

UPS PS

TECHNOLOGY:	TRUE ON LINE Double Conversion
CLASSIFICATION CODE:	VFI-SS-111 (EN 62040-3)
POWER RANGE:	10, 20, 30, 40 kVA
PHASE CONFIGURATION:	1:1, 3:1, 3:3, 1:3



■ APPLICATIONS

- Computer networks
- Servers
- Rack cabinets 19"
- Laboratory apparatus
- Telecommunications
- Automation and control systems

■ CHARACTERISTICS

True On-Line Double Conversion technology ensures excellent output voltage performance regardless of energy interference and the type of consumers being powered.

The universal design of the rectifier and inverter allows the UPS to be used in any input and output phase configuration of 1:1, 3:1 or 3:3, as well as 1:3.

Separate feeding of the rectifier and Bypass tracks (Split Bypass) increases system reliability and enables operation in cascade systems. **IGBT rectifier** the most advanced technology providing very low THDi and high power factor.

The automatic bypass - uninterruptible - ensures uninterrupted power supply to consumers in critical situations such as overheating or failure.

Communication interfaces:

USB for monitoring and managing UPS operation.

SNMP integration with NMS-type network management systems, **Remote Emergency Power Off. (REPO)** to provide remote disconnection of power supply to consumers in the event of fire,

The LCD control and monitoring panel and LED indicator allow the parameters and operating mode of the PSU to be diagnosed and events to be logged.

Small dimensions - modules suitable for installation in standard 19" racks.

The unit's high efficiency (>96%), achieved over a wide range of load values, limits the heat emitted, making eventual space cooling simpler and cheaper to operate.

ECO-Mode significantly reduces the operating costs of the unit and virtually eliminates heat emission.

Advanced software enabling the user to have full control over the unit and the powered loads.

The configurability of the operating parameters - nominal voltages, frequencies, preferred operating modes, method of communication - greatly expands the range of possible applications.

The high input power factor value of 0.99 limits the value of the current drawn by the unit from the mains.

The high output power factor of 1.0 allows the power supply to be loaded with full active power.

The wide input voltage range in normal operation ensures stable operation of the unit without the need for batteries, significantly extending battery life.

Automatic diagnostics and digital control guarantee full efficiency of the unit, control of components and operating parameters without user intervention.

The wide input frequency range in normal operation allows the power supply to be used freely in mains with unstable parameters and when powered by a generator set.

Simplicity of operation - the ease of connection to the mains and the simple switching on and off of the unit does not require any special skills on the part of the user.

Advanced battery management ensures optimal charging and utilisation of the battery bank, increases battery life and reduces operating costs.

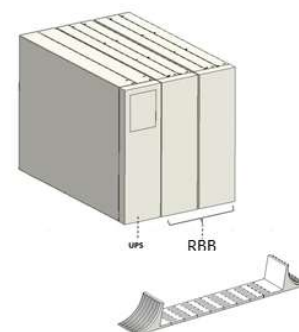
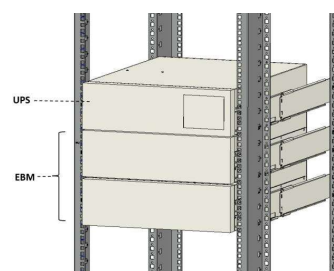
Battery start ensures that the UPS can be switched on even if the mains supply is interrupted.

The excellent quality of the output voltage, achieved through the use of a 3-level IGBT inverter, using advanced PWM control technology means that a voltage with stable parameters is delivered, regardless of energy disturbances and the type of equipment being powered.

Redundant parallel operation - redundant parallel operation possible for increased power or reliability (N+1).

UPS PS - 19" rack installation with battery modules

UPS PS - free-standing, Tower with battery modules



UPS PS

Model	PS 10K	PS 20K	PS 30K	PS 40K
Power	10 kVA / 10 kW	20 kVA / 20 kW	30 kVA / 30 kW	40 kVA / 40 kW
No. of phases IN : OUT	1:1, 3:1, 3 : 3, 1:3			
Input				
Nominal voltage [L-N] [L-L]	220 / 230 / 240 VAC 380 / 400 / 415 VAC			
Voltage range [L-N] [L-L]	100 ÷ 160 VAC linearly for load. 50% - 100%, 160 ÷ 300 VAC for load 100% 174 ÷ 278 VAC linearly for load 50% - 100%, 278 ÷ 522 VAC for load 100%			
Frequency	50 / 60 Hz			
Frequency range	45 ÷ 65 Hz			
THDi	<3%			
Input power factor	≥0,99			
Output				
Nominal voltage [L-N] [L-L]	220 / 230 / 240 VAC 380 / 400 / 415 VAC			
Power factor	1,0			
Static/dynamic voltage regulation	±1% / ±3%			
Nominal frequency	50 / 60 ±0,1 Hz			
Overload resistance	105% const., 125% - 10 min., 150% - 30 s., >150% - 500 ms			
Efficiency in On-line mode	96%			
Efficiency in ECO mode	98%			
Creast factor	3:1			
Battery				
Number of batteries in 1 string	32 - 40 szt. battery 12 V			
Charging current	1 ÷ 13 A			
Charging time	3 - 8 hours up to 90% capacity (configurable)			
Charging cycle	According to DIN 41773 with automatic charge deactivation according to current and voltage criteria, with time control, temperature compensation option for charging voltage			
Dimensions and weight				
Dimensions UPS W x D x H [mm]	440 x 690 x 132 (3U)		440 x 750 x 132 (3U)	
Weight of 1 UPS module	25 kg	32 kg	36 kg	38 kg
Dimensions of 1 battery module W x D x H [mm] (20 bat.)	440 x 780 x 132 (3U)			
Weight of 1 battery module (20 bats)	65 kg			
Signalling and communication ports				
Operating status indicator	LCD, audible alarm			
Communication	USB, RS232, EPO, SNMP			
Environmental conditions				
Noise level (dependent on number of power modules)	<65 dB @ load 100%			
Permissible operating temperature	0°C ÷ 40°C			
Recommended operating temperature	15°C ÷ 25°C			
Storage temperature	-20°C ÷ 40°C			
Humidity	0 ÷ 95% (non-condensing)			
Standards				
Resistance to interference	EN 62040-2:2018, EN 61000-3-2:2019, EN 61000-3-3:2013+A1:2019			
Safety	EN 62040-1:2019, EN 62040-1-2:2003, 62040-3:2001, CE			
Optional equipment				
- SNMP adapter - Uninterruptible External Bypass, Service	- 19" rack-mounted or rack-mounted battery modules - Remote Fire Protection Switch - REPO			

The publication contains specifications for standard models. Due to continuous product improvement, the parameters are subject to change without prior notice.