TRANSTECTOR
an INFINITE brand

Series 700 AV/T-S Power Conditioner

160K(i) Power Conditioner with Voltage Regulation (60 Hz)

Owners Manual

Important safety instructions - save these instructions and review prior to using equipment



Quad Output Power Conditioner for Novalis TX with ExacTRAC and OBI Options

160K(i) 60 Hz Model Front Access Design

▪ 112084-BRL2 Rev 5

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RECEIVING & INSPECTING THE UNIT

INSPECTING THE POWER PROCESSOR

Upon receipt of the unit, visually inspect for shipping damage. If any damage is found, the Purchaser must contact the Carrier immediately and file a shipping damage claim.

NOTE: Be sure to remove the front and side panels, and inspect the inside of the unit for shipping damage.

If any internal damage has occurred or any external damage that could affect the operation of the unit, please contact Transtector.

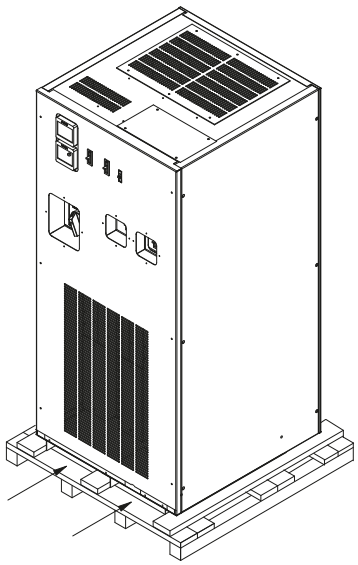
FOR ASSISTANCE CALL 1-800-882-9110 X 6112 (8am-5pm Pacific Time)
AFTER HOURS CALL 1-800-521-4792

STORING

If it is necessary to store the unit for a period of time before it is installed, be sure to place the unit in a clean, dry area. To prevent excessive dust from accumulating on the unit, it is advisable to protect it by replacing it in the original container (if possible). If the original container is not available it is recommended that all openings that lead internally into the unit are covered so that dust, water or any other substance cannot enter the internal components of the system. The unit must be handled at all times with the same care you would give to any piece of precision industrial equipment.

REMOVING THE POWER PROCESSOR FROM PALLET

Please take special care when removing the unit from the pallet. Proper equipment must be used for lifting and moving, and all safety precautions should be taken. Each unit is bolted to a wooden pallet. In order to properly remove the cabinet from the pallet, all bolts connecting the unit to the pallet must be removed completely. The unit can then be lifted off the skid using a pallet jack or a fork lift, as shown below. When lifting the unit off of the pallet, be sure to take proper safety precautions. Serious injury and/or unit damage can result otherwise.



GENERAL DESCRIPTION

The Series 700AV/T-S Power Processor is designed to supply reliable, clean regulated power to critical loads. An efficient design with state of the art micro-processor controlled solid state devices provide immunity to all line disturbances.

The basic design consists of a three phase triple shielded isolation transformer with seven separate voltage taps per phase. Output regulation is achieved by monitoring the input and automatically switching taps anytime the input line sags or surges. The use of a triple shielded isolation transformer provides superior common mode and transverse mode noise attenuation. Automatic switching occurs during current zero allowing noise free switches for both leading and lagging power factor loads that are connected to the Series 700AV/T-S.

MONITOR

Monitoring of the Series 700AV/T-S is simple, clean and effective. Three green light indicators are utilized to display “POWER ON”. These indicator lights are connected directly to the output (line to neutral for each phase) and indicate that the Series 700AV/T-S is operating properly with just a quick glance.

The Series 700AV/T-S is also provided with “INPUT OUT OF RANGE” red indicating LEDs for each phase. If any phase of the input voltage source exceeds the specified +10%, -15% from nominal, the appropriate phase LED is illuminated.

In addition, a red “ALERT” light is provided as an over temperature indicator. If an over temperature condition exists, the “ALERT” light will illuminate and shut down the output. Over temperature thermal sensors are strategically located at critical points on the regulator assemblies and transformer. The main AC input circuit breaker must be turned off in order to reset the “ALERT” light.

OUTPUT VOLTAGE METERS

Two (2) digital output meters are provided. One monitors the 208/120 VAC output and the other monitors the 480/277 VAC output. Each meter monitors and displays Line-to-Line and Line-to-Neutral voltages. Minimum and maximum voltage values are recorded in EPROM. High and low output voltage limit alarms are programmable and a visual indication given if limits are exceeded.

PROTECTION

Protection is accomplished very effectively to minimize failures and the cost of repairs. A total of five major devices protect the Series 700AV/T-S.

1. The input is protected with an integrally mounted AC circuit breaker for abnormal current overloads and provides a convenient means of disconnecting utility power.

2. The main transformer is protected by fuse links connecting the SCR regulators together, and are designed to clear in the event that two or more SCR’s should fail. This will prevent a transformer tap short and the possibility of transformer failure.

3. Overtemp sensing devices are mounted at critical points on the SCR regulating assembly and the main transformer. When an overtemp condition exists the “ALERT” light will illuminate and hold until the overtemp is corrected. There are no automatic shut-off circuits for the “ALERT” condition. The main AC input breaker must be turned off in order to reset the “ALERT” light.

4. Each output of the Series 700AV/T-S is protected with an integrally mounted AC breaker for abnormal current overloads and provides a convenient means of disconnecting power from the load.

SAFETY PRECAUTIONS



****** WARNING ******



THERE ARE DANGEROUSLY HIGH VOLTAGES PRESENT WITHIN THE ENCLOSURE OF THE POWER SUPPLY SYSTEM.

CAUTION MUST BE TAKEN WHEN WORKING WITH THE SYSTEM.

IT IS RECOMMENDED THAT ALL WORK BE PERFORMED BY QUALIFIED ELECTRICAL PERSONNEL ONLY.



****** CAUTION ******



RISK OF ELECTRICAL SHOCK AND HIGH SHORT CIRCUIT CURRENT. THE FOLLOWING PRECAUTIONS SHOULD BE OBSERVED WHEN WORKING ON THE UNIT:

1) REMOVE WATCHES, RINGS, OR OTHER METAL OBJECTS.
2) USE TOOLS WITH INSULATED HANDLES.
3) WEAR RUBBER GLOVES AND BOOTS.



****** CAUTION ******



- FOLLOW ALL STANDARD AND LOCAL ELECTRICAL CODES.
- DO NOT ALLOW WATER OR FOREIGN OBJECTS TO GET INSIDE THE UNIT.
- DO NOT PLACE OBJECTS OR LIQUIDS ON TOP OF THE UNIT.
- DO NOT LOCATE THE UNIT NEAR RUNNING WATER.

PRELIMINARY INSTALLATION

INSTALLATION CONSIDERATIONS

Prior to installing the Series 700AV/T-S, be sure to take into consideration the site you have selected. Power Conditioners produce heat and therefore require ventilation as well as accessibility. Consider these factors.

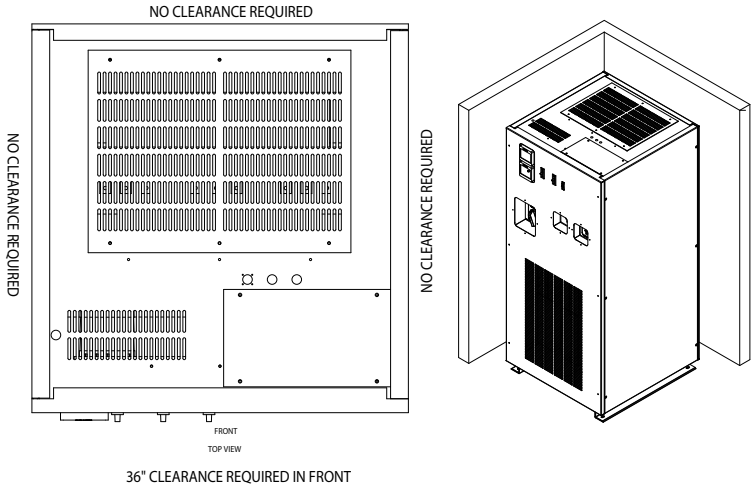
- Ventilation
- Size of the Power Conditioner
- Weight Load
- Audible Noise Requirements
- Remote Emergency Power Off (Repo)
- Monitors
- Options
- Clean Environment
- Input Source Voltage
- Receiving Facilities
- Distribution of Power
- Room Temperature
- Clearances
- Accessibility
- Excessively Long Power Runs
- Proper Ground Techniques

CHOICE OF LOCATION

These units are intended for installation in a temperature-controlled, indoor area free of conductive contaminants.

The unit has been completely inspected and extensively tested under various load conditions prior to shipment. Care to install it at a proper location will assure long trouble-free operation.

The unit is air cooled with the air intake at the front and exhausts at the top. Therefore, it should be installed in a clean, dry place with enough clearance to allow a free flow of air. Allow a minimum of 36” in front of the 700AV/T-S for installation, operation, and maintenance. There is no clearance required on either the left or right hand side of this enclosure. Either or both sides, as well as the rear of the enclosure, can be set flush up against a wall. Input and output conductors should then enter/exit via the top and/or bottom of the enclosure as indicated.



PRELIMINARY INSTALLATION (continued)

INPUT AND OUTPUT BREAKER SIZE

OUTPUT KVA CONTINUOUS	INPUT BREAKER SIZE	OUTPUT BREAKER SIZE	MAX OUTPUT CURRENT
75 kVA	300A @ 208V 250A @ 240V 150A @ 480V 100A @ 600V	150A, 3P @ 208V Accelerator 70A, 3P @ 480V BL Generator 60A, 3P @ 480V OBI 30A, 1P @ 120V BL Computers	208/120V 125A Accelerator 480/277V 70A BL Generator 480/277V 55A OBI 120V 25A BL Computers

WEIGHTS, BTU AND DIMENSIONS

OUTPUT KVA	WEIGHT	OPERATIONAL BTU/HR TYPICAL	MAXIMUM BTU/HR	DIMENSIONS
75 kVA	2,194 lbs 995.18 kg	5,115*	10,230	34.5” w x 35.875” d x 76” h 87.63 cm x 91.12 cm x 193.04 cm

* Stated BTU’s / Hr is at 75kVA rated load, 100% duty cycle. Operational BTU’s / Hr is typically at 50% of rated load. Input over current protection provided by others.

****** CAUTION ******

To reduce the risk of fire, use only on circuits provided with ampere branch circuit protection as noted in the table above, in accordance with the National Electric Code, ANSI/NFPA 70.

If unit is provide with no output circuit breaker option, output over-current protection and a disconnect device (circuit breaker) shall be provided by others.

INPUT WIRE SIZE, GROUNDING AND OUTPUT WIRING

NOTE: Refer to the latest edition of The National Electric Code Requirements for over-current protection and wire sizing.

Refer to the latest edition of The National Electric Code Requirements for over-current protection and wire sizing.

INPUT WIRE SIZE, GROUNDING AND OUTPUT WIRING

A. Conduit should be used for both input and output wiring.

B. Input wire size is based on the NEC table 310.16. Specifying not more than 3 connections in a raceway based on an ambient of 30°C and wire rated for 90°C (Note: amperages will need to be adjusted for 40° C ambient applications).

C. Input phase conductors are terminated directly to the input circuit breaker terminals.
Wire range:

208 VAC	300 Amp breaker	#1 AWG to #600 KCMIL
240 VAC	250 Amp breaker	#3/0 AWG to #350 KCMIL
480 VAC	150 Amp breaker	#14 AWG to #3/0 AWG
600 VAC	100 Amp breaker	#14 AWG to #3/0 AWG

D. Input ground lug TA-250, max wire range 6 AWG - 250 MCM one piece.

E. Output is a 4 wire (5 including ground). If four (4) current carrying conductors are used in a raceway the neutral is assumed to be current carrying and the wire must be de-rated as indicated in table 310.6 on the NEC.

Example:
1. Assume #10 wire max current = 25 Amps.
2. Multiply 25 x .8 = 20
3. 20 Amps is max current for #10 wire in a raceway with 4 conductors.

NOTE: Installation is subject to local codes - verify with a local electrical inspector.

F. All output ground and neutral terminals are copper bus bars w/ two holes. Double bolted lug are recommended. Manufactured by Burndy

RECOMMENDED LUGS: Double bolted type as supplied by Burndy Copper Compression lug, 2 hole Type YA, ¼" stud, ¾" spacing.

YA6CL-2TC14E2 #6 wire	YA4CL-2TC14E2 #4 wire	YA2CL-2TC14E2 #2 wire
YA1CL-2TC14E2 #1 wire	YA25L-2TC14E2 #1/0 wire	YA26L-2TC14E2 #2/0 wire
YA27L-2TC14E2 #3/0 wire	YA28L-2TC14E2 #4/0 wire X 2	

Output connections are made directly to the output breaker(s) and output neutral and ground lugs provided. The load current is not to exceed 80% of the output breaker(s) rating, and not to exceed the rated total current.

INPUT WIRE SIZE, GROUNDING AND OUTPUT WIRING (continued)

F. Continued

Output wiring sizes:

208/120 VAC	150 Amp breaker	#14 AWG to #3/0 AWG
480/277 VAC	70 Amp breaker	#14 AWG to #3/0 AWG
480/277 VAC	60 Amp breaker	#14 AWG to #3/0 AWG
120 VAC	30 Amp breaker	#14 AWG to #2 AWG

G. Output neutral to ground bonded during manufacturing of the power conditioner. Output Neutral is already grounded by the factory.

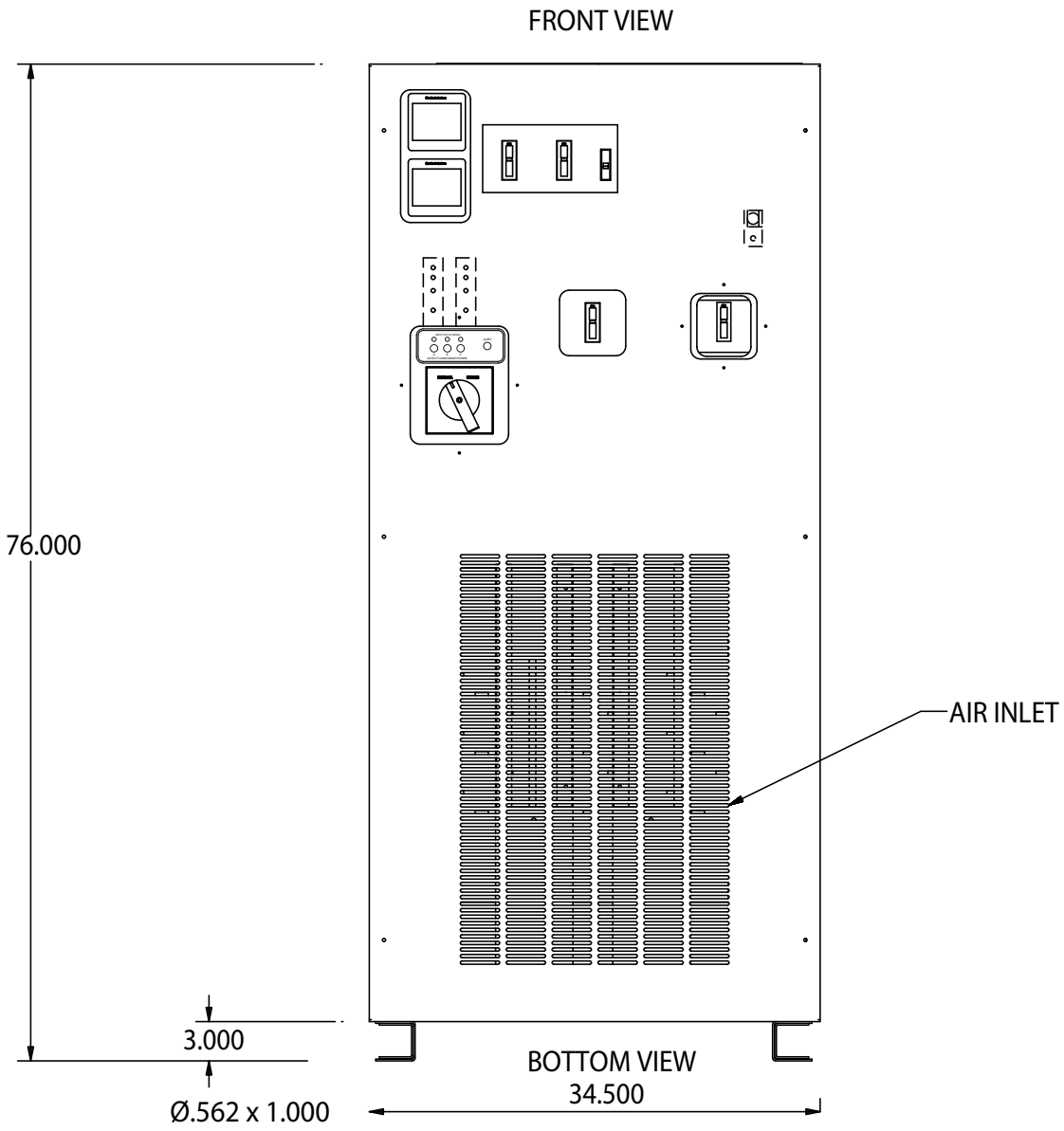
H. Installation is subject to local codes. Verify with a local electrician inspector.

The unit is constructed using an isolation transformer and is considered to be a "separately derived system". It should be grounded in accordance with the NFPA 70 article 250.20 "Alternating-Current Circuits and Systems to Be Grounded", article 250.20(D) "Separately Derived Systems" and article 250.30 "Grounding Separately Derived Alternating-Current Systems".

***The Output Neutral and Ground connection points are <u>common</u> to both wye outputs (208/120 VAC & 480/277 VAC). Therefore, it is considered a single, separately derived, power source and should be wired accordingly.**

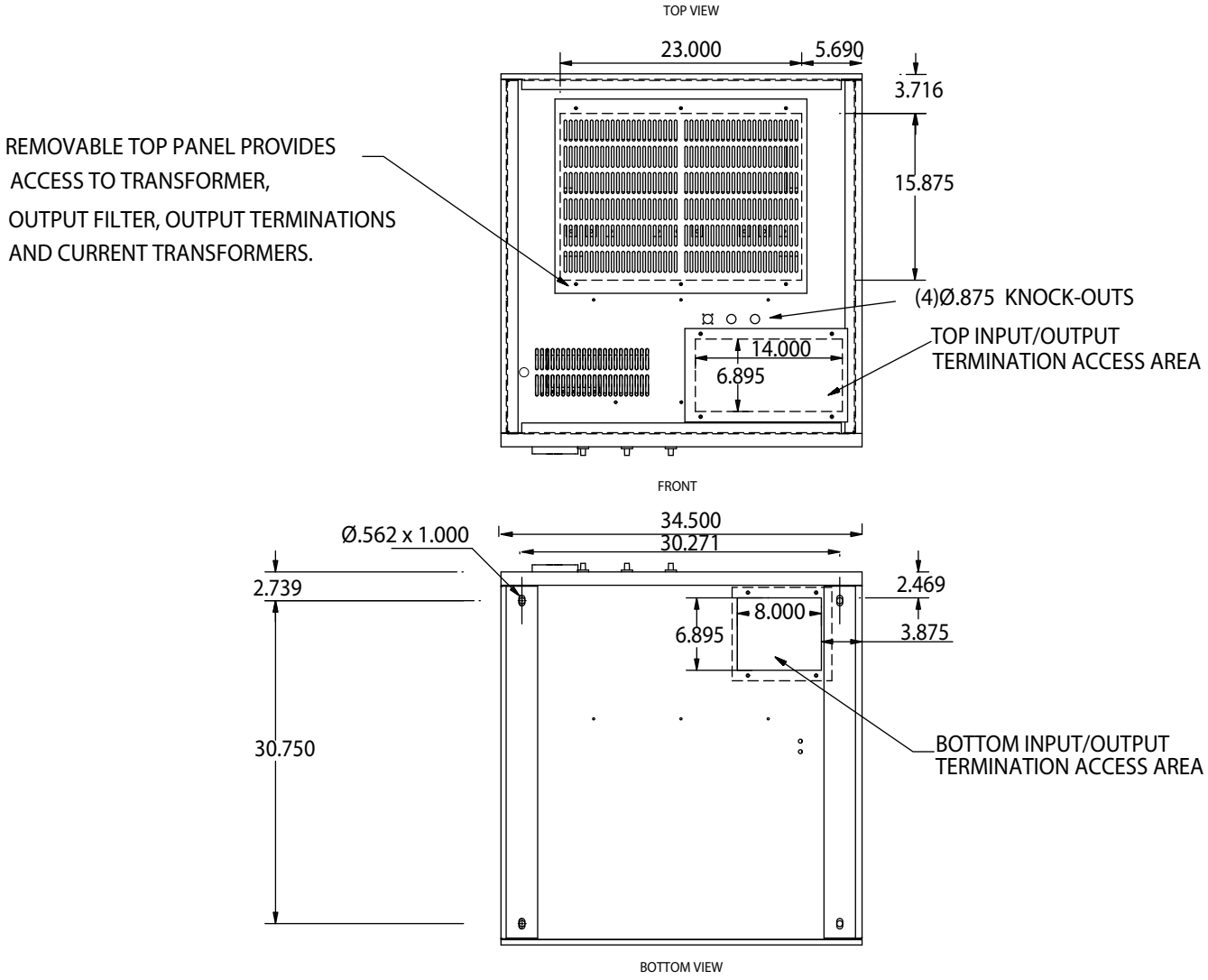
INSTALLATION

CABINET OUTLINE - FRONT VIEW



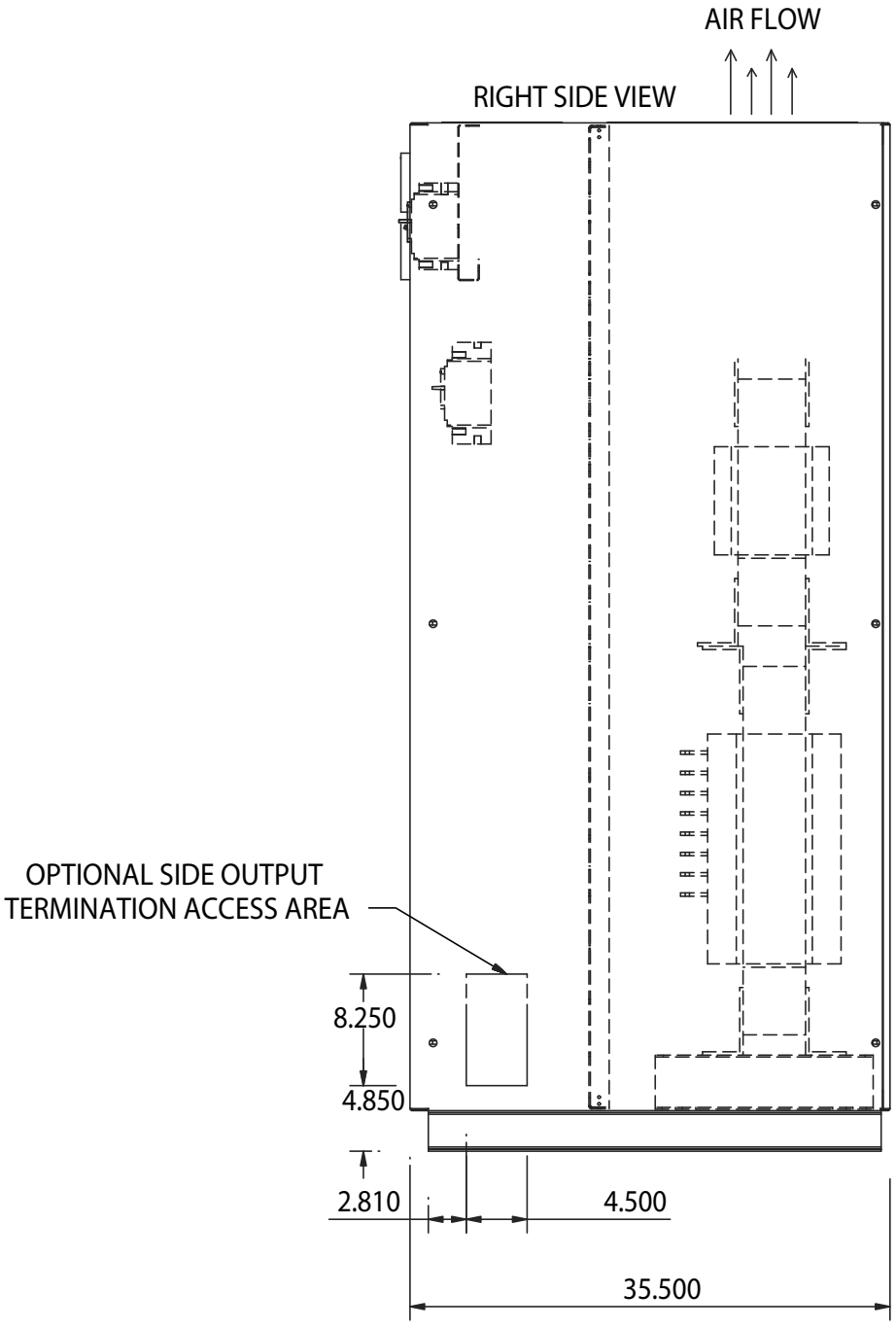
INSTALLATION (continued)

CABINET OUTLINE - TOP AND BOTTOM VIEW



INSTALLATION (continued)

CABINET OUTLINE - RIGHT SIDE VIEW

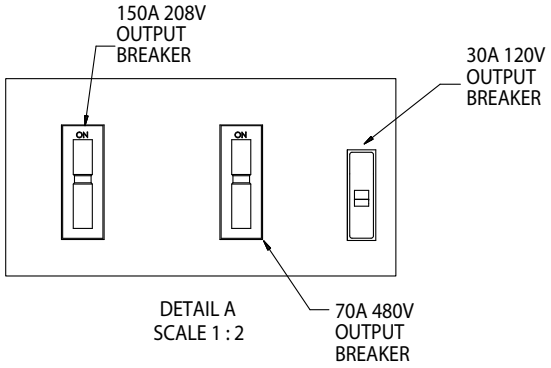


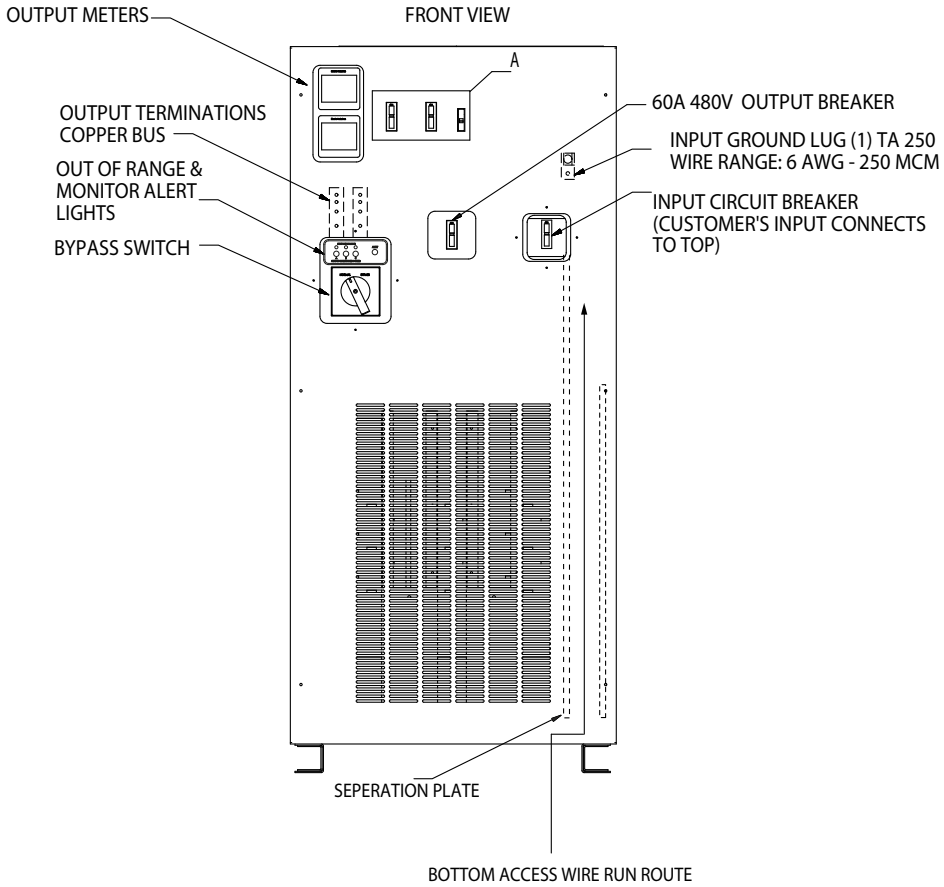
INSTALLATION (continued)

INPUT AND OUTPUT CONNECTIONS

1. Input connections are made directly to the unit's 3 pole main input circuit breaker and input lug provided. Note the bottom access wire run route illustrated below.

2. Output connections are made directly to the output breaker(s) and output neutral and ground lugs provided. The load current is not to exceed 80% of the output breaker(s) rating, and not to exceed the rated total current.





BYPASS SWITCH

****** CAUTION ******

Prior to switching from one position to another- turn off the AC input breaker.

The manual bypass switch is a break before make switch located on the Series 700 AV/T-S. The manual bypass switch is used to bypass all power electronics in case of failure.

This is a no load switch and MUST only be operated when the unit is OFF. The bypass switch should be in the "NORMAL" position unless a problem occurs with the system. If a problem occurs, turn OFF the main AC circuit breaker and turn the bypass switch to the "BYPASS" position. Re-energize the system by turning on the AC circuit breaker and contact the Customer Support Department for repairs.

NORMAL MODE

With the switch in the normal position, the Series 700 AV/T-S will provide clean and regulated power to the critical loads. The Series 700 AV/T-S should have the switch in the normal position unless a failure has occurred.

BYPASS MODE

With the switch in the bypass position, the Series 700 AV/T-S will provide clean power to the critical loads. In the bypass position, the unit will not regulate the incoming voltage. The Series 700 AV/T-S should be placed in the bypass position when a failure of the system has occurred. This provides the user with some protection until a service technician arrives.

REMOTE EMERGENCY POWER OFF (REPO) OPTION

The REPO is operated by a remote push button that when depressed will shunt trip the Series 700 AV/T-S input breaker and disable the unit. This option may be added to units in the field.

Contact the Customer Support Department if you wish to add this option.

START UP

****** WARNING ******

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NOTE: INITIAL START-UP SHOULD BE PERFORMED WITH NO LOAD ON SYSTEM.

1. Re-install all panels that may have been removed during installation.
2. Make sure the input circuit breaker is in the **off** position.
3. Energize the primary building power.
4. Turn on the main AC input breaker.
5. Verify that the output voltage is within the specified range.
6. Verify output phase rotation is correct.
7. Turn the system off.
8. Connect the loads one at a time and repeat Step 4.

OPERATION

MONITORING

Two (2) digital output meters shall be provided. One shall monitor the 208/120 VAC output and the other shall monitor the 480/277 VAC output. Each meter shall monitor and display Line-to-Line and Line-to-Neutral voltages. Minimum and maximum voltage values shall be recorded in EPROM. High and low output voltage limit alarms shall be programmable and a visual indication given if limits are exceeded.

For function and use, see the monitor manual supplied with the Power Conditioner.

PREVENTIVE MAINTENANCE

****** WARNING ******

DANGER OF ELECTRICAL SHOCK, TURN OFF ALL POWER SUPPLYING THIS EQUIPMENT PRIOR TO MAINTENANCE.

To ensure longer component life and trouble-free operation, minor preventive maintenance procedures should be performed at regular intervals, for example once every year. More frequent inspection intervals would be needed for more severe operating conditions and larger number of hours of continuous operation.

1. Remove front and side panels and at each service inspection any accumulated dust, dirt or foreign particles should be carefully removed. Special care should be exercised in cleaning the thyristors (SCR's), heat sinks and the control assembly.

2. Inverse Parallel Silicon Rectifiers (SCR's) or Thyristors - The silicon controlled rectifiers (SCR's or Power Mods) usually fail in the shorted mode. When this happens, normally the fusible link in series with the SCR will be blown open to clear the short and prevent damage to the transformers. If a blown SCR is suspected, contact Transtector for service.

3. A simple performance checklist has been developed for use in maintenance. See *"Performance Checklist"* and check off items 1-7.

4. After items 1-7 have been checked on the *"Performance Checklist"*, the next step is to check the operation of the system.

5. Replace front and side panels. Turn unit on with no load. Check item 8 on the *"Performance Checklist"*

6. Turn on loads and check items 9-10 off the *"Performance Checklist"*.

7. Check to make sure all fans are operational and check off item 11.

   NOTE: Preventive Maintenance Plans are available. Please contact the Customer Support Group for information. Call 1-800-882-9110 X6112.

SERVICE

Transtector shall provide immediate phone support/consultation and if possible, same day parts shipment. (contact must be prior to 12:00 PM PST). If necessary, on site service shall be scheduled the same day for service to be conducted within 24 to 48 hours, based on customer requirements. Typical service hours are 8 AM to 5 PM Monday through Friday.

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E-mail: rribbeck@transtector.com

Transtector Systems
10701 Airport Dr.
Hayden Lake ID 83835

PERFORMANCE CHECKLIST

Company_____

Model #_____Serial #_____

1. Customer Comments or Problems_____

2. Power Processor Environment Clean and Dust Free Yes_____ No_____

3. Phase Rotation Correct (ABC) Yes_____ No_____

4. Electrically wired properly ie...Conductor Sizing, Breakers, Grounding

5. Verify Input Voltage (See specification tag)

6. Check Tightness of Electrical Connections:

   _____Input Connections_____Output Connections_____Heatsink Connections (SCR's)

   _____Circuit Board Connections_____By-Pass Switch_____Fuse Connections

   _____Fan Connections_____Transformer Connections

7. Exercise all circuit breakers-

   _____Input Breaker_____Output Breakers

8. Input/Output Voltage Checks (Adjust as Needed).

No Load Input	No Load Output	
A-B_____VAC_____	A-N_____VAC	A-B_____VAC
B-C_____VAC_____	B-N_____VAC	B-C_____VAC
A-C_____VAC_____	C-N_____VAC	A-C_____VAC

9. Available Load Input / Available Load Output

Available Load Input	Available Load Output	
A-B_____VAC_____	A-N_____VAC	A-B_____VAC
B-C_____VAC_____	B-N_____VAC	B-C_____VAC
A-C_____VAC_____	C-N_____VAC	A-C_____VAC

10. Input/Output Current Checks (Balance as Needed).

Input	Output
A_____Amps	A_____Amps
B_____Amps	B_____Amps
C_____Amps	C_____Amps
	N_____Amps
	G_____Amps

11. Fans Operational_____

GENERAL TROUBLESHOOTING

****** WARNING ******

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SYMPTOM	PROBABLE CAUSES
1. No Output on One or More Phases.	A. No Input. B. Blown Fuse. C. Defective SCR or Power Mod. D. Defective Control Card. E. Defective Sense Card.
2. Output is too High or too Low.	A. Input Out of Range. B. Control Card Adjustment. C. Defective Control Card. D. Defective Sense Card. E. Defective SCR or Power Mod.
3. Input Breaker Tripping Off.	A. System Overloaded. B. Defective Breaker. C. Shorted Taps.

SERVICE

Transtector shall provide immediate phone support/consultation and if possible, same day parts shipment. (contact must be prior to 12:00 PM PST). If necessary, on site service shall be scheduled the same day for service to be conducted within 24 to 48 hours, based on customer requirements. Typical service hours are 8 AM to 5 PM Monday through Friday.

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PARTS LIST

QTY	208 V INPUT PART #	240 V INPUT PART #	480 V INPUT PART #	600 V INPUT PART #	DESCRIPTION
2	112640	112640	112640	112640	OUTPUT METER
1	204936	204936	204418	204420	MAIN TRANSFORMER
1	204518	204518	204518	204518	AUTO TRANSFORMER
1	11173	11173	11173	11173	CONTROL TRANSFORMER
1	104036	110898	110924	110217	MAIN INPUT BREAKER
6	17666	17666	17666	17666	FILTER CAPACITOR
6	17538	17538	17538	17538	FILTER RESISTOR
3	16638	16638	16638	16638	SENSE FUSE (.75A)
3	18702	18702	18702	18702	CONTROL FUSE (FNQ-.6)
3	109580	109580	109580	109580	CONTROL FUSE (SC-30)
3	110894	110894	110894	110894	CONTROL FUSE (SC-1)
8	110895	110895	110895	110895	CONTROL FUSE (SC-3)
1	110896	110896	110896	110896	CONTROL FUSE (SC-5)
1	13789	13789	13789	13789	CONTROL RELAY
1	13696	13696	13696	13696	PILOT LIGHT - RED (ALERT)
3	109054	109054	109054	109054	PILOT LIGHT - GREEN (A,B,C)
3	107829	107829	107829	107829	PILOT LIGHT - INPUT OUT OF RANGE
3	23943	23943	23943	23943	SENSE BOARD
3	25723	25723	25723	25723	SNUBBER BOARD
3	420356	420356	420356	420356	MAIN CONTROL BOARD
1	100810	100810	100810	100810	BYPASS SWITCH
1	13765	13765	13765	13765	30A, 1P, 120V OUTPUT BREAKER
1	110212	110212	110212	110212	60A, 3P, 480V OUTPUT BREAKER
1	111822	111822	111822	111822	70A, 3P, 480V OUTPUT BREAKER
1	110924	110924	110924	110924	150A, 3P, 208V OUTPUT BREAKER
1	111601	111601	111601	111601	TVSS
3	301357	301357	301357	301357	HEATSINK ASSEMBLY
3	407753	407753	407753	407753	HEATSINK
21	104583	104583	104583	104583	POWER MODULE (SCR)
3	13319	13319	13319	13319	THERMAL SENSOR
6	104607	104607	104607	104607	FUSIBLE LINK
3	110939	110939	110939	110939	DIODE
3	103759	103759	103759	103759	BLOWER MOTOR

WARRANTY

WARRANTY VALIDATION

WARRANTY VOID UNLESS THIS FORM IS COMPLETE AND

RETURNED TO TRANSTECTOR SYSTEMS

Transtector Systems, Inc. warrants that the Series 700 AV/T-S Power Conditioner and its components will remain free from defects in material and workmanship for the period of two (2) years from the date of shipment and agrees to replace F.O.B. its factory, any part or parts which fail through defect in material or workmanship during such period.

- The Warranty shall be effective only if and so long as the system is installed and operated in the manner specified in the manual which accompanied the Power Conditioner and operated within the ratings on the nameplate of the system.
- The Warranty shall be void if any alteration is made to the system or any of its components are altered by anyone other than authorized personnel.
- The cost of transporting a questionable component and/or a replacement component to and from the factory is the responsibility of the customer. The expense of installation of the replacement component is the responsibility of the purchaser, unless covered by the GOLD PLAN or GOLD PLUS PLAN. Factory servicemen are not included in this warranty.
- This Warranty is in lieu of all other warranties, expressed or implied. The giving of, or failure to adhere to any advice or recommendations by Transtector Systems shall not constitute any warranty by, or impose any liability upon the company. Transtector Systems Inc. neither assumes nor authorizes any person to assume for it, any liability other than that specifically set forth in this Warranty. Except for its obligations, Transtector Systems, Inc. assumes no responsibility for consequential or other damages resulting from defects in workmanship or failure of the system or any components.
- This warranty does not apply if the cause of the failure to properly perform is fire, flood, windstorm, earthquake, misuse, or abuse or any other reason other than those described above, i.e. defects in manufacture. If the component fault has been caused by misuse or abnormal conditions in the judgment of factory personnel after inspection at our plant, the customer will be charged for repairs based on parts and labor required.

Serial # Model #

Company Date

Address

City/State/Zip

Contact Title

Phone Start up Organization

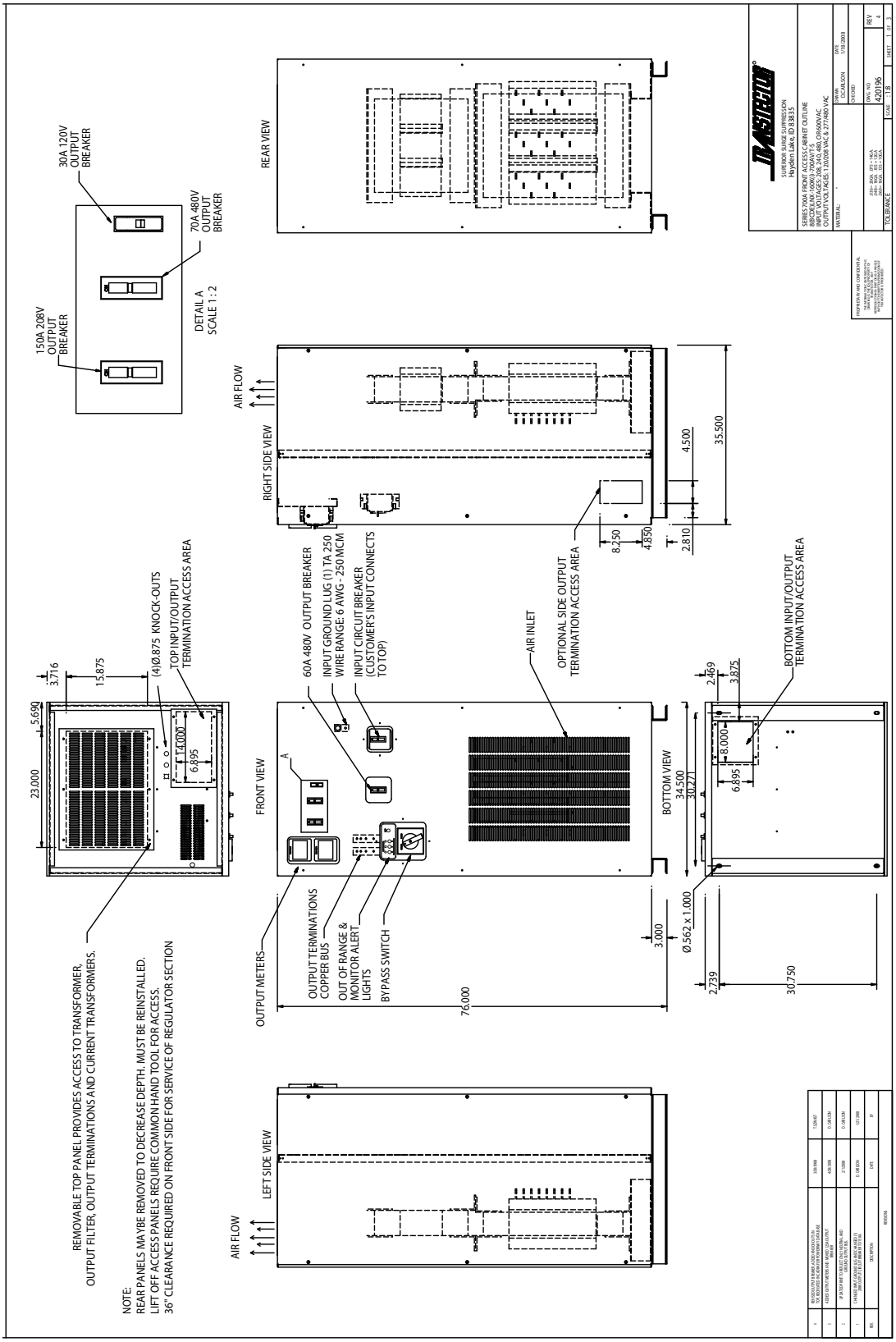
Complete and return form to:

Attn: Rick Ribbeck
Transtector Systems, Inc.
10701 Airport Dr.
Hayden Lake ID 83835
Phone 208-635-6400 Ext. 5867
Fax 208-762-6133
rribbeck@transtector.com

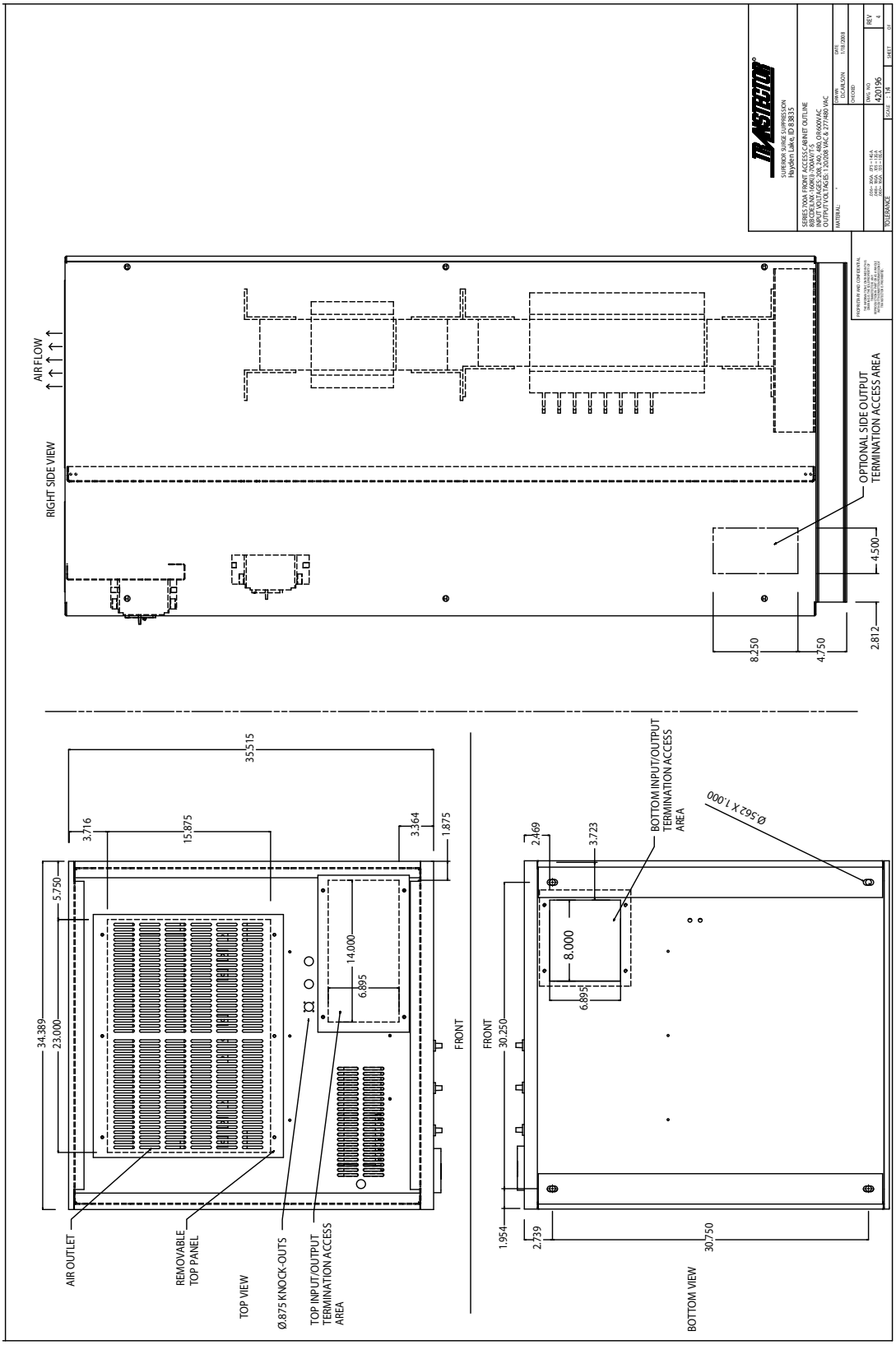
APPENDIX A

RELATIVE DRAWINGS & SCHEMATICS

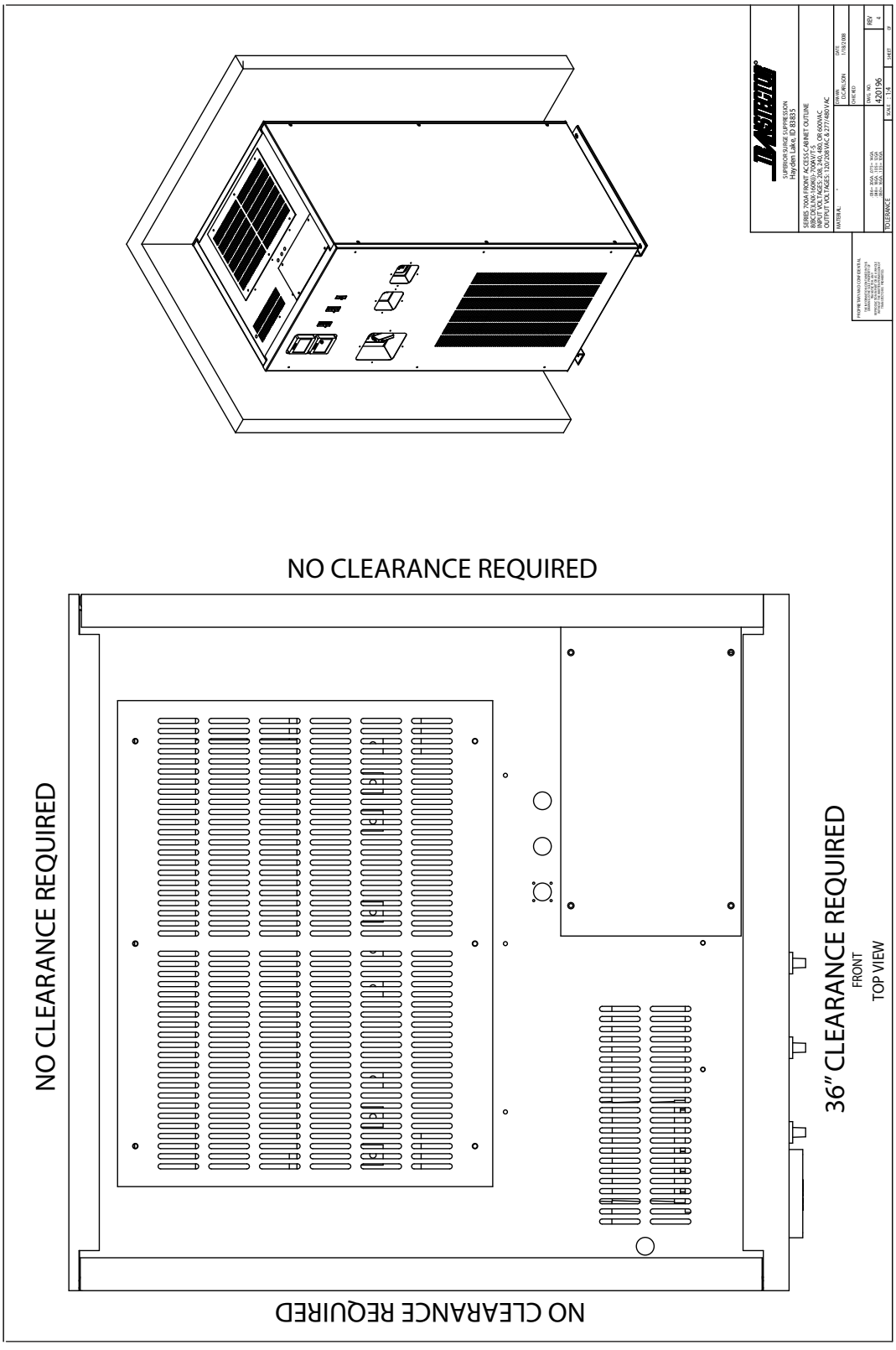
CABINET LAYOUT



CABINET LAYOUT

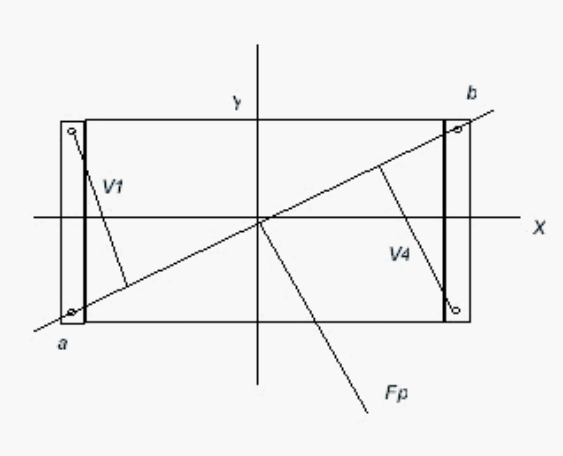


CABINET LAYOUT



SEISMIC CALCULATIONS

Coastal California, Zone 4	Z = 0.4
Equipment Anchorage	I = 1.5
Uniform Building Code, Table 160	Cp = 0.75
	Fp = Z x I x (Cp) x Wp = 0.45 x Wp
Cabinet Weight	2194 lbs.
Center of Gravity Height	33.00 in.
	Wp (max) = 2145.0 lbs x 1.15 = 2777.25 lbs.
	Wp (min) = 1785.0 lbs. x 0.85 = 1517.25 lbs.
	Fp = 0.45 x 2777.25 = 1249.76 lbs.
Vertical Force	(Fp) = 0.15 x 2777.25 = 416.58 lbs.
Moment	Mo = 33.00 x 1249.76 = 41242.08 in. lbs.
	Tension = Fp x Cg / V4 = 3213.6 lbs.
	Shear = Wp(max)Fp/4 lbs., each anchor= 603.8 lbs.



Corners (a,b) 43.1 in
V1=V4 = 21.6 in.

EXAMPLE: <Rawl Power Bolt # 6913>
3/8” embedded 2.5” / min 2000 psi concrete
Tension rating of bolt: 5200 lbs.
Shear rating of bolt: 7270 lbs.

Interaction = (T/Tbolt) + (S/Sbolt)
Interaction = 0.7
Interaction = < 1.00 (OK)

SYMBOL LIBRARY



Caution

This symbol indicates that caution should be taken when performing the process required in this manual. Damage to the unit or personal harm could happen if proper precautions are not taken.



Shock Hazard

This symbol indicates that there is a risk of electrical shock if proper precautions are not followed. Only qualified personnel should perform the actions required in this manual.

NOTES