TRYSTAR®

INDUSTRIAL POWER PURIFIER

OWNERS MANUAL

SERIES 800PI, 800P2, 800P3, 250VA - 25KVA
SINGLE PHASE, 50HZ OR 60HZ

IMPORTANT - SAVE THESE INSTRUCTIONS - PLEASE READ THIS MANUAL BEFORE USING EQUIPMENT

ABOUT THIS MANUAL

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15765 Acorn Trail / Faribault, MN 55021 / 507.333.3990

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GENERAL DESCRIPTION

The Power Purifier is a double magnetic conversion, line-interactive, power conditioner. This proven technology provides assured reliability with tight regulation and true power conditioning properties. The Power Purifier is ideal in any electrical environment, especially in industrial factory automation applications whenever high-power equipment interferes with vulnerable electronic controls. The Power Purifier delivers isolated, regulated, transient and noise free sinewave power; securing operational reliability.

The Power Purifier is the solution to 99.95% of all power problems. The Power Purifier protects your sensitive electronic equipment from voltage spikes, oscillatory ring waves, noise, impulses, overvoltages, undervoltages, distorted sinewaves and even short duration power outages. In addition the Power Purifier protects your building's electrical system from the effects of damaging harmonic currents and also corrects for poor power factor conditions. In short, the triple value-add of the Power Purifier's double magnetic conversion, line-interactive design, enhances control equipment performance, extends equipment life and improves the buildings overall electrical system.

FEATURES & BENEFITS

- Variable Range Regulation (VRR) - Variable Range Regulation, extends the usable input voltage window depending upon load. VRR provides regulated voltage under extreme brownout conditions or surges up to 200%. The output voltage remains tightly regulated under the following conditions.

LOAD	INPUT	OUTPUT REGULATION
25%	+10, -45%	+3%
50%	+10, -40%	+3%
75%	+10, -35%	+3%
100%	+10, -20%	+2%

- Unique "Ride-through" Capability - The Power Purifier generates it's output voltage by a circuit operating as a powerful stored energy oscillator. Even with the loss of input voltage for one entire cycle the output retains it'stight regulation. The Power Purifier offers battery back-up behavior without expensive batteries.
- Immunity to Distortion - With an input waveform distortion as high as 40%, the output of the Power Purifier delivers a transient free sinewave with no more than 5% harmonic distortion.
- Transverse Mode Noise Attenuation - 120dB.

- Common Mode Noise Attenuation - 140dB.
- Lightning and Surge Protection - The Power Purifier's 3000:1 attenuation surpasses the stingiest lightning and surge protection criteria. Exceeds U/L 1449 Rating 330v, ANSI\IEEE C62.41-Cat B3.
- Short Circuit Proof - The Power Purifier will sustain operation under short circuit conditions without damage to the unit.
- Power Factor Correction - Corrects for load generated poor power factor. Input power factor remains within .95 with a load power factor of 0.6.
- K factor - K factor rating of 30. Handles high harmonic content loads without overheating.
- Harmonic Attenuation - The Power Purifier attenuates odd current harmonics typically generated by switch mode power supplies in the order of -23dB.
- NEMA2 Cabinetry is specifically manufactured for harsh physical environments. Constructed for indoor use, protecting against falling non-corrosive liquids and dirt, this optional cabinet can be installed in virtually any location. NEMA2 cabinet construction is only available from Trystar.

SPECIFICATIONS

- **Power Output -** 1ø, 100% Duty kva/kw for non-linear loads.
- **Line Voltage Regulation -** ±2% Vout for +10% to -20% Vin..
- **Immunity To Distortion -** @40%THD Vin, 5% Max. THD Vout
- **Load Regulation -** ±2.5% for 0% to 100% load
- **Voltage Recovery -** 2 cycles to 95%, 3 cycles to 100%
- **K Factor -** K-30 Rated
- **Power Factor Correction -** Input of 0.95 typical
- **Harmonic Attenuation -** -23db for load reflected harmonics
- **Galvanic Isolation -** NEC 250-5d, .001pf
- **Surge Protection -** U/L 1449 Rating 330v; ANSI/IEEE C62.41-Cat B3
- **CMN Attenuation -** 140db
- **TMN Attenuation -** 120db
- **Ride Through Capability -** 1 cycle
- **Reliability -** 200,000 hr. (MTBF)
- **Audible Noise -** 1 meter, A scale, 52db to 56db
- **Efficiency -** ≈ 92%
- **Operating Temperature -** -20°C to +40°C
- **Listings -** Underwriters Laboratories (UL, C-UL) 1012 Listed.

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.

RECEIVING & INSPECTING THE UNIT

INSPECTING THE POWER PURIFIER

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.

If any damage has occurred that could affect the operation of the unit, please contact Trystar. Call 507-333-3990.

IMPORTANT NOTICE

This shipment has been carefully inspected, checked and properly packaged at our company.

When it was delivered to the carrier it was in good condition and technically it became your property at that time. Thus, any damage, whether obvious or hidden, must be reported to the transportation company within FIVE days of receipt of the shipment at your premises to avoid forfeiting claims for damages.

FOR ALL SHIPMENTS DAMAGED IN TRANSIT

Leave the items, packing material and carton “AS IS”. Notify your carrier’s local office and ask for immediate inspection of the carton and contents.

After inspection has been made by the carrier, and you have received acknowledgment in writing as to the damage, notify our Customer Service Department to make any required repair arrangements.

It is your responsibility to follow the above instructions or the carrier will not honor any claims for damage. Also, if there are any shortages or questions regarding this shipment, please notify us within FIVE days.

Please note that we cannot be responsible for any service work or back-charges unless authorized by us in writing, before the work is performed.

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 unit are covered so that dust, water or any other substance cannot enter inside 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 PURIFIER FROM PALLET (where applicable)

Please take special care when removing the unit from the pallet and/or container. Proper equipment must be used when lifting and moving. Safety precautions should be taken. Larger sized Power Purifiers are 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. Larger sizes must be lifted off with a pallet jack or a fork lift.

When removing the Power Purifier from the pallet and/or container, be sure to take proper safety precautions. Serious injury and/or unit damage can result from not taking proper precautions..

PRELIMINARY INSTALLATION

INSTALLATION CONSIDERATIONS

Prior to installing the Series 800PI, P2 or P3, be sure to take into consideration the installation site you have selected. Power Purifiers produce heat and therefore require ventilation as well as accessibility. Consider these factors:

- Ventilation
- Size of the Power Commander
- 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

The unit has been completely inspected and extensively tested under various load conditions prior to shipment. Care to install the Power Purifier at a proper location will assure long trouble free operation. The PI, P2 and P3 industrial models are convection air cooled with the air intake at the bottom and exhausts at the top, rear, or sides. Install in a clean, dry place with enough clearance to allow free flow of air. Allow at least 4 inches of space between the unit and other equipment. Floor standing units require enough space for maintenance on all four sides. Never mount one unit over the other or near a heat source. Heat rising from the lower unit or heat source may cause premature failure.

INSPECTION

Check by thorough inspection if any electrical connection has become loose because of vibration during shipment. Check the nameplate to be sure that the voltage and frequency match the available power supply. Under no circumstance should the unit be connected to a power source which does not conform to the nameplate rating.

VOLTAGE, CURRENT, BTU AND WEIGHTS MATRIX

NOMINAL INPUT CURRENT AT VARIOUS INPUT VOLTAGES

INPUT VOLTAGE					
VA SIZE	120	208	240	480	600
250 *	2.3A	1.3A	1.1A	0.6A	0.5A
500	4.6A	2.6A	2.3A	1.1A	0.9A
750	6.9A	4.0A	3.4A	1.7A	1.4A
1000	9.2A	5.3A	4.6A	2.3A	1.8A
1500	13.8A	7.9A	6.9A	3.4A	2.8A
2000	18.3A	10.6A	9.2A	4.6A	3.7A
2500	22.9A	13.2A	11.5A	5.7A	4.6A
3000	28A	16A	14A	7A	6A
5000	46A	26A	23A	11A	9A
8000	73A	42A	37A	18A	15A
10000	92A	53A	46A	23A	18A
15000	138A	79A	69A	34A	28A
20000	183A	106A	92A	46A	37A
25000	229A	132A	115A	57A	46A

NOMINAL OUTPUT CURRENT AT VARIOUS OUTPUT VOLTAGES

INPUT VOLTAGE					
VA	120	208	240	480	600
250 *	2.1A	1.2A	1.0A	0.5A	0.4A
500	4.2A	2.4A	2.1A	1.0A	0.8A
750	6.3A	3.6A	3.1A	1.6A	1.3A
1000	8.3A	4.8A	4.2A	2.1A	1.7A
1500	12.5A	7.2A	6.3A	3.1A	2.5A
2000	16.7A	9.6A	8.3A	4.2A	3.3A
2500	20.8A	12.0A	10.4A	5.2A	4.2A
3000	25.0A	14.4A	12.5A	6.3A	5.0A
5000	41.7A	24.0A	20.8A	10.4A	8.3A
8000	66.7A	38.5A	33.3A	16.7A	13.3A
10000	83.3A	48.1A	41.7A	20.8A	16.7A
15000	125.0A	72.1A	62.5A	31.3A	25.0A
20000	166.7A	96.2A	83.3A	41.7A	33.3A
25000	208.3A	120.2A	104.2A	52.1A	41.7A

NOTE: Input protection should be 125% of input, use time delay (slow blow) fuses or thermal magnetic breaker only.

* NOTE: THIS SIZE HAS BEEN DISCONTINUED - 2011.

VA SIZE	BTU / Hr	Weight
250 *	85 btu	29 lbs
500	171 btu	52 lbs
750	256 btu	60 lbs
1000	341 btu	82 lbs
1500	512 btu	106 lbs
2000	682 btu	125 lbs
2500	853 btu	853 btu
3000	1023 btu	157 lbs
5000	1705 btu	407 lbs
8000	2728 btu	465 lbs
10000	3410 btu	507 lbs
15000	5115 btu	830 lbs
20000	6820 btu	950 lbs
25000	8525 btu	1070 lbs

NOTE: THIS SIZE HAS BEEN DISCONTINUED - 2011.

INSTALLATION

⚠ 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.

NEMA1 (PI) - GENERAL PURPOSE-INDUSTRIAL enclosures are intended for indoor use, primarily to prevent accidental contact of personnel with the enclosed equipment, in areas were unusual service conditions do not exist.

NEMA2 (P2) - DRIP PROOF-INDOOR enclosures are intended for indoor use to protect the enclosed equipmentagainst falling non-corrosive liquids and falling dirt.

NEMA3R (P3) - DRIP PROOF-OUTDOOR enclosures are intended for outdoor use to protect the enclosed equipment against falling non-corrosive liquids, falling dirt and driving rain or snow.

INSTALLATION

Refer to the wiring diagrams and tables on the following pages for cabinet information, wiring, and electrical connections on standard units. The Power Purifier must be installed in the vertical upright position. If the Power Purifier is not being installed in the United States, or has a non standard configuration, please refer to the wiring diagram that comes with the unit. If conduit must be installed, refer to current NEC specifications and any local electrical codes. It is recommended that over current protection is installed. Refer to current NFPA standards for information.

The Power Purifier requires ventilation and should not be mounted in a non-ventilated control cabinet. Certain loadsconnected to the Power Purifier with high inrush currents will cause the output voltage to fall below usable levels if they exceed 150% of the units current rating. Where excessive inrush currents are expected, it may be necessary to use a higher KVA rated Power Purifier. After installation is complete, verify with a voltmeter that the output voltage is within its rated specifications. The output voltage of an overloaded unit will drop below its rated specifications. **Verify all output voltages prior to connecting loads.**

INSTALLATION - CABINET SPECIFICATIONS

DIMENSIONS 800PI

Power Rating (VA)	*Input Voltage	*Output Voltage	Weight (Lbs.)	Dimensions (in.)			Model #
				L	H	W	
250 *	120/208/240/480	120	29	10.368	7.875	6.681	5DZAX-250-8P1
500	120/208/240/480	120/208/240	52	13.875	9.875	7.188	5DZZX-500-8P1
750	120/208/240/480	120/208/240	60	13.875	9.875	7.188	5DZZX-750-8P1
1000	120/208/240/480	120/208/240	82	13.875	9.875	7.188	5DZZX-1K-8P1
1500	120/208/240/480	120/208/240	106	16.375	14.625	10.500	5DZZX-1.5K-8P1
2000	120/208/240/480	120/208/240	125	16.375	14.625	10.500	5DZZX-2K-8P1
2500	120/208/240/480	120/208/240	142	16.375	14.625	10.500	5DZZX-2.5K-8P1
3000	120/208/240/480	120/208/240	157	16.375	14.625	10.500	5DZZX-3K-8P1
5000	120/208/240/480	120/208/240	407	23.000	28.500	20.000	5DZZX-5K-8P1
8000	208/240/480	120/208/240	465	23.000	28.500	20.000	5DMZX-8K-8P1
10,000	208/240/480	120/208/240	507	23.000	28.500	20.000	5DMZX-10K-8P1
15,000	208/240/480	120/208/240	830	35.000	39.500	25.000	5DMZX-15K-8P1
20,000	208/240/480	120/208/240	950	35.000	39.500	25.000	5DMZX-20K-8P1
25,000	208/240/480	120/208/240	1070	35.000	39.500	25.000	5DMZX-25K-8P1

*** NOTE: THIS SIZE HAS BEEN DISCONTINUED - 2011.**

DIMENSIONS 800P2

Power Rating (VA)	*Input Voltage	*Output Voltage	Weight (Lbs.)	Dimensions (in.)			Model #
				L	H	W	
250 *	120/208/240/480	120	29	8.500	12.937	8.875	5DZAX-250-8P2
500	120/208/240/480	120/208/240	52	9.183	17.450	11.855	5DZZX-500-8P2
750	120/208/240/480	120/208/240	60	9.183	17.450	11.855	5DZZX-750-8P2
1000	120/208/240/480	120/208/240	82	9.183	17.450	11.855	5DZZX-1K-8P2
1500	120/208/240/480	120/208/240	106	13.000	20.000	15.500	5DZZX-1.5K-8P2
2000	120/208/240/480	120/208/240	125	13.000	20.000	15.500	5DZZX-2K-8P2
2500	120/208/240/480	120/208/240	142	13.000	20.000	15.500	5DZZX-2.5K-8P2
3000	120/208/240/480	120/208/240	157	13.000	20.000	15.500	5DZZX-3K-8P2
5000	120/208/240/480	120/208/240	407	23.000	28.000	24.000	5DZZX-5K-8P2
8000	208/240/480	120/208/240	465	23.000	28.000	24.000	5DMZX-8K-8P2
10,000	208/240/480	120/208/240	507	23.000	28.000	24.000	5DMZX-10K-8P2
15,000	208/240/480	120/208/240	830	35.000	39.262	29.000	5DMZX-15K-8P2
20,000	208/240/480	120/208/240	950	35.000	39.262	29.000	5DMZX-20K-8P2
25,000	208/240/480	120/208/240	1070	35.000	39.262	29.000	5DMZX-25K-8P2

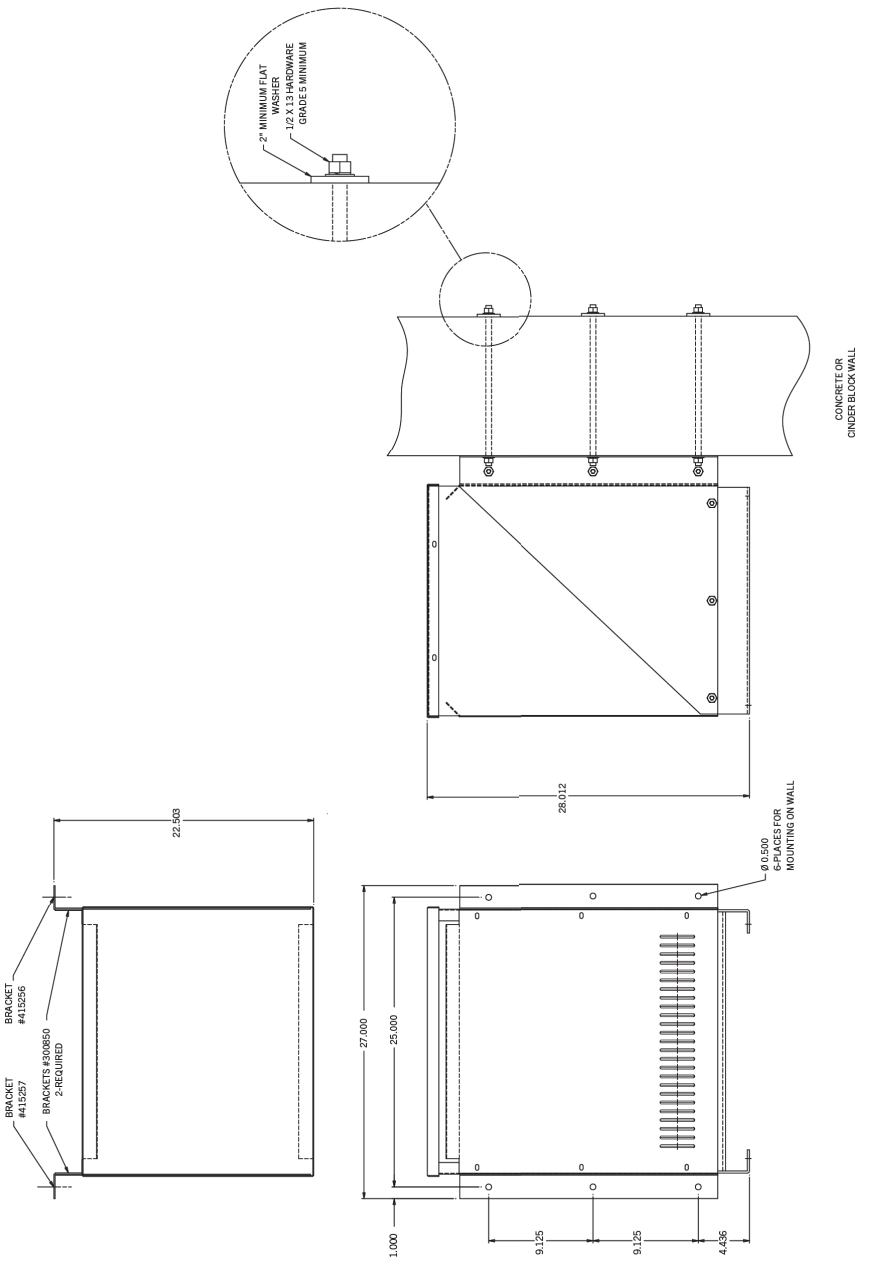
Note: This size has been discontinued - 2011.

*** NOTE: THIS SIZE HAS BEEN DISCONTINUED - 2011.**

See “appendix a - cabinet outlines” for complete cabinet Layout drawings, conduit entry points and Mounting bracket dimensions.

INSTALLATION - WALL MOUNT UNITS

5KVA - 10KVA WALL MOUNTED UNITS



INSTALLATION - WIRING

250VA

VA	Model	Model	120	208	240	480	Input Voltage
250 VA *	5DZAX-250-8P1	5DZAX-250-8P2	2.3A	1.3A	1.1A	0.57A	Input Current

Note: This size has been discontinued - 2011.

*** NOTE: This size has been discontinued - 2011.**

Note: Input protection should be 125% of input, use time delay (slow blow) fuses or thermal magnetic breaker only.

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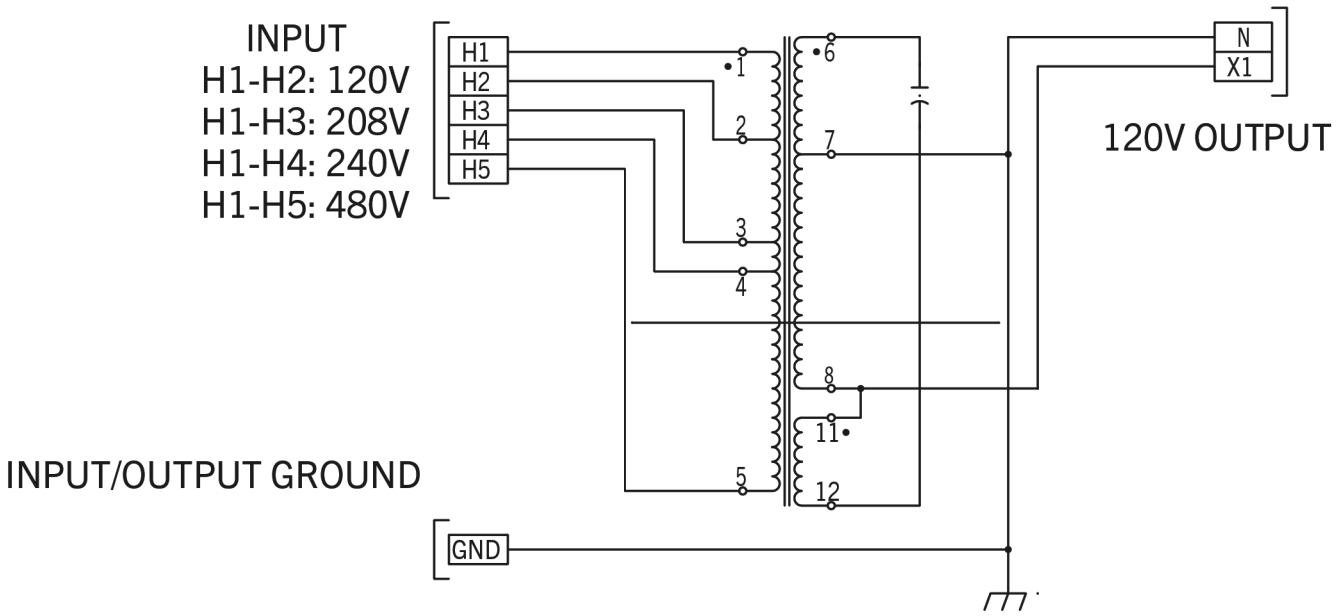


Terminals

#8 Stud Maximum Wire Size: 10AWG Recommended
Torque : 15 In. Lbs.

Note:This size has been discontinued - 2011.

NOTE: This size has been discontinued - 2011.

INSTALLATION - WIRING

500VA - 5KVA

VA	Model	Model	120V	208V	240V	480V	Input Voltage
500	5DZZX-500-8P1	5DZZX-500-8P2	5A	3A	2A	1A	Input Current
750	5DZZX-750-8P1	5DZZX-750-8P2	7A	4A	3A	2A	
1000	5DZZX-1K-8P1	5DZZX-1K-8P2	9A	5A	5A	2A	
1500	5DZZX-1.5K-8P1	5DZZX-1.5K-8P2	14A	8A	7A	3A	
2000	5DZZX-2K-8P1	5DZZX-2K-8P2	18A	11A	9A	5A	
2500	5DZZX-2.5K-8P1	5DZZX-2.5K-8P2	23A	13A	11A	6A	
3000	5DZZX-3K-8P1	5DZZX-3K-8P2	28A	16A	14A	7A	
5000	5DZZX-5K-8P1	5DZZX-5K-8P2	46A	26A	23A	11A	

Note: Input protection should be 125% of input, use time delay (slow blow) fuses or thermal magnetic breaker only.

NOTE: Input protection should be 125% of input, use time delay (slow blow) fuses or thermal magnetic breaker only.

**NOTE

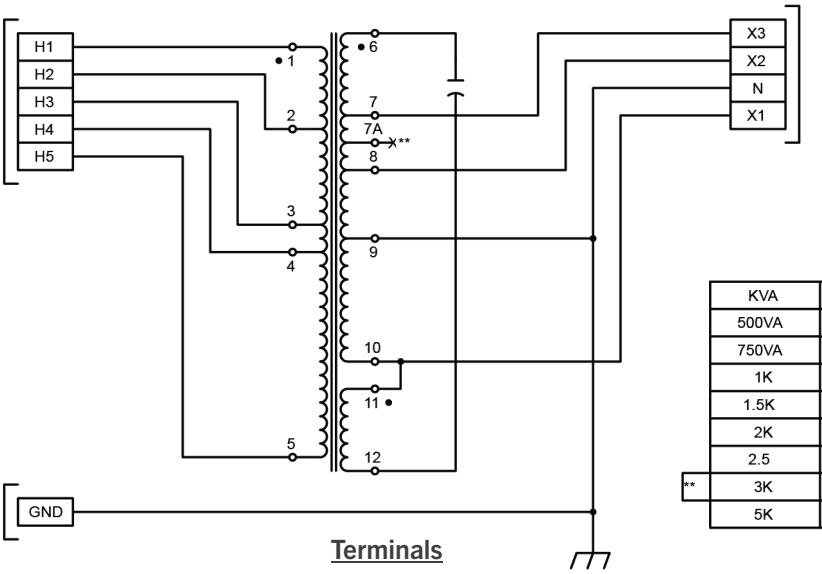
OUTPUT TAP "7A" ON 3KVA ONLY.

NO CONNECTION

CAP NOTE:

ALL 18µ THRU 30µ CAPS MUST HAVE INDIVIDUAL WIRES RAN TO THEM FROM TRANSFOMRER LEAD 15µ AND LOWER MAY BE JUMPERED

INPUT
H1-H2: 120V
H1-H3: 208V
H1-H4: 240V
H1-H5: 480V



OUTPUT
X1-N: 120V
X1-X2: 208V
X1-X3: 240V
X3-N: 120V
X2-N: 88V

KVA	PRI. WIRE	SEC. WIRE
500VA	#14 AWG	#14 AWG
750VA	#14 AWG	#14 AWG
1K	#14 AWG	#14 AWG
1.5K	#12 AWG	#12 AWG
2K	#10 AWG	#10 AWG
2.5	#10 AWG	#10 AWG
** 3K	#8 AWG	#8 AWG
5K	#8 AWG	#8 AWG

Terminals

500VA - 2500VA

#8 StudMaximum Wire Size: 10AWG
Recommended Torque : 15 In. Lbs.

3000VA

#10 Stud Maximum Wire Size: 6AWG
Recommended Torque : 20 In. Lbs.

INSTALLATION - WIRING

3KVA - 230V GROUNDED LEG OUTPUT

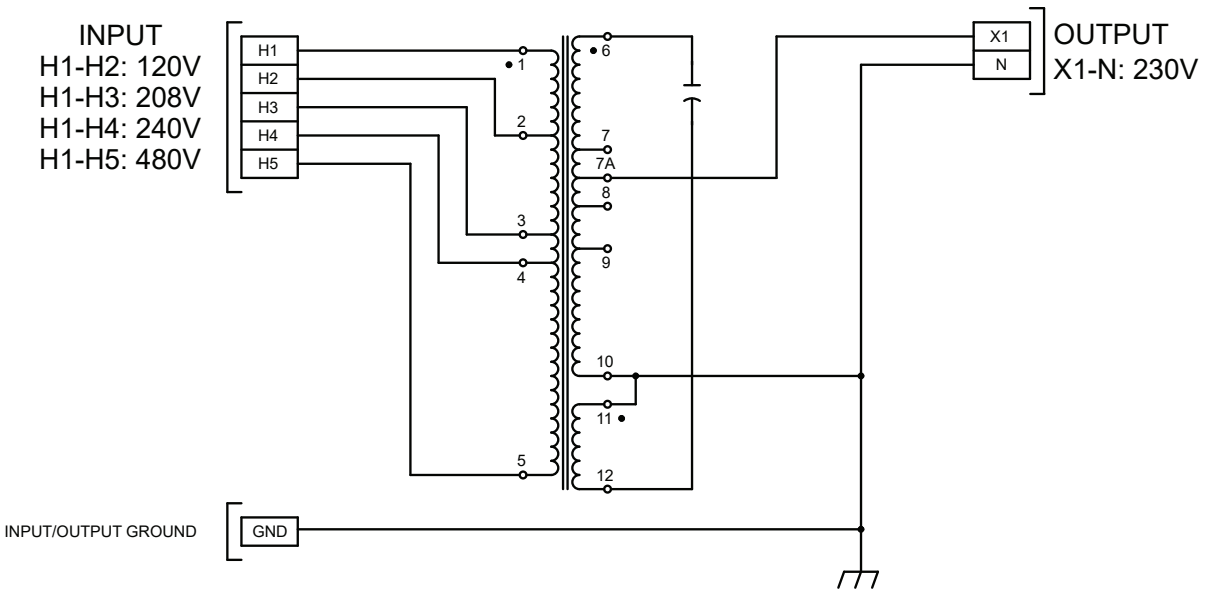
VA	Model	Model	120V	208V	240V	480V	Input Voltage
3000	5DZUX-3K-8-PI-	5DZUX-3K-8-P2-	28A	16A	14A	7A	Input Current
	(230V - N)	(230V - N)					

Note: Input protection should be 125% of input, use time delay (slow blow) fuses or thermal magnetic breaker only.

Note: Input protection should be 125% of input, use time delay (slow blow) fuses or thermal magnetic breaker only.

CAP NOTE:

ALL 18µ THRU 30µ CAPS MUST HAVE INDIVIDUAL WIRES RAN TO THEM FROM TRANSFOMRER LEAD
15µ AND LOWER MAY BE JUMPERED



KVA	PRI. WIRE	SEC. WIRE
3K	#8 AWG	#8 AWG

Terminals

Wire Size Range #12-1/O AWG Recommended
Torque : 45-50 In. Lbs.

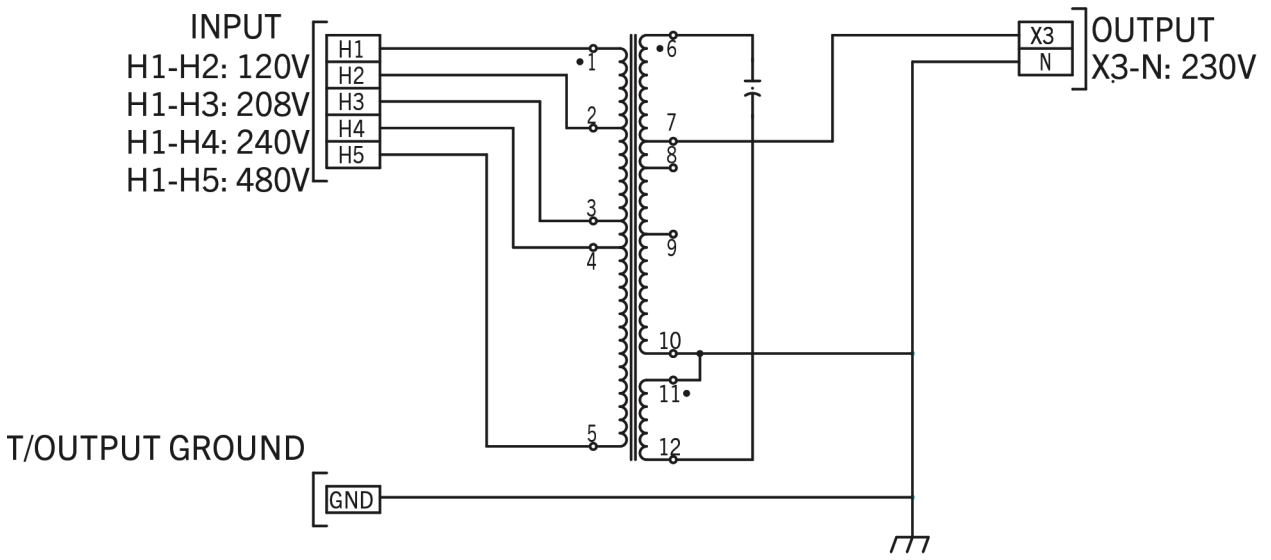
INSTALLATION - WIRING

5KVA - 230V GROUNDED LEG OUTPUT

VA	Model	Model	120V	208V	240V	480V	Input Voltage
5000	5DZUX-5K-8-PI-	5DZUX-5K-8-P2-	46A	26A	23A	11A	Input Current
	(230V - N)	(230V - N)					

Note: Input protection should be 125% of input, use time delay (slow blow) fuses or thermal magnetic breaker only.

Note: Input protection should be 125% of input, use time delay (slow blow) fuses or thermal magnetic breaker only.



Terminals

Wire Size Range #12-1/O AWG Recommended
Torque : 45-50 In. Lbs.

INSTALLATION - WIRING

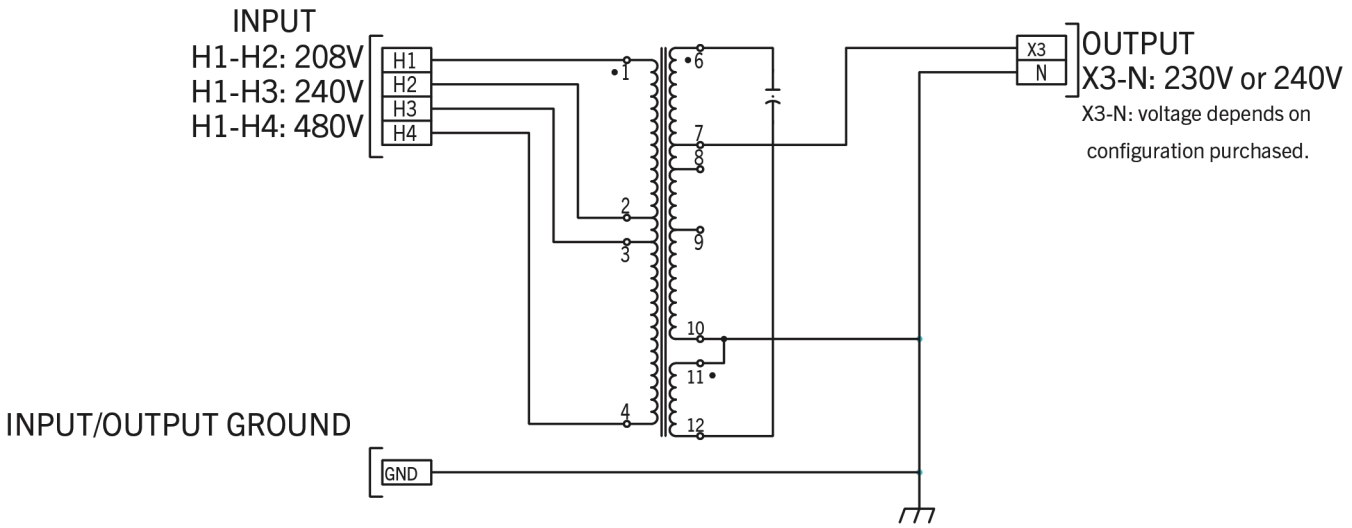
10KVA - 230V or 240V GROUNDED LEG OUTPUT

VA	Model	Model	208V	240V	480V	Input Voltage
10,000	5DMKX-10K-8-PI-	5DMKX-10K-8P2-	53A	46A	23A	Input Current
	(230V - N)	(230V - N)				

VA	Model	Model	208V	240V	480V	Input Voltage
10,000	5DMCX-10K-8-PI-	5DMCX-10K-8P2-	53A	46A	23A	Input Current
	(240V - N)	(240V - N)				

Note: Input protection should be 125% of input, use time delay (slow blow) fuses or thermal magnetic breaker only.

NOTE: Input protection should be 125% of input, use time delay (slow blow) fuses or thermal magnetic breaker only.



Terminals

Wire Size Range #12-1/O AWG Recommended
Torque : 45-50 In. Lbs.

INSTALLATION - WIRING

8KVA - 25KVA

VA	Model	Model	208V	240V	480V	Input Voltage
8,000	5DMZX-8K-8P1	5DMZX-8K-8P2	42A	37A	18A	Input Current
10,000	5DMZX-10K-8P1	5DMZX-10K-8P2	53A	46A	23A	
15,000	5DMZX-15K-8P1	5DMZX-15K-8P2	80A	70A	34A	
20,000	5DMZX-20K-8P1	5DMZX-25K-8P2	106A	92A	46A	
25,000	5DMZX-25K-8P1	5DMZX-25K-8P2	132A	115A	57A	

Note: Input protection should be 125% of input, use time delay (slow blow) fuses or thermal magnetic breaker only.

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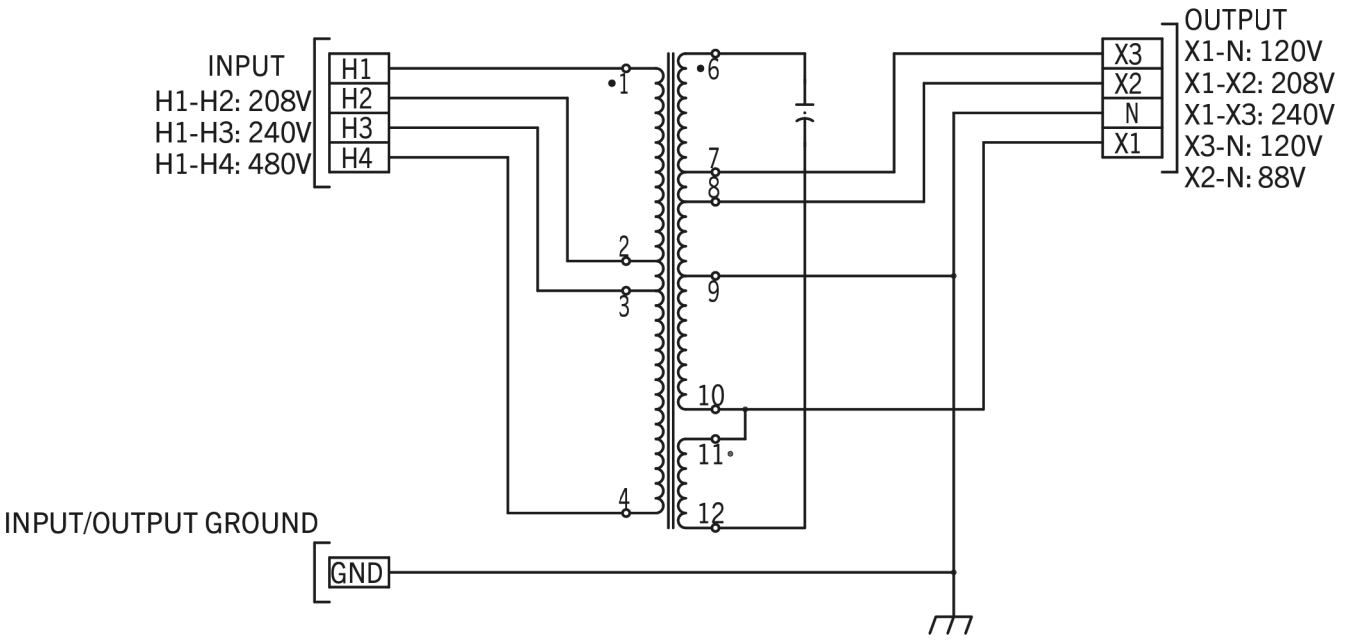


Terminals

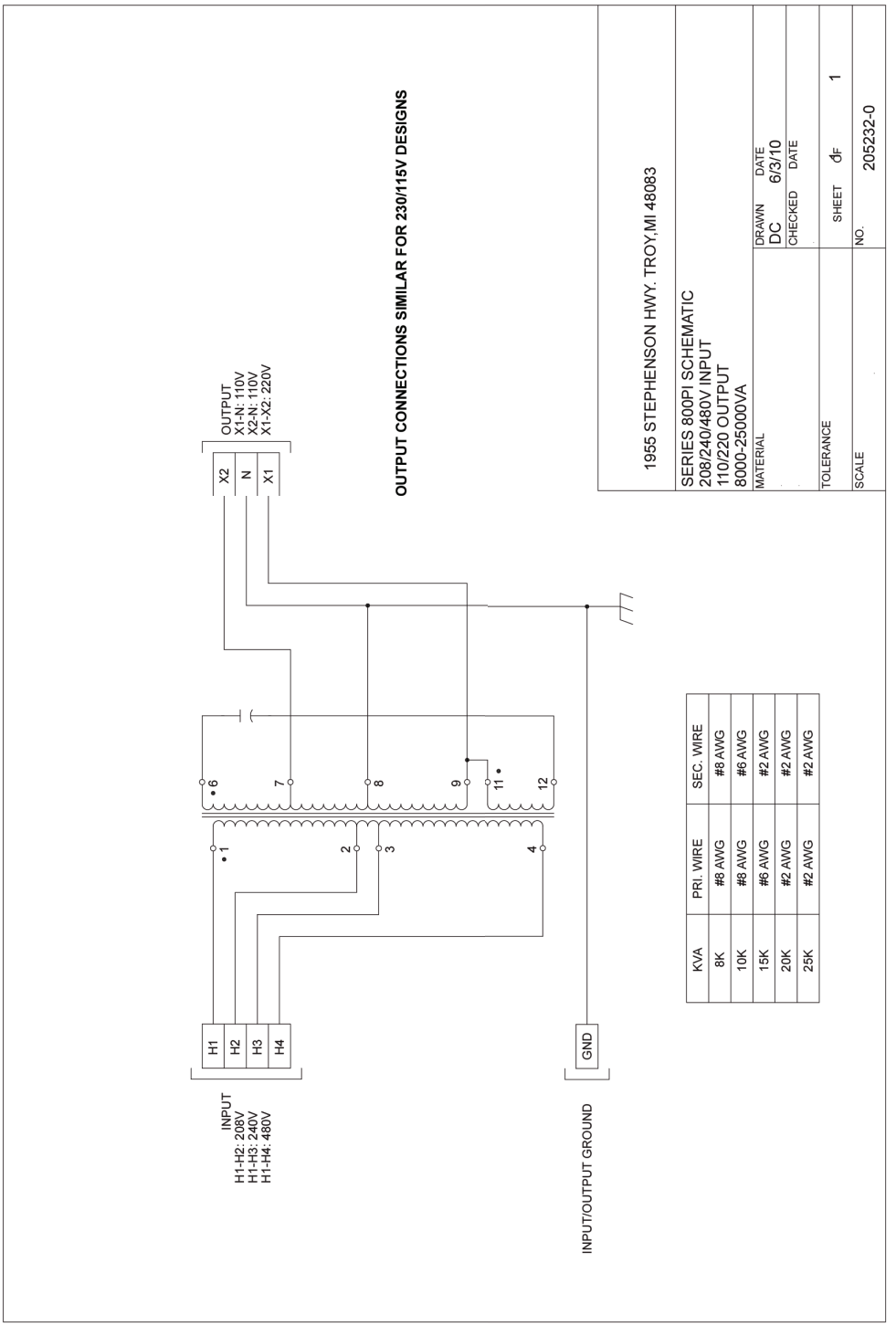
Wire Size Range #12-1/O AWG Recommended
Torque : 45-50 In. Lbs.

Note: Full KVA ratings may be used at 120VAC on secondary windings with exception of 20KVA and 25KVA units.

NOTE: Full KVA ratings may be used at 120VAC on secondary windings with exception of 20KVA and 25KVA units.

INSTALLATION - WIRING

8KVA - 25KVA WITH 110/220V OR 115/230V OUTPUT



MAINTENANCE AND TROUBLESHOOTING

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.

Preventive 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 operation conditions.

At each service inspection remove any dust, dirt, or foreign particles. Thoroughly inspect and tighten any loose electrical connections.

Trouble Shooting: Corrective maintenance might have to be performed on either of the two main component types in the Series 800PI/P2/P3: Transformer and Capacitors.

1. Transformers: The transformer is designed with a considerable safety margin. Normally the only malfunction that can take place is a short to the core. It can be checked easily with an ohmmeter.
2. Capacitors: Capacitors can be defective in the open or shorted mode and checked easily with an ohmmeter. Visually when a capacitor is defective the enclosure will swell or leak liquid. In either case, the capacitor should be replaced. Another indication of a bad capacitor is to measure the output voltage while the unit is energized. If it is not within its rated specifications turn the unit off and check the capacitors visually and with an ohmmeter.

SPARE PARTS: Available for all units, contact factory.

WARRANTY

This Warranty applies only to the original purchaser who must properly register the product within thirty (30) days of receipt.

Trystar warrants that our products and their components will remain free from defects in material and workmanship for the duration of the respective warranty period* from the date of shipment and agrees to replace, F.O.B. its factory, any parts which fault through defect in material or workmanship during such period. Non payment for the product to either the reseller, rep, distributor or the factory direct will result in revocation of warranty, technical support and service contracts. **Warranty begins from date of shipment unless a factory start-up is purchased, then the warranty begins from date of Start Up or 90 days from ship date; whichever comes first.**

If a Start-Up is purchased with the unit(s) or within 30 days from original ship date, the 1st year warranty is upgraded to include onsite labor and expenses during normal business hours (Monday - Friday, 8AM - 4PM). Start up includes all travel and living expenses. Start up description: Testing all emergency circuitry - Calibration - Inspection - Exercising all circuit breakers - Cooling fan check - Input and output parameter check - Air intake / exhaust check - Complete battery inspection and testing (where applicable) - Re-torque all high current terminals - Battery certification report (where applicable) - Input/Output verification - Written report. User training to be done at time of start up (no return visits). Product installation is required to be complete before start up can be scheduled.

Products:

- Industrial Power Purifier (800PI, P2, P3) / 10 Years Core and Coil + Additional 10 Yrs Prorated on Core and Coil + 2 years on all other components.*

* From original shipment date / Excludes on site labor and expenses unless otherwise noted.

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1. This 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 product, and is operated within the ratings on the nameplate of the system.
2. This Warranty shall be effective provided the purchaser pays the cost of transporting the faulty component(s) to and from Trystar's factory at the purchaser's own expense, unless the item covered under service contract with Trystar. There is no cost for installation of the replacement component(s) when done at the factory. Otherwise installation of the replacement component(s) are the responsibility of the purchaser, unless the item is covered under service contract with Trystar. If after inspection the faulty component has been caused by misuse or abnormal conditions in the judgment of

Trystar, the purchaser will be charged for repairs based on parts and labor required. This Warranty does not cover fuses, light bulbs, and other normally expendable items. Trystar service personnel are not included i n this warranty unless covered by a Trystar service contract.

3. This Warranty shall be void if any alteration is made to the system, or any of its components are altered by anyone other than an authorized Trystar service person, without the written permission of Trystar.
4. This Warranty is in lieu of all other warranties, expressed or implied. Trystar 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, Trystar assumes no liability or responsibility for personal injury, loss of life, consequential or other damages resulting from defects in, or failure of, the system or any of its components.

CUSTOMER SUPPORT

SERIES 800PI INDUSTRIAL POWER PURIFIER

Contact Trystar.

TRYSTAR NATIONWIDE CUSTOMER SUPPORT.

Trystar offers total customer support that assures your critical equipment is maintained properly for trouble-free operation.

HOT LINE:	Call 24 Hours 507-333-3990
RESPONSE TIME:	Immediate 24 hour phone support. If problem is not solved, we will make every effort to have your system running within 48 hours.
***START-UP:**	On site start-up assures equipment is installed and operating properly.
FIELD REPAIRS:	Customer Support Plans cover parts, labor, travel, living and freight expenses.
PREVENTIVE MAINTENANCE:	Optional scheduled preventive mainte nance includes the following:

- Inspection
- Exercising all circuit breakers.
- Re-torquing all high current terminals and connectors.
- Testing all emergency circuitry.
- Calibration
- Clean internal and external
- Verify Cooling System
- Written Report

*Start up may be substituted for preventive maintenance on new units.

PLAN	ON SITE COVERAGE	PARTS COVERED	FIELD REPAIR LABOR COVERED	FACTORY REPAIR LABOR COVERED	FREIGHT COVERED	TRAVEL EXPENSES COVERED
SILVER	NONE	YES	NO	YES	NO	NO
GOLD	M-F 8AM-4PM	YES	YES	YES	YES	YES
PLATINUM	24-7	YES	YES	YES	YES	YES

TRAINING AND PARTS

For customers who maintain their own equipment, Trystar offers hands on training at our facility and part kits. For more information, contact Trystar Customer Support Department at 507-333-3990.

Individual components are available upon request, please contact the factory for specific part numbers and prices. When contacting the Parts Department, please have the unit's full model number and serial or system number.

Call 507-333-3990.

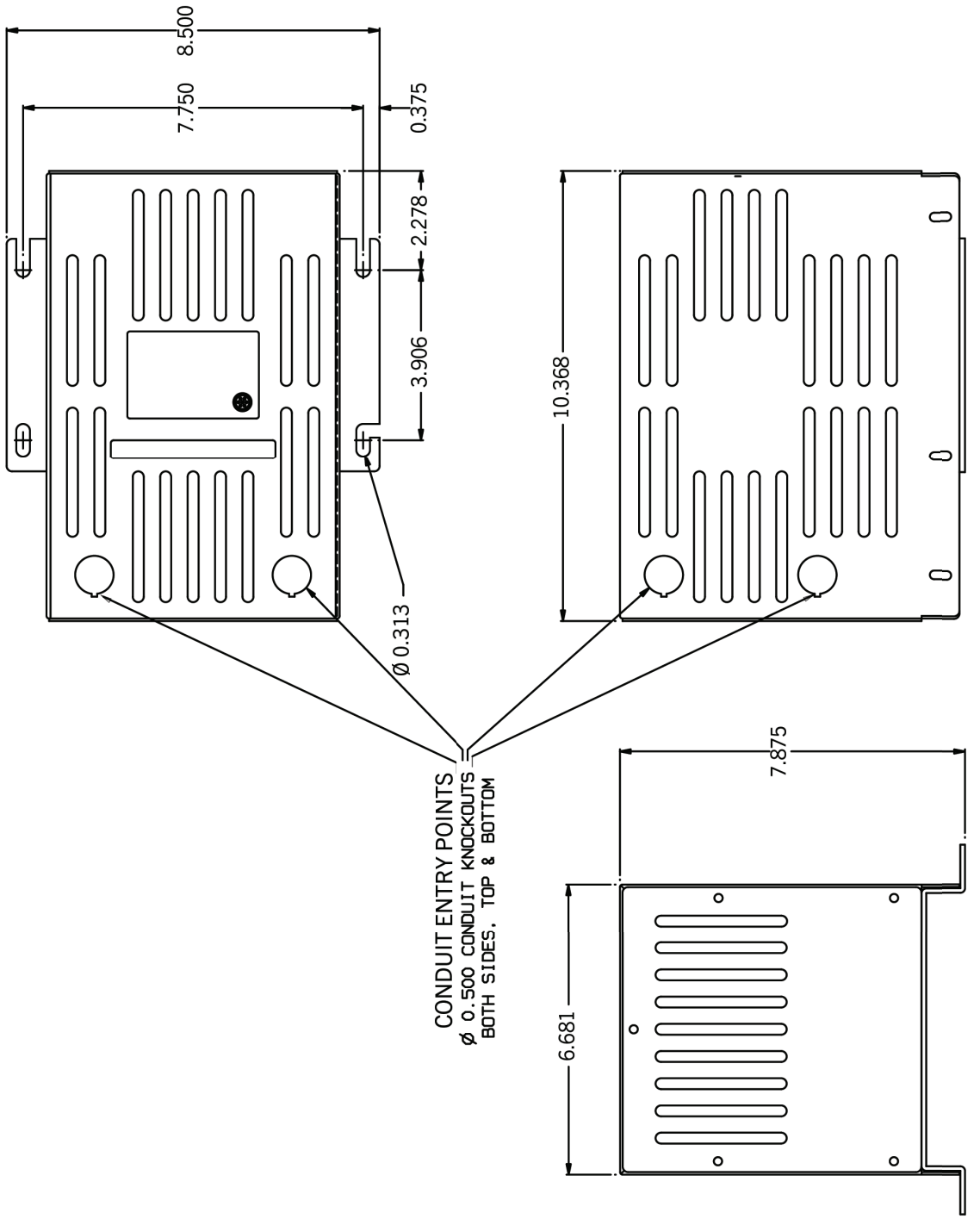
APPENDIX A

RELATIVE DRAWINGS

CABINET OUTLINES

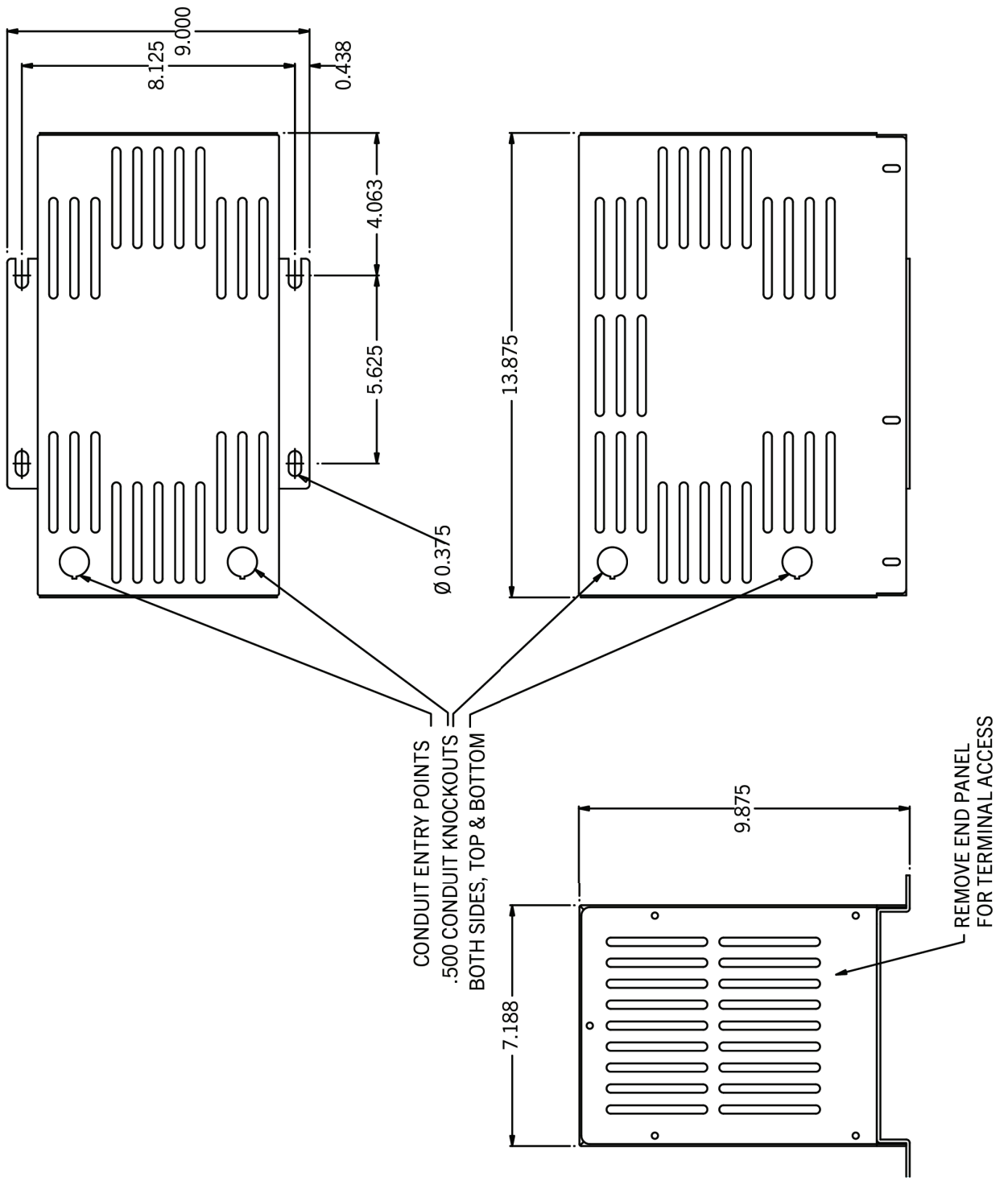
250VA * PI

* **Note:** This size has been discontinued - 2011



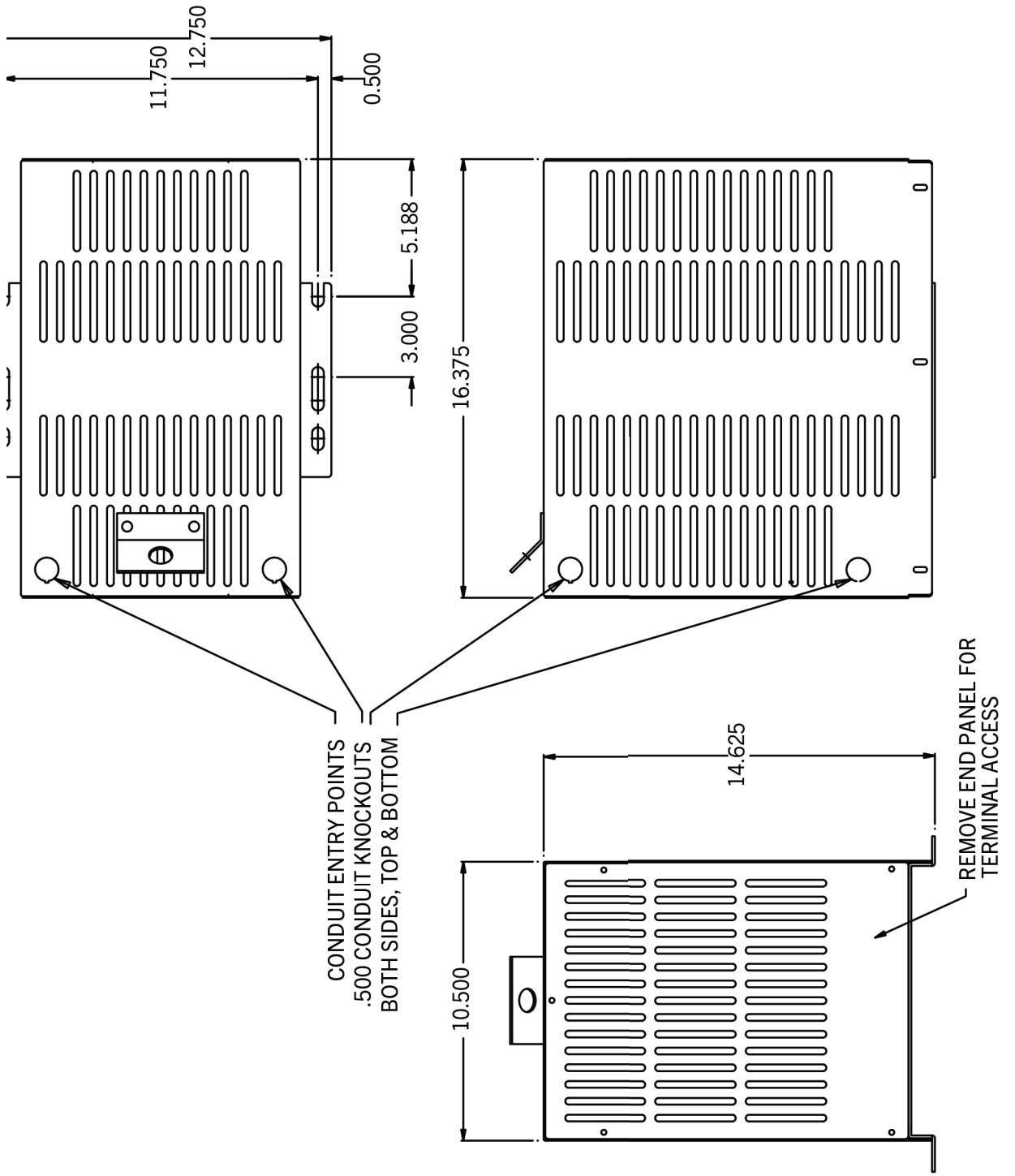
CABINET OUTLINES

500VA, 750VA, 1000VA PI



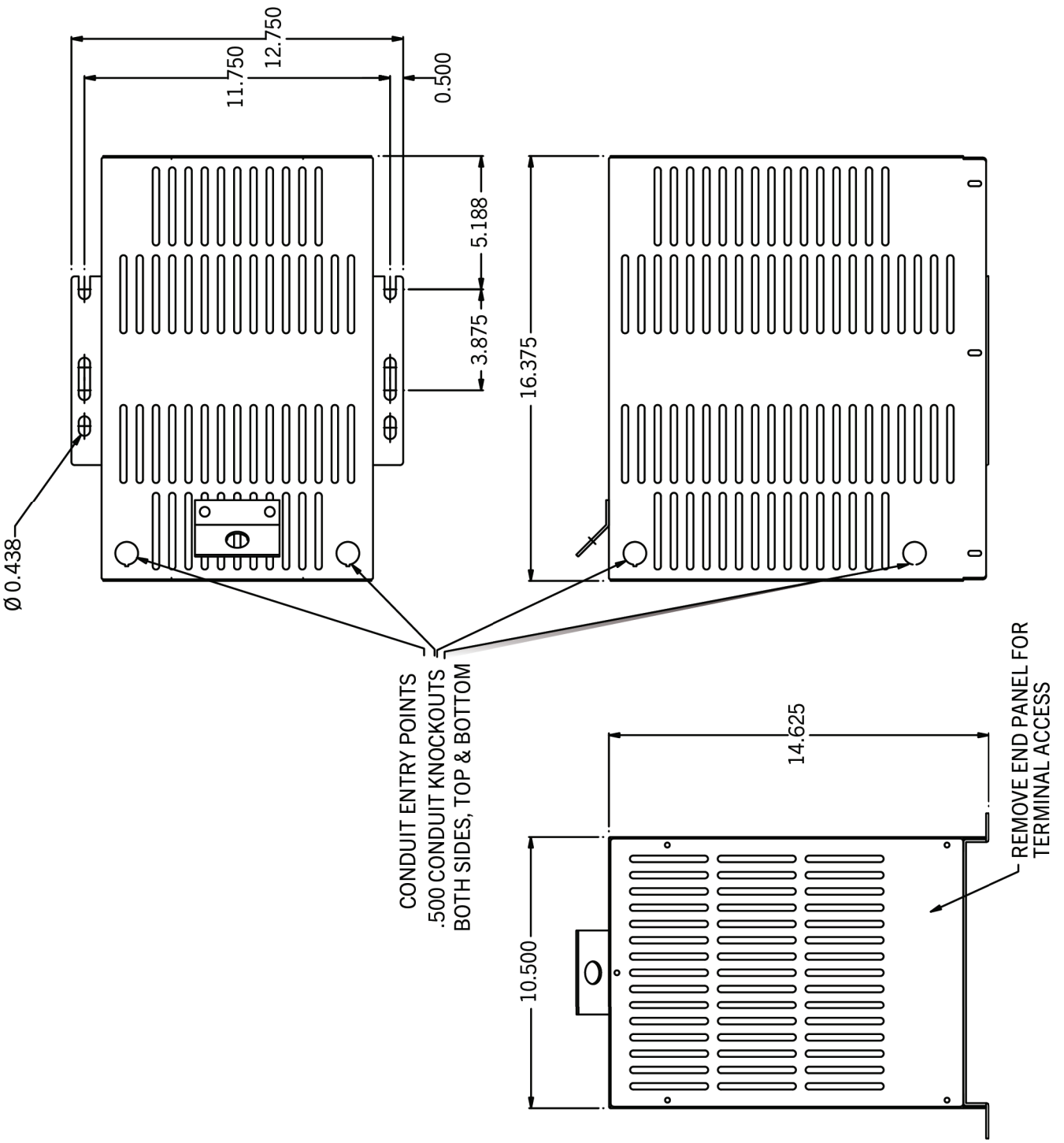
CABINET OUTLINES

1500VA PI



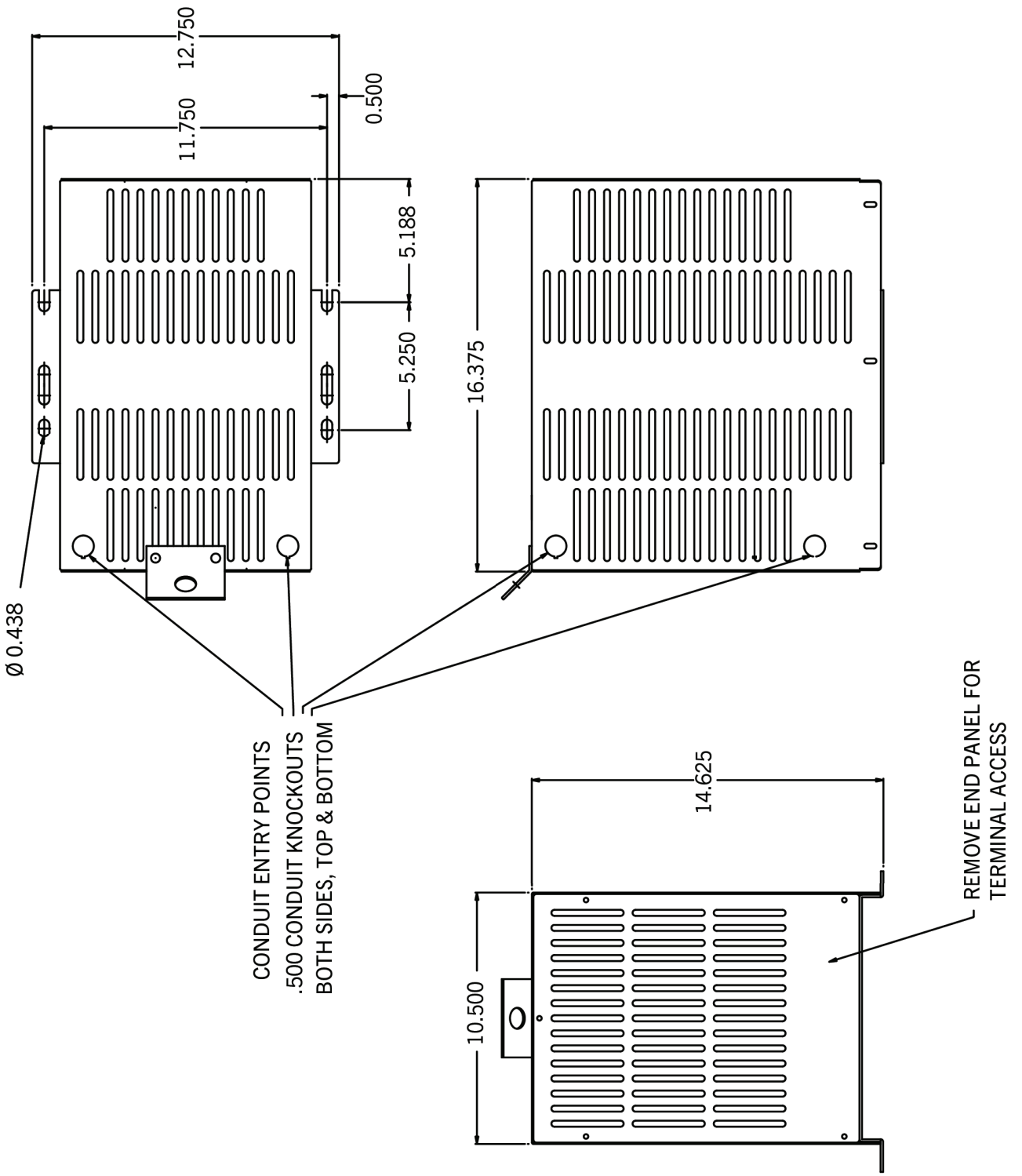
CABINET OUTLINES

2000VA PI



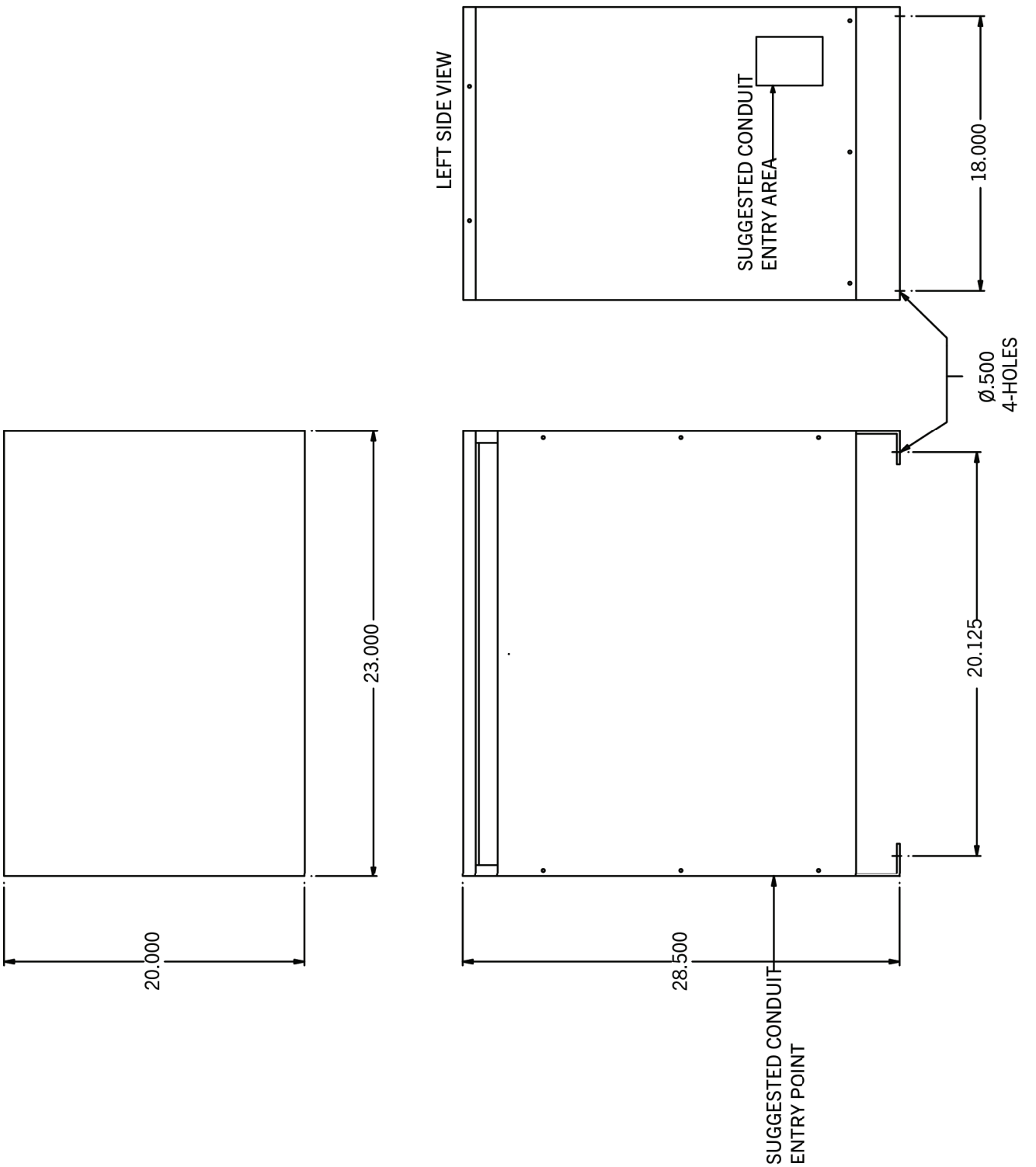
CABINET OUTLINES

2500VA, 3000VA PI



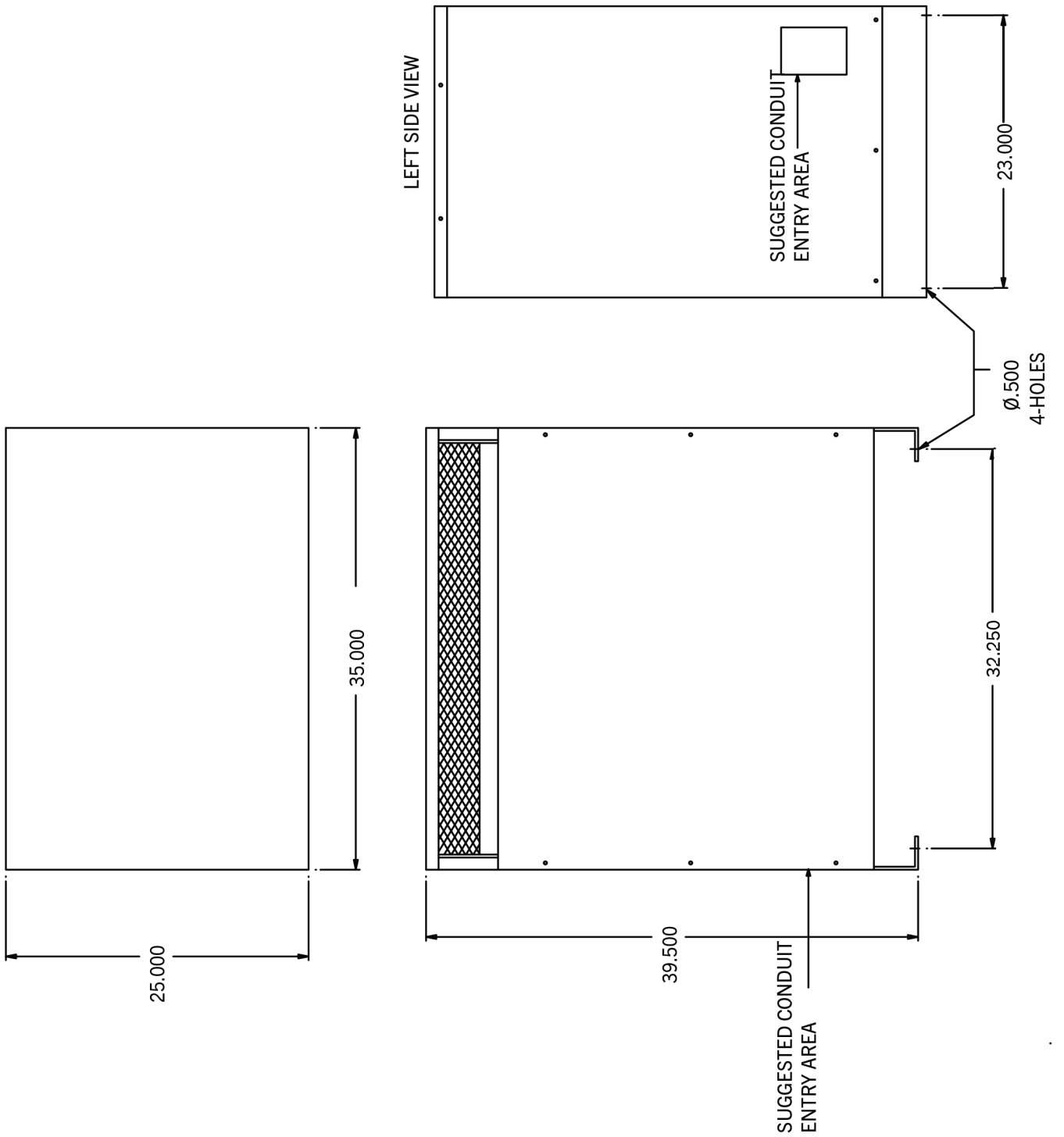
CABINET OUTLINES

5000VA, 8000VA, 10000VA PI



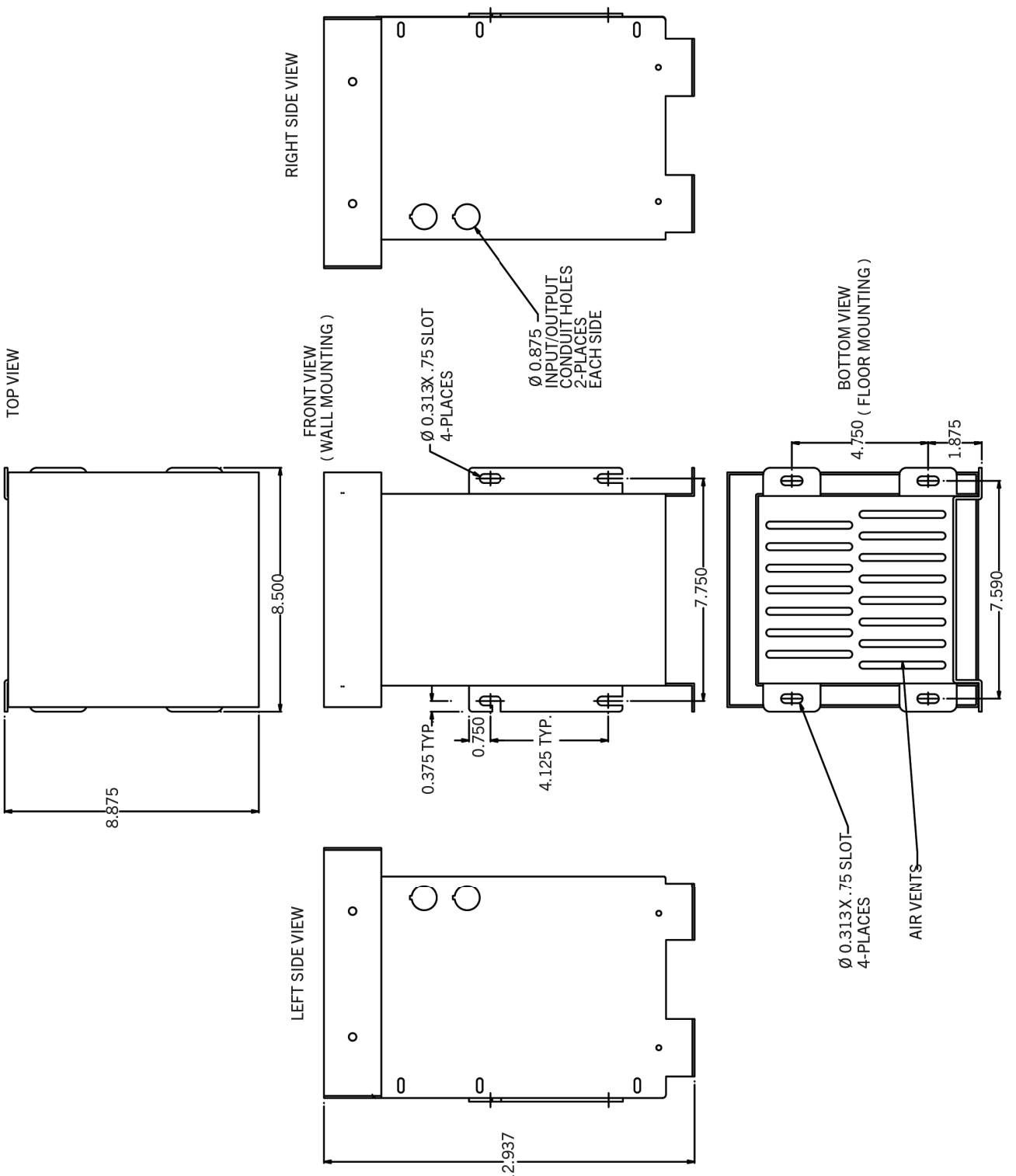
CABINET OUTLINES

15000VA, 20000VA, 25000VA PI



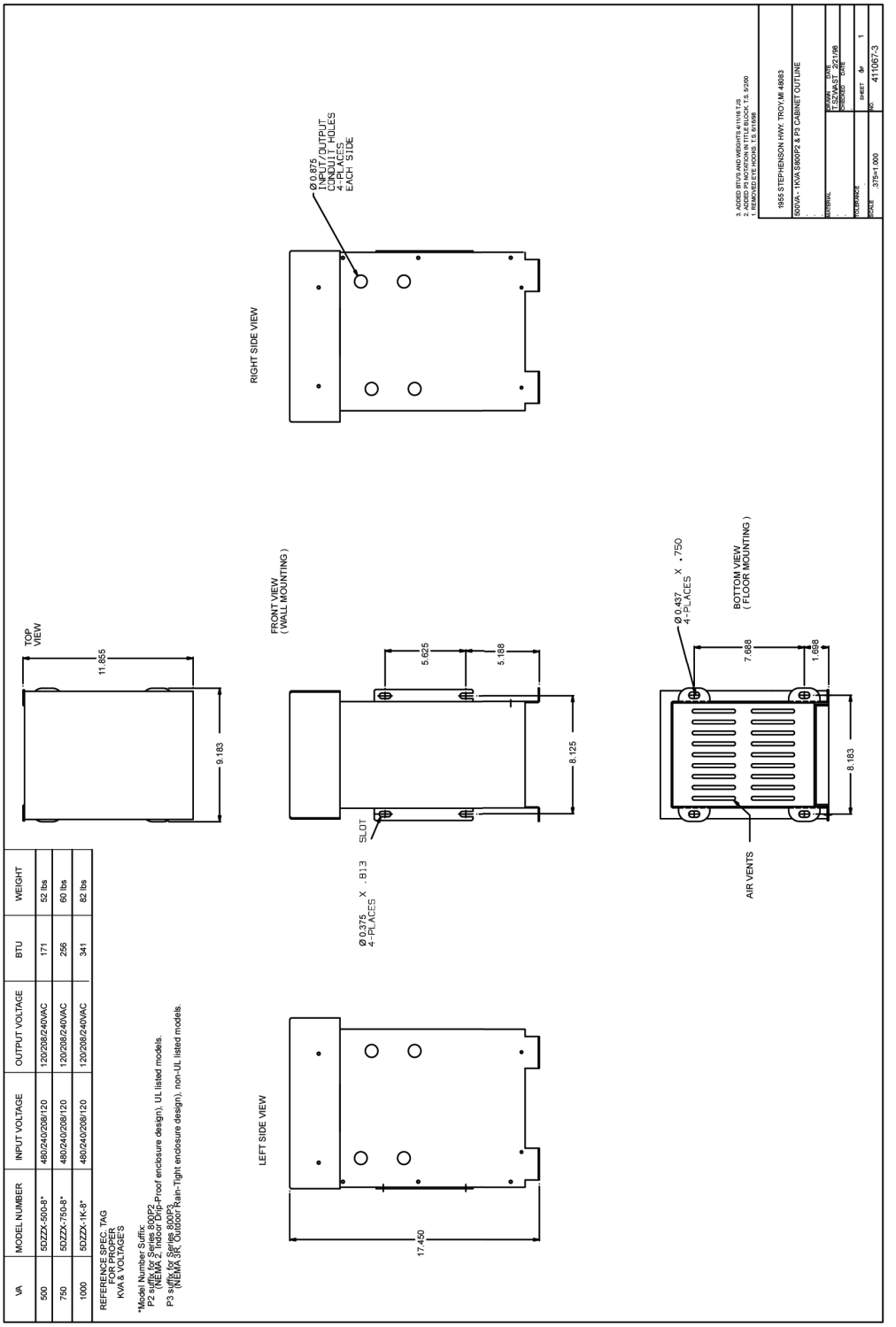
CABINET OUTLINES

250VA P2, P3



CABINET OUTLINES

500VA, 750VA, 1000VA P2, P3



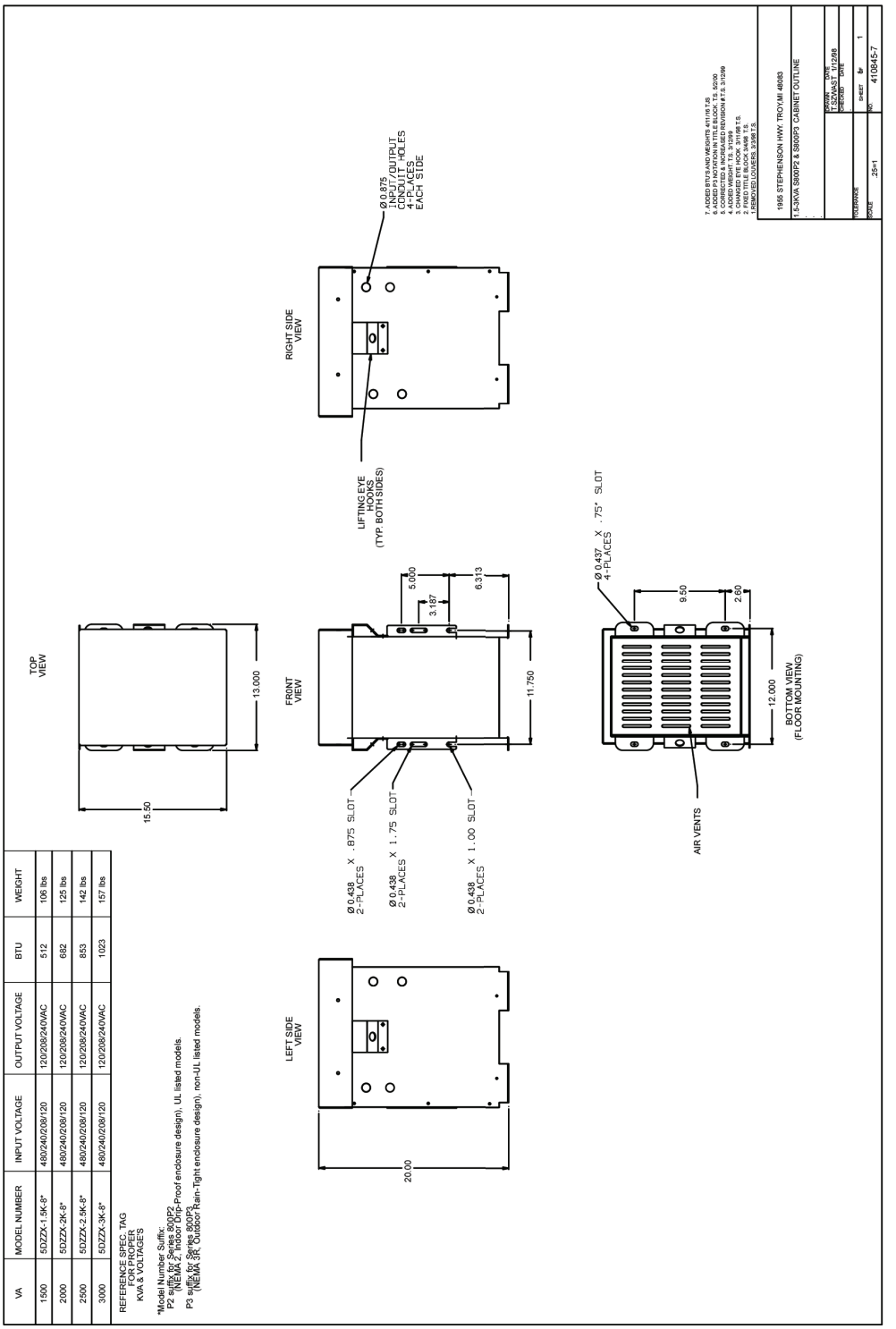
VA	MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	BTU	WEIGHT
500	5DZZX-500-8*	480/240/208/120	120/208/240VAC	171	52 lbs
750	5DZZX-750-8*	480/240/208/120	120/208/240VAC	256	60 lbs
1000	5DZZX-1K-8*	480/240/208/120	120/208/240VAC	341	82 lbs

REFERENCE SPEC. TAG FOR PROPER KVA & VOLTAGES

*Model Number Suffix:
P2 suffix for Series 800P2 (NEMA 2 Indoor Drip-Proof enclosure design), UL listed models.
P3 suffix for Series 800P3 (NEMA 3R Outdoor Rain-Tight enclosure design), non-UL listed models.

CABINET OUTLINES

1500VA, 2000VA, 2500VA, 3000VA P2, P3



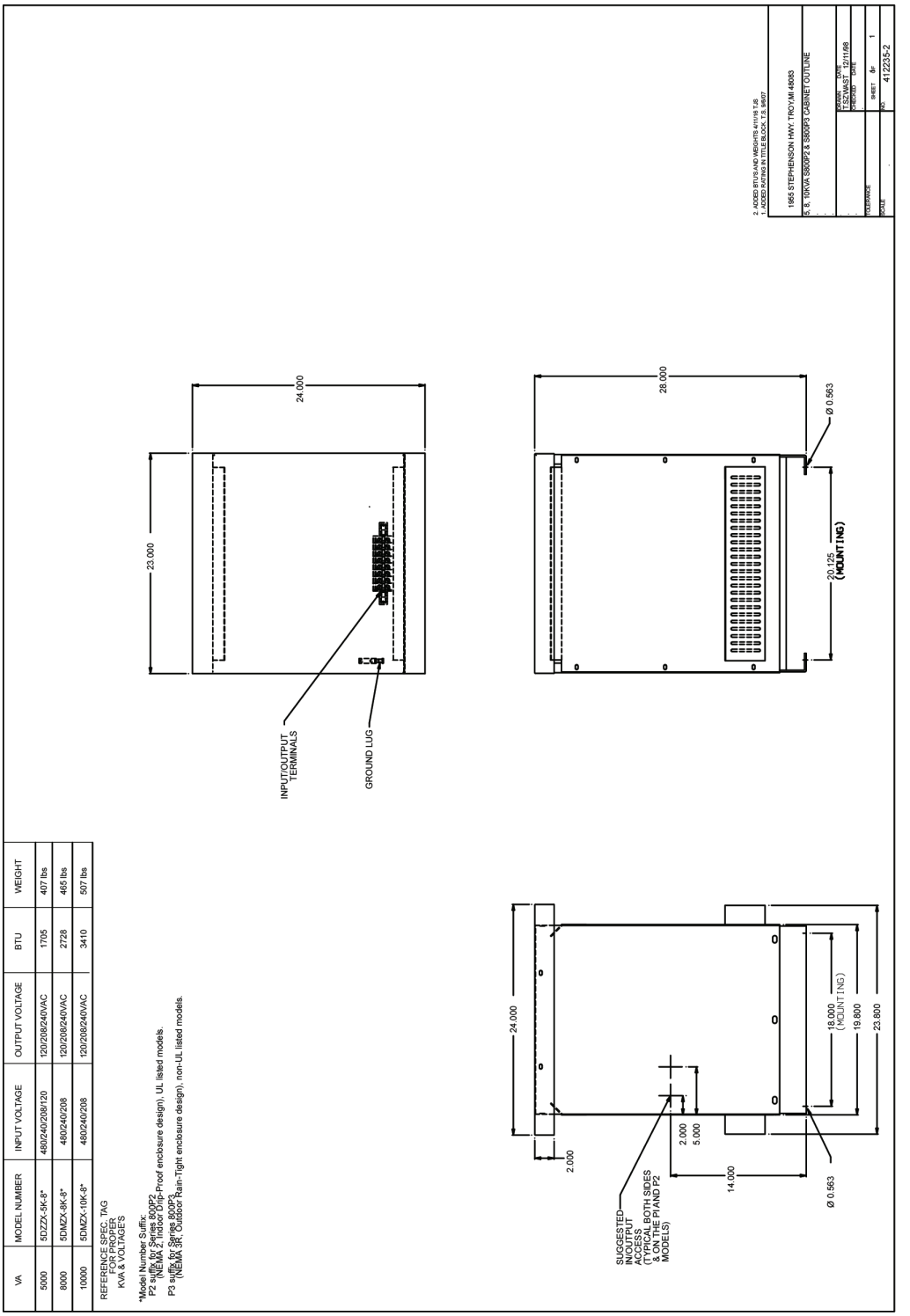
VA	MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	BTU	WEIGHT
1500	5DZZX-1.5K-8*	480/240/208/120	120/208/240VAC	512	106 lbs
2000	5DZZX-2K-8*	480/240/208/120	120/208/240VAC	682	125 lbs
2500	5DZZX-2.5K-8*	480/240/208/120	120/208/240VAC	853	142 lbs
3000	5DZZX-3K-8*	480/240/208/120	120/208/240VAC	1023	157 lbs

REFERENCE SPEC. TAG FOR PROPER KVA & VOLTAGES

*Model Number Suffix:
P2 suffix for Series 80IP2 (NEMA 2, Indoor Drip-Proof enclosure design), UL listed models.
P3 suffix for Series 80IP3 (NEMA 3R, Outdoor Rain-Tight enclosure design), non-UL listed models.

CABINET OUTLINES

5000VA, 8000VA, 10000VA P2, P3



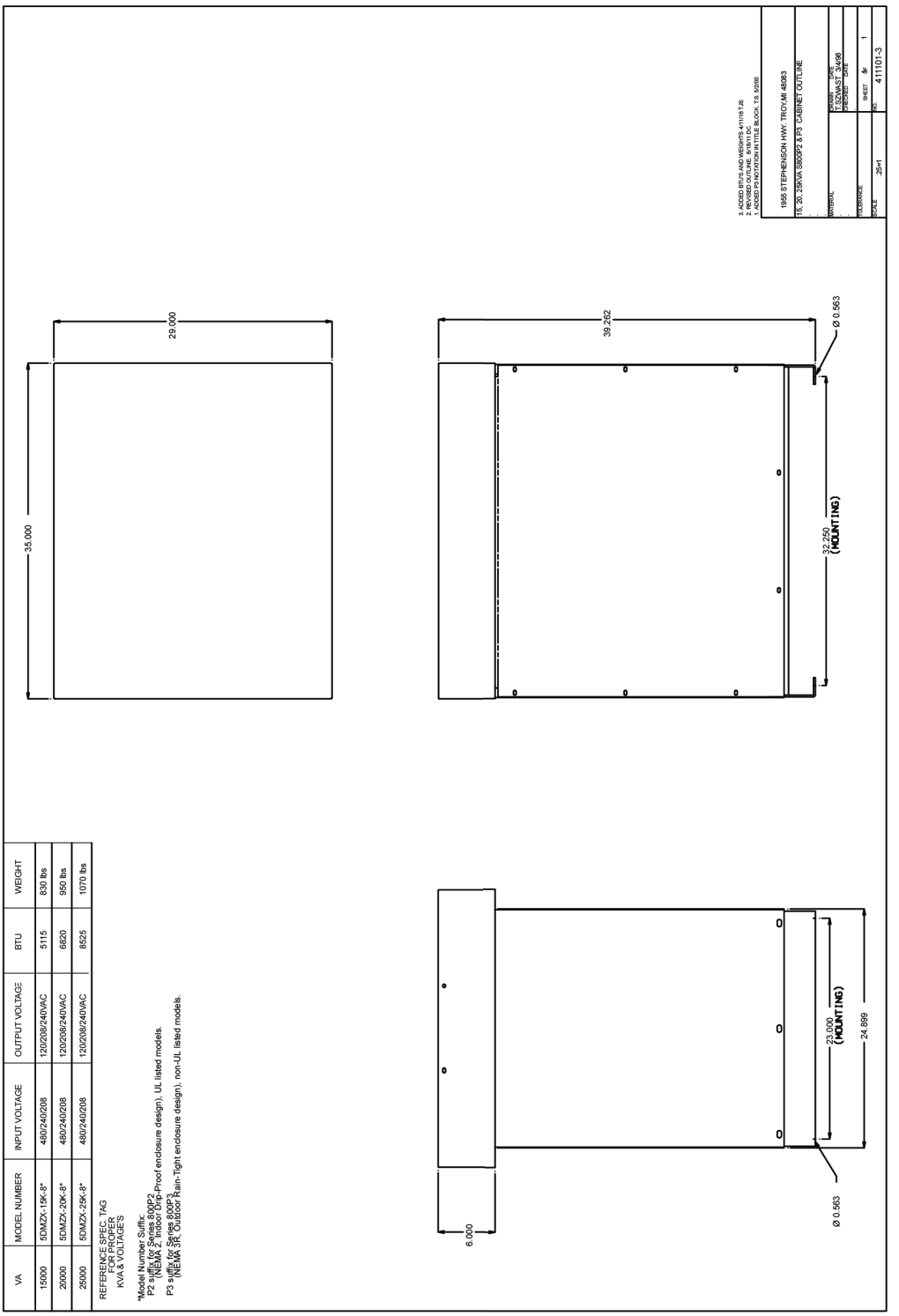
VA	MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	BTU	WEIGHT
5000	5DZZX-5K-8*	480/240/208/120	120/208/240VAC	1705	407 lbs
8000	5DMZX-8K-8*	480/240/208	120/208/240VAC	2728	465 lbs
10000	5DMZX-10K-8*	480/240/208	120/208/240VAC	3410	507 lbs

REFERENCE SPEC. TAG
FOR POWER, KVA & VOLTAGES

*Model Number Suffix:
P2 suffix for Series 800P2
(NEMA 2, Indoor Drip-Proof enclosure design), UL listed models.
P3 suffix for Series 800P3
(NEMA 3R, Outdoor Rain-Tight enclosure design), non-UL listed models.

CABINET OUTLINES

15000VA, 20000VA, 25000VA P2, P3



VA	MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	BTU	WEIGHT
15000	5DMZX-15K-8*	480/240/208	120/208/240VAC	5115	830 lbs
20000	5DMZX-20K-8*	480/240/208	120/208/240VAC	6820	950 lbs
25000	5DMZX-25K-8*	480/240/208	120/208/240VAC	8525	1070 lbs

REFERENCE SPEC. TAG
FOR PROPER
KVA & VOLTAGES

*Model Number Suffix:
P2 suffix for Series 600P2
(NEMA 2, Indoor Drip-Proof enclosure design), UL listed models.
P3 suffix for Series 600P3
(NEMA 3R, Outdoor Rain-Tight enclosure design), non-UL listed models.

SYMBOLS

CAUTION

The following 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

The following 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

TRYSTAR®

15765 Acorn Trail / Faribault, MN 55021 / 507.333.3990

Document Number: 1002IB1125 / November 2025

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