



## EPI S5-Dual MLD series

Single-Phase in /Single-Phase out – from 5kVA to 10kVA  
Three-Phase in /Single-Phase out – 10kVA



S5-Dual MLD is the perfect solution for mission critical applications which require the highest levels of reliability, availability and performance.

S5-Dual MLD is unique in that the UPS can be placed directly onto the floor or mounted in 19" rackmount cabinets. The UPS only occupy 4U in the 19" or 21" rack cabinets with optional 21" rack accessories. The range is available in 5000-6000-10000 VA modes.

### SIMPLIFIED SINGLE AND PARALLEL INSTALLATION

- The UPS can be installed as a floor standing tower or 19" rackmount UPS
- The front panel digital display can be pulled out and rotated to suit the installation format
- The maximum parallel operation configuration is up to 4 units by interconnecting the RJ-45 connector on the rear panel

### FULL DIGITAL SIGNAL PROCESSOR (DSP) CONTROL

- Double conversion true online technology (VFI) complies with EN60240-3, European Directives for True-on-Line Technology
- Reprogram the UPS to be a Frequency Converter for either 50Hz or 60Hz through front keypad configuration
- DSP controller's built-in parameters and settings, such as UPS operation modes voltage configurations, synchronization frequency, bypass voltage tolerance and buzzer alarm status, can be modified through the LCD front panel
- Through intelligent self-diagnostics, faulty component can be rapidly pinpointed which enables your service technicians to repair the UPS very quickly
- High input power factor of 0.99 and low input current THD of <3%
- Start-up without mains (cold start)



### SMARTFAN SPEED REGULATION WITH TEMPERATURE CONTROLLED

The cooling fan speeds are controlled according to load percentage and temperature to reduce noise levels and energy consumption.

### ENERGY-EFFICIENTS

The AC to AC efficiency of the UPS reaches up to 90% at 50% load and better at higher loadings. Using the ECO mode, efficiencies of up to 97%.

### LCD/LED MIMIC PANEL

A precise LCD/LED display provides real time status of all major system parameter and status such as operation modes, AC Input and Output Voltage, Frequency, Battery Voltage, Load Level, temperature & etc.

### Dual Input Loops

Optional input terminal connections for the bypass and rectifier are available in addition to the standard single-input connection.

### ACCESSORIES OPTIONS:

- Emergency Power-Off (EPO) enables users to perform one-touch emergency shutdown of the UPS remotely
- External Maintenance Manual Bypass ensures continuous supply of power to the critical load during service or periodical maintenance of the UPS system
- Galvanic Isolation Transformer module provides isolation between the input and the output of the UPS and various secondary voltage 110/115/120/208/220/230/240 Vac
- e-Batt automatically manages the End-Discharge voltage of the internal batteries according to the load and prevents the deep discharge of the batteries during a power failure with ultra low load conditions
- Hot Swappable Battery function allows users to easily replace the battery packs without interruption of the critical load
- Standard matching battery cabinets are available to extend the UPS runtime

RS485



2<sup>nd</sup> RS 232



USB



Dry contact



WEB/SNMP



### CONNECTIVITY OPTIONS

In addition to the standard RS232, an internal 2nd RS232, USB, RS485, Dry Contact, or WEB/SNMP card provides isolated contacts for industrial and remote alarm applications.

### ADVANCED COMMUNICATION

The UPS is equipped with monitoring/shutdown software. The software not only allows the control of the UPS and its scheduled shutdown when the utility power fails, but also allows the user to:

- Remotely testing of the major operating UPS functions
- Communicate via SNMP/WEB card
- Access UPS function via WEB

# S5-Dual MLD series

TYPE	MLD-500L	MLD-600L	MLD-1000L	MLD-1000 TM
Power (kVA)	5	6	10	10
INPUT				
Phase Configuration	1Ph + N + PE			3Ph + N + PE
Nominal Voltage	220V/230V			380V/400V
Minimum Voltage (at Half load)	160V			277V
Minimum Voltage (at full load)	180V			312V
Maximum Voltage	280V			485V
Frequency	45-65 Hz			
Power Factor	0.99			
OUTPUT				
Phase Configuration	1Ph + N + PE			
Nominal Voltage	220V / 230V (adjustable)			380V/400V
Nominal current at 220V	23A	27A	45,5A	
Wave Form	Pure Sine Wave			
Total Harmonic Distortion at 100% linear load	<3%			
at 100% non-linear load	<5%			
Frequency	50Hz or 60Hz (adjustable)			
Frequency Tolerance (free running)	±0,2 %			
Frequency Regulation	±1Hz; ±3Hz			
Static Voltage Regulation (0%-100% load)	<1%			
Crest Factor	3:1			
Transfer Time	0 sec			
Overload (on mains at 110% load)	2 min			
Overload (on mains at 125% load)	5 sec			
Overload (on mains at 150% load)	Transfer to bypass			
Total Efficiency	≥90%			
Greenmode efficiency	≥97%			
BATTERY				
Type	Maintenance Free Dry Type			
DC Voltage	240VDC (20 pcs 12V Batteries)			
Recharging Time	4-6h up to 90%			
Cold Start	Present			
DISPLAY				
Status on LED + LCD	Line Mode, Back up Mode, Eco Mode, Bypass Supply, Battery Low, Battery Bad/ Disconnect, Overload, UPS Fault, Interruption during transfer			
Displayed parameters on LCD	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load%, Battery Voltage, Internal Temperature			
Self Diagnostics	Upon Power On, Front Panel Setting and Through Software Control, 24h routine Check			

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PROTECTION				
Overload Protection	Bypass transfer time is calculated by simulating a temperature related model of a fuse			
Short Circuit Protection	Acts as the ideal current source during the short circuit time			
Other Protection	Against excessive (heat,voltage,current) intense battery discharge			
COMMUNICATION INTERFACE				
	Standard RS232 port and optional RS485, Internal SNMP, Dry Contact Cards			
ENVIRONMENT				
Operating Temperature	0 °C.... + 40 °C			
Proposed Temp to extend battery life	20 - 25 °C			
Humidity	up to 90% (non-condensing)			
Audible Noise at 1 m	≤50 dB			
PHYSICAL SPECIFICATIONS (tower position)				
Net Weight (power module)	25 kg	26 kg	26 kg	
Net Weight (with internal batteries)	55 kg			
Dimensions (mm) (HxWxD)- power module	440 x 88 x 680	440 x 132 x 680		
Dimensions (mm) (HxWxD)- w/battery vers.	440 x 176 x 680			
STANDARDS				
Safety	EN62040-1-1			
EMC	EN62040-2			
Performance	EN62040-3			
Protection Class	IP 20			
OPTIONS				
Relay board (Communication Card)	X	X	X	X
RS485 Board (Communication Card)	X	X	X	X
UPSBoard (Communication Card)	X	X	X	X
UPSMAN (Management Software)	X	X	X	X
Internal SNMP (Internal Slot Card)	X	X	X	X
SNMP External Mini Net Agent	X	X	X	X
SNMP CS121BL External Adapter	X	X	X	X
MDL-BC1 (Additional Charging Board)	X	X	X	X
MLD-BY-5-1 (External Manual Bypass)	X	X	X	X
MLD-DBP (Distribution box for parallel UPS)	X	X	X	X
MLD-ESB External socket Box (2 x Schuko & 4 x IEC Outlets)	X	X	X	X
Battery Cabinet				
MPBC-0 for 20 x 12v 7 or 9Ah (440H x 176W x 680D, 26 kg)	X	X	X	X
MPBC-1 with 20 x 12v 7Ah (440H x 176W x 680D, 77 kg)	X	X	X	X
MPBC-1 with 20 x 12v 9Ah (440H x 176W x 680D, 82 kg)	X	X	X	X
MPBC-2 with 20 x 12v 12Ah (440H x 176W x 680D, 101 kg)	X	X	X	X