

# mcPhilben®

emergency lighting



MST SERIES UPS Systems for 12,500VA through 14,000VA Single Phase

Job Name: \_\_\_\_\_

Type: \_\_\_\_\_

Voltage: \_\_\_\_\_

### OVERALL CHARACTERISTICS

87% throughput efficiency, 85% emergency efficiency. Operating temperature range 32–104°F (0–40°C)\*. Internal, make before break maintenance by-pass is standard. Double conversion with no interruption. Standard backup time of 90 minutes, other backup run times of 10 minutes or 20 minutes are available. Output circuit breakers (OCB) and circuit breakers with trip alarm (OCBA) are available. Optional normally off load (NOL) energizes only during power outage, normally off load with time delay (TDT) also available.

### BATTERY

Maintenance-free, sealed lead calcium battery with an expected life up to 10 years. Optimum operating range for sealed lead calcium batteries is 65°F (19°C) to 85°F (30°C)\*.

### APPLICATIONS

Operates incandescent, magnetic and electronic ballast fluorescent, high power factor compact fluorescent, and high intensity discharge (H.I.D.) lamp types.

**Consult factory for specific applications.**

### ELECTRONICS

Sine wave output. Completely solid-state Pulse Width Modulation (PWM) inverter offers enhanced load compatibility. Microprocessor control and diagnostic system. Input power factor correction maintains power factor at 0.99. Frequency range 60Hz, ±2.5Hz. Input harmonic current distortion <5% THD. Inverter output distortion ≤3% THD (at unity power factor). Output voltage regulation ±2% of nominal at full load.

Frequency within ±0.5% of nominal. Load power factor capability is 0.7 leading to 0.7 lagging. Automatic, battery protecting low voltage disconnect (LVD). Overload capability 125% for 10 seconds. Fault current rating 42kAIC. Audible noise less than 50dB at 3ft. on "A" weighted scale.

### HOUSING

Free standing NEMA 1 enclosure. Acid resistant powder coat finish. Multiple conduit entries. Refer to dimensions on back for appropriate size.

See back for additional product details.

\* Increases or decreases in temperature may affect battery performance. Optimum battery performance realized at 77°F (25°C). Batteries are rated at 100% capacity at 77°F (25°C). Temperatures above 85°F (30°C) adversely impact battery life.

### CATALOG NUMBER (Example: MSTJJ13.5S110X00E3Z0)

SERIES	INPUT VOLTAGE	OUTPUT VOLTAGE	BASE SIZE	BATTERY TYPE	NORMALLY OFF LOAD	OUTPUT CKT. BRKRS.	NO. BREAKERS ON 2ND VOLTAGE	NO. OF NOL CIRCUIT BREAKERS	NOL VOLTAGE	NO. OF NOL ON 2ND VOLTAGE	OPTIONS
MST - mcPhilben UPS System for Emergency Lighting Applications 90 minute backup MSTX - 10 min. backup MSTY - 20 min. backup	G - 120/240 volt J - 277 volt L - 120/208 volt Y - 120/277 volt	G - 120/240 volt J - 277 volt L - 120/208 volt D - 480 volt**	12.5 - 12.5 kVA 13.5 - 13.5 kVA 14.0 - 14.0 kVA	S - Sealed Lead Calcium	0 - None 1 - Yes T - NOL w/TDT	00X - Hardwire 01X - 1 OCB 02X - 2 OCB 03X - 3 OCB 04X - 4 OCB : : : 20X - 20 OCB ----- 01A - 1 OCBA 02A - 2 OCBA 03A - 3 OCBA : : : 10A - OCBA Maximum Pole Spaces 20	00 - 2nd Voltage Hardwire or no 2nd Voltage 01 02 03 : : : 19	A - 1 B - 2 C - 3 D - 4 E - 5 F - 6 G - 7 H - 8 I - 9 J - 10 K - 11 L - 12 M - 13 N - 14 O - 15 P - 16 Q - 17 R - 18 S - 19 T - 20 Z - No NOL	0 - None 1 - First 2 - Second 3 - Both	A - 1 B - 2 C - 3 D - 4 E - 5 F - 6 G - 7 H - 8 I - 9 J - 10 K - 11 L - 12 M - 13 N - 14 O - 15 P - 16 Q - 17 R - 18 S - 19 Z - No NOL	0 - None 1 - Data Guard Software RAU - Remote Alarm Unit EXT - Extended Warranty FAX - Fax Modem

See Page ERS8050.1 for suggested specification.

\*\*Fault current rating: 10kAIC@48V

ers8015.3

# MST SERIES UPS Systems for 12,500VA through 14,000VA Single Phase

## METERING/CONTROLS

### Standard

The LCD readout system status panel shall display real time operating parameters of the system as well as the results of the 25 most recent battery test events. The LCD readout shall also display the 25 most recent system alarm events including the date and time of such events. Dry contact for remote failure alarm, and a DB9 computer style connector shall provide volt free contacts for remote alarm indication.

### Optional

mcPhilben diagnostics software for remote computer (PC) monitoring and control. Stand-alone remote display mimics all measurements, indications and alarms shown on the front panel display. Optional Fax Modem available.

warranty for 12 months from the date of shipment.

### Extended Warranty

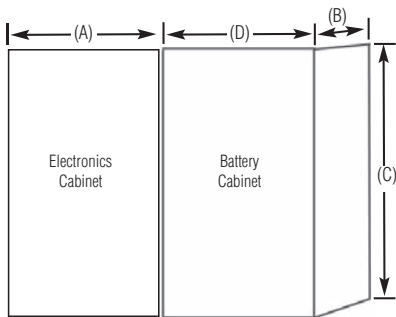
(Available with purchase of factory Start-Up Service). mcPhilben Systems will provide on-site labor for an additional 12 months.

## WARRANTY

### Standard Warranty

Requires execution of factory start-up within 120 days of shipment. mcPhilben will provide parts and on-site labor for the first 12 months following start-up of the product, and parts only for an additional 12 months. If factory start-up is not executed within 120 days of shipment, mcPhilben will provide a parts

## DIMENSIONS/WEIGHTS

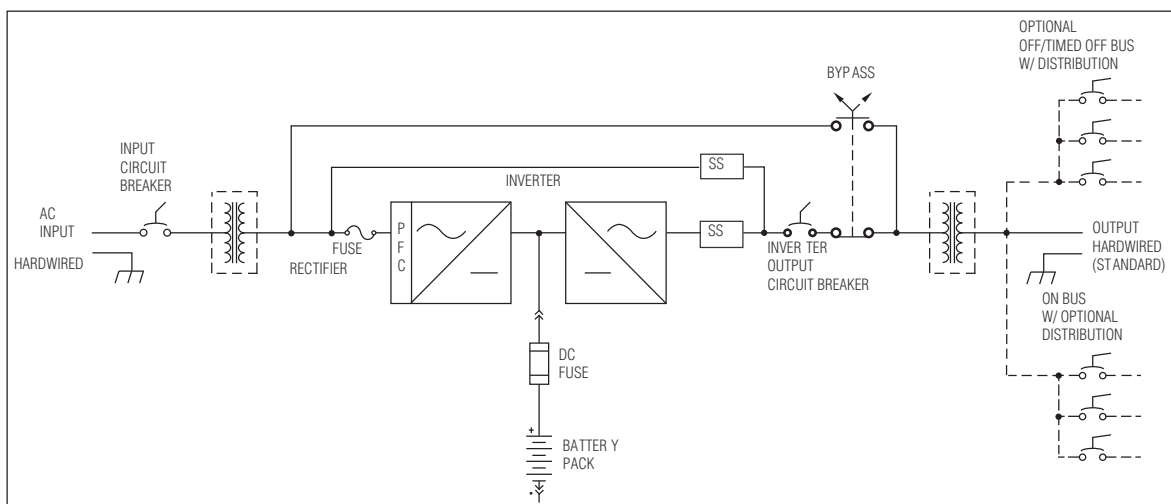


Width (A)	36"
Depth (B)	24"
Height (C)	80"
Width (D)	36"

## System Input/Output Ratings

System Rating (kW/kVA)	12.5	13.5	14.0
Input Voltage (V) : Input Current (A)	120/240 : 69.3	120/240 : 74.4	120/240 : 77.0
	277 : 61.5	277 : 66.0	277 : 68.2
	120/208 : 80.0	120/208 : 85.9	120/208 : 88.8
	480 : 35.5	480 : 38.1	408 : 39.4
Output Voltage : Output Current*	120/240 : 104.2/52.1	120/240 : 112.5/56.3	120/240 : 116.7/58.3
	277 : 45.1	277 : 48.7	277 : 50.4
	120/208 : 104.2/60.1	120/208 : 112.5/64.9	120/208 : 116.7/67.3
	120/277 : 104.2/45.1	120/277 : 112.5/48.7	120/277 : 116.7/50.4
OCB Pole Spaces Available			
without trip alarm	20	20	20
with trip alarm	10	10	10
Heat Rejection (Btu/hr)	5967	6445	6684
Weights (Lbs)			
Electronics	1100	1100	1100
Empty batt cab	350	350	350
90 min battery	2674	2864	3126
20 min battery	2259	2348	2348
10 min battery	2146	2146	2146

## SYSTEM ONE-LINE DIAGRAM



\*Multi-voltage total loads not to exceed system rating