

Power-Suppress 600



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Powering Business Worldwide

Safety and preparations

Important safety instructions

Save these instructions—This manual contains important instructions for the Power-Suppress 600 that must be followed during operation of the equipment.

 **WARNING**

OPENING ENCLOSURES EXPOSES HAZARDOUS VOLTAGES. ALWAYS REFER SERVICE TO QUALIFIED PERSONNEL ONLY.

 **WARNING**

AS STANDARDS, SPECIFICATIONS, AND DESIGNS ARE SUBJECT TO CHANGE, PLEASE ASK FOR CONFIRMATION OF THE INFORMATION GIVEN IN THIS PUBLICATION.

Note: This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's own expense.

Certification standards

- ANSI/IEEE C57.12.91 transformer test code
- ANSI C62.41 Category B-3
- NFPAT 70—National Electric CodeT
- FCC Class A limits, 47 C.F.R. Part 15, Subparts A, B
- UL listed to Standard 1012, power supplies—general purpose
- cUL listed to CSAT Standard C22.2, No. 107.1-01
- NEMA PE 1 (National Electric Manufacturers Association)
- NEMA 250 (National Electric Manufacturers Association)
- Enclosures for electrical equipment (1000V maximum)
- ISOT 9001:2008
- Occupational Safety & Health Administration (OSHA)

 **WARNING**

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, INSTALL IN A TEMPERATURE- AND HUMIDITY-CONTROLLED INDOOR AREA FREE OF CONDUCTIVE CONTAMINANTS. THIS EQUIPMENT IS INTENDED ONLY FOR INSTALLATIONS IN A RESTRICTED-ACCESS LOCATION.

 **WARNING**

HIGH LEAKAGE CURRENT. EARTH CONNECTION ESSENTIAL BEFORE CONNECTING SUPPLY.

Symbol usage

This manual uses three icon symbols with text to convey important information and tips

 **WARNING**

A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR INJURY.

 **CAUTION**

A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY OR IN PROPERTY DAMAGE INCIDENTS.

 **IMPORTANT**

INDICATES INFORMATION PROVIDED AS AN OPERATING INSTRUCTION OR AS AN OPERATING TIP.

This manual also uses a specific type treatment to point out a specific note.

Note: Indicates information provided as an operating tip or an equipment feature.

Disclaimer

The product discussed in this literature is subject to terms and conditions outlined in Eaton selling policies. The sole source governing the rights and remedies of any purchaser of this equipment is the relevant Eaton selling policy.

No warranties, express or implied, including warranties of fitness for a particular purpose or merchantability, or warranties arising from course of dealing or usage of trade, are made regarding the information, recommendations, and descriptions contained herein.

In no event will Eaton be responsible to the purchaser or user in contract, in tort (including negligence), strict liability, or otherwise for any special, indirect, incidental, or consequential damage or loss whatsoever, including but not limited to damage or loss of use of equipment, plant or power system, cost of capital, loss of power, additional expenses in the use of existing power facilities, or claims against the purchaser or user by its customers resulting from the use of the information, recommendations, and descriptions contained herein.

The information contained in this manual is subject to change without notice.

Serial numbers

Record all serial numbers for the Power-Suppress 600 and components.

These serial numbers will be required if your system needs service.

Keep this manual in a place where you can reference the serial numbers if service is required.

Power-Suppress 600 unit serial number: _____

Additional serial numbers:

1 Introduction

1.0 Scope

Introduction is a general description of system characteristics of the product, its intended use and applicable electrical, mechanical, and environmental specifications, voltage requirements, AC input, and circuit breaker readings.

1.1 Section descriptions

This manual is divided into three sections:

Section 1: Introduction

This section is a general description of the Power-Suppress 600 isolation transformer. The section includes receiving, electrical and mechanical specifications, and cabinet measurements.

Section 2: Installation

This section guides the user through installation requirements, wiring and circuit diagrams, hard wired connections, and factory configuration ratings for the Power-Suppress 600.

Section 3: Maintenance and troubleshooting

This section contains preventive maintenance for the Power-Suppress 600 unit and a troubleshooting guide to assist the user with any communication or configuration connections.

1.2 Receiving

Before accepting the shipment from the freight carrier, inspect the exterior surfaces of all shipping containers or packaging used, and the equipment for damage that may have occurred during transit. If the shipping containers or equipment shows evidence of damage, note the damage on the receiving document (bill of lading) prior to signing for receipt of equipment.

All claims for shipping damage must be filed directly with the carrier. Replacements for damaged components should be ordered through Eaton.

Check by thorough inspection if any electrical connections have 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 that does not conform to the nameplate rating.

1.2.1 Location and storage

The unit is air cooled with the air intake at the bottom and exhausts at the top, front or at the sides. Therefore, it should be installed in a clean, dry place with enough clearance to allow a free flow of air. Allow at least 6 inches of space between the unit and the wall or other equipment. Allow enough space for maintenance on all four sides of the unit.

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.

1.3 Prerequisites to installation

An efficient installation depends on careful planning and site preparation. Installation of the equipment must be handled by skilled technicians and electricians familiar with the special requirements of high-voltage electrical equipment. The installation must comply with the requirements of the National Electrical Code (ANSI/NFPA 70, latest issue) and local codes as applicable.

1.3.1 Other Installation considerations

Prior to installing the power conditioner, 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
- Input source voltage
- Size of the power conditioner
- Receiving facilities
- Weight load
- Distribution of power
- Audible noise requirements
- Room temperature
- Clearances
- Accessibility
- Options
- Excessively long power runs
- Clean environment
- Proper ground techniques

1.4 General description

The overall function of the Power-Suppress 600 is to attenuate transients and noise that originate on incoming power lines and to provide a newly derived, isolated power source.

The Power-Suppress 600 is used to protect sensitive electronic equipment from power-line noise and transients. There are common disturbances on power lines caused by lightning, motor starting and stopping, utility network switching, and general electrical noise, which will adversely affect sensitive electronic equipment.

The Power-Suppress 600 establishes a new neutral to ground bond on the transformer's output, meeting the definition of a separately derived power source as defined in NFPA 70, Article 250.20 (D). Its isolated wye secondary provides a new single point ground reference to which critical load neutral and ground conductors are wired, thus preventing potential N-G circulating currents.

The Power-Suppress 600 may be paired with a transformerless uninterruptible power system (UPS). This is critical if the input neutral to the UPS is shared with other electrical noise-producing loads, creating noise voltage with respect to ground. The transformer provides an isolated, clean neutral bond for IT/data center equipment. Locating the transformer at the input or output of the UPS is dictated by the UPS configuration and grounding requirements. In either case, the Power-Suppress 600 ensures that the critical load is provided with the highest power quality, even when the UPS is in bypass mode.

1.4.1 Product specifications

Table 1.

Power output	
Three phase	15, 30, 45, 75, 112, 150, 225, 300, 500 kVA
Operating frequency	
Frequency	60 Hz +/- 5%
	Note: 50 Hz models available, consult factory
Electrical input	
Three phase (15-150 kVA)	208, 240, 480, or 600 VAC (Delta)
(225-500 kVA)	480, 600 VAC (Delta)
Voltage taps (15-300 kVA*)	(2 taps) 2.5% Full capacity above nominal (4 taps) 2.5% Full capacity below nominal
* Exception	
(112 kVA - 150 kVA at 208 VAC or 240 VAC)	(1 tap) 5% Full capacity above nominal (2 taps) 5% Full capacity below nominal
(500 kVA)	(1 tap) 3.5% Full capacity above nominal (2 taps) 3.5% Full capacity below nominal
NOTE: Special Voltages available consult factory.	
Electrical output	
Three phase	208/120, 480/277 or 600/347 Vac (wye)
	Note: Special voltages available consult factory.
Output impedance	2% to 3.5% typical
Output distortion	Less than 1.0% THD added under linear load
Load regulation	2% typical, no load to full load
Overload	Up to 500% for 10 seconds, 1000% for 1 cycle
Isolated neutral	Establishes a new neutral to ground bond on the transformer's output.
Noise attenuation	
Common mode	126dB - Standard double (2) shield 146dB - Optional triple (3) shield
Transverse mode	3dB down at 10kHz, decaying 20 dB per decade; decaying 40 dB with "SPD with high frequency" option
Environmental	
Operation ambient temperature	-25° C to +40° C
Relative humidity	0 to 95% non-condensing
Altitude	Up to 5000 feet above sea level without de-rating
Audible noise	45 to 55dBA @ 1 meter, depending on kVA size
Efficiency	
U.S.	Meets and exceeds U.S. Department of Energy (DOE) 2016 high efficiency standards identified under DOE 10 CFR Part 431
Canada	Meets and exceeds CSA Standard C802.2-12

K-factor ratings	
Ratings	K13
Neutral size	Twice the ampacity of the secondary phase conductor on three phase models

Harmonic handling capability	
Designed to handle the following percentages of fundamental and harmonic currents, without exceeding temperature rise limits.	
	K13
Fundamental 60 Hertz	100%
3rd Harmonic	40%
5th Harmonic	42%
7th Harmonic	25%
9th Harmonic	7%
11th Harmonic	10%
13th Harmonic	8%
15th Harmonic	3%
17th Harmonic	2%

Harmonic elimination	
Protects the loads from voltage and current distortions caused from triplen harmonics (3rd, 9th, 15th, 21st, etc.)	

General	
Transformer construction	All copper winding and conductor construction, dry type transformer with M3, grain-oriented silicon steel
Electrical connection	Copper bus provided for hardwired input and output. Note: Customer to provide Lugs
Basic impulse level	10kV
Temperature rise	135° C rise above ambient, under non-linear loading per UL 1561 standard
Cooling	Convection cooled
Enclosure	Standard, floor mounted: NEMA 2 up to 225 kVA; NEMA 1 at 300 kVA and 500 kVA Note: Optional NEMA 3R outdoor enclosure available up to 225 kVA

Certifications	
Safety	UL 1561 Listed, labeled for operation with or below a specific K-factor rating; C-UL listed to CSA Standard C22.2, No. 47-13
RoHS	Compliant
Quality	ISO 9001:2015

1.4.2 Optional items

SPD (SPD; UL1449 listed, type 2)

This option is factory installed. SPD with peak surge current capacity ratings up to 100kA per phase, UL 1449 4th Edition Listed, Type 2. The SPD has a nominal discharge current rating of 20kA, and a short circuit current rating (SCCR) of 200 kA. Includes EMI/RFI filtering, Form C relay contacts rated for 2 amps at 30 VDC or 250 VAC, and LED protection status indicators. (Option not available for 300 kVA and 500 kVA models.)

Form C relay contact ratings: 2 A at 30 Vdc or 250 Vac

Form C relay contact logic:

Power ON, normal state—NO contact = open, NC contact = closed

Power OFF or fault state—NO contact = closed, NC contact = open

See figures section for form C terminal location. Also refer to the circuit diagram provided with the unit.

Tri-colored LED protection status indicators

Tri-colored protection status indicators show results of continuous self-diagnostic testing, including neutral-ground mode. The LED protection status indicators on the device have three LED color states and are viewable through the front panel viewing slot (where applicable):

Green—fully protected

Yellow—loss of neutral-to-ground protection

Red—loss of protection

SPD; UL1449 listed, type 2 specifications

Table 2.

kA per phase	50, 80, 100
Nominal discharge current	20 kA
Wye system voltages	120/208, 240/415, 277/480, 347/600
Input power frequency	50/60 Hz
	Wye L-N, N-G, L-G, L-L
Mounting feet torque rating	20.3 lb-in (2.3 N-m)
Conduit locknut torque rating	Not to exceed 200 lb-in (22.5 N-m)
Max. altitude	2000 m
Certification/listing	UL 1449 4th edition, UL1283 6th edition, CSA 269.1-14, 269.2-15, C22.2 No. 8-13 EMI filter
SPD type	UL1449 4th edition & CSA type 1 and type 2 SPD
RoHS compliant	Yes
EMI/RFI filtering attenuation	Up to 40dB from 10kHz to 100MHz.

High / over temperature alarm contacts

Thermal warning alarm contacts for customer’s hardwired connection. Thermal sensors at 180° C and 200° C. See figures section for high / over temperature alarm contact terminal location and ratings. Also refer to the circuit diagram provided with the unit.

Note: Not available for 300 kVA and 500 kVA models.

NEMA 3R enclosure

UL Listed NEMA 3R enclosure for outdoor installations. Enclosure is constructed using 14 gauge galvanized steel and provided with a durable powder coat paint finish.

Note: Not available for 300 kVA and 500 kVA models.

IR scanning window

Infrared, transparent polymer IR window(s) for safe routine thermal scanning of transformer connections under load, without exposing personnel to arc flash hazards. Durable IR windows are industrial-grade with a patented reinforced grill, fully impact-resistant, and UL and C-UL Listed. This option adds 2” to the depth of the 112 kVA – 225 kVA enclosure. (Option not available for 300 kVA and 500 kVA models.)

1.4.3 Cabinet dimensions

Table 3. Cabinet standard dimensions and weights

The diagram illustrates the components of a model number: **T 6 0 0 - X X XXX X X X**. Each character is linked to a specific option table:

- T**: Nominal Voltage (Delta Input: L, L, L, G; B=208, C=240, H=400, D=480, E=600)
- 6**: Nominal Output Voltage (Wye Output: L, L, N, G; L=120/208, M=230/400, N=277/480, P=347/600)
- 0**: kVA Rating and Dimensions (Table below)
- 0**: kVA Rating and Dimensions (Table below)
- : kVA Rating and Dimensions (Table below)
- X**: kVA Rating and Dimensions (Table below)
- X**: kVA Rating and Dimensions (Table below)
- XXX**: kVA Rating and Dimensions (Table below)
- X**: Enclosure (N = NEMA 2/1, R = NEMA 3R)
- X**: Frequency (6 = 60Hz, 5 = 50Hz)
- X**: Options (Blank = No Options, A = 3rd Shield, B = Surge Protector, C = IR Window², D = 3rd Shield, Surge Protector, E = 3rd Shield, IR Window², F = Surge Protector, IR Window², G = 3rd Shield, Surge Protector, IR Window²)

kVA	Weight (lbs)	Cabinet Size Dimensions in H x W x D in Inches (mm)
015	370	23W x 20D x 28H (584.2 x 508 x 711.2)
030	495	23W x 20D x 28H (584.2 x 508 x 711.2)
045	700	23W x 20D x 28H (584.2 x 508 x 711.2)
075	830	23W x 20D x 28H (584.2 x 508 x 711.2)
112	1210	38W x 32D x 57H (965.2 x 812.8 x 1447.8)
150	1470	38W x 32D x 57H (965.2 x 812.8 x 1447.8)
225	1880	38W x 32D x 57H (965.2 x 812.8 x 1447.8)
300	2666	38W x 32D x 57H (965.2 x 812.8 x 1447.8)
500	4820	38W x 32D x 57H (965.2 x 812.8 x 1447.8)

NOTE 1: 225 kVA and below NEMA 2, 300 kVA and 500 kVA available in NEMA 1 only
NOTE 2: 300 kVA or 500 kVA Models

Figure 1. 15-30 kVA NEMA 3R SPD alarm contacts.

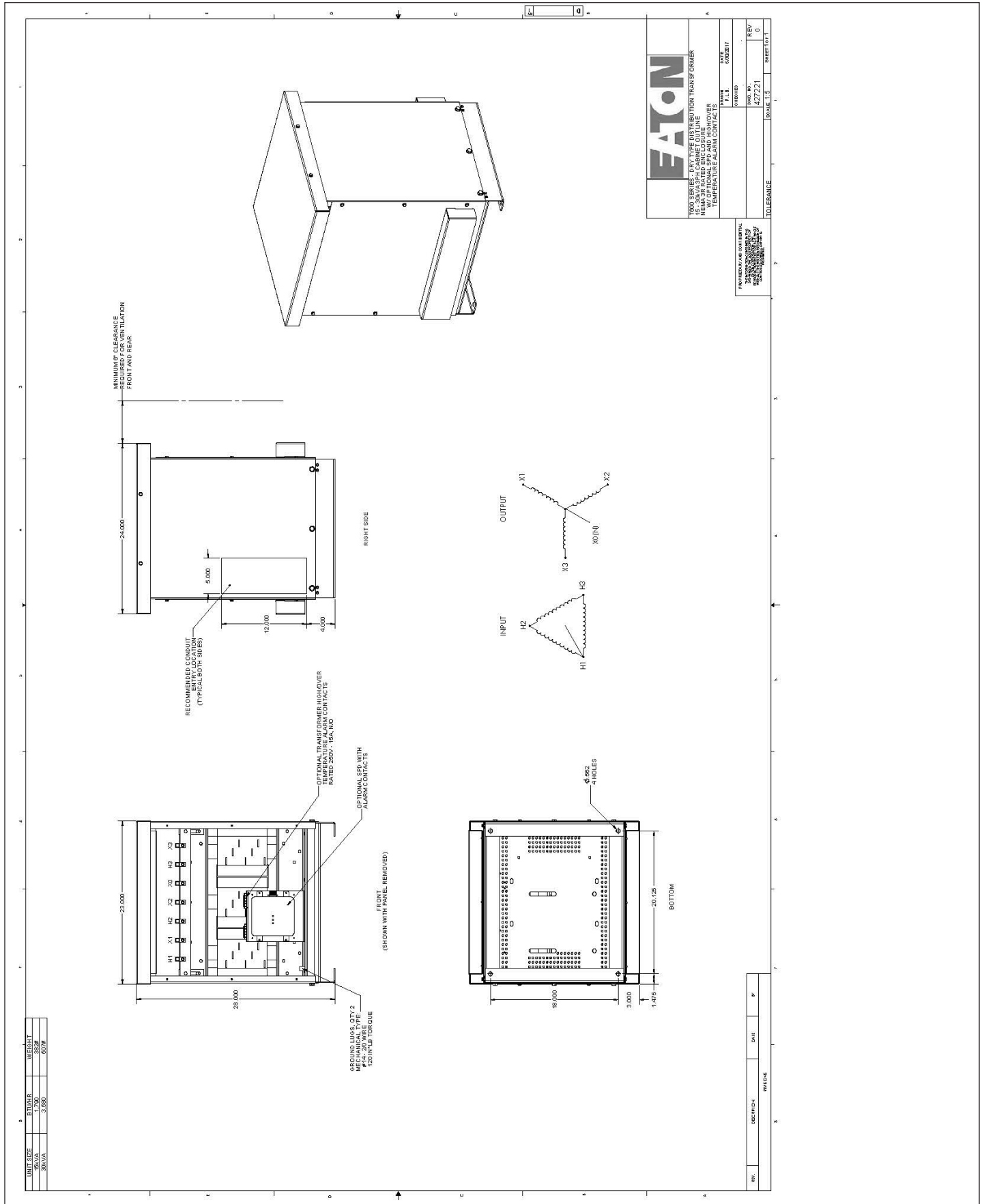


Figure 2. 15-30 kVA NEMA 2 SPD alarm contacts.

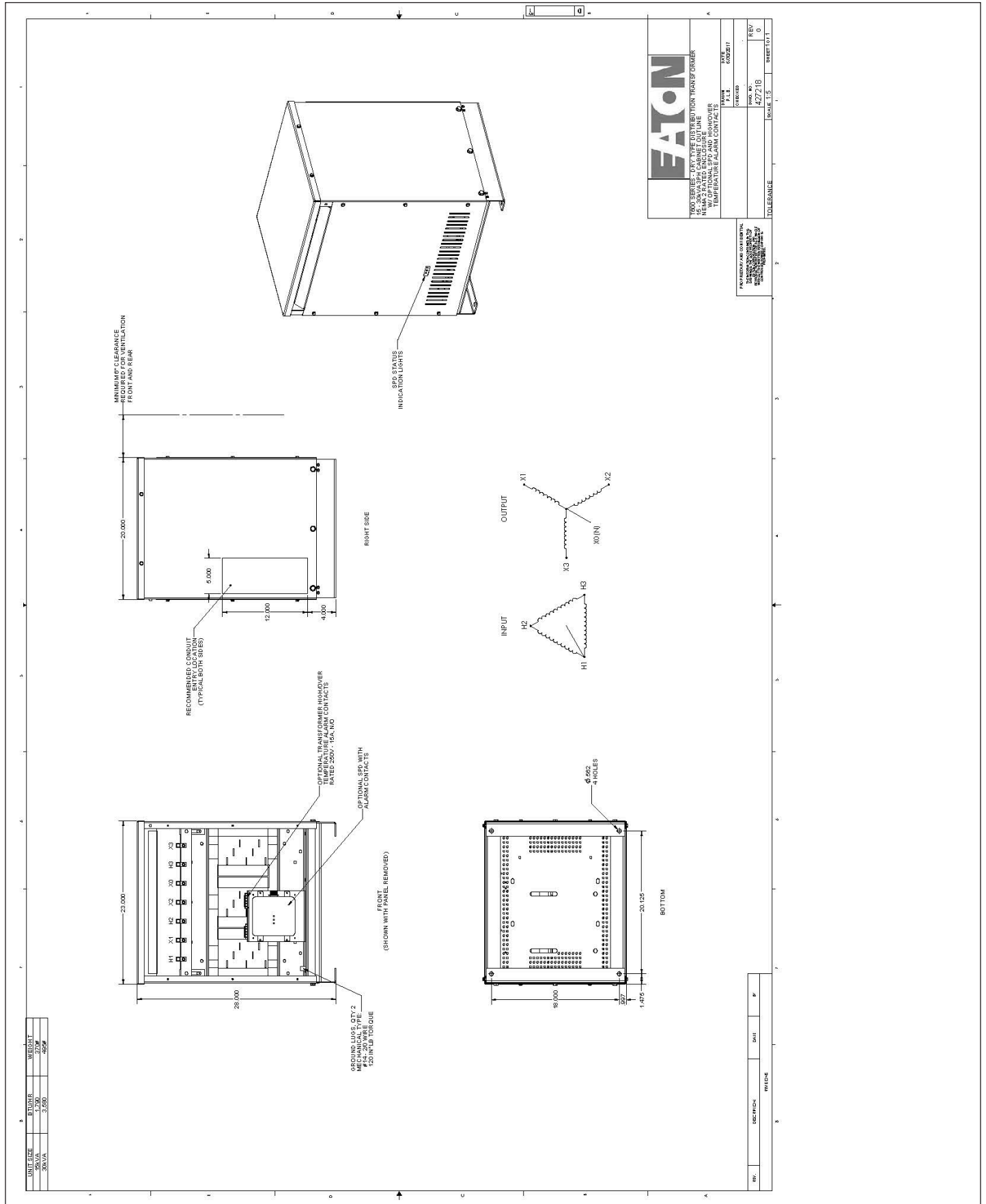


Figure 3. 45-75 kVA NEMA 3R SPD alarm contacts.

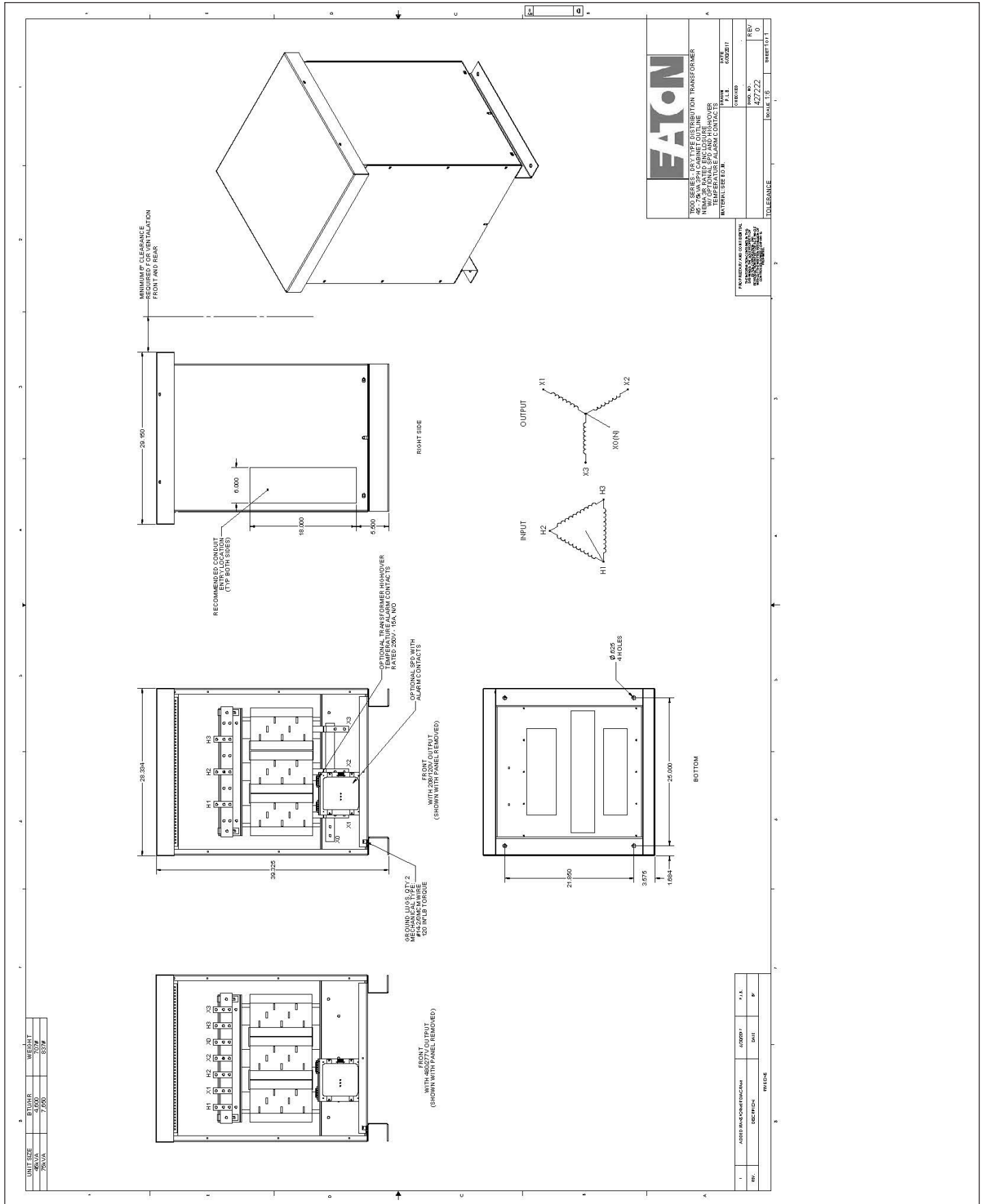
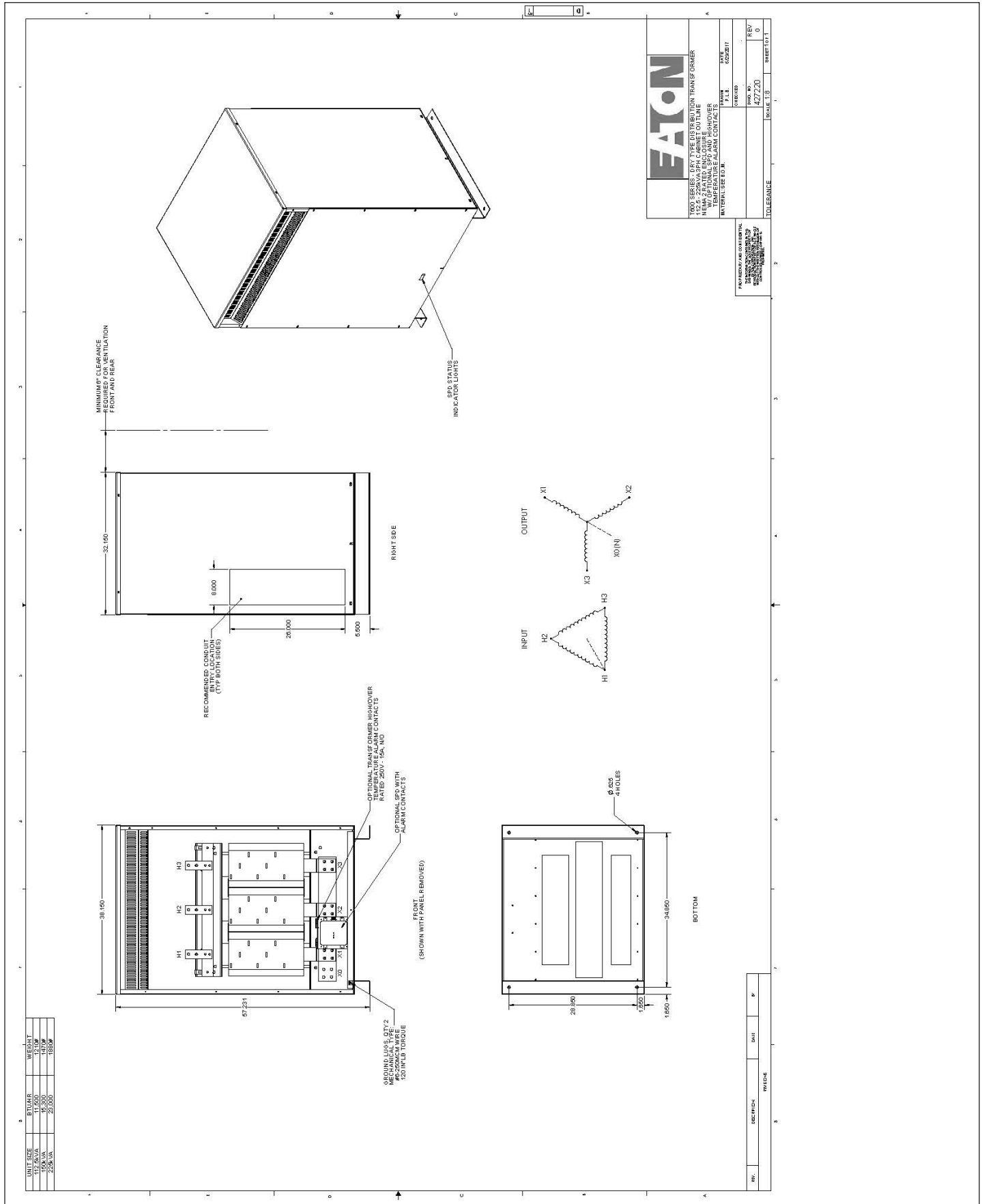
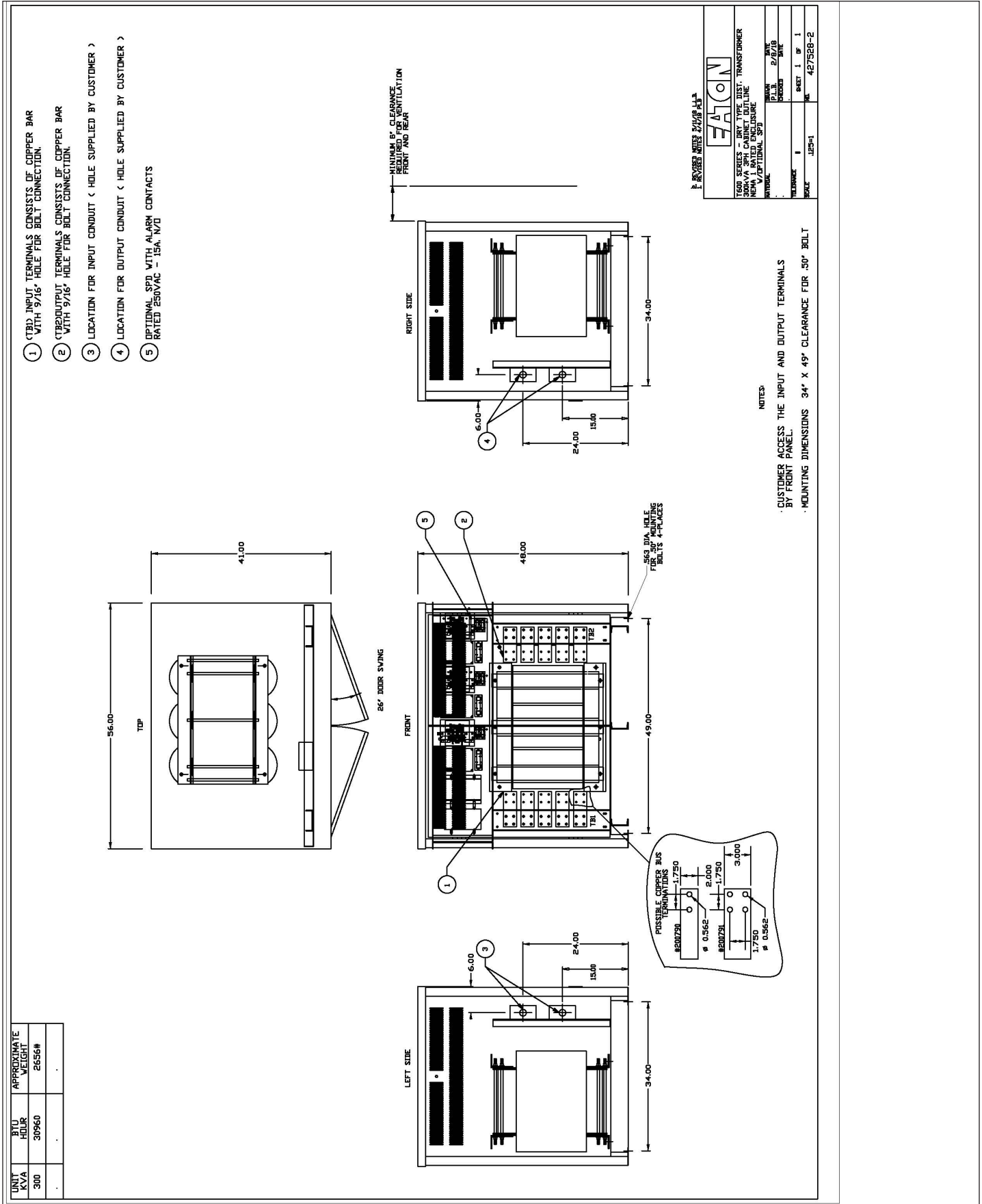


Figure 5. 112-225 kVA NEMA 2 SPD alarm contacts.



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Figure 7. 300 kVA NEMA 1.



2 Installation

2.0 Scope

This section guides the user through installation requirements, circuit wiring diagrams, hard wired connections, and factory input/output configurations for the Power-Suppress 600

2.1 Installation notes

- The Power-Suppress 600 requires ventilation and should not be mounted in a non-ventilated control cabinet.
- After installation is complete, verify that the output voltage is within its rated specifications
- Certain loads connected to the Power-Suppress 600 with high inrush currents will cause the output voltage to fall below usable levels if they exceed 150% of the unit's current rating. If high inrush currents are expected, the Power-Suppress 600 must be oversized.
- If the Power-Suppress 600 power conditioner is overloaded, the output voltage will drop below its rated specifications and the input fusing will open due to higher input currents
- For installation of conduit, reference NEC Article 248 and 350 and any applicable local electrical codes

Refer to the provided typical wiring diagrams for electrical hookup.

2.2 Input / output voltage and full load amps

Table 4. 15 kVA

Voltage	FL input amps per phase	FL output amps per phase
208	43.2	---
208/120	---	41.7
240	37.4	---
480	18.7	---
480/277	---	18.1
600	15	---
600/347	---	14.5

Cabinet dims: 23" w x 20" d x 28" h
 Max installed weight: 370 lbs. (add 12 lbs. for NEMA 3R)
 BTUs/hr: 1790

Table 5. 30 kVA

Voltage	FL input amps per phase	FL output amps per phase
208	86.4	---
208/120	---	83.4
240	74.9	---
480	37.4	---
480/277	---	36.1
600	29.9	---
600/347	---	28.9

Cabinet dims: 23" w x 20" d x 28" h
 Max installed weight: 495 lbs. (add 12 lbs. for NEMA 3R)
 BTUs/hr: 3580

Table 6. 45 kVA

Voltage	FL input amps per phase	FL output amps per phase
208	128.9	---
208/120	---	125.1
240	111.7	---
480	55.9	---
480/277	---	54.2
600	44.7	---
600/347	---	43.4

Cabinet dims: 28" w x 25" d x 39" h
 Max installed weight: 700 lbs. (add 7 lbs. for NEMA 3R)
 BTUs/hr: 4600

Table 7. 75 kVA

Voltage	FL input amps per phase	FL output amps per phase
208	214.9	---
208/120	---	208.4
240	186.2	---
480	93.1	---
480/277	---	90.3
600	74.5	---
600/347	---	72.3

Cabinet dims: 28" w x 25" e x 39" h
 Max installed weight: 830 lbs. (add 7 lbs. for NEMA 3R)
 BTUs/hr: 7650

Table 8. 112 kVA

Voltage	FL input amps per phase	FL output amps per phase
208	322.3	---
208/120	---	312.6
240	279.3	---
480	139.7	---
480/277	---	135.5
600	111.7	---
600/347	---	108.4

Cabinet dims: 38" w x 32" d x 57" h
 Max installed weight: 1210 lbs. (add 21 lbs. for NEMA 3R)
 BTUs/hr: 11,500

Table 9. 150 kVA

Voltage	FL Input Amps Per Phase	FL Output Amps Per Phase
208	429.7	---
208/120	---	416.9
240	372.4	---
480	186.2	---
480/277	---	180.6
600	149.0	---
600/347	---	144.5

Cabinet dims: 38" w x 32" d x 57" h
 Max installed weight: 1470 lbs. (add 21 lbs. for NEMA 3R)
 BTUs/hr: 15,300

Table 10. 225 kVA

Voltage	FL input amps per phase	FL output amps per phase
208/120	---	625.3
480	279.3	---
480/277	---	271.0
600	223.5	---
600/347	---	216.8

Cabinet dims: 38" w x 32" d x 57" h
 Max installed weight: 1880 lbs. (add 21 lbs. for NEMA 3R)
 BTUs/hr: 23,000

Table 11. 300 kVA

Voltage	FL input amps per phase	FL output amps per phase
208/120	---	833.7
480	372.4	---
480/277	---	361.3
600	298	---
600/347	---	289

Cabinet dims: 56" w x 41.5" d x 48" h
 Max installed weight: 2656 lbs.
 BTUs/hr: 30,690

Table 12. 500 kVA

Voltage	FL input amps per phase	FL output amps per phase
480	620.7	---
480/277	---	602.1
600	496.6	---
600/347	---	481.7

Cabinet dims: 45" w x 48" d x 62.75" h
 Max installed weight: 4820 lbs.
 BTUs/hr: 51,150

! IMPORTANT

BEFORE INSTALLING THE POWER CONDITIONER MAKE SURE THAT THE INPUT VOLTAGE AND THE OUTPUT VOLTAGES MATCH THE UNIT'S SPECIFICATION PLATE.

2.3 Input / output wire size, and grounding

1. Conduit should be used for both input and output wiring.
2. Minimum ground wire size is based on the latest National Electric Code. Full current ground conductors while not required by code are a good practice for power conditioning equipment.
3. Input wire size is based on NEC Table 310-16 specifying not more than 3 conductors in a raceway based on ambient of 30° Celsius, and wire rated at 75° Celsius.
4. Output neutral to ground is already bonded during manufacturing of the Power Conditioner.
5. Output requires 4 wire + ground conductors in a raceway assuming neutral as a current carrying conductor.

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

Refer to figures section for cabinet outlines, conduit entry points and input/output terminal location and wire ranges.

! IMPORTANT

BEFORE INSTALLING THE POWER CONDITIONER MAKE SURE THAT THE INPUT VOLTAGE AND THE OUTPUT VOLTAGES MATCH THE UNIT'S SPECIFICATION PLATE.

2.4 Recommended connections

Table 13. Recommended input lugs / terminals

KVA	208 V / 240 V	480 V / 600 V
15	(3) AB 1492-CE2 195A (3-L)	(3) AB 1492-CE2 195A (3-L)
30	(3) AB 1492-CE2 195A (3-L)	(3) AB 1492-CE2 195A (3-L)
45	(3) ILSCO TA-350 (3-L)	(3) ILSCO TA-2/0 (3-L)
75	(3) ILSCO TA-350 (3-L)	(3) ILSCO TA-2/0 (3-L)
112	(3) ILSCO TA-600 (3-L)	(3) ILSCO TA-350 (3-L)
150	CF	(3) ILSCO TA-350 (3-L)
225	N/A	(3) ILSCO TA-600 (3-L)
300	CF	CF
500	N/A	CF

N/A-not applicable CF-consult factory

Table 14. Recommended output lugs / terminals

KVA	208 V / 120 V	480 V / 277 V
15	(4) AB 1492-CE2 195A (3-L, 1-N)	(4) AB 1492-CE2 195A (3-L, 1-N)
30	(4) AB 1492-CE2 195A (3-L, 1-N)	(4) AB 1492-CE2 195A (3-L, 1-N)
45	(3) ILSCO TA-350(3-L), (1) ILSCO TA-600 (1-N)	(4) ILSCO TA-2/0 (3-L, 1-N)
75	(3) ILSCO TA-350 (3-L), (1) ILSCO AV-350 (1-N)	(3) ILSCO TA-2/0 (3-L), (1) ILSCO TA-350 (1-N)
112	(3) ILSCO TA-600(3-L), (1) ILSCO T4A4-250N (1-N)	(3) ILSCO TA-350 (3-L), (1) ILSCO TA-600 (1-N)
150	CF	(3) ILSCO TA-350 (3-L), (1) ILSCO AV-350 (1-N)
225	CF	(3) ILSCO TA-600(3-L), (1) ILSCO T4A4-250N(1-N)
300	CF	CF
500	CF	CF

N/A-not applicable CF-consult factory

Table 15. Wire sizes and torque ratings

Lug / terminal	Wire range	Torque rating
AB 1492-CE2195A	# 12 - 1/0	50 in-lb
ILSCO TA-2/0	#14 - 2/0	120 in-lb
ILSCO TA-250	#6 - 250 MCM	275 in-lb
ILSCO TA-350	#6 - 350 MCM	375 in-lb
ILSCO TA-600	#2 - 600 MCM	500 in-lb
ILSCO AV-350	(2X) #2 - 600 MCM	275 in-lb
ILSCO T4A4-250N	(4X) #6 - 250 MCM	275 in-lb

Refer to the latest edition of the National Electric Code.

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

! WARNING

THERE ARE DANGEROUSLY HIGH VOLTAGES PRESENT WITHIN THE ENCLOSURE OF THE POWER SUPPLY SYSTEM. CAUTION MUST BE TAKEN WHEN WORKING WITH THE ENCLOSURE. IT IS RECOMMENDED THAT ALL WORK BE PERFORMED BY QUALIFIED ELECTRICAL PERSONNEL ONLY.

Note: Initial start-up should be performed with no load on system.

2.5 Start up procedure

1. Make sure the input circuit breaker feeding the Power-Suppress 600 is in the off position.
2. Re-install all panels that may have been removed during installation.
3. Turn on the main AC input breaker feeding the Power-Suppress 600.
4. Verify that the output voltage is within the specified range.
5. Verify output phase rotation is correct.
6. Turn the system off.
7. Connect the loads one at a time and repeat Step 3.

 **WARNING**

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

3 Maintenance

3.0 Scope

This section contains preventative maintenance and troubleshooting for the Power-Suppress 600 power conditioner, transformer, capacitors, and cooling fans.

3.1 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 operating conditions and larger number of hours of continuous operation. At each service inspection any accumulated dust, dirt or foreign particles should be carefully removed. A light pull should be used to test if there is any loose electrical connections which need to be tightened.

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