

MASTERELITE MULTITEC MRMX

MRMX 10-20kVA single/single phase or three/single phase



The MasterElite MultiTec range uses advanced digital on-line (VFI) technology to support loads up to 20kVA (80kVA for the maximum parallel system). MRMX models provide a single phase output from a single or three phase input and provide a Galvanically isolated output.

The load is powered continuously by the inverter with an EMI filtered, stabilised and regulated sinewave supply. The MultiTec feature provides the UPS with four user selectable operating modes: On-line, Standby (for emergency lighting applications), Stabiliser, and Smart-Active/Economy to achieve high operating efficiencies up to 98%. In Economy mode the UPS mimics digital line interactive (VI) technologies used for less critical or sensitive loads. In Smart-Active mode the UPS monitors the stability of the mains supply and automatically selects whether to operate in on-line or line interactive mode. All modes can be set using the PowerShield² software supplied with each UPS. MasterElite is an outstanding long runtime solution for critical voice and data processing applications. Runtimes from several minutes to many hours can be achieved using battery extension packs (BEPs) with extra chargers to maintain reasonable recharge times, or local standby generators.



- 1 Language selection
- 2 Input/Output measurements
- 3 Controls/Settings/Customisation options
- 4 Event log
- 5 Alarm reset
- 6 Time/Date
- 7 Scroll down
- 8 Scroll up

Buttons **7** and **8** are used to display detailed operating information

FEATURES

- Advanced digital on-line (VFI) technology (EN50091-3)
- Galvanically isolated output
- High reliability: microprocessor controlled static and manual bypass facility
- IGBT based power electronics
- Parallel and redundant (N+1) operation (up to 4 units)
- Dual input option
- High level diagnostics: states, modes, measurements and alarms
- Built-in front panel LCD with scroll function, RS232 and signal contact ports
- Power factor correction with sinusoidal input
- Low power consumption and maintenance costs (MTTR 30 minutes)
- Low cost and simplified installation including; castors for easy positioning, selection of the three phase or single phase input, and calibration of the output voltage from the front panel keypad to allow for voltage drop down long cable runs.
- High level surge immunity (6kV to IEC801-5)
- Auto restart on power up
- Built-in battery test facility (automatic and manual), temperature compensating charger and deep battery discharge protection
- Cold-start facility to allow the UPS to power up without a mains supply for security applications such as emergency lighting

APPLICATIONS

- Local Area Networks (LANs)
- Servers
- Data centres
- Internet centres (ISP/ASP/POP)
- Industrial PLCs
- PoS (Point of Sale) systems
- Emergency applications (lights/alarms)
- Medical appliances
- Telecommunications devices



ADVANCED COMMUNICATION

- Advanced, multi-platform communication, for all operating systems and network environments: PowerShield² monitoring and control software included, with SNMP agent, for Windows 95, 98, 2000, Me, NT 4.0, Novell operating systems. The UPS is supplied with a cable for direct connection to a PC (Plug and Play)
- RS232 and modem serial ports
- EPO (Emergency Power Off) contact for UPS shutdown using a remote panic button
- Remote control panel

TECHNICAL DATA

single phase output models MRMX

MODEL	10KVA	15KVA	20KVA
RECTIFIER INPUT			
Rated power [kVA]	10	15	20
Rated voltage	400Vac three-phase+N or 230Vac single-phase		
Voltage range	±20%		
Frequency range	45-65Hz		
Power factor	0.95		
BATTERIES			
Type	Maintenance free sealed lead-acid		
Recharge time	8h		
INVERTER OUTPUT			
Rated power [kVA]	10	15	20
Active power [kW]*	8	12/10.5*	16/12*
Number of phases	1		
Rated voltage [V]	230		
Voltage regulation range	200-243V		
Crest factor (Ipeak/Irms)	3:1		
Waveform	Sinewave		
Distortion with non-linear load	2%		
Static stability	±1%		
Dynamic stability	±5% in 10ms		
Frequency	50 or 60Hz selectable		
Overload	125/150% of the rated current for 10'/1'		
BYPASS			
Rated voltage	230V		
Number of phases	1		
Permitted voltage range	±15% (selectable from ±5% to ±25%)		
Rated frequency	50/60Hz		
Permitted frequency range	±2% (selectable from ±1% to ±5%)		
INSTALLATION INFORMATION			
Input	Three-phase or single-phase		
Remote signaling	Volt-free contacts		
Remote controls	EPO and bypass		
Communication	RS232/C and modem ports		
Operating temperature	0-40°C		
Relative humidity	95% (non condensing)		
Colour	Light grey RAL 7035		
Audible noise	<56dBA		
Enclosure protection rating	IP20		
Efficiency	>92%		
Compliance	Safety EN 50091-1 EMC EN 50091-2 Lev. A Directives 73/23-93/68-89/336 EEC		
Air flow (m ³ /h) (for installations in a closed environment)	320	320	480
Bypass input current	45A	68A	91A
Maximum rectifier input current	18A	27A	36A
Differential input current**	100mA		
VALUE OF THE OUTPUT PROTECTIONS FOR SELECTIVITY***			
Normal fuses (G1)	In (Rated current)/7		
Normal switches (Curve C)	In (Rated current)/7		
Extra Fast fuses	In (Rated current)/2		

* With single-phase input

** This value must be added to the differential current of the equipment. Special applications on request

*** Complying with these values, the UPS will be able to provide the power required to interrupt the output protection if a short-circuit occurs, without switching the load to the mains supply

TECHNICAL DATA

Model No	Power	Back-up at full load	Dimensions (W x D x H) mm	Weight Kg
MRMX10KVA000	10kVA/8kW	0m	450 x 760 x 1200	170
MRMX10KVA007		8m	450 x 760 x 1200	260
MRMX10KVA012		15m	450 x 760 x 1200	290
MRMX15KVA000	15kVA/12kW	0m	450 x 760 x 1200	215
MRMX20KVA000	20kVA/16kW	0m	450 x 760 x 1200	240

TYPICAL BATTERY EXTENSION PACKS

UPS Model No	Back-up at full load	Battery Extension Packs	Qty	Dimensions (W x D x H) mm	Weight Kg
MRMX10KVA007	30m	BEP384012Y/01	1	285 x 805 x 735	180
MRMX10KVA012	40m	BEP384012Y/01	1	285 x 805 x 735	180
MRMX10KVA012	1h5	BEP384038AB/01	1	555 x 720 x 1200	483
MRMX15KVA000	8m	BEP576007M/01	1	450 x 760 x 1200	192
MRMX15KVA000	15m	BEP576012M/01	1	450 x 760 x 1200	240
MRMX15KVA000	40m	BEP576024AC/01	1	860 x 720 x 1200	567
MRMX15KVA000	1h5	BEP576038AC/01	1	860 x 720 x 1200	720
MRMX20KVA000	7m	BEP576007M/01	1	450 x 760 x 1200	192
MRMX20KVA000	10m	BEP576012M/01	1	450 x 760 x 1200	240
MRMX20KVA000	30m	BEP576024AC/01	1	860 x 720 x 1200	567
MRMX20KVA000	1h	BEP576038AC/01	1	860 x 720 x 1200	720

OPTIONS

USB signal converter
 SNMP network slot-in adapter
 Remote status panel with LEDs and LCD
 Wall mounted maintenance bypass with manual transfer
 Isolation (Galvanic) pack for the bypass supply
 Voltage conversion pack (110/230 and 230/110V)
 Battery cabinets, cladded racks, internal trays and cables
 Parallel/redundant operation card
 19" rackmount trays and PowerRak cabinet system
 PowerShield² UPS monitoring and control software, and SNMP solutions
 Service and maintenance plans
 StrikeSafe Transient Voltage Surge Suppressors (TVSS)
 Harmonic filter