

# QUICKSTARTGUIDE



**For the following models:**  
430XAC and 460XAC

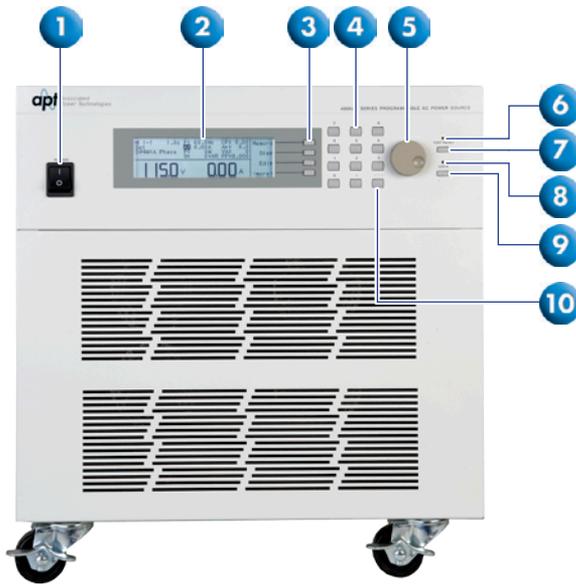
## SAFETYCHECKLIST

- KEEP** unqualified/unauthorized personnel away from test area
- ARRANGE** test stations in a safe and orderly manner
- NEVER** touch products or connections during a test
- STOP** the test first in the event of a problem
- BE SURE** to use the appropriate AWG for your input and output cabling
- TURN OFF** the output when making any connections to the load



**WARNING:** THIS GUIDE WAS CREATED FOR OPERATORS HAVING SOME FAMILIARITY WITH AC POWER SOURCES AND HIGH VOLTAGE/HIGH CURRENT TESTING APPLICATIONS. AN AC POWER SOURCE PRODUCES VOLTAGES AND CURRENTS THAT CAN CAUSE HARMFUL OR FATAL ELECTRIC SHOCK. TO PREVENT ACCIDENTAL INJURY OR DEATH, THESE SAFETY PROCEDURES MUST BE STRICTLY OBSERVED WHEN HANDLING AND USING AN AC POWER SOURCE.

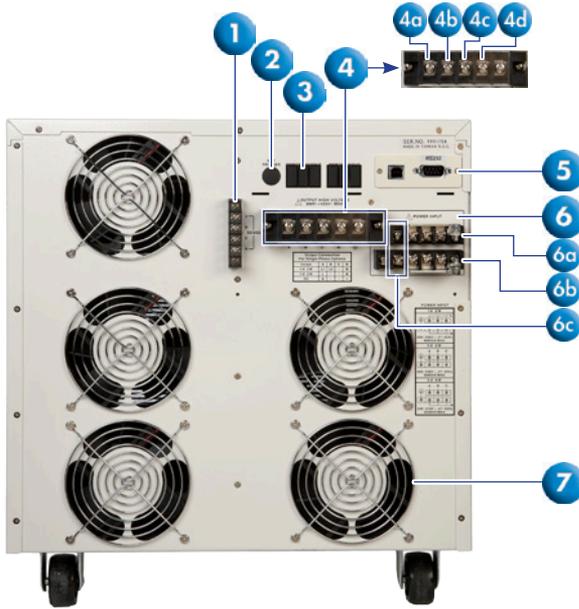
# FRONTPANELCONTROLS



(430XAC/460XAC Front Panel)

- 1. POWER SWITCH:** Rocker style power switch with international ON ( | ) and OFF ( 0 ) markings.
- 2. GRAPHIC LCD:** 240 x 64 monographic LCD.
- 3. SOFT KEYS:** Multi-functional selection keys used to select parameters, select screens, and edit parameters.
- 4. NUMERIC KEYPAD:** Keys used to enter numerical data.
- 5. ROTARY KNOB:** Used to adjust the voltage/frequency output in MANUAL Mode or DC Mode.
- 6. TEST/RESET LED:** When lit, this LED indicates output is active, or when blinking indicates the instrument is in a failure condition.
- 7. TEST/RESET KEY:** Used to turn ON/OFF output voltage, or used to reset the instrument in the event of a failure condition.
- 8. LOCK LED:** When lit, this LED indicates the instrument's front panel is locked.
- 9. LOCK KEY:** Used to lock out the front panel.
- 10. DELETE KEY:** Used to delete text characters and numerical data.

# BACKPANELCONTROLS



(460XAC Back Panel)

- 1. EXTERNAL SENSE OUTPUT TERMINAL BLOCK:** Provides screw terminals for external voltage sense leads.
- 2. EXTERNAL TRIGGER CONNECTOR:** Provides the capability to monitor a 5 VDC output signal.
- 3. REMOTE OUTPUT CONNECTOR:** Provides output to monitor PASS, FAIL, TEST-IN-PROCESS via relay contact closures
- 4. OUTPUT TERMINAL POWER BLOCK:** Provides output power to the DUT.
  - 4a.** Phase A for 3Ø4W output mode
  - 4b.** Phase B for 3Ø4W output mode
  - 4c.** Phase C for 3Ø4W output mode
  - 4d.** Neutral terminal
- 5. USB/RS-232/GPIB INTERFACE CARD:** Interface card used to control, program, and capture data.
- 6. INPUT TERMINAL POWER BLOCK:** Provides input power to the instrument. Model 430XAC requires 200-240 VAC, 1Ø, 47-63 Hz. Model 460XAC requires 1Ø: 200~240 VAC, 3Ø3W: 200~240 VAC, 3Ø4W: 346~416 VAC.
  - 6a.** N: Neutral input screw terminal.
  - 6b.** L: Line input screw terminal.
  - 6c.** G: Earth ground (chassis) connection.
- 7. THERMAL FAN:** Used to cool the instrument.

Note: Model 430XAC has one input bar as opposed to two bars shown on the 460XAC.

# CHANGING TEST MODES



**WARNING:** LOCATE A SUITABLE TESTING AREA WITH A THREE-PRONG, GROUNDED OUTLET. BE SURE THAT THE THREE PRONG GROUNDED OUTLET HAS BEEN TESTED FOR PROPER WIRING. MAKE SURE YOU READ THE SAFETY CHECKLIST OF THIS GUIDE BEFORE USING THE INSTRUMENT.

The 400XAC includes two test modes that change the way in which the AC power source operates. PROGRAM mode allows the operator to configure and run a test using steps and memory locations within the AC power source's menu. PROGRAM mode is designed for advanced testing applications. MANUAL mode doesn't utilize steps and memories, allowing the operator to quickly run a test with basic test parameters.

1. Turn the instrument power switch ON.
2. From the Set screen, press the "<more>" soft key and press SYSTEM in the next screen.
3. In the System Parameters Menu, use the up or down arrow soft keys to highlight the AUTO RUN parameter. Press EDIT to change the parameter.
4. Press CHANGE to toggle the parameter between PROGRAM and MANUAL mode. Press ENTER to save changes and then press EXIT to return to the Set screen.

When the AUTO RUN parameter is set to PROGRAM mode, the Set screen will be displayed as follows: (See Figure 1)

Auto Run PROGRAM		OC Fold	OFF	^
PLC Remote	OFF	Lock	OFF	
Single Step	OFF	Mem Lock	ON	v
Alarm	5	Volt Sense	INT	
Contrast	5			Edit
Power Up	Off			
Loop Cycle	1			
Results	LAST			Exit

(Figure 1. System Parameters Menu)

When the AUTO RUN parameter is set to MANUAL mode, the Set screen will be displayed as follows: (See Figure 2)

Auto Run MANUAL		F Lo-Lmt	40.0Hz	^
PLC Remote	OFF	Start Angle	0	
Alarm	5	End Angle	0	v
Contrast	5	Results	LAST	
Power Up	Off	OC Fold	OFF	Edit
V Hi-Lmt	300.0V	Transient	OFF	
V Lo-Lmt	5.0V	Lock	OFF	
F Hi-Lmt	1000Hz		<more>	Exit

(Figure 2. System Parameters Menu)

# CONSTANT CURRENT MODE

## USING THE 400XAC IN CONSTANT CURRENT MODE

### 1) Turn ON the OC FOLD parameter.

From the Set screen, press the "<more>" soft key and then press SYSTEM in the next screen.

In the System Parameters Menu, use the up or down arrow soft keys to highlight the "OC FOLD" parameter. Press EDIT to change the parameter.

Press CHANGE to set the highlighted parameter to ON. Press ENTER to save changes and press EXIT two times to return to the Set screen.

### 2) Program a current Hi-Limit, which represents the constant current you will provide to the load.

Press EDIT from the Set screen.

Use the up and down arrow soft keys to highlight the "A Hi-Lmt" parameter. Press EDIT to change the parameter.

Use the Numeric Keypad to enter the desired current limit. Press ENTER to save changes and then press EXIT to return to the Edit Parameters Menu. The limit set will be the constant current output.

### 3) Program the voltage.

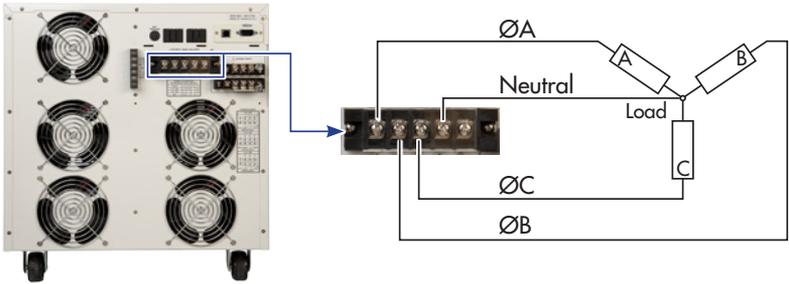
From the Edit Parameters Menu, use the up or down arrow soft keys to highlight the "Voltage" parameter. Press EDIT to change the parameter.

Using the Numeric Keypad enter the voltage which should be set higher than the nominal load voltage. This allows the current to adjust to the Hi-Limit value.

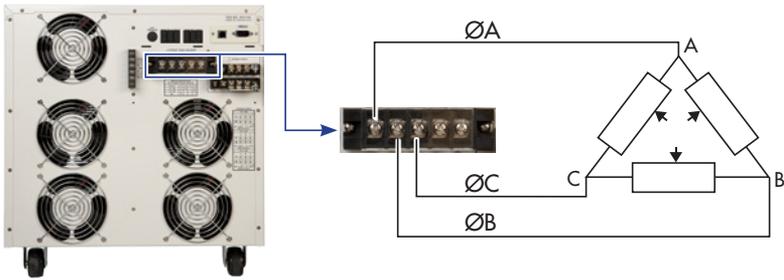
Press ENTER after you enter the voltage and press EXIT twice to return to the Set screen.

# APPLICATION CONFIGURATIONS

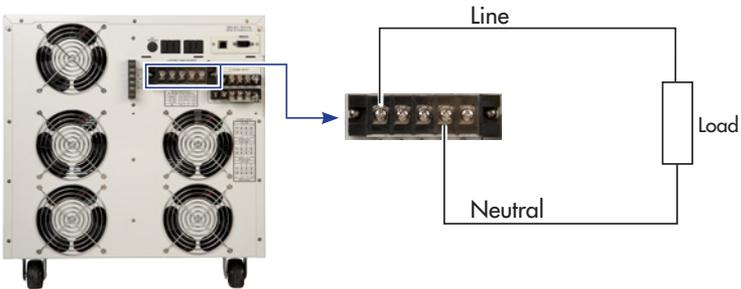
The figures below illustrate how the 400XAC can be fully configured for an automated test setup.



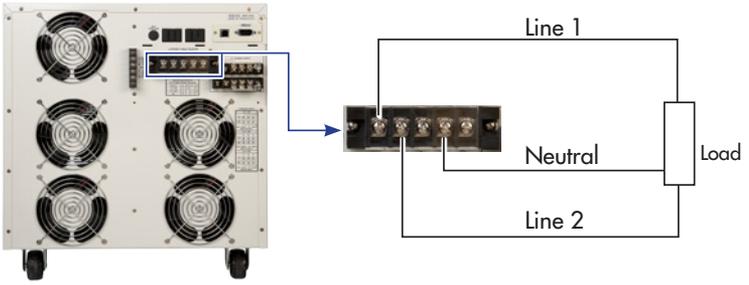
(Figure 3: 3Ø4W Configuration)



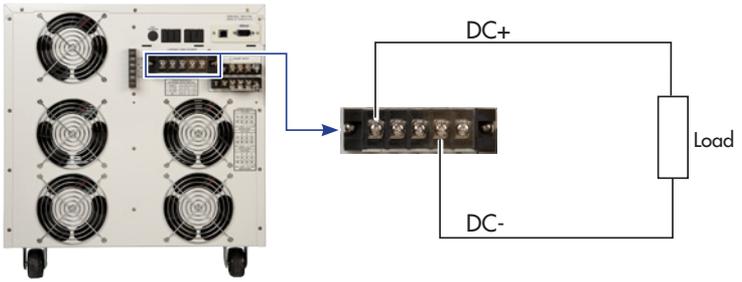
(Figure 4: 3Ø3W Configuration)



(Figure 5: 1Ø2W Configuration)



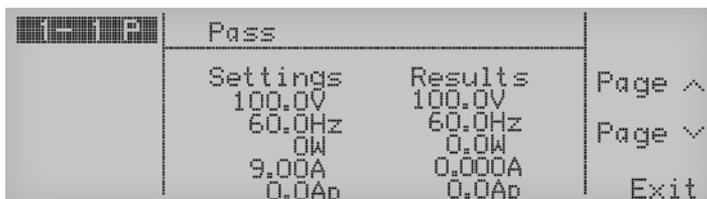
(Figure 6: 1Ø3W Configuration)



(Figure 7: DC Output Configuration)

# VIEWING TEST RESULTS

From the Set screen, press the RESULTS key to view the results.



The screenshot shows a monochrome display with a 'Pass' status at the top. Below it, a table compares 'Settings' and 'Results' for various parameters. On the right side, there are navigation options: 'Page ^', 'Page v', and 'Exit'.

Settings	Results	
100.0V	100.0V	Page ^
60.0Hz	60.0Hz	Page v
0W	0.0W	
9.00A	0.000A	
0.0Ap	0.0Ap	Exit

(Figure 7. Pass/Fail Indication screen)

If you have multiple steps linked together, you will have to use the up and down arrow soft keys in order to toggle through each step to review the results.

Press EXIT to return to the Set screen.

