

**SP-MBS-2-6KVA-2**

**INSTALLATION AND USER GUIDE**

# **SP-MBS-2-6KVA-2**



**UNIT COMES PACKAGED IN A  
24L x 24W x 18H CARTON, 140 LBS**

# SP-MBS-2-6KVA-2

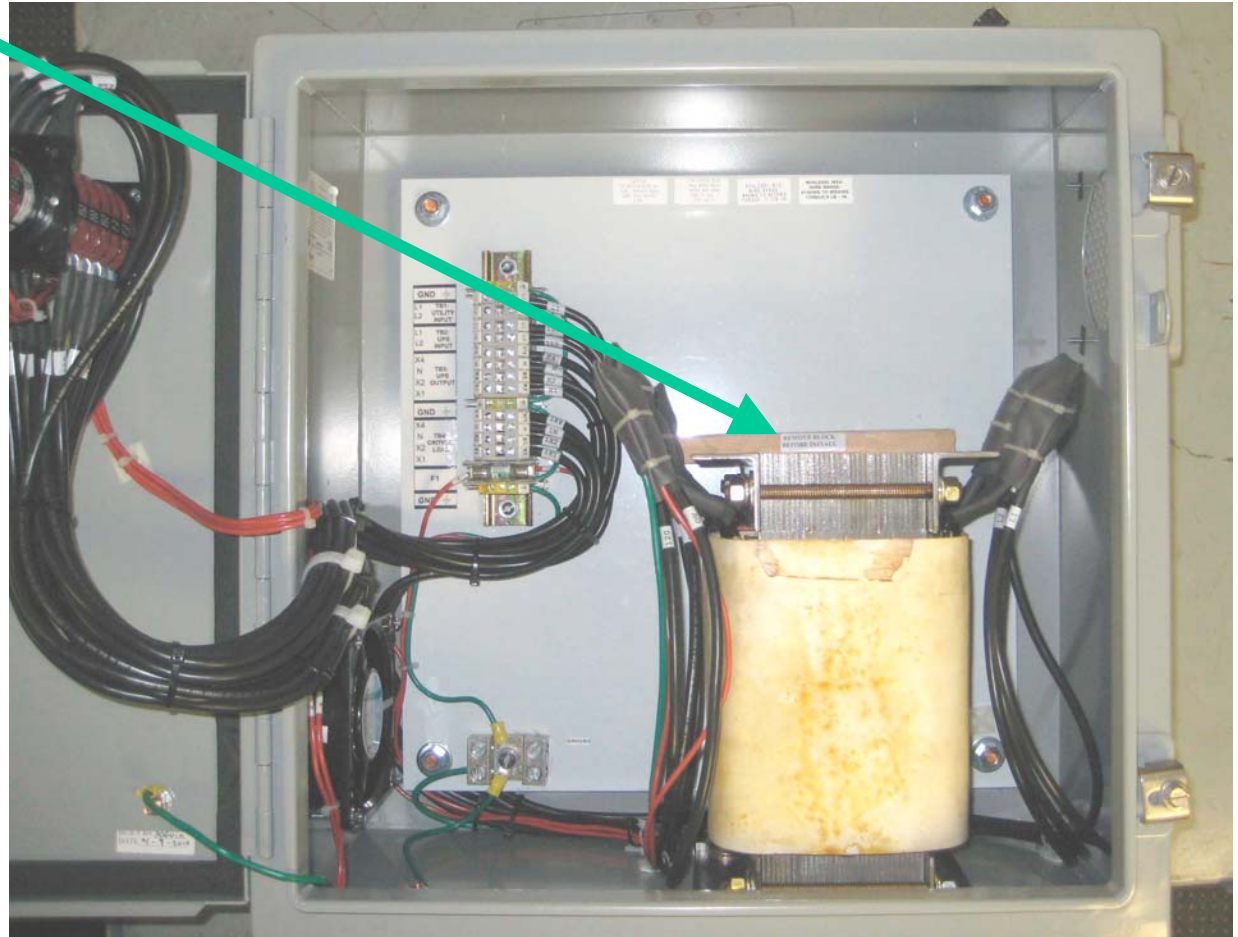


UNIT REMOVED FROM CARTON

# SP-MBS-2-6KVA-2

**OPEN DOOR AND  
REMOVE WOOD  
BLOCK. PROVIDED TO  
KEEP TRANSFORMER  
FROM MOVING  
DURING SHIPPING**

**INSTALLER TO MOUNT  
TO WALL AND TO  
ROUTE INCOMING  
POWER TO  
ENCLOSURE. BE SURE  
THAT THE TWO AIR  
VENTS ON THE LEFT  
AND RIGHT SIDE ARE  
NOT BLOCKED.**



# SP-MBS-2-6KVA-2

## Installation Instructions for bypass panel

This is a bypass panel manufactured for Powervar. It is intended for use as a bypass switch for the UPS protecting critical loads.

The power circuitry is enclosed in a metal enclosure with a hinged door. Visible from the front of the unit is the bypass switch operating handle.

Access is through the front door by use of a screwdriver to loosen the two cover screws located along the right side of the unit. Disconnect all sources of supply (Utility power and UPS power) prior to working on electrical equipment including the bypass and any downstream distribution or loads. It is recommended that a licensed electrician install and troubleshoot the equipment.

This unit is HEAVY, take necessary safety precautions to prevent injury. Locate the panel in a convenient location within sight of the UPS. Be sure to install in a manner to support 140 pounds. The unit should be installed within sight of the UPS. Be sure to keep the two vents clear of any obstructions, failure to do so will result in damage to the unit.

Conduit entry can be at the top in the area toward the right right side of the enclosure away from the switch. Right side entry can be near the top away from the transformer. Bottom entry can be at the left third of the bottom section away from the transformer. Cover any internal components when punching or drilling through enclosure walls.

Incoming and outgoing wires to be terminated at the terminal block located at the upper left hand side of the unit. Input from utility power (208VAC, 1PH, 60Hz, L+L+G), input from the UPS output (240/208/120, 1PH, 60Hz, L+L+L+N+G), output to UPS input (208VAC, 1PH, 60Hz, L+L+G), and output to the load (240/208/120, 1PH, 60Hz, L+L+L+N+G) will be hardwired observing local NEC codes. Wiring to be rated for 35 amps. Utility input protection by others. Refer to UPS operating and installation instructions for actual connections needed for the application.

Check for tightness of all the connections inside the panel. Some wires might have worked themselves loose during shipping and handling. Insure that all connections are tight before applying power to the panel.

Observe proper cable sizing per NEC or local codes. Observe proper phase sequence when hooking up the panel.

# SP-MBS-2-6KVA-2

## Installation Instructions for bypass

All hardwired inputs and outputs are to be made to the terminal block in the upper left hand quadrant of the backpanel. There are individual terminals for all connections. Follow NEC or local code requirements for wire sizing.

### **UPS operation:**

The bypass switch should be in the “Normal” position. Conditioned power is output from the UPS to the critical load.

### **TEST operation:**

In the event that the UPS needs to be serviced or replaced, rotating the bypass switch to “Test” will reroute the utility power around the UPS through the bypass contacts on the switch to power the load. It is recommended to place the UPS in internal bypass prior to switch operation. Check the UPS installation manual to determine how to perform this operation. This mode also provides power to the input of the UPS for test purposes.

### **BYPASS operation:**

In the event that the UPS needs to be isolated for service or to be replaced, rotating the bypass switch to “Bypass” will reroute the utility power around the UPS through the bypass contacts on the switch to power the load. The UPS will be fully isolated from this panel in this mode. A qualified technician should use proper safety guidelines when working on the UPS. Always confirm that power has actually been removed prior to working on any equipment.

### General Specifications:

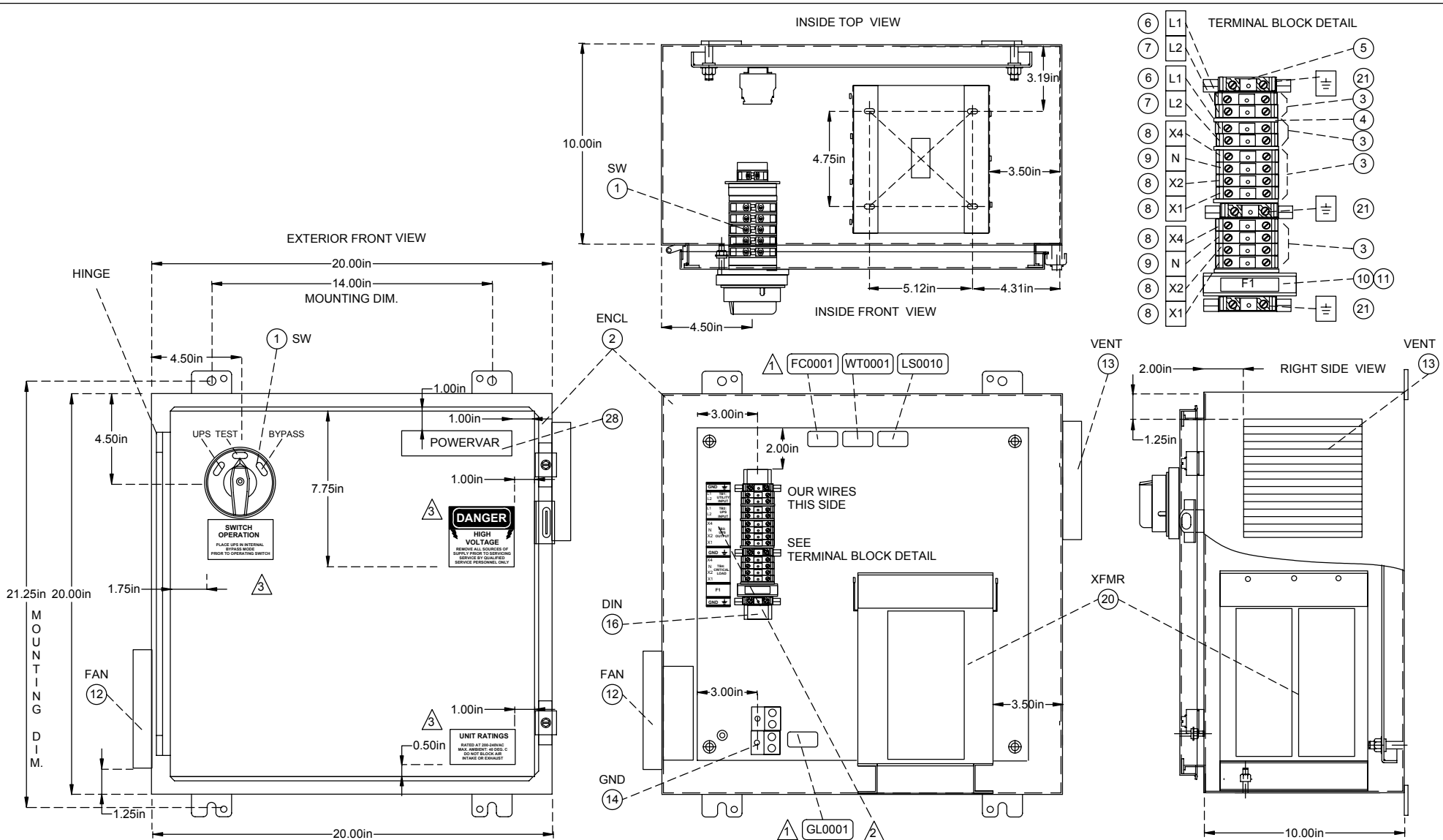
Utility Input: 208VAC, 1PH, 60Hz, hardwired

UPS Input: 208VAC, 1PH, 60Hz, hardwired

UPS Output: 240/208/120VAC, 1PH, 60Hz, hardwired

Output to Load: 240/208/120VAC, 1PH, 60Hz, hardwired

Ampacity rating: 35 amps



- NOTES:**
- ⚠ Labels identified by P/N from document UL-LABELS1-L-1003 found in Labels "L" file.
  - ⚠ Label from Document BPT030-3P-N1-00-L-0310
  - ⚠ Labels from Document BPT030-3P-N1-00-L2-0410

PART NUMBER

**SP-MBS-2-6kVA-2**

Reference: BPT030-4P-N1-00-D

DESCRIPTION

2-6KVA MBS WITH ISOLATION TRANSFORMER (35A AMP)

DRAWN BY: MFN

DATE: 03/08/10

APPROVAL : D.U.

DATE: 03/08/10

REV.	DATE:	DESC.:	APPR :
REV. A:	03/17/10	Refined transformer dims. and placement.	D.U.
REV. B:	04/05/10	Changed TB2 to larger terminals	D.U.
REV. C:	04/08/10	Reduced TB2 terminals and moved cust. entry	D.U.
REV. D:	04/13/10	Finalized transformer position and added labels	D.U.
REV. E:	05/13/10	Changed location of switch label	D.U.
REV. F:	06/04/10	Added PowerVar supplied label	D.U.
REV. G:	08/05/10	Changed logo and P/N to Powervar	D.U.
REV. H:	08/25/10	Changed customer P/N & description	D.U.

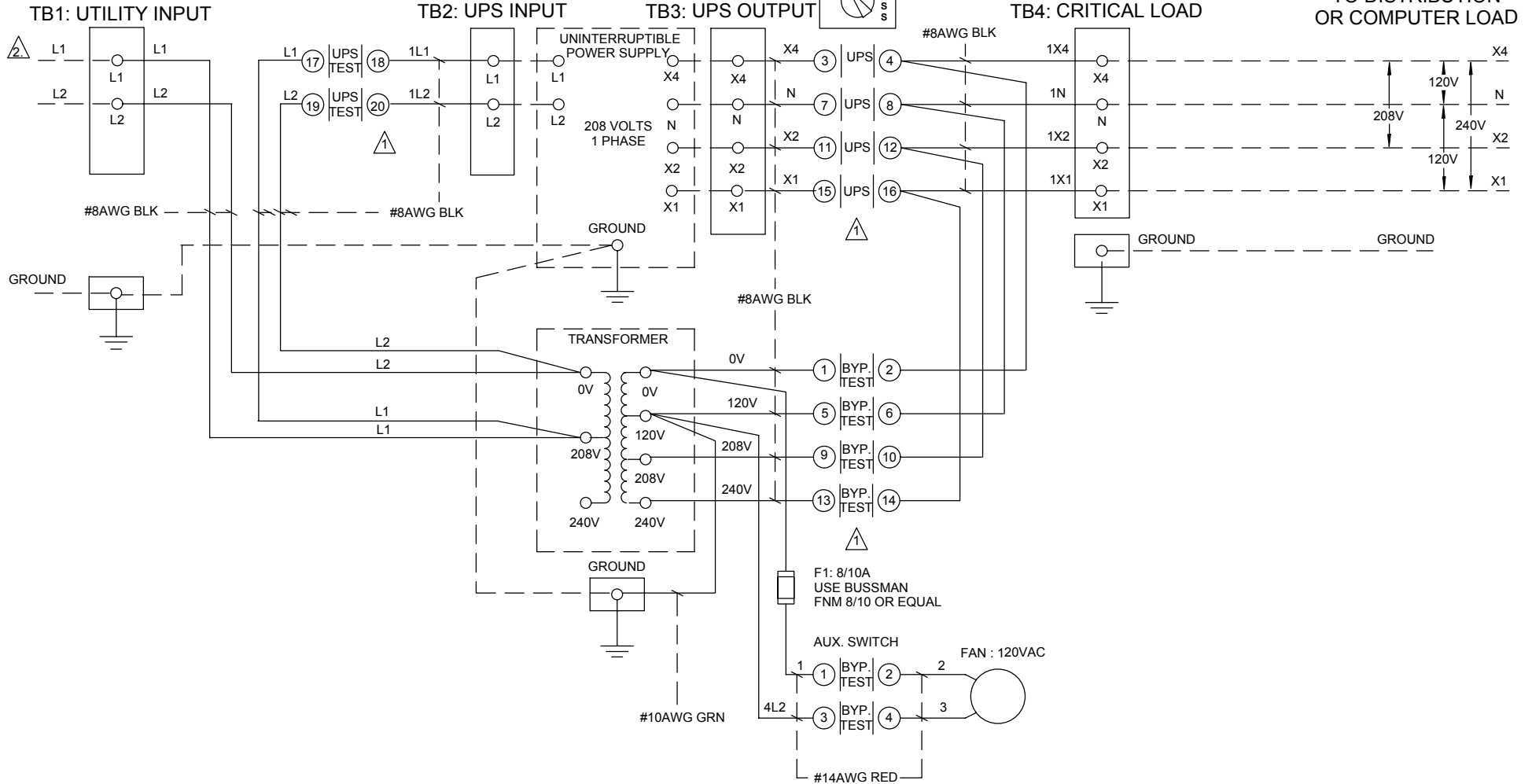
DRAWING NO: BPT030-4P-N1-00-D-0310



Phone: (800) 369-7179 or (847) 596-7000  
 Fax (847) 596-7100  
 1450 Lakeside Drive, Waukegan, IL 60085  
 www.powervar.com

INCOMING POWER 208 VOLTS AC, 1 PHASE, 3 WIRE, 60Hz  
 INTERNAL CABLE: #8 AWG (50A)  
 PANEL RATED FOR 35A

**BYPASS SWITCH**



**NOTES:**

1 SWITCH CONTACTS ARE "MAKE-BEFORE-BREAK"  
 CONTACTS MARKED "UPS" ARE CLOSED IN THE "UPS"  
 POSITION.  
 CONTACTS MARKED "TEST" ARE CLOSED IN THE "TEST"  
 POSITION.  
 CONTACTS MARKED "BYP" ARE CLOSED IN  
 THE "BYPASS" POSITION.

2 MAIN DISCONNECT AND BRANCH CIRCUIT PROTECTION  
 PROVIDED BY OTHERS

PART NUMBER  
**SP-MBS-2-6kVA-2**

Reference: BPT030-4P-N1-00-D

REV.	DATE:	DESC.:	APPR :
REV. A:	03/30/10	Changed UPS input wiring to twin #10 leads	D.U.
REV. B:	04/08/10	Changed UPS input wiring back to #8 leads	D.U.
REV. C:	04/08/10	Moved control wires from switch to transformer taps	D.U.
REV. D:	07/28/10	Changed to Powervar label and P/N	D.U.
REV. E:	08/25/10	Changed customer P/N and desc.	D.U.

DESCRIPTION 2-6KVA MBS WITH ISOLATION TRANSFORMER (35 AMP)

DRAWN BY: MFN DATE: 03/09/10 APPROVAL : D.U. DATE: 03/09/10



DRAWING NO: BPT030-4P-N1-00-S-0210



# **SP-MBS-2-6KVA-2**

## **RATING INFORMATION:**

**VOLTAGE: 240/208/120VAC, 60 HZ**

**PHASE: SINGLE PHASE**

**FULL LOAD CURRENT: 35 AMPS**

**INTERRUPT RATING: 5KAIC SYM @ 600VAC**

**TYPE 1 ENCLOSURE**

## **CONTACT INFORMATION:**

**Powervar**

**1450 Lakeside Dr.**

**Waukegan, IL 60085**

**(800) 369-7179 or**

**(847) 596-7000**

**Fax (847) 596-7100**