

MST Series

3.6kVA and 6kVA

# UPS



## MST Series On-Line Double Conversion UPS with Static Switch

The MST is a small, attractive, compact and reliable UPS, in the power capacity of 3.6kVA and 6kVA.

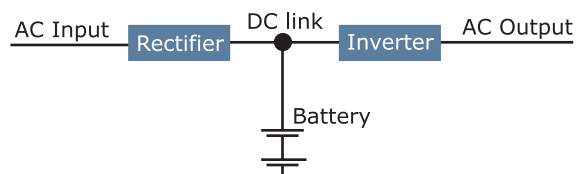
The MST series is a classic Double Conversion On-Line UPS with an inverter isolation transformer and static switch. The separate battery enclosures allow flexibility in backup time.

### Main Features

- ▶ Double Conversion
- ▶ On-Line Batteries
- ▶ VFI - Volt Frequency Independent (EN50091-3)
- ▶ Inverter Isolation Transformer
- ▶ Static Switch
- ▶ DC Start
- ▶ Rectifier/Charger for Extended Backup Time
- ▶ Battery Current Limit Circuit for Safe Battery Charge
- ▶ LED Display
- ▶ Alarm Dry Contacts Relay
- ▶ Automatic and Manual Battery Test
- ▶ RS232 Interface for Smart Software and SNMP Management
- ▶ PSM-AC Universal Management Application (option)

### **Double Conversion True On-Line Battery (VFI)**

According to IEC 62040-3



| INPUT  |   |
|--|---|
| Voltage  | 230V/220V                                       |
| Voltage Range  | 10% - 15%                                       |
| Frequency  | 50/60Hz $\pm$ 3Hz                               |
| Power Walk-In  | 5 sec.  |
| Protection   | Circuit Breaker; RFI filter(option)             |
| OUTPUT   |   |
| Voltage  | 230V/220V<br>No DC Component                    |
| Regulation (at normal input)                         | $\pm$ 2% ( $\pm$ 1% optional)                   |
| Freq. Tracking Range                                 | $\pm$ 2Hz                                       |
| Slew Rate  | 1Hz/sec   |
| Overload   | 125% 10 min.<br>150% 30 sec.<br>1000% 1 cycle   |
| Load PF  | 0.7   |
| Waveform   | Pure sinusoidal                                 |
| THD  | Less than 2% (at linear load)                   |
| Crest Factor   | 3:1   |
| Protection   | Overload and short circuit                      |
| Dynamic Response on 100% Load Change                 | $\pm$ 2%  |
| Transition Time from STSW to Inverter and Vice Versa | Less than 0.5 msec.                             |
| Rejection Ratio                                      | More than 100dB                                 |
| Audible Noise (dB) at 1.5m distance                  | 51  |
| ENVIRONMENT  |   |
| Ambient Temperature                                  |   |
| Operating  | 0° C to 40° C                                   |
| Storage  | -20° C to 60° C                                 |
| Relative Humidity                                    | 95% max.<br>Non-condensation                    |
| Altitude   | 1500m w/o derating                              |
| UPS Standards  |   |
| General & Safety                                     | EN50091-1                                       |
| EMC  | EN50091-2                                       |
| Design   | ENV50091-3                                      |
| MTBF   | 100,000 hrs.<br>250,000 hrs. with static switch |
| INDICATIONS  |   |
| Output load via 7 LED bar graph                      |   |
| Audio Alarm  |   |
| Battery OK   |   |
| Line OK  |   |
| Bypass/ Inverter                                     |   |
| OPTIONS  |   |
| Extended Battery Backup                              |   |
| Other Voltage/Frequency                              |   |
| Bypass Isolation                                     |   |
| COMMUNICATION OPTIONS                                |   |
| RS232 Interface                                      | For shutdown & SNMP                             |
| Alarm Interface                                      | Systems shutdown, 3 dry contacts                |
| GMAc   | Gamatronic's management card                    |
| WING   | Gamatronic's wireless card                      |
| PSM-AC Universal                                     | Management application                          |

| MODEL                                       | 3.6kVA             | 6kVA               |
|---|--------------------|--------------------|
| INPUT                                       | 220/230V           |                    |
| Voltage                                     |                    |                    |
| Required External Input MCB                 | 25A                | 40A                |
| OUTPUT                                      |                    |                    |
| Voltage                                     | 220/230V           |                    |
| Power                                       | 3.6kVA<br>2.5kW    | 6kVA<br>4.2kW      |
| Efficiency AC-AC                            |                    |                    |
| 100% load (%)                               | 85                 | 85                 |
| 50% load (%)                                | 84                 | 84                 |
| Full Load Heat Dissipation (W) (1W=3.4 Btu) | 441                | 741                |
| Inverter Efficiency at full load (%)        | 91                 | 91                 |
| BACKUP OPERATION                            |                    |                    |
| Backup (min):                               |                    |                    |
| 100% load                                   | 9                  | 4                  |
| 50% load                                    | 28                 | 12                 |
| Battery Charging Time                       | approx<br>4 hrs    | approx<br>4 hrs    |
| Batteries (12Vdc each)                      | External<br>16x5AH | External<br>16x5AH |
| Batteries Voltage                           | 216Vdc             |                    |
| Expected Battery Life                       | 5 years            |                    |
| PHYSICAL                                    |                    |                    |
| UPS   |                    |                    |
| Size (cm) H                                 | 26                 | 26                 |
| W   | 19                 | 19                 |
| D   | 67                 | 67                 |
| Weight (Kg)                                 | 36                 | 47                 |
| Batteries Cabinet (16x5AH)                  |                    |                    |
| Size (cm) H                                 | 10                 | 10                 |
| W   | 19                 | 19                 |
| D   | 60                 | 58                 |
| Weight (Kg)                                 | 33                 | 33                 |

\*All specifications are typical and subject to change without prior notice

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