MZ 120K

TECHNOLOGY:	**TRUE ON LINE Double Conversion**
CLASSIFICATION:	**VFI-SS-111** (EN 62040-3)
POWER:	**120 kVA/kW**
No. OF PHASES:	**3:3**

APPLICATION

- Large computer networks
- Data processing centers
- Industrial facilities and equipment
- Laboratory equipment
- Telecommunication
- Medical equipment (CT, MRI)

SPECIFICATION

Technology True On-Line Double Conversion provides excellent output voltage parameters regardless of power disturbances and the type of receivers being powered.
VFI-SS-111 according to EN 62040-3 ensure TrueSinwave waveform of the output voltage in all UPS working modes and switching time 0ms between Inverter-bypass operation.
Rectifier IGBT the most advanced technology ensuring very low THDi and high power factor.
Modular hot swap design allows maintenance or repair work without turning off the inverter.
Automatic bypass - uninterrupted ensures uninterrupted power supply to critical loads such as overheating or failure.
Service bypass - enables servicing of devices without switching off powered receivers. Separate power supply Bypass track provides the ability to provide a reserve power source for receivers even in the event of a device failure or UPS protection in the main track.
Communication interfaces:
RS485, ModBus to monitor and manage the operation of the power supply and receivers,
DryContact in/out relay contacts for cooperation with BMS systems,
SNMP integration with NMS network management systems ,
Remote switch connector against Fire (REPO) to ensure remote disconnection of power supply to receivers in the event of a fire,
Switch aginst Fire (EPO) on the control panel it enables immediate disconnection of power from the receivers,
Touch control and monitoring panel gives the possibility of diagnostics of parameters and operation mode of the power supply and enables registration of events. Available languages include Polish English.
Small dimensions , thanks to which a large space for installing the device is not required. Power packing at 211 kW / m2.
High efficiency of the device 96% It reduces the own losses of the device and reduces the heat emitted, making possible cooling of the rooms easier and cheaper. Compared to 120kVA devices with efficiency of 94%, annual savings of USD 11,000 are achieved (assuming energy prices of 0.5 USD / kWh).

Function Self-Aging allows you to test the device with full load, even without connected receivers.
Automatic diagnostics with FTM (Fault Trace Management) and fully digital control (32 bit DSP x2) guarantees full device efficiency, control of components and operating parameters without the need for user intervention.
High value of the input power factor limits the value of the current consumed by the device from the network.
Maximum value of the output power factor PF = 1 provides 20% more active power than standard solutions with PF = 0.8.
Maximum wide input voltage range -60% ÷ + 25% in normal operation mode, it ensures stable operation of the device without the need to use batteries, which significantly affects the extension of their service life.
A wide range of input frequencies in the normal operation mode, it allows free use of the power supply in a network with unstable parameters and power supply from the generator set.
Advanced battery management it guarantees optimal charging and use of batteries, increases their lifespan and lowers operating costs.
Excellent quality of output voltage achieved thanks to the use of the IGBT inverter using highly advanced PWM control technology, it provides voltage with stable parameters, regardless of the power disturbances and the type of powered equipment.
High overload provides device protection and continuity of power supply in the presence of transient transients, and reduces the need for oversizing the device in relation to the power of the receivers.
Advanced software allowing the user full control over the device and powered receivers.
Configurable work parameters nominal voltages, frequencies, preferred modes of operation, communication method - significantly broadens the range of possible applications.
Redundant configurations:
- redundant work for increased reliability
- capacitive parallel operation for increased power
- HotStandby operation (separated rectifier and bypass power supply)

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UNINTERRUPTIBLE POWER SUPPLY

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THE POWER IS ON

Model	MZ 120K
Power	120kVA / 120kW
No of phases IN : OUT	3:3
Input	
Nominal Voltage	380 / 400 / 415 VAC
Voltage range	92÷287 Vac (L-N) / 160÷500 Vac (L-L)
Frequency	50/60 Hz
Frequency range	-20% ÷ +20 %
THDi	<3%
Input power factor	>0,99
Output	
Nominal voltage	380 / 400 / 415 VAC
Power factor	1,0
Static / dynamic voltage regulation	±1% / ±3%
THDu linear / not linear load	<1% / <3%
Nominal frequency	50/60 Hz ±0,01 Hz
Inverter overload resistance	105% - cont.; 115% - 60 min., 130% - 10 min., 150% - 60 sek., >151% - 0,2 sek.
Efficiency in On-Line mode	96%
Efficiency in Eco mode	99%
Crest factor	3:1
Battery	
Type	Sealed maintenance-free VRLA
No. of batteries in string	Configurable: 30 ÷ 40 psc
Maximum charging current	30A
Charging time	3 - 8 hours to 90% capacity (configurable)
Charging cycle	According to DIN 41773 with automatic shutdown of charging according to the criterion of current and voltage, with time control.
Bypass	
Automatic bypass	Static switch type Bypass, uninterruptible changeover
Bypass manual mechanical	Standard
Dimensions and weight	
Dimensions and weight UPS (W x D x H)	450 x 840 x 1400 mm
	242 kg
Signaling and communication ports	
Work status indicator	4.3-7.0 "touch display, LED indicators, audible alarm
Standard communication	3 x Smart Slot for additional communication cards, 2 x REPO (NO/NC), 3 x Dry Contact Out, RS485, Modbus.
Alarms and fault signalizing	EPO active, Mains/Bypass parameters over or under voltage/frequency, bypass overload, inverter overload, Inverter voltage low/high, maintenance bypass ON, battery circuit abnormal, battery low, battery under voltage, phase rotation error, overtemperature, short circuit, communication problem, redundancy lost etc.
Environmental conditions	
Noise level	<60 dB
Protection	IP 20
Permissible operating temperature	0°C ÷ 40°C
Recommended working temperature	15°C ÷ 25°C
Storage temperature	-25°C ÷ 55°C
Humidity	0 ÷ 95% (without condensation)
Standards	
Resistance to interference	EN 62040-2:2017, EN 62040-2:2016, EN 62040-3:2011
Safety	EN IEC 63000: 2018, EN 62321, IEC62040-1-1, CE (LV and EMD directives)
Optional equipment	
- SNMP card, - RS 232 - Uninterruptible Bypass External - Additional Dry Contact card - Output transformer for galvanic separation	- Batteries in rack or in battery modules - Sensor for battery voltage compensation - Remote signaling panel - Backfeed protection contactor

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