*Max**Pac***

Viewer Manual

CHROMALOX

Advanced Thermal Technologies

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Safety Precautions

The MaxPac Viewer Software monitors and manages equipment that is designed to provide power to electrical heating devices. Before working on or servicing the equipment or heating devices, be sure that all power has been removed and observe all safety precautions. Please refer to the MaxPac Installation Manual PK480 & Set-Up Guide for more safety guidance.

Since the MaxPac Viewer Software, by application extension, is associated with the power control equipment, the following safeguards shall also apply:

The MaxPac User Manual uses this symbol to alert personnel to potential hazards that may damage the equipment

The MaxPac User Manual uses this symbol to alert personnel to potential hazards that may cause injury or death

Throughout the MaxPac Installation Guide, these symbols will alert you to potential hazards. Safety precautions should always be followed to reduce the risk of fire, electrical shock, injury and even death to persons.

Please read all instructions before operating your MaxPac Power Controller. To avoid electrical shock or injury, always remove power before servicing a circuit. Personnel working with or near high voltages should be familiar with modern methods of resuscitation. Contact an area supervisor or safety personnel for more information.

HIGH VOLTAGE is used in the operation of this equipment; DEATH ON CONTACT may result if personnel fail to observe safety precautions. Learn the areas containing highvoltage connections when installing or operating this equipment. Be careful not to contact high-voltage connections when installing or operating this equipment. Before working inside the equipment, turn power off and ground all points of high potential before touching them.

ELECTRIC SHOCK HAZARD. Any installation involving control equipment must be performed by a qualified person and must be effectively grounded in accordance with the National Electrical Code to eliminate shock hazard.

ALL PERSONNEL WORKING ON HIGH VOLTAGE ELECTRICAL EQUIPMENT MUST ADHERE TO ALL NATIONAL AND LOCAL REGULATIONS, CODES, AND STANDARDS.

ONLY SUITABLY QUALIFIED AND EXPERIENCED PERSONS, WHO ARE FAMILIAR WITH THIS EQUIPMENT, AND THE WORK THEY ARE TO DO, SHOULD CARRY OUT INSTALLATION, COMMISSIONING, OPERATION, OR MAINTENANCE OF THIS PANEL AND THE ASSOCIATED HEATER.

SUCH PERSONS SHALL ADHERE TO PROPER HIGH VOLTAGE SAFETY PROCEDURES, INCLUDING THE USE OF APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE).

FAILURE TO ADHERE TO ANY OF THE ABOVE MAY RESULT IN EQUIPMENT DAMAGE, OPERATING LOSSES, INJURY, OR DEATH. CHROMALOX WILL NOT BE LIABLE FOR FAILURE TO ADHERE TO ALL GOVERNING REGULATIONS, CODES, STANDARDS, SITE PROCEDURES AND INFORMATION GIVEN IN THIS MANUAL.

IF IN DOUBT, CONTACT CHROMALOX.

BEFORE WORKING INSIDE THE EQUIPMENT, CONFIRM THAT ALL POWER HAS BEEN TURNED OFF, LOCKED OFF, AND PREFERABLY EARTHED [GROUNDED] AT ALL POINTS OF LOW AND HIGH POTENTIAL, ON BOTH THE SUPPLY LINE AND LOAD SIDE CIRCUITS, AS REQUIRED / PERMITTED BY ALL CODES AND STANDARDS.

Precautions & Warnings READ AND UNDERSTAND SECTION x ABOVE BEFORE CARRYING OUT THE WORK DETAILED IN THIS MANUAL

Introduction

The **MaxPac Viewer Software** is designed to monitor and manage MaxPac Power Controller. It provides efficient and secure remote monitoring and parameter value management of the whole system.

MaxPac Viewer is available to download as a PC software program from Chromalox website. Alarm indication throughout your entire system is visible on the Dashboard page. More detail information can be found on Alarm and Service page.

MaxPac Viewer Features:

• Effective Visual Alarm Status of whole system
• Intuitive Windows Based System Screens
• Modbus RTU/RS485 Communication
• Full Alarm & Monitoring Capabilities
• Input/Output Scaling Feature
• Proprietary Soft Start Algorithm
• Time Proportional and D.O.T firing algorithms
• Output controlled via Modbus
• Shorted SCR Detection
• Facilitates All MaxPac Control Functions

Wiring

PC computer with installed MaxPac viewer needs to be connected to RX+(J6.1) and RX-(J6.2) on the controller
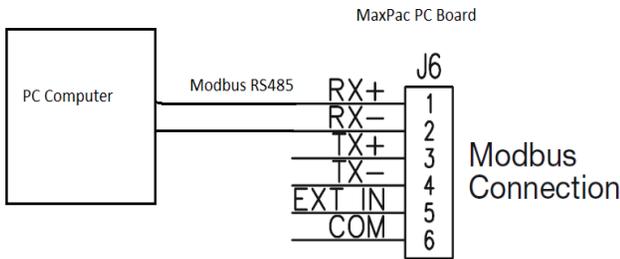
Modbus address of the PC Board is determined by position of the rotary switch SW4.

Table 1

Rotary Switch Position	Modbus Address
0	Do not use – reserved for factory use
1	1
2	2
3	3
4	4
5	5
6	6
7	7

To establish successful communication with controller follow steps below:

1. Select correct COM port from the drop down list:
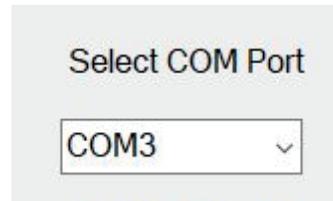
2. Select correct Modbus Address (see Table 1 above)
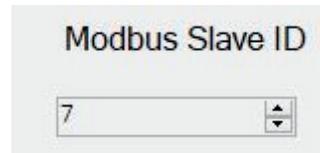
3. Press Connect button
4. For automatic updates, check "Automatically refresh every 5 sec" box.

PC Requirements

When downloading MaxPac Viewer software to a desktop or laptop PC, the following are the suggested minimum computer requirements:

- Windows XP/7/8, 32/64 Bit
- 1 Ghz CPU
- 2 GB RAM
- RS485 port or USB RS485 PC adapter
- Color SVGA monitor (1024x768 minimum)

MaxPac Viewer Installation

1. Run the MaxPac Viewer program Setup Wizard by double clicking the MaxPac Viewer.exe executable file. This will initiate the installation process.
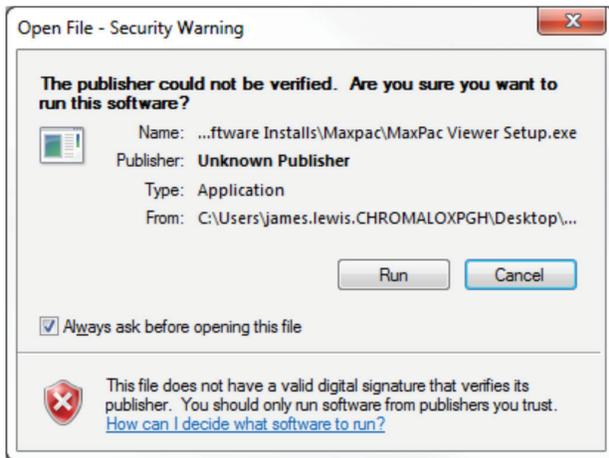
2. Read and accept the agreement
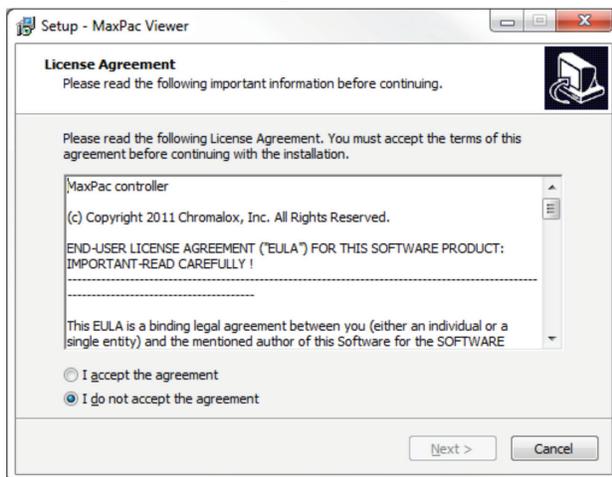
3. Once you accept the agreement, you will be prompted to select the appropriate install folder. Default location is C:\Program Files (x86)MaxPac Viewer, however, if a different location is requested, select "Browse" and find the new location. If default location is acceptable, click "Next".
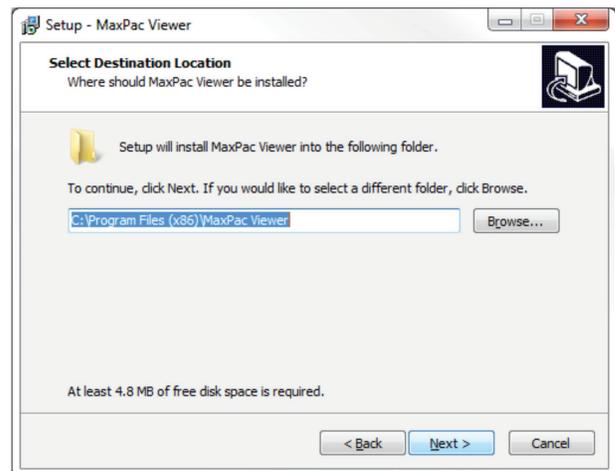
4. Next you will be prompted to create a desktop shortcut. For ease of access, we recommend adding the shortcut, but this is up to the users discretion.
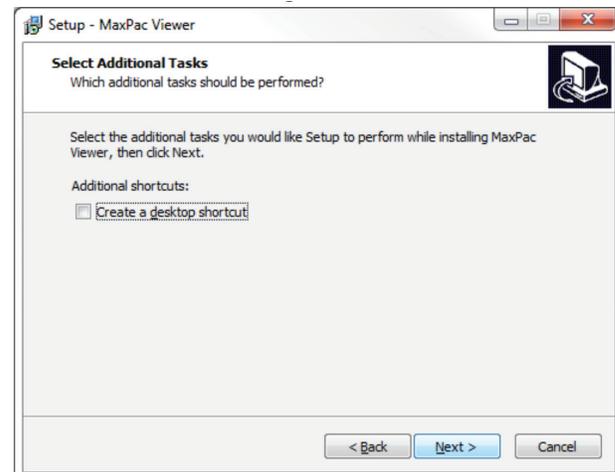
5. Complete installation of the MaxPac Viewer program by following the prompts.
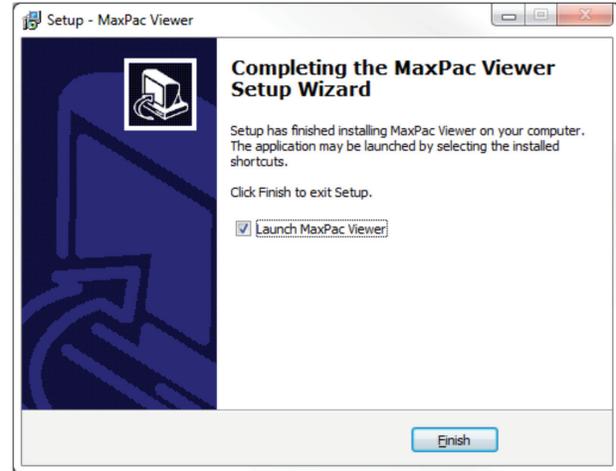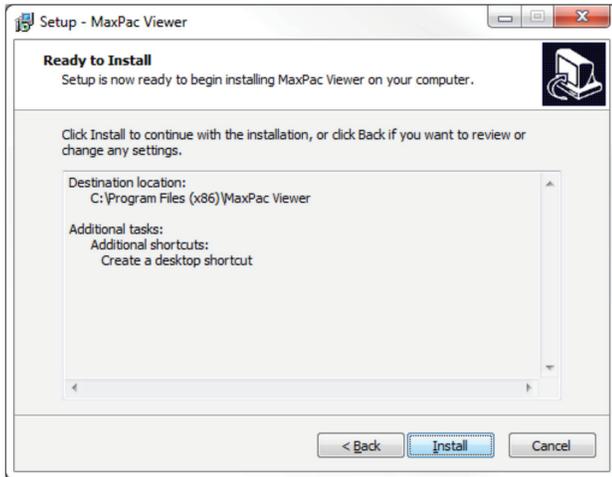
Dashboard

All data displayed on Dashboard tab is read only.

Frequency – Sensed line frequency: 50Hz, 60Hz or NULL (not determined)

Phase Sequence – SINGLE PHASE, 3 Phase 2 Leg, 3 Phase 3 Leg, INVALID, NULL (not determined)

Input Level - sensed input level command signal (0-100%)

Output Level – calculated output demand level (0-100%)

SCR # 1 Temp – SCR 1 heatsink temperature in deg °F

SCR # 2 Temp – SCR 2 heatsink temperature in deg °F

SCR # 3 Temp – SCR 3 heatsink temperature in deg °F

Input Selector – selected input command (ON/OFF, POT, 0-10V, 0-5V,1-5V, 0-20 mA, 4-20 mA, MODBUS)

Firing Mode – Demand On Transfer (D.O.T) or Time Proportional On/Off Input Detected – Yes (signal is detected on ON/OFF port), NO (signal is not detected).

Remote Stop – YES, NO

Alarm Relay – ON, OFF

Auto/Manual - AUTO when jumper installed between J2.4 & J2.5, MANUAL when jumper removed.

Power Control
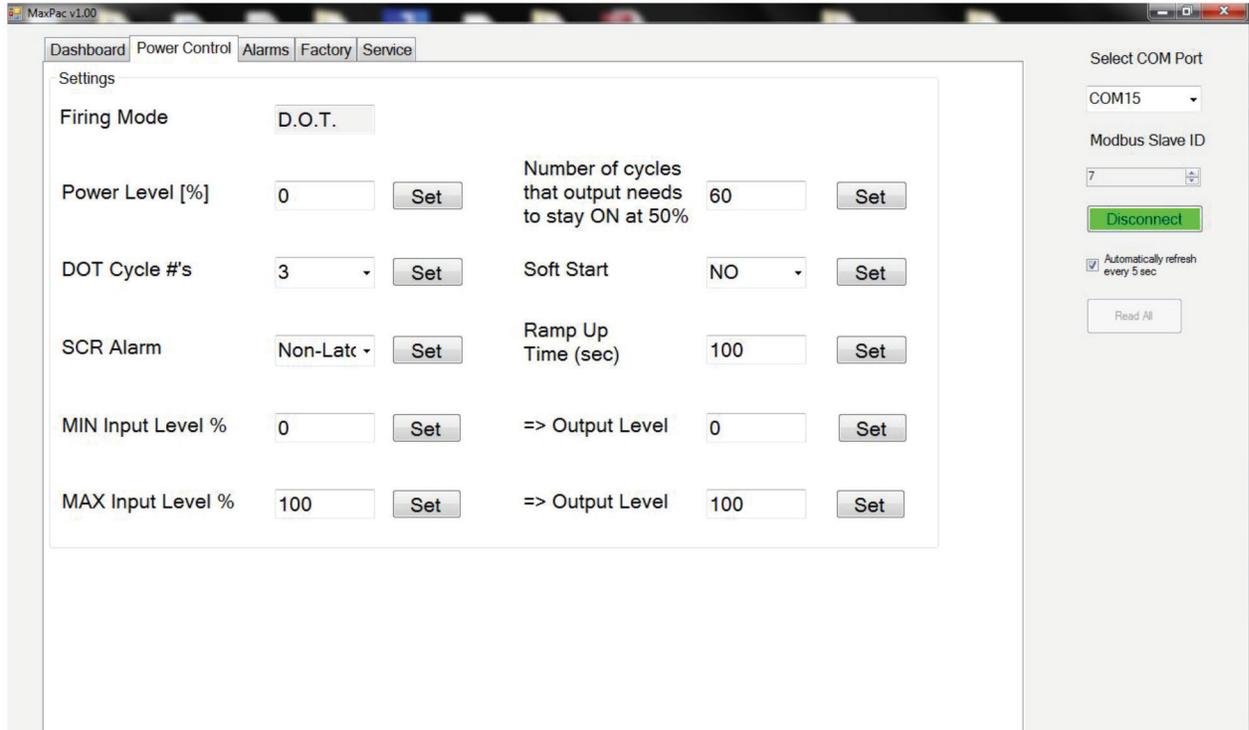
Firing Mode - Demand On Transfer, Time Proportional. Selection is made by adjusting SW3 switch. See Phase Selection and Firing Mode section in the MaxPac Manual.

Power Level [%] – command input signal (0-100%) when Input Selector is set to position 7 – Modbus**.**

DOT Cycle #'s – Number of zero crossings in a single firing SCR Alarm – Shorted SCR alarm latching or non-latching. The latching alarm means that if the alarm activates and the system subsequently return to normal, the alarm will remain latched until power is turned off. A non-latching alarm will reset automatically.

Number of cycles that output needs to stay at 50% - number of zero crossings during ON and OFF state at 50% duty cycle, used in Time Proportional firing technique. Default value is 60 (1 sec ON, 1 sec OFF for 60 Hz Line).

Soft Start - Yes, No.

Ramp up Time (sec) – number of seconds to reach full ON state of the output. Used when Soft Start is selected.

Min Input Level % - Minimum acceptable input signal value.

Output level – Output % value assigned to Min Input Level value

Max Input Level % - Maximum acceptable input signal value.

Output level – output % value assigned to Max Input Level value

Examples:

Input & Output MIN/MAX Level Example
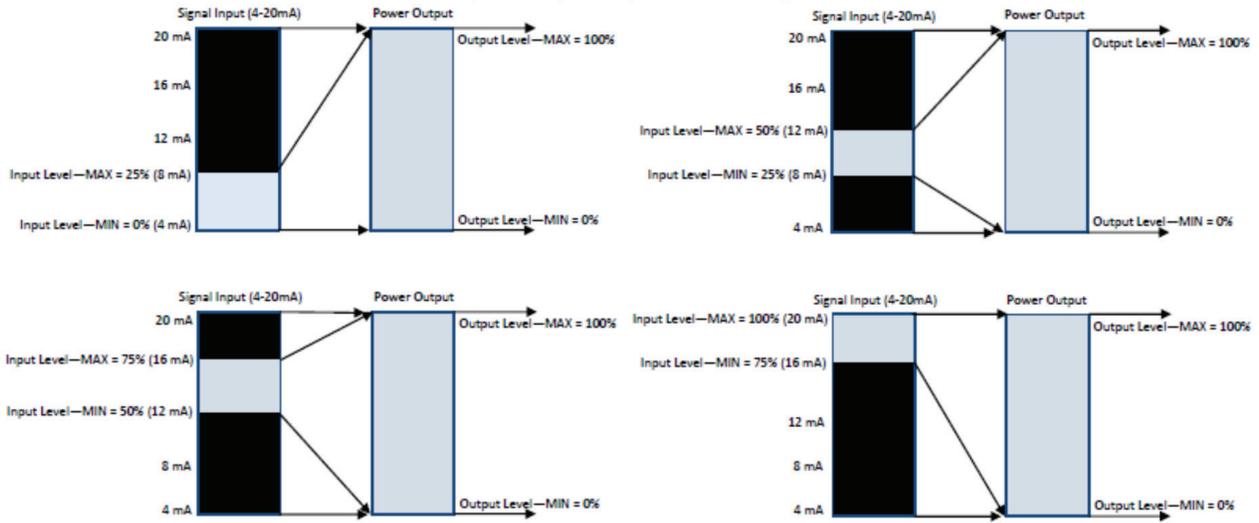
Example of Staging Multiple Maxpac SCR's

10
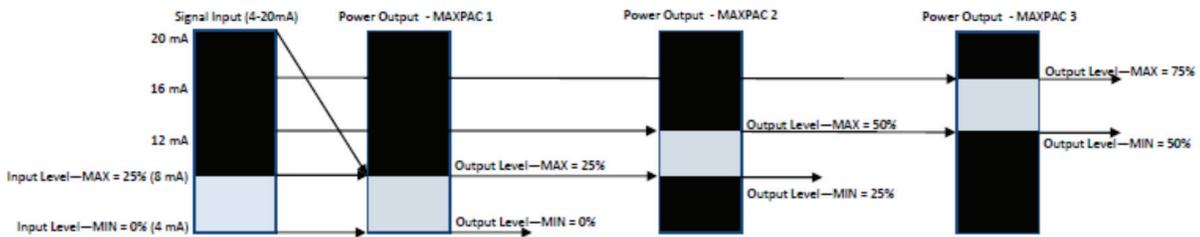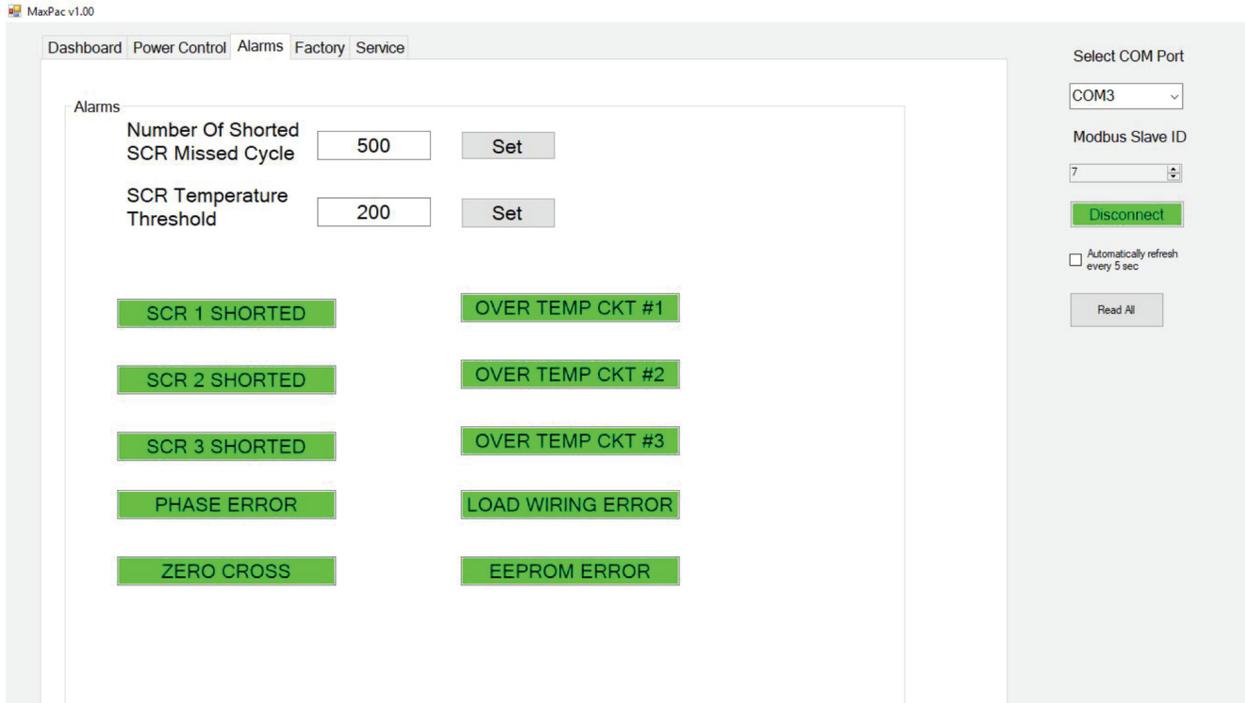
Alarms

Green color – no alarm

Red color – alarm condition

Number of Shorted SCR Missed Cycle – number of missed zero cross detections before Shorted SCR Alarm is declared.

SCR Temperature Threshold – Heatsink temperature threshold, before Over Temp alarm is declared. If heatsink temperature will exceed 212°F, outputs will shut off.

SCR1 SHORTED – shorted SCR switch # 1

SCR2 SHORTED – shorted SCR switch # 2

SCR3 SHORTED – shorted SCR switch # 3

OVERTEMP CKT #1 – when red, temperature of heatsink #1 is above threshold.

OVERTEMP CKT #2 – when red, temperature of heatsink #2 is above threshold.

OVERTEMP CKT #3 – when red, temperature of heatsink #3 is above threshold.

PHASE ERROR – controller could not determine correct phase sequence.

ZERO CROSS – controller could not detect zero crossings.

LOAD WIRRING ERROR – incorrect wiring of the load.

EEPROM ERROR – corruption of the non-volatile memory.

Service Contact Information

Chromalox is global supplier, providing the highest level of customer support. If you should have questions concerning your MaxPac Viewer software or power controller, or need information, you may contact Chromalox at:

For application questions, you can:

1. Call one of our application engineers for personal assistance at 1-888-996-9258.
2. Visit the technical reference section of our website at www.chromalox.com for downloadable manuals in PDF format.

Corporate Headquarters Chromalox, Inc.	Controls Division Chromalox, Inc.
103 Gamma Drive Pittsburgh, PA 15238 Phone: (412) 967-3800	1347 Heil-Quaker Blvd. LaVergne, TN 37086 Phone: (615) 793-3900
Customer Service Hotline: 1-800-443-2640	

Chromalox, Inc.
1347 Heil Quaker Boulevard
Lavergne, TN 37086
(615) 793-3900
www.chromalox.com