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MODELS 6705-6775

COAXIAL LOAD RESISTOR



6750/6775



6710 -6735



6705



ALTRONIC RESEARCH, INC.
P.O. BOX 249
YELLVILLE, ARKANSAS 72687, U.S.A.

DECLARATION OF CONFORMITY

The Model 6700 Series RF Coaxial Loads conform to the following standards:

Low-Voltage Directive (2014/35/EU)

Electromagnetic Compatibility Directive (2014/30/EU)

Restriction of Hazardous Substances Directive (EU)2015/863

Machinery Directive (2009/127/EC)

Safety Requirements for Radio Transmitting Equipment
(IEC 215 / EN 60215)

As of the date of manufacture on the specifications page.

ATTEST:

John L. Dyess,
President

LIMITED WARRANTY

MODEL 6705/6775

05/75 KW AIR COOLED COAXIAL RESISTOR

We take pride in manufacturing products of the highest quality and we warrant them to the original purchaser to be free from defects in material and workmanship for the period of one year from date of invoice. Additionally, products of our manufacture repaired by us are warranted against defects in material and workmanship for a period of 90 days from date of invoice, with the provisions described herein.

Should a product, or a portion of a product of our manufacture prove faulty, in material or workmanship, during the life of this warranty, we hereby obligate ourselves, at our own discretion, to repair or replace such portions of the product as required to remedy such defect. If, in our judgment, such repair or replacement fails to be a satisfactory solution, our limit of obligation shall be no more than full refund of the purchase price.

This warranty is limited to products of our own manufacture. Equipment and components originating from other manufacturers are warranted only to the limits of that manufacturer's warranty to us. Furthermore, we shall not be liable for any injury, loss or damage, direct or consequential, arising out of the use, or misuse (by operation above rated capacities, repairs not made by us, or any misapplication) of the equipment. Before using, the user shall determine the suitability of the product for the intended use; and the user assumes all risk and liability whatsoever in connection therewith.

The foregoing is the only warranty of Altronic Research Incorporated and is in lieu of all other warranties expressed or implied.

Warranty returns shall first be authorized by the Customer Service Department and shall be shipped prepaid. **Warranty does not cover freight charges.**

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OPERATING TEMPERATURE WARNING

**CARE SHOULD BE TAKEN TO OPERATE UNIT BELOW STATED
MAXIMUM AMBIENT OPERATING TEMPERATURE.**

**OPERATION ABOVE RATED AMBIENT
TEMPERATURE CAN CAUSE MOTOR THERMAL
PROTECTION TO SHUT OFF FAN, WHICH WILL
CAUSE DAMAGE TO UNIT.**

**PROVISIONS ARE MADE TO TRIP THE INTERLOCK
IN THE EVENT OF OVERHEAT, BUT THE INTERLOCK
MUST BE PROPERLY CONNECTED TO THE RF SOURCE
FOR THIS FUNCTION TO OPERATE.**

**NEVER OPERATE WITH INTERLOCK
BYPASSED OR MALFUNCTIONING.
TO DO SO WILL VOID THE WARRANTY.**

PRECAUTIONS



WARNING



This equipment can start automatically. Do not attempt any service or parts replacement without first disconnecting all AC power and RF power. Failure to do so may result in serious or *fatal electrical shock or physical injury.*

CAUTION

Do not block air grills or restrict airflow when ducting inlet and discharge air. Restrictions in airflow limit the load's ability to dissipate RF power and could damage and/or cause the unit to fail.

CAUTION

Do not connect the Model 6705/6775 to an RF power source without first ensuring that the load is connected to the proper line voltage and that the interlock circuit is properly attached to the transmitter. The interlock circuit is designed to indicate a fault and prevent operation when line voltage is not present. Do not apply more than rated power to unit. Damage will occur before thermal protectors can activate interlock circuit if large overloads are applied.

CAUTION

When using any cleaning solvents or solutions, assure that there is adequate ventilation to protect personnel from breathing any irritable or toxic fumes.

INTRODUCTION

This handbook was prepared for technical personnel as an aid in understanding and performing installation, service and maintenance procedures for the Model 6705-6775 Air-Cooled Coaxial Loads. Personnel are considered to be skilled if they have the necessary knowledge and practical experience of electrical and radio engineering to appreciate the various hazards that can arise from working on radio transmitters, and to take appropriate precautions to ensure the safety of personnel.

HAZARD ANALYSIS

A Hazard Analysis of the Model 6705-6775 Air-Cooled Coaxial Loads

1. The 6705-6775 loads are provided for indoor operation.
2. The hazards presented by these loads include:
 - electrical hazards envisioned by the Low Voltage Directive;
 - mechanical hazards envisioned by the Machinery Directive;
 - high voltage shock/burn hazard presented by the radio frequency energy which the load is designed to dissipate. This hazard is not directly addressed by any standard, but we have chosen to comply with the requirements of IEC 215/EN60215.
3. The electrical hazards arise from the connection of the equipment to 230 volts AC. The following measures were incorporated into the design to minimize the exposure of personnel to the mains voltage:
 - AC Mains power enters through an IEC 603203 pin connector with a cord set connector lock or hard wired connections.
 - The AC Mains power enters the control box and is immediately connected to a guarded terminal block;
 - AC Mains power is routed to a minimum of locations;
 - All control voltages are 28 volts AC or less;
 - Exposed terminals which carry voltages greater than 28 volts AC are protected from accidental contact by polycarbonate panels which are not removable without tools;
 - Users are not required to remove any guard for normal system operation and adjustments;
 - Local control of the system is provided, lessening the chance that other personnel may accidentally start the fans or energize other components of the circuit.
4. The mechanical hazards arise from the operation of the fan, and motor. The following measures were incorporated into the design to minimize exposure of personnel to these hazards:
 - Warnings placed in the manual and on the load state the load should be disconnected from the power source before performing any maintenance. This will prevent injuries from moving parts;
 - The panels which protect personnel from contact with the rotating elements are not removable except with tools.
 - There are no operating controls or routine adjustments required within the fan compartment of the load;
 - The fan and fan motor are in an enclosed shroud, preventing access to moving parts.

5. The high voltage shock/burn hazards arise from the connection of the load to the transmitter. The following measures were incorporated into the design to minimize exposure of personnel to these hazards:
- The panels which protect personnel from contact with the high voltage elements are not removable except with tools.
 - There are no operating controls or routine adjustments required within the high voltage compartment of the load;
 - The energized components are mounted in the load as far from personnel as is possible;
 - There are warning labels on the equipment stating that the RF connection should be removed before performing any maintenance.

AIR FLOW VS TEMPERATURE ANALYSIS

The 6705-6775 series was designed to cut off RF transmission when an overheat condition exists. This is accomplished by placing normally closed thermal switches in the resistor compartment. This limits exhaust air to 250°F. Installation instructions for indoor loads recommend ducting exhaust air from the building. Non-metallic ducting materials vary greatly in their heat resistance, especially with regard to their long-term stability. They also tend to have a higher resistance to airflow due to their rough surface. Therefore, metallic duct is preferred. However, the external surface of a metallic duct may become a hazard to personnel due to the discharge temperature from the load. For this reason, the exterior of the duct should either be guarded to prevent inadvertent contact or should be insulated with high temperature (i.e. 122C/250F) material. This will eliminate skin burns in the event contact is made with the duct.

ELECTROMAGNETIC COMPATIBILITY (EMC) ANALYSIS

This device is a finished apparatus available on the commercial market and is subject to conformity with the Electromagnetic Compatibility Directive (2014/30/EU). The compliance of this apparatus with The Directive has been established in accordance with Annex II thereof.

This apparatus has been determined to be immune to electromagnetic energy which is radiated or conducted by the associated transmitting apparatus. It will accept without malfunction the entire output of the transmitter for which it is designed.

The design of the control circuitry and the components thereof has been optimized for immunity from electromagnetic disturbances and will accept disturbances on the AC Mains without malfunction. This apparatus may introduce disturbances upon the AC Mains during starting and stopping events. These disturbances are not expected to last longer than 25 cycles (1/2 second) and are of a normal nature for motor-driven machinery. No special measures have been taken to reduce or to mitigate these effects.

SECTION I

DESCRIPTION AND LEADING PARTICULARS

- 1-1. Purpose and Application of Equipment.** The Models 6705-6775 Coaxial Load is designed to safely dissipate a maximum of 5,000/75,000 watts of electrical energy over a frequency range of DC to 110 MHz and can be optimized for frequencies above 110 MHz.
- 1-2. Equipment Supplied.** The Model 6705-/6775 Coaxial Load is supplied with standard RF connectors. Their designations are:

FLANGE SELECTION												
	E1	F1	R1	E3	F3	R3	E4	F4	R4	E6	F6	R6
6705	√	√	√									
6710	√	√	√	√	√	√						
6715	√	√	√	√	√	√						
6725				√	√	√						
6735				√	√	√	√	√	√			
6750				√	√	√	√	√	√			
6775				√	√	√	√	√	√	√		

EIA Swivel flange: **E**

Unflanged flush: **F**

Unflanged recessed: **R**

Other connectors may be supplied upon special order.

The standard power supply voltages and their designators after the Model # are:

-110: 110-120VAC, single phase, 60 Hz

-230: 208-230VAC, single & three phase, 50/60 Hz

-380: 380-440VAC, three phase, 50/60 Hz

- 1-3. Equipment Required But Not Supplied.** The Model 6705-6775 Coaxial Load is complete as supplied, but the user must furnish AC Mains input cable, RF input coaxial line, interlock control cable and ground cable appropriate to each installation.
- 1-4. General Description.** The Model 6705/6775 Coaxial Load is enclosed in a single aluminum case which is painted with a durable acrylic finish. Power connections are made by conventional cord connections or by passing the AC cord through the access hole labeled AC main voltage on the fan compartment and fastening to the terminals for the AC Mains and Ground. This panel also contains an access hole for cables that attach to the 4 position screw terminal strip connections of the interlock circuit. The RF connector is located in the center of the top panel of the main unit.

1-5. Electrical Description. The Model 6705/6775 contains a 50-ohm non-reactive resistor assembly capable of dissipating 5,000/75,000 watts of applied electrical energy at sea level at frequencies between DC and 110 MHz and can be optimized for frequencies between 110 MHz and 240MHz with a maximum VSWR of 1.15 to 1 at room temperature. Some VSWR variation may occur at operating temperatures. No provisions are made for tuning the resistor assembly and all operating controls relate to the operation of the blower assembly. The blower control circuit consists of two or three switches wired in parallel to control the blower motor relay. Power is supplied to this relay and to the "Blower On" lamp whenever the equipment is attached to the correct power supply and the main power switch is "ON" or when one of the fan thermostats senses a temperature equal to or greater than 120° ($\pm 7^\circ$) F.

The transmitter interlock circuit consists of two switches wired in series to control the interlock relay. Models ordered with an optional airflow interlock switch have a third switch in series in this circuit. This switch closes only when it senses higher pressure internally, therefore confirming correct blower operation. The airflow interlock switch is bypassed with an OA140 thermal switch. When the thermal switch opens at designed temperature, it removes the bypass, engages the AFL (Airflow Interlock) system, and interlock relay. This bypass allows the air load to sit idle without a "Low Flow" indication, and faulted interlock. Power is supplied to control the interlock relay whenever the equipment is attached to the correct power supply and neither of the overtemperature thermal switches senses a temperature equal to or greater than 250° ($\pm 7^\circ$) F or the differential pressure switch senses no differential between ambient and internal pressures on units so equipped. A lamp is provided to indicate when one or more of the overtemperature switches opens. It is labeled "OVERHEAT", indicating a change in state of the interlock.

1-6. Mechanical Description. The Model 6705/6775 RF Coaxial Load is a 50-ohm non-reactive resistor assembly which is cooled by forced ambient air. The blower assembly is a centrifugal blower. The blower moves air from floor level into a closed plenum surrounding the resistor assembly. Air then enters the resistor assembly and flows downward through it to the transition duct and then out of the enclosure via the discharge grill. This places the RF input connector at the coolest point in the air stream and affords exceptionally quiet operation.

1-7. General Principle of Operation. After ascertaining that the Model 6705/6775 is connected to the correct power supply, connect the transmitter interlock circuit and RF source. Turn the main power switch ON to start the fan and enable transmitter. Operate transmitter as desired. To stop operation, it is necessary to first turn off the transmitter, then the main power switch on the Model 6705/6775. The fan may continue to run for some time. This depends upon the power level at which the load was operating and upon the ambient air temperature. This feature is necessary to prevent damage to the load. The Model 6705/6775 can be operated in a "Standby" or "Reject" mode with the blower off. Current draw in this mode is 630 milliamperes. To operate in this mode, connect the unit as before and leave the main power switch on the front panel "Off".

1-8. Operating and Adjustment Controls. The only operating control is the main power switch. No field adjustments are necessary or possible.

For optional AFL systems only. In the event of the low flow indicator light illuminating, one field adjustment may be necessary. To adjust the differential pressure switch, it is necessary that the load be connected to the AC Mains and blower turned on.

1. Remove the left side panel and remove one wire from the large thermal switch in the middle of the long panel. This switch is marked L140-20F. Replace the panel temporarily.
2. Observe the front panel “Low Flow” lamp.
3. If it is lighted, go to the back panel and look for the ½ inch diameter hole in the center of the panel near the bottom rail.
4. Insert a ¼ inch flat screwdriver or a ¼ inch nut driver to engage the adjusting screw.
5. Turn the adjusting screw clockwise until the lamp is dark. (You will hear the interlock relay pull in when the switch closes and turns off the light.)
6. Turn the fan off and back on to be sure that the lamp is on initially and goes out when the blower gains full speed.
7. If the lamp is dark when you first start, turn the adjusting screw counter-(anti)clockwise until the lamp illuminates. Continue for 2 more turns, then go to step 5, above.
8. Remove the panel (as in Step 1) and reconnect the wire you disconnected in Step 1. Replace the panel.

1-9. Operator Training. The operator of this equipment must have the following skills/knowledge:

- An understanding of the purpose of the equipment;
- An understanding of the principles of operation of the equipment;
- An understanding of the normal operating procedures for the equipment;
- An understanding of the normal and abnormal indications which may be presented at the control point;
- The proper procedures for starting, using and stopping the equipment under normal conditions;
- The proper procedure for stopping the equipment under abnormal or emergency conditions;
- The proper procedure to lock out and mark controls prior to allowing or commencing maintenance on the equipment;
- The proper procedure to obtain clearance to remove lockouts and out-of-service marks and return the equipment to normal service.

SECTION II

TEST EQUIPMENT AND SPECIAL TOOLS

2-1. Test Equipment Required. No test equipment is required for routine maintenance. In some circumstances it may be desirable to determine the temperature differential (outlet air minus inlet air) and ambient air temperature which the equipment is experiencing. We recommend the John B. Fluke Mfg. Co. Model 52 or equivalent instrument for this function.

2-2. Special Tools Required. Although no non-standard tools are required for routine maintenance, we recommend the technician have the following specialized tools available:

- 1 Torx T-20 driver

- 1 Tee handle hex key, 6/16" bit

- 1 Power screwdriver with 3/16" hex key & torx T-20 bit

SECTION III

PREPARATION FOR USE AND RESHIPMENT

3-1. Unpacking Equipment. The units should be handled and unpacked with care. Inspect outer cartons for evidence of damage during shipment. *Claims for damage in shipment must be filed promptly with the transportation company involved.* No internal packaging or bracing is used for shipments and the units should not rattle when being unpacked.

3-2. Pre-installation Inspection. Conduct a thorough inspection of the units, paying particular attention to the following items:

- Screws in place and tight.
- All panels and grills free of dents and scratches.
- AC input receptacle visually OK.
- Interlock terminal strip visually OK.
- RF connector visually OK.

While inspecting RF connector, measure DC resistance of the unit by reading from the center conductor to the outer conductor. Compare this reading to that on the specification sheet at the end of this manual. Reading should be ± 1 ohm. If not, consult factory.

3-3. Pre-installation Tests. Prior to installation, connect the load to AC Mains power for the following tests:

- a. Read data plate on lower rear panel of resistor enclosure and connect to a suitable source of AC power.
- b. Turn main switch on and check for quiet blower operation.
- c. Connect an ohmmeter or a battery operated test lamp across the normally closed terminal pair on the interlock terminal board.
- d. Turn the main power switch off, observing the indicator (ohmmeter or test lamp). It should remain as it was.
- e. Now disconnect the AC power from the unit. The indicator should change state (terminals open).

3-4. Installation. The Model 6705/6775 must be installed in a location convenient for servicing. Consideration should be given to adequate accessibility for free air flow intake and exhaust maintenance and unit replacement. Exhaust should be at least 3 feet away from any surface. No attempt is made in this handbook to present complete installation instructions, since physical differences in plant will determine the installation procedure. General guidelines are outlined in subsequent paragraphs.

3-5. Location. The location selected for the Model 6705/6775 should be dry, free of excessive dust and have an ambient temperature below 104°F (40°C). The distance to the wall for intake air should be equal or greater than the width of the unit. The room should be well ventilated to prevent excessive temperature rise and consequent derating of the unit. The

maximum dissipation and Btu/hr. of the units is shown below, and may be ducted out of the building envelope. Exhaust air should not be directed towards any combustable surface.

Model	Maximum Watts Dissipation	BTU/Hr.
6705	5,000	17,076
6710	10,000	34,152
6715	15,000	51,228
6725	25,000	85,379
6735	35,000	119,531
6750	50,000	170,759
6775	75,000	256,138

The unit should be oriented to provide a short, direct duct run in order to avoid high static pressure and loss of cooling efficiency. The assistance of a competent heating and air conditioning installer will help avoid over-or-under-specifying the duct system.

- 3-6. Mounting.** The Model 6705/6775 is designed to be a free-standing device. It rests on four adjustable-length leveling feet.

CAUTION!

THE UNIT SHOULD BE ATTACHED TO THE PROPER AC POWER SUPPLY WITH INTERLOCK CONNECTED WHENEVER THE RF CONNECTOR IS ATTACHED TO THE SOURCE. INADVERTENT APPLICATION OF RF POWER TO THE UNIT WITHOUT AC POWER MAY DAMAGE OR DESTROY THE RESISTOR ASSEMBLY.

- 3-7. Connections.** There are four possible connections on the Model 6705/6775: the RF connector, the AC power supply, the remote operation terminals and the transmitter interlock.

- 3-8. Ducting.** In many installations it will be necessary to duct the discharge air from the Model 6705/6775 to the exterior of the building. In some installations it will also be necessary to supply inlet air from outside of the climate-controlled portion of the building.

The discharge airflow is at a maximum temperature of 250°F. Due to the high temperatures involved, non-metallic duct materials should not be used for the discharge duct, but may be suitable for inlet duct. Attaching a discharge duct to the unit is easily accomplished:

1. Remove the 10 torx head screws at the discharge on the exhaust panel.
2. Then, attach a discharge air duct adapter to the exhaust panel.

Suitable ducting can then be attached to the adapter. This duct should be as short as possible to minimize backpressure. Design of the ducting and wall or ceiling penetrations should be referred to a competent heating and air conditioning firm.

"Make-up air" is a ventilation term used to indicate the supply of outdoor replacement air to a building in a controlled manner. It may be provided for the Model 6705/6775 by ducting into the room or by extending a supply duct to both intake grills of the blower enclosure.

Make-up air will enter the building to equal the volume actually exhausted, whether or not provision is made for this replacement. However, the actual exhausted volume may not equal the design volume unless an adequate supply is provided.

3-9. Adjustments. No field adjustments are necessary or possible.

3-10. Preparation for Reshipment. When shipping Models 6705 through 6735, place the right side of the load down as you face the control panel. This will keep the motor from moving in the fan housing. For 6750/6775 Models, ship the blower unit upright resting on the feet. No other special measures are required to prepare the units for reshipment. Care must be taken to protect the RF connector and to immobilize the swivel flange. Packaging should provide protection against abrasion and impact.

SECTION IV

THEORY OF OPERATION

- 4-1. General.** The Model 6705/6775 contains a 50-ohm non-reactive resistor assembly which is cooled by forced air supplied by a centrifugal blower assembly. Control of the blower and of the transmitter interlock circuit is accomplished with a single rocker switch and five thermal switches.

Model	Resistor Assembly Ω
6705	4 @ 200
6710	8 @ 400
6715	10 @ 500
6725	20 @ 250
6735	24 @ 300
6750	36 @ 200
6775	54 @ 300

- 4-2. Control Circuits.** On a Model 6705, Control Power is derived from a Control Transformer that is fed from a 3 ampere main breaker. This breaker also provides Line Power to the Blower Assembly. The Control Circuit provides for the operation of the Transmitter Interlock Circuit and Blower Control.

For Models 6710, 6715, 6725, 6735, Control Power is derived from a Control Transformer that is fed by a 3 ampere circuit breaker. The Control Transformer provides power for the operation of the Transmitter Interlock Circuit and Blower Control. There is also a separate breaker to supply power to the Blower Assembly. This breaker will vary in ampacity depending on the model number and the current draw of the Blower Assembly specific to that model number.

For Models 6750 and 6775, both Line Power for the Blower Assembly and Line Power for the Control Transformer is supplied via a 2 pole, or 3 pole din-rail mounted circuit breaker. This breaker will vary in ampacity depending on the model number and the current draw of the Blower Assembly specific to that model number. The Control Transformer provides power for the operation of the Transmitter Interlock Circuit and Blower Control.

Blower Control Circuit: Three thermal switches (two on Model 6705) and one rocker switch are connected to AC Control Line 1. The thermal switches are Single Pole, Normally Open, and close at a specific temperature (as detailed in the schematics) and connect to Blower Contactor “RYI” terminal 0, as does the SPST rocker switch. Blower contactor “RYI” terminal 1, connects to AC Control Line 2. The blower indicator lamp is connected in parallel with the contactor coil.

Transmitter Interlock Circuit: Two thermal switches are connected in series from Control Line 1 to Interlock Relay “RY2” terminal 13. These thermal switches are Single Pole, Normally Closed, and open at a specified temperature (as detailed in the schematics). The overheat lamp is connected from Line 1 to interlock relay “RY2” Terminal 13. Interlock relay “RY2” terminal 14 is connected to Control Line 2.

Interlock relay (RY2) terminals 5 & 6 are paralleled and are connected to interlock terminal strip (TB1)-1. Interlock relay (RY2) terminals 9 & 10 are paralleled and are connected to interlock terminal strip (TB1) terminal 2. This terminal pair will be closed when there is AC main power to the load.

When sold with two sets of Normally Closed terminals at TB1 interlock relay (RY2) terminals 7 & 8 are paralleled and are connected to interlock terminal strip (TB1) terminal 4. Interlock relay terminals 11 & 12 are paralleled and are connected to interlock terminal strip (TB1) terminal 3. This terminal pair will be closed when AC power is supplied to the load.

When sold with one set of Normally Closed terminals and one set of Normally Open terminals at TB1 interlock relay (RY2) terminals 3 & 4 are paralleled and are connected to interlock terminal strip (TB1) terminal 4. Interlock relay terminals 11 & 12 are paralleled and are connected to interlock terminal strip (TB1) terminal 3. This terminal pair will be open when AC power is supplied to the load.

SECTION V

MAINTENANCE



***PERSONNEL WORKING ON THIS LOAD MUST BE
CONSIDERED SKILLED AS DEFINED BY
EN60215 SECTION 3.1 AND APPENDIX D***

BEFORE PERFORMING ANY MAINTENANCE:

- 1. DISCONNECT POWER AND ALLOW MOTOR TO COME TO A FULL STOP.**
- 2. DISCONNECT RF CONNECTOR ASSEMBLY AND LOCK OUT TRANSMITTER OPERATING CONTROLS.**
- 3. DISCONNECT TRANSMITTER INTERLOCK LINE.**



***FAILURE TO FOLLOW THESE DIRECTIONS
MAY CAUSE FATAL ELECTRICAL SHOCK!***

5-1. Cleaning. The enclosure of the Model 6705/6775 is finished with an acrylic finish or other durable coating system. It should be cleaned with a neutral plastic and glass cleaner such as Windex or Glass Plus. The RF connector should be cleaned with a non-residue contact cleaner. Remove dirt accumulations from the fan and motor by vacuuming. Do not use solvents or an air jet, as these can damage the motor. Remove dirt and dust accumulations from the grills and resistor assembly with an air jet and a soft brush.

5-2. Lubrication. The fan pillow blocks, if used, are lubricated at the factory with quality lithium-based high temperature grease. Each pillow-block assembly has a bearing which must be lubricated periodically with ordinary lithium-based grease designed for ball-bearing lubrication. The motors are factory lubricated and are not designed to be lubricated in the field except under severe conditions.

5-3. RF Circuit. The RF circuit does not require any periodic maintenance and the only repairs possible are the replacement of parts in the connector, quick-step or support portions of the resistor assembly or the replacement of resistors.

To replace resistors it is necessary to remove the panels as follows:

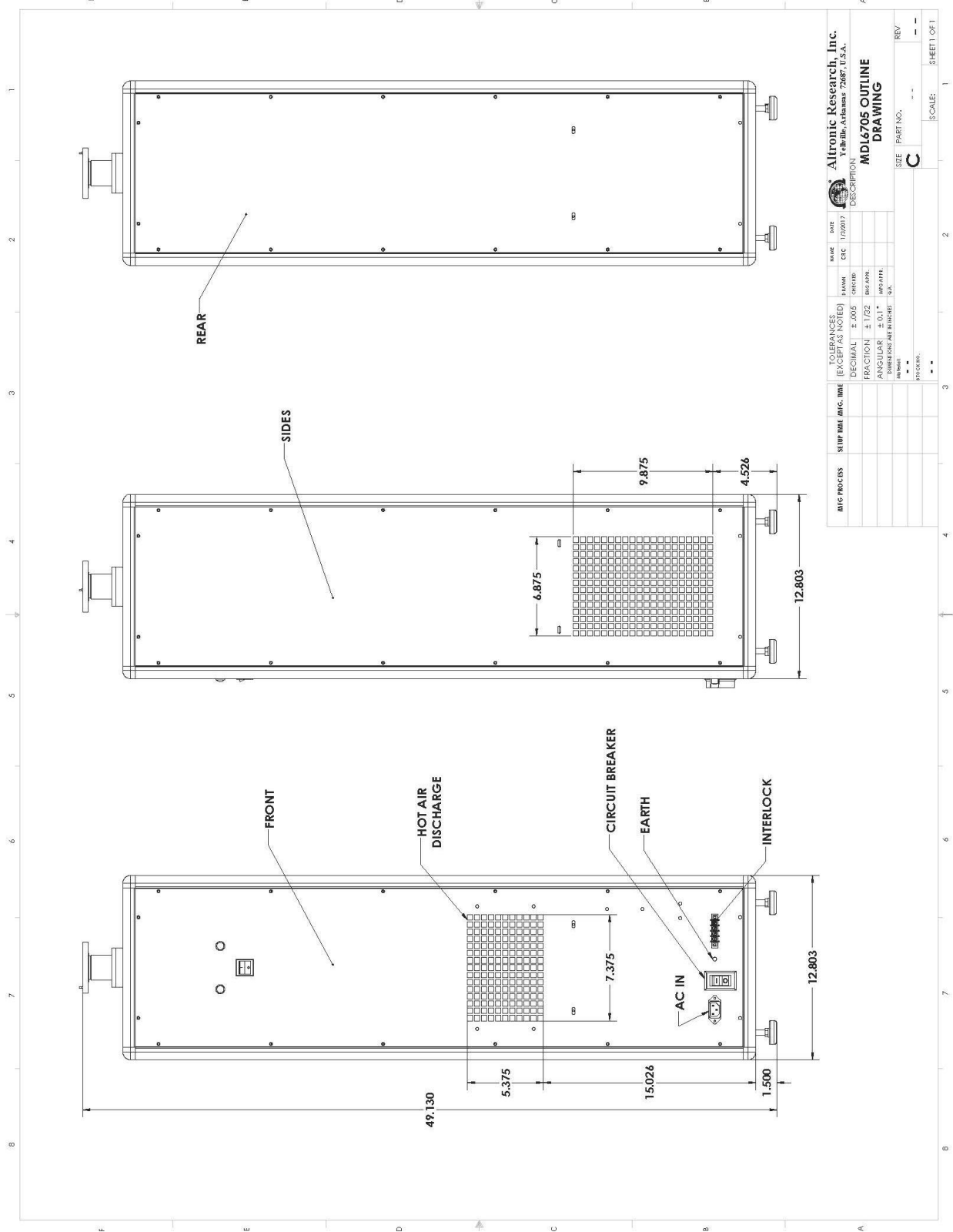
- Remove the 8-32 X 1/2" torx head screws holding the rear panel and set this panel aside.
- Remove screws from the vertical sides of the exposed inner panel.
- Remove the two 1/4-20 X 2 hex head cap screws at the bottom.
- Remove three 8-32 1/2 torx head screws from top of unit. You can now remove panel by bowing it out. With this panel removed, you will have access to the resistor bank.
- It is usually not necessary to remove any other panels, but you may find it easier to fit some resistors if you remove the opposite inner panel.
- Reverse procedure to reinstall.

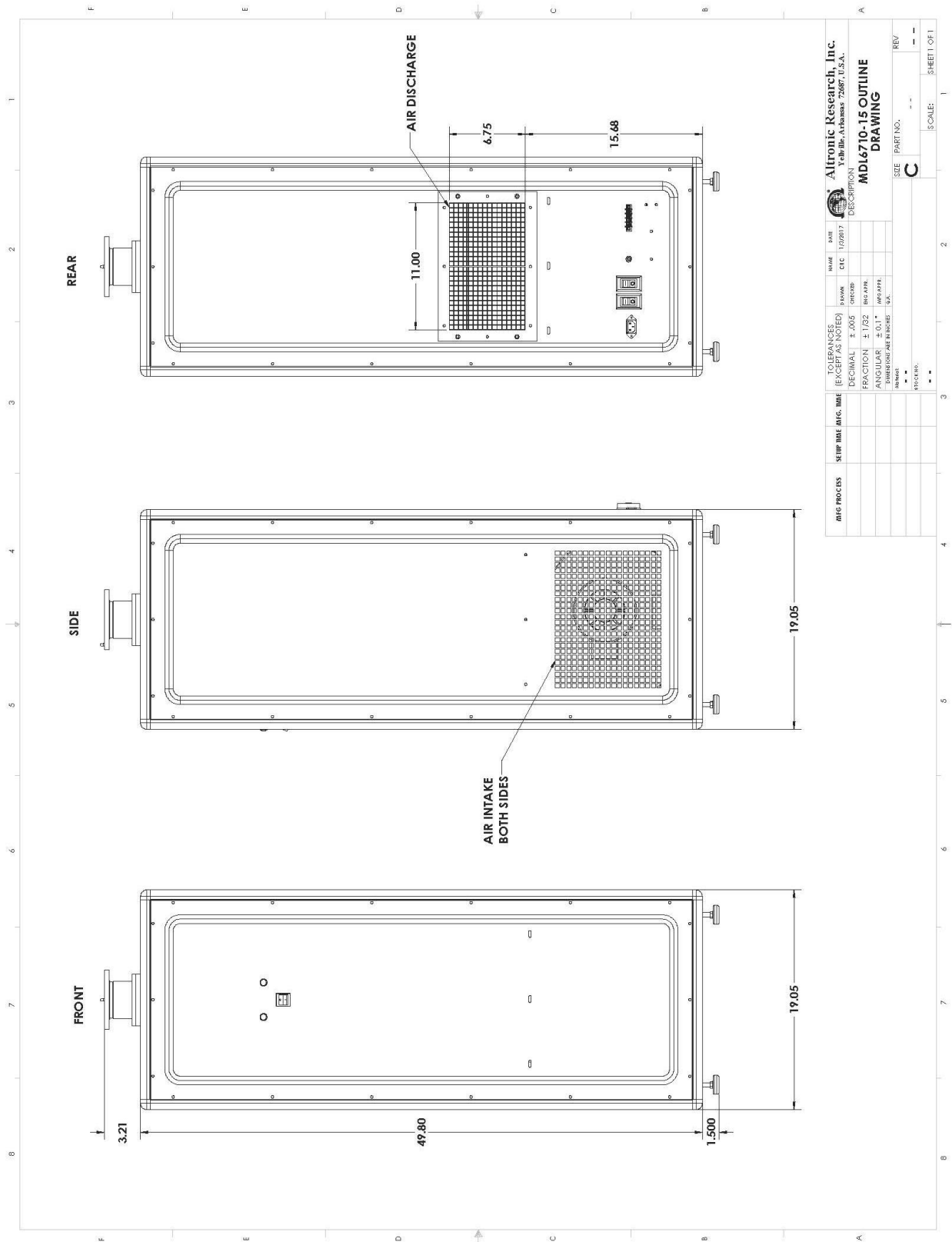
CAUTION!

When installing the 1/4-20 X 2 screws, take care not to overtighten them and fracture the resistors. The resistors are hard, brittle ceramic material. It is very important to avoid impact and excessive force when installing or removing them.

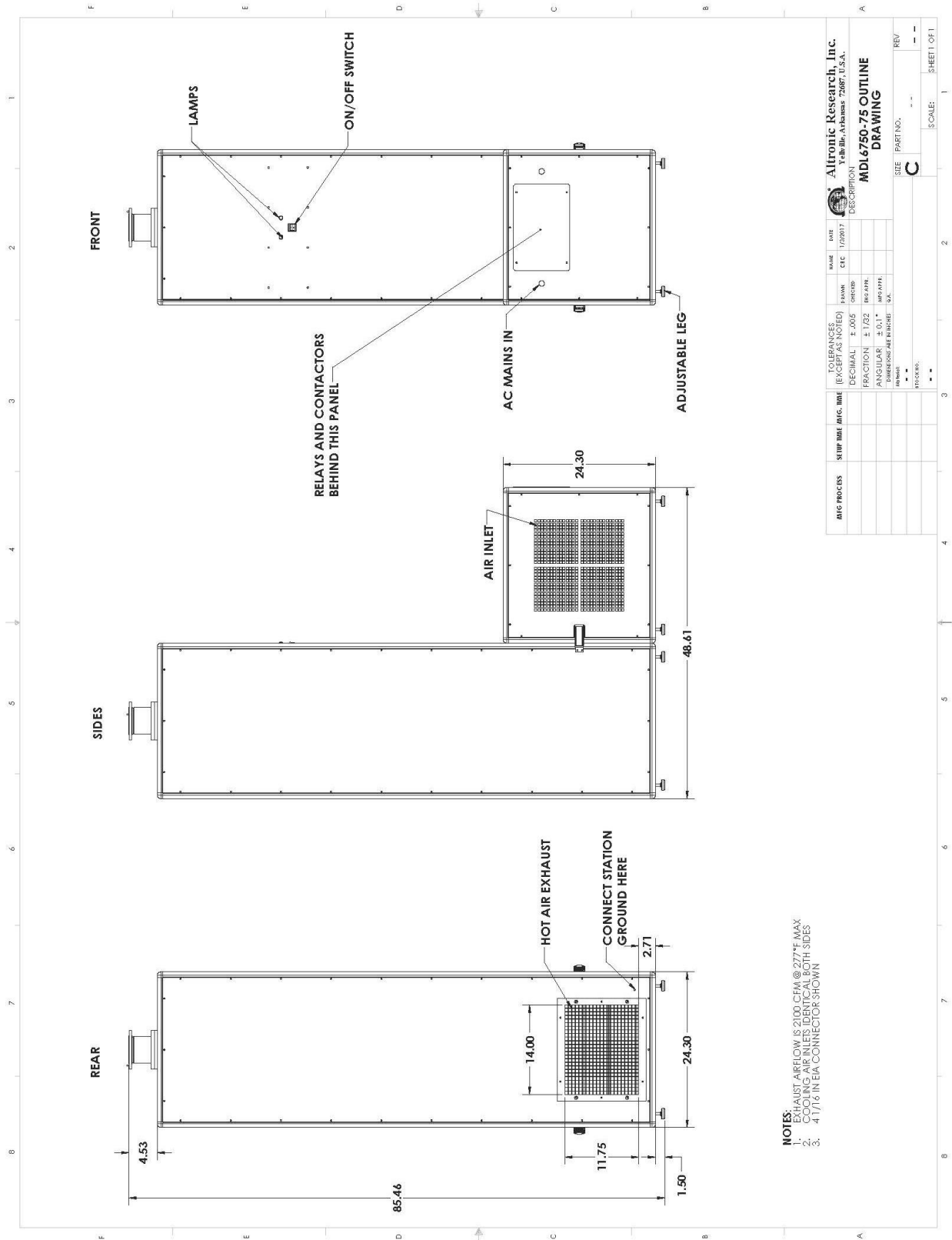
SECTION VI

6-1 OUTLINE AND DIMENSIONS

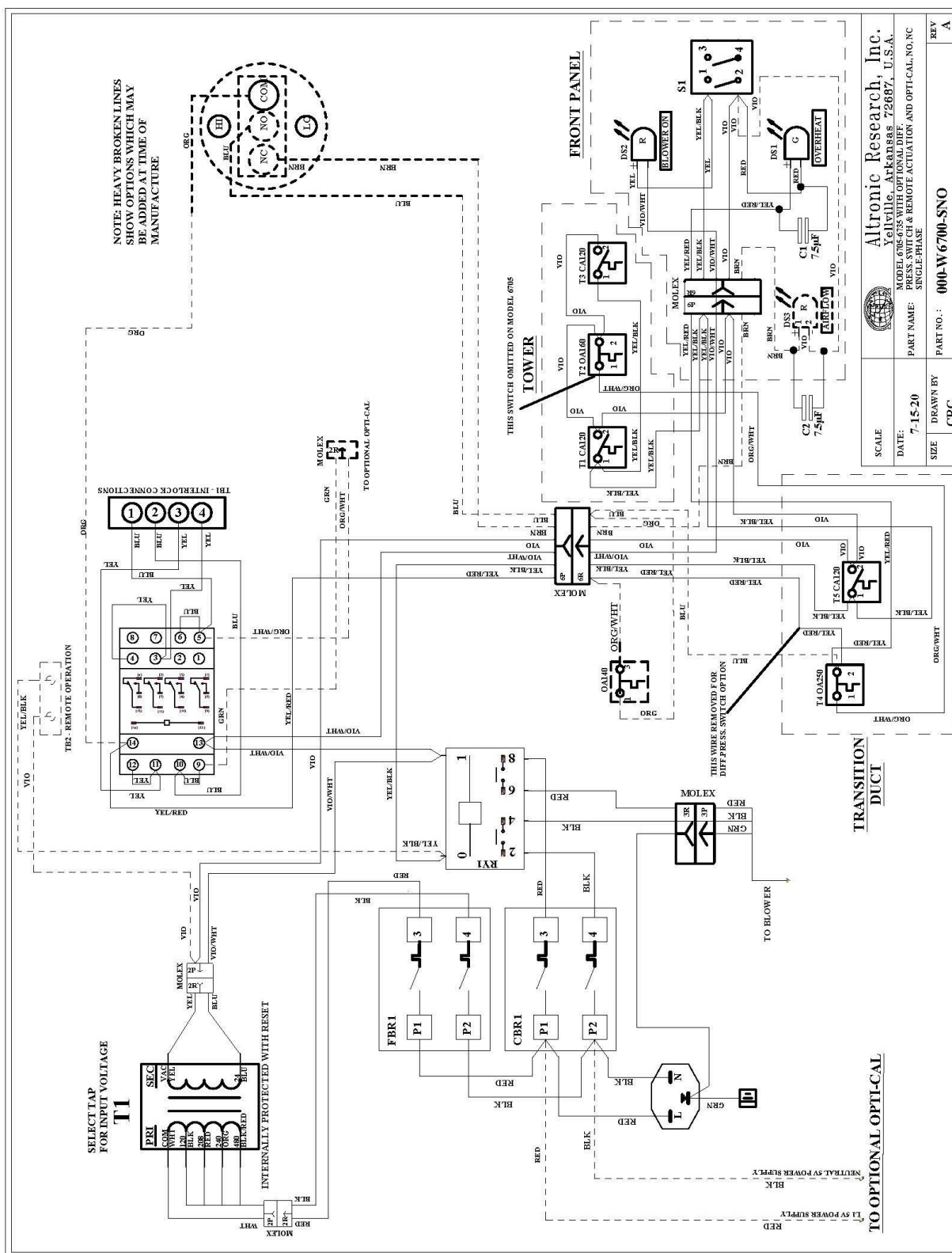


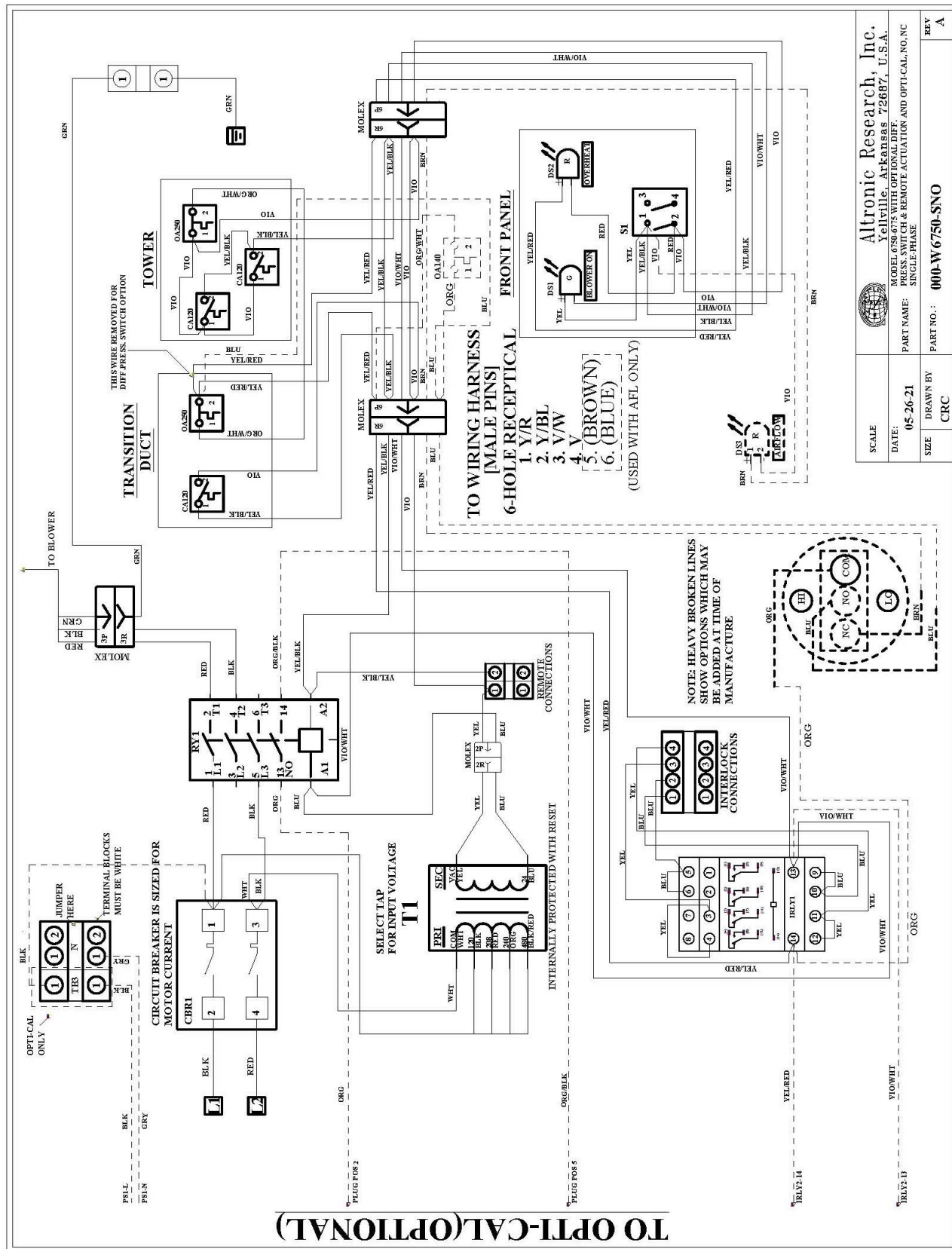


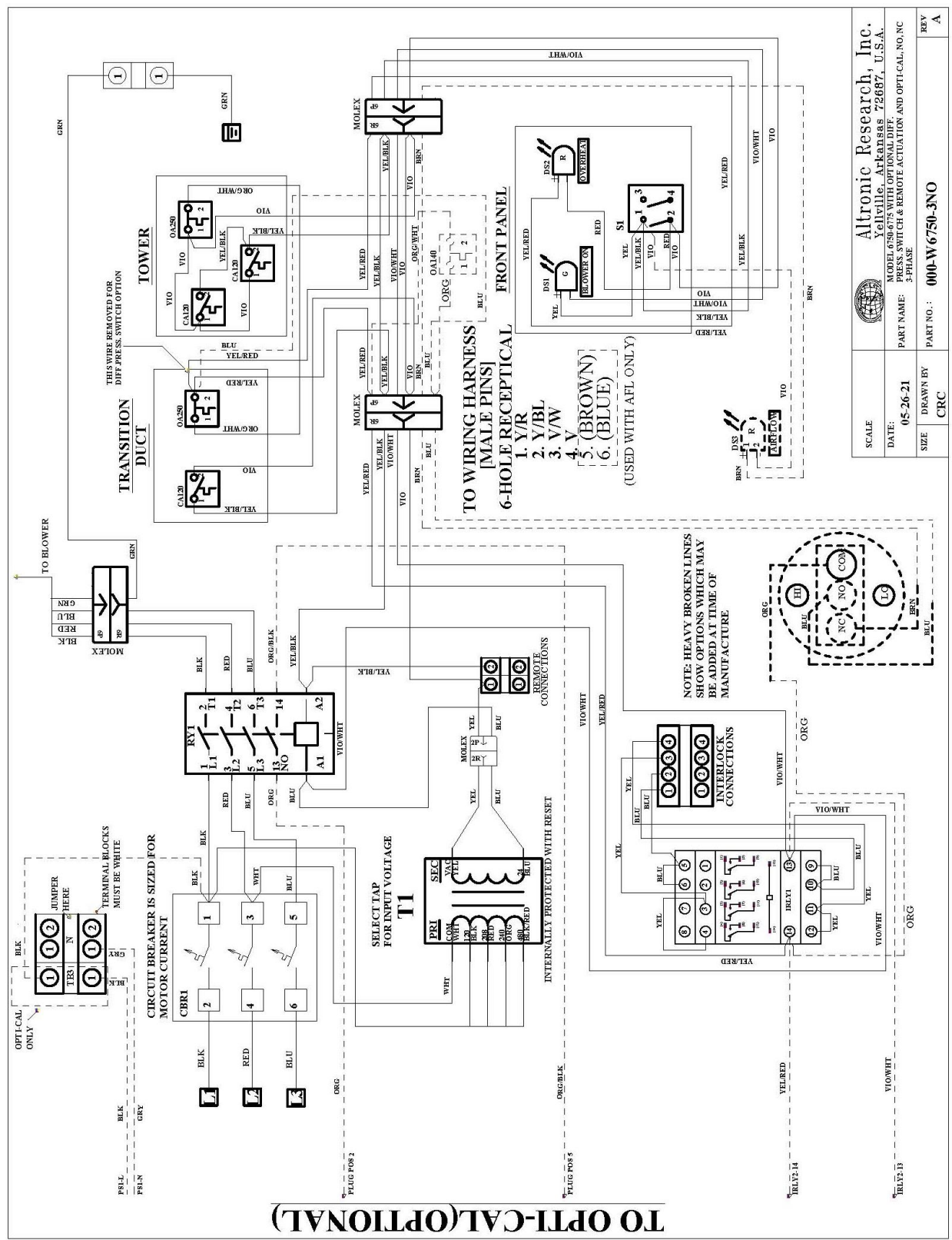
Altronic Research, Inc. Yonkers, Arkansas 72687, U.S.A.		DATE	1/2/2017
NAME	CTC	DATE	1/2/2017
DESCRIPTION	MDL6710-15 OUTLINE DRAWING		
REVISIONS			
NO.	DATE	DESCRIPTION	BY
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6-2 SCHEMATIC DIAGRAMS









TOLERANCES (EXCEPT AS NOTED)	 Altronic Research, Inc. YALTBURG, ARKANSAS 72667, U.S.A.	DESCRIPTION	DIN RAIL ASSEMBLY				
DECIMAL		± .030	MODEL NO.:	115-240V-30/60hz SINGLE PHASE, NO. NC			
FRACTION		± 1/16	PART NO.:	000-W6750-1-SNO			
ANGULAR	± 1.0°	SCALE	DRAWN BY	DATE	CHECKED BY:	REV	
DIMENSIONS IN INCHES		NO. OF	2-22-79			A	

6-3 HOW TO RECEIVE REPLACEMENT PARTS
MODEL 6705/6775

(CONSULT FACTORY)
CALL 870-449-4093

When consulting the factory for replacement parts, please have the model and the serial number of loads requiring service.

SPECIFICATIONS

Model 6705/6775

Impedance ----- 50 ohms nominal

6705 VSWR @ DC to 110MHz 1.10:1 110 to 240MHz 1.15:1
6710 VSWR @ DC to 110MHz 1.10:1 110 to 240MHz 1.15:1
6715 VSWR @ DC to 110MHz 1.10:1 110 to 240MHz 1.15:1
6725 VSWR @ DC to 110MHz 1.10:1 110 to 240MHz 1.15:1
6735 VSWR @ DC to 110MHz 1.10:1 110 to 240MHz 1.15:1
6750 VSWR @ DC to 110MHz 1.10:1 110 to 240MHz 1.15:1
6775 VSWR @ DC to 110MHz 1.15:1 Consult Factory

Power Rating @ Sea Level ----- 05/75 KW

Frequency Range ----- DC to 110 MHz

Cooling Method ----- Forced Air Ductable

Ambient Temperature ----- -30°C to 43°C

Fan Assembly ----- 1/6 hp /1½ hp (50 Hz /60 Hz) centrifugal

AC Power Requirements: 6705 3 amp at 115 Volts
6710 9 amp at 115 Volts 5 amps at 230 Volts
6715 9 amp at 115 Volts 5 amps at 230 Volts
6725 9 amp at 115 Volts 5 amps at 230 Volts
6735 18 amp at 115 Volts 5 amps at 230 Volts
6750 15 amp at 115 Volts 15 amps at 230 Volts
6775 25 amp at 115 Volts 15 amps at 230 Volts

Finish ----- Beige Splatter

Serial No. _____ Frequency _____ Resistance _____ dBA @ 3ft ≤ 80dBA

Model _____ Inspected by _____ Date _____

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CRAFTED WITH PRIDE IN ARKANSAS, U.S.A.