in less than 4 years in operation.
- output power with power factor 0.9 that provides up to 15% more active power compared to a normal UPS in commerce, guaranteeing the greatest margin in sizing of the UPS for further load increases

FLEXIBILITY

Flexus can be used for a wide range of applications, thanks to its characteristics of configuration flexibility, accessories and options available and performance levels:

- suitable for powering capacitive loads such as blade servers, without any reduction of the active power, from 0.9 leading to 0.9 lagging
- modes of operation: On Line, Eco, Smart Active and Stand By Off



- frequency converter mode
- Power Share sockets that can be configured in order to maintain the back-up time for the most critical loads or to be activated only when the mains goes down
- Cold Start to switch on the UPS including when the supply mains is off
- battery cabinets of various dimensions and capacity, for longer back-up times
- option to connect a temperature sensor for external battery cabinets, for recharge voltage compensation
- additional battery chargers to optimize recharge times
- optional double input of the supply mains
- isolation transformers to modify the neutral arrangements, in case of separate sources or for galvanic isolation between input and output

ADVANCED COMMUNICATION

Flexus is equipped with a graphic display that provides information, measures, states and alarms regarding the UPS in 5 different languages.

- Advanced multiplatform communication, for all operating systems and network environments: Watch&Save 3000 monitoring and shutdown software included with SNMP agent
- Compatible with PowerNetGuard for the remote assistance service RS232 or USB serial port
- 3 slots for the installation of optional communication accessories such as network adapters, zero-potential contacts, etc.
- REPO (Remote Emergency Power Off) with which to power down the UPS through a remote emergency pushbutton
- Input for connection of the auxiliary contact of an external manual bypass
- Input for synchronization from an external source
- Graphic mimic panel display for remote connection

SUITABLE FOR EMERGENCY LIGHTING APPLICATIONS

Flexus

Three-phase input
Three-phase output

Technical data

Models	FT 10	FT 12	FT 15	FT 20
Power (kVA)	10	12	15	20

Input	FT 10	FT 12	FT 15	FT 20
Rated voltage	380- 400-415 Vac three-phase +N			
Rated frequency	50/60 Hz			
Frequency tolerance	40 ÷ 72 Hz			
Power factor at full load	0.99 Pf			
Current distortion	THDI ≤ 3%			

By pass	FT 10	FT 12	FT 15	FT 20
Rated voltage	380-400-415 Vac three-phase +N			
Number of phases	3 + N			
Voltage tolerance	180 ± 264V (selectable)			
Rated frequency	50 or 60 Hz (selectable)			
Frequency tolerance	±5 (selectable)			

Output	FT 10	FT 12	FT 15	FT 20
Rated power (kVA)	10	12	15	20
Active power with load PF from 0,9 cap. to 0,9 ind.	9	10.8	13.5	18
Output power factor	0.9			
Number of phases	3 + N			
Rated voltage	380-400-415 Vac (selectable)			
Static variation	± 1%			
Dynamic variation	± 3%			
Crest factor (Ipeak/Irms)	3 : 1			
Voltage distortion	≤ 1% with linear load / ≤ 3% with non-linear load			
Frequency	50/60 Hz			
Frequency stability on battery mode	0.01%			
Overload at Pf 0.8	115% infinite, 125% for 10 minutes, 150% for 1 minute, 168% for 5 seconds			

Batteries	FT 10	FT 12	FT 15	FT 20
Type	VRLA AGM/GEL			
Recharge time	6 h			

Flexus

Three-phase input
Three-phase output

System	FT 10	FT 12	FT 15	FT 20
Weight with internal batteries (kg)	180	182	190	195
Dimensions (hwd) (mm)	930 x 320 x 840			
Communication	3 communication interface slots/RS232/USB			
Operating temperature	0°C - 40°C			
Relative humidity	90% non condensing			
Colour	Dark grey (RAL 7024)			
Noise	< 56 dBA at 1 m			
Protection rating	IP20			
Efficiency	≥ 94% in On-line mode, ≥ 98% in Economy mode			
Compliance	European Directives: L V 73/23/EC and 93/68/EC Low voltage directive EMC 2004/108/EC and 89/336/EC Electromagnetic compatibility directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2 C2 Classification according to IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111			

Details