LANTRONIX®

PS-DC-DUAL-5624T

345 Watt Isolated Power Supply with 56VDC and 24 VDC Dual Output

Install Guide

Part Number 33788
Revision E January 2022

Intellectual Property

Warranty

For details on the Lantronix warranty policy, please go to our web site at http://www.lantronix.com/support/warranty.

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Sales Offices
For a current list of our domestic and international sales offices, go to the Lantronix web site at www.lantronix.com/about/contact.

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Revision History

Date	Rev	Notes
7/29/19	A	Initial release at FW Rev. 1.0.4.
8/19/19	B	Revise specs, labels and model number.
9/18/19	C	Add power cord information.
11/9/21	D	Remove PS-DC-DUAL-5612T references and update specifications.
1/26/22	E	Initial Lantronix re-brand.

Table of Contents

1 Introduction

The Power Supply provides 345W at 56VDC and is targeted for PoE applications. The Power Supply is fully compliant with IEEE 802.3af, at, and bt PoE standards for isolation. It provides a secondary fully-isolated 24V at 1.25A (30W) output for other equipment.

Ordering Information

Model	Description
PS-DC-DUAL-5624T	Hardened 345 Watt Isolated Power Supply with 56VDC and 24VDC Dual Output
PS-DC-DUAL-5624T-AL	Hardened 345 Watt Isolated Power Supply with 56VDC and 24VDC Dual Output with Locked –NA Power Cord
27274	AC Power Cord with locking; -NA Line Cord
3344	AC Power Cord; non-locking; -NA Line Cord
27275	AC Power Cord with locking; -NA Line Cord, Right angle

Features

- Wide 100-240VAC input with externally accessible fuse
- 56 VDC output provides plenty of margin for the powered device (PD) to meet minimum PSE output voltage requirements:
  - IEEE 802.3af (44VDC, 12V margin)
  - IEEE 802.3at (50VDC, 6V margin)
  - IEEE 802.3bt (52VDC, 4V margin)
- Desktop mountable / DIN rail form factor
- Full compliance with the IEEE 2250 VDC PoE isolation requirements
- Active fan speed control based on temperature (PWM)
- Front panel LED for power supply status (Normal and Alarm)
- 2-Pin Alarm DC relay output monitoring five events:
  - Fan tachometer monitoring for low speed and lock conditions
  - Over- or under-temperature
  - 24V output out of spec
- UL approval
- 5 year warranty

Specifications

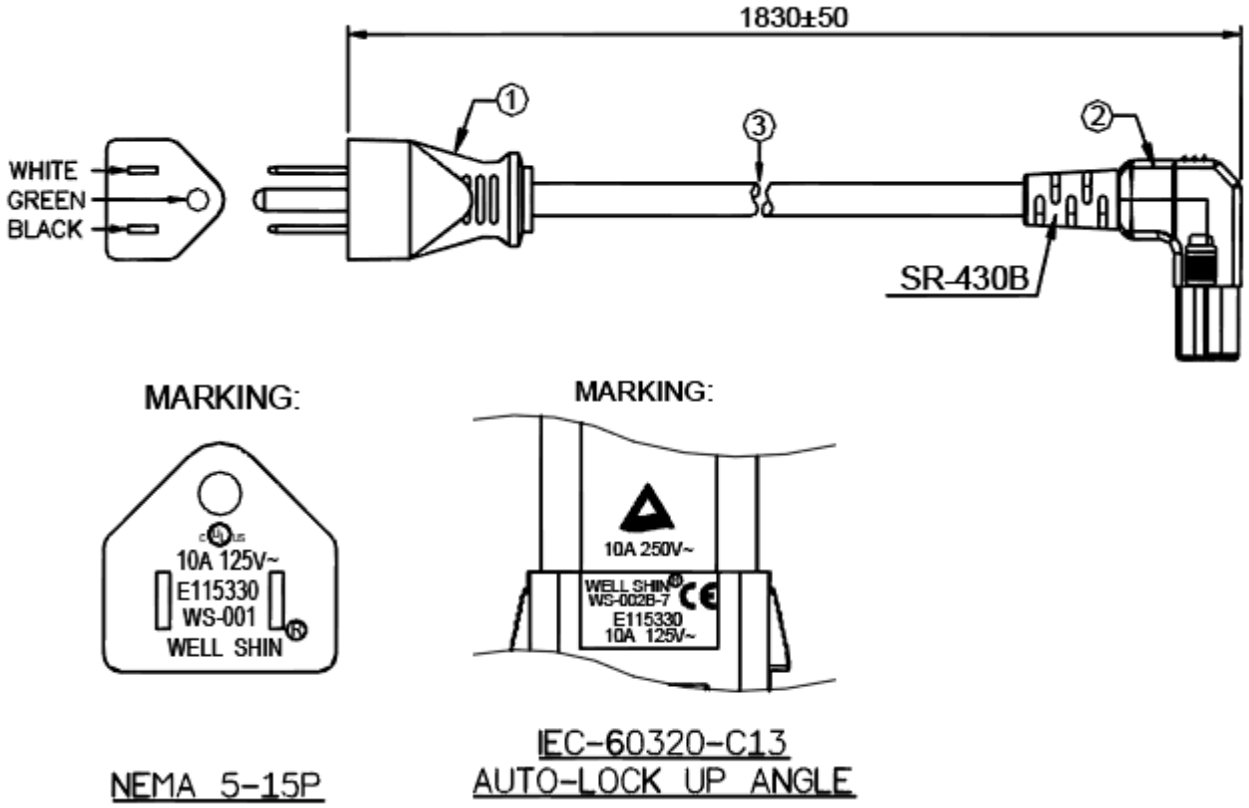
Output 1	Voltage 56V (terminal block) Regulation +/- 2% Current Rating 5.7A Power Rating 315W
Output 2	Voltage 24V (terminal block) Regulation +/- 5% Current Rating 1.25A Power Rating 30W
Input Voltage Range	100-240VAC
Input Frequency Range	47 - 63 HZ
Power Consumption	4.0A at 120VAC typical
Dimensions (HxWxD)	Width: 6.25” [159 mm] x Depth: 6.45” [164 mm] x Height: 1.75” [44 mm]
Weight	1.8 lbs. (0.72Kg)
Environment	Operating Temp.: -20°C to +70°C (restricted); -20°C to +50°C (unrestricted) Storage Temp.: -30°C to +70°C Operating Humidity: 5% to 95% (non-condensing)
Alarm output rating	30VDC maximum 50mA maximum
MTBF	623,377 hrs. ENV: GB TEMP: 30.00 deg. C TELCORDIA CALCULATION METHOD: Parts Count (Method I)
Certifications	EMI: EN55032 Class A, EN55024 Safety: EN60950, UL 60950
Warranty	Five years

Power Cord Specifications

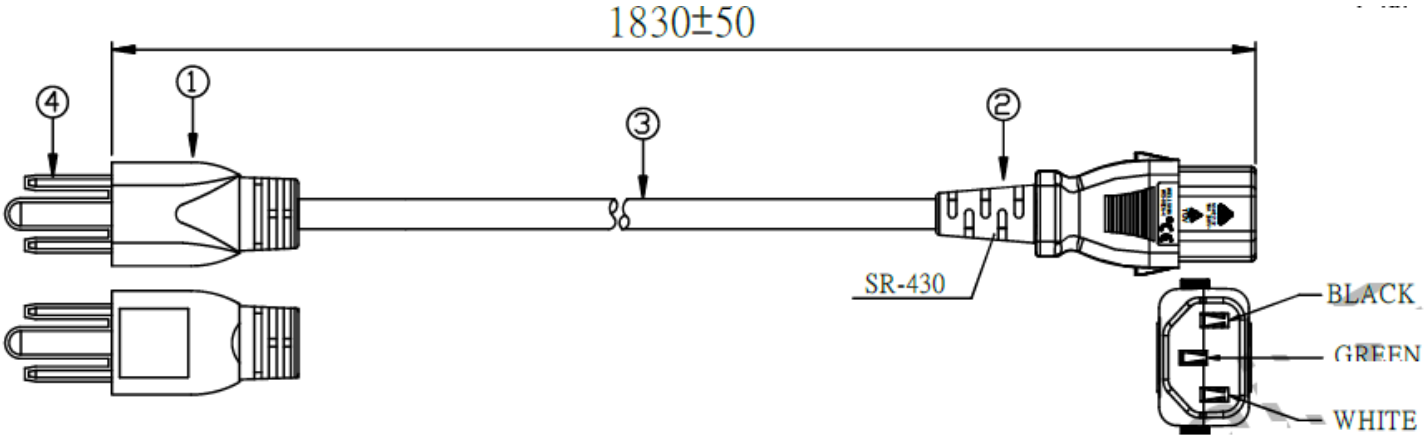
Power cord specifications are provided below.

27275 AC Power Cord with locking; -NA Line Cord, Right angle

Connectors:	NEMA 5-15P IEC-60320-C13
Length:	3 ft. (0.91 m)
Gauge:	18
Jacket Type:	SJTW 105ºC
Rating:	10A – 125V
Safety:	UL



27274 AC Power Cord with locking; -NA Line Cord



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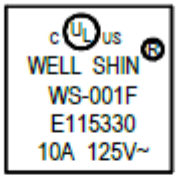

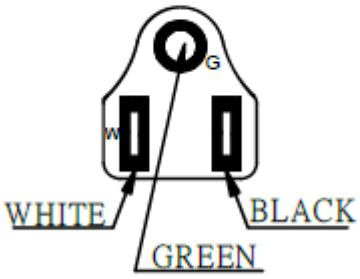

NEMA 5-15P

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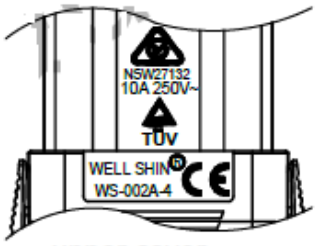
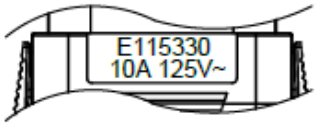


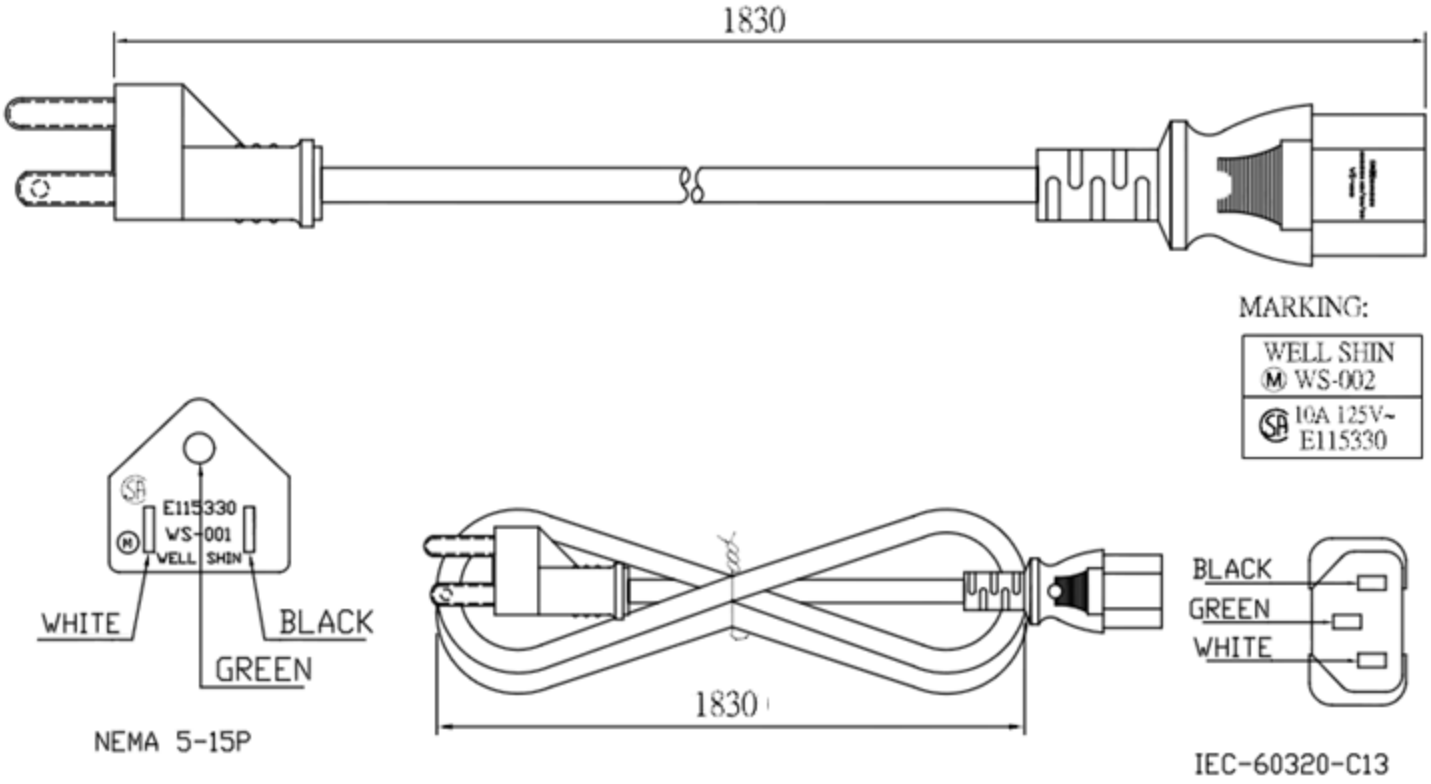
upper cover



Lower lid

IEC-60320-C13
AUTO-LOCK

3344 AC Power Cord; non-locking; -NA Line Cord



Connectors and LEDs

AC Input

- Connector: IEC C14
- Fuse: 6.3A slo blo
- Power On/Off switch

56VDC and 24VDC output: 6-Pin Terminal Block

- Pin 1: 24Vout+
- Pin 2: 24Vout-
- Pin 3: Alarm Contacts 1
- Pin 4: Alarm Contacts 2
- Pin 5: 56Vout+
- Pin 6: 56Vout-

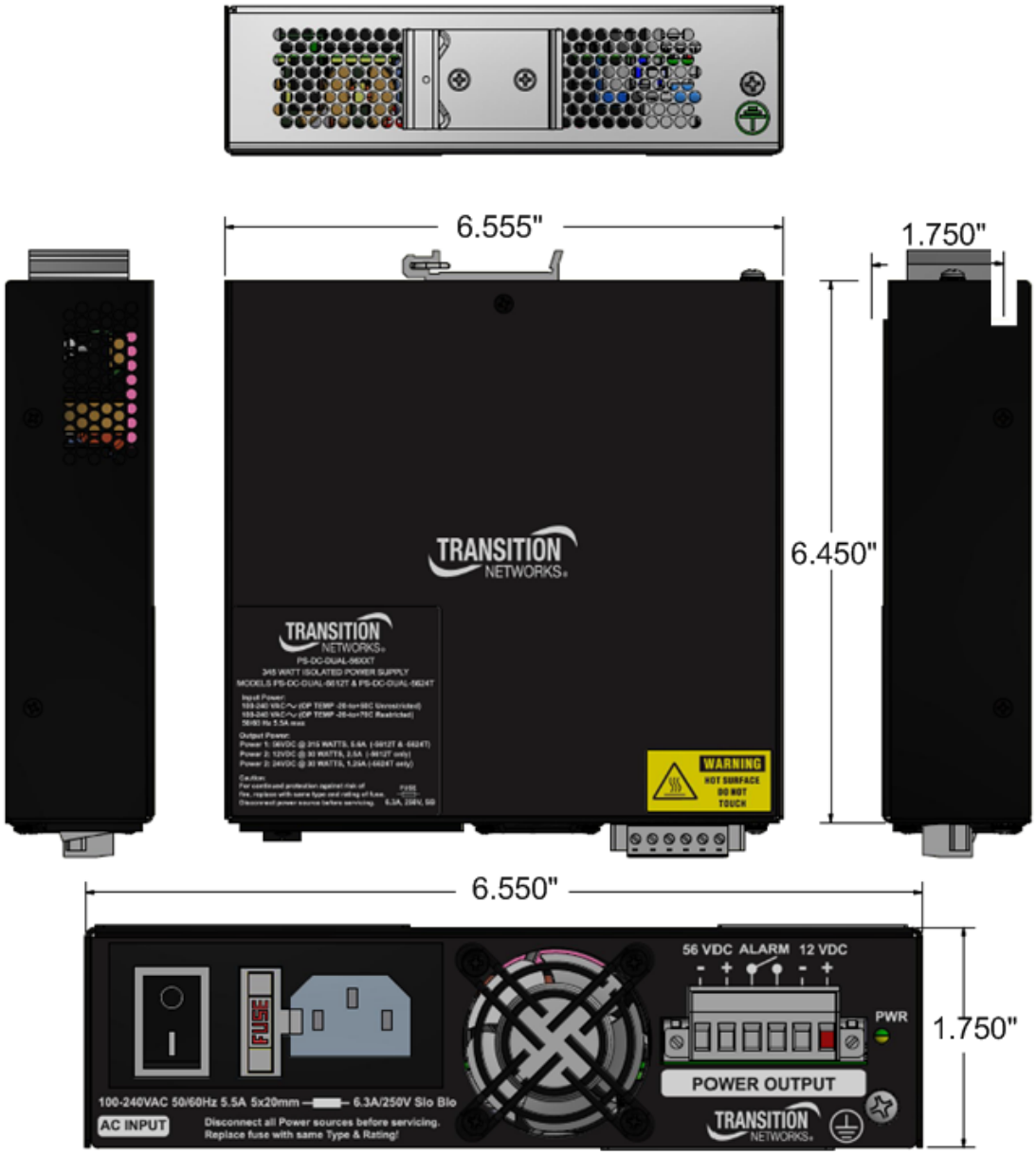
LEDs

- Power status
    - Green: OK
    - Yellow blink: Will cycle through if one or more events (alarms) occur with one of these Blink Rates:
        - 1 blink per 3 seconds: Fan locked (no tach)
        - 2 blinks per 3 seconds: Fan less than 30% PWM (Pulse Width Modulation) setting
        - 3 blinks per 3 seconds: 24VDC output out of spec
        - 4 blinks per 3 seconds: Exceeding -25 Deg. C
        - 5 blinks per 3 seconds: Exceeding +75 Deg. C

If more than one alarm is set the LED will cycle through the Blink Rates one at a time, and then repeat until the alarm is cleared.

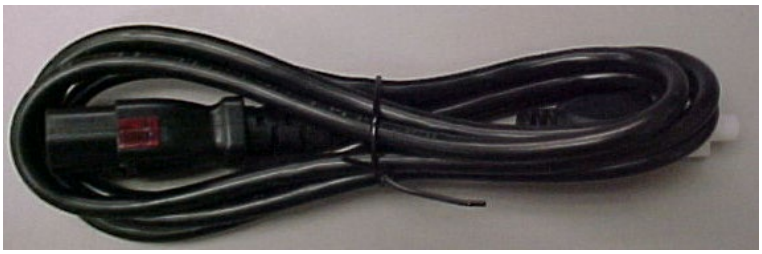
Note: These Blink Rates include a 3 second alarm delay to prevent triggering a false alarm when the fan ramps up or down.

Dimensions



Power Cords

Locking and non-locking line cords are available.



AC Power Cord with locking; -NA Line Cord

AC Power Cord with locking; -NA Line Cord, Right angle

Front Panel Descriptions

The Power Supply front panel is shown and described below. See the Installation section for the actual grounding and connection procedures.

PS-DC-DUAL-5624T Hardened 345 Watt Isolated Power Supply with 56VDC and 24VDC Dual Output

On / Off switch: The power on/power off switch is labeled **O** (off) /**|** (on).

FUSE: The fuse can be replaced without opening the chassis; see Fuse Replacement below.

AC INPUT Power connection: labeled 100-240VAC 50/60 Hz; see Connecting AC INPUT below.

POWER OUTPUT Terminal Block: labeled 56 VDC - and +, ALARM, and 24 VDC - and +. See Connecting POWER OUTPUT below.

PWR (Power) Status LED: a bi-color green/amber LED; Green = OK, Yellow blink = Fault Event Detected (see LED Blink Rate above).

2 Installation

Cautions and Warnings

Cautions and Warnings appear here and may appear throughout this manual where appropriate. Failure to read and understand the information identified by this symbol could result in poor equipment performance, damage to the equipment, or injury to persons.

Cautions indicate that there is the possibility of poor equipment performance or potential damage to the equipment. Warnings indicate that there is the possibility of injury to person.

See Electrical Safety Warnings on page 16 for Electrical Safety Warnings translated into multiple languages.

High Risk Activities Disclaimer: Components, units, or third-party products used in the product described herein are NOT fault-tolerant and are NOT designed, manufactured, or intended for use as on-line control equipment in the following hazardous environments requiring fail-safe controls: the operation of Nuclear Facilities, Aircraft Navigation or Aircraft Communication Systems, Air Traffic Control, Life Support, or Weapons Systems ("High Risk Activities").
Lantronix and its supplier(s) specifically disclaim any expressed or implied warranty of fitness for such High Risk Activities.

Notice: Not Designed for Use in Life Support Equipment or Applications: These products are not designed for use in life support equipment or applications that would cause a life-threatening situation if any such product failed. Do not use this product in these types of equipment or applications.

Operating Temperature - RESTRICTED ACCESS LOCATION: A location for equipment where both of the following paragraphs apply:

- access can only be gained by SERVICE PERSONS or by USERS who have been instructed about the reasons for the restriction applied to the location and about any precautions that shall be taken; and
- access is through the use of a TOOL or lock and key, or other means of security, and is controlled by the authority responsible for the location.

NOTE: The requirements for equipment intended for installation in RESTRICTED ACCESS LOCATIONS are the same as for OPERATOR ACCESS AREAS, except as given in 1.7.17, 2.1.3 and 4.5.1.

1.2.7.4 TOOL: A screwdriver or any other object which may be used to operate a screw, latch or similar fixing means.

1.2.7.5 BODY: All accessible conducive parts, shafts of handles, knobs, grips and the like, and metal foil in contact with all accessible surfaces of insulating material.

1.2.7.6 SAFETY INTERLOCK: A means either of preventing access to a hazardous area until the hazard is removed, or of automatically removing the hazardous condition when access is gained.

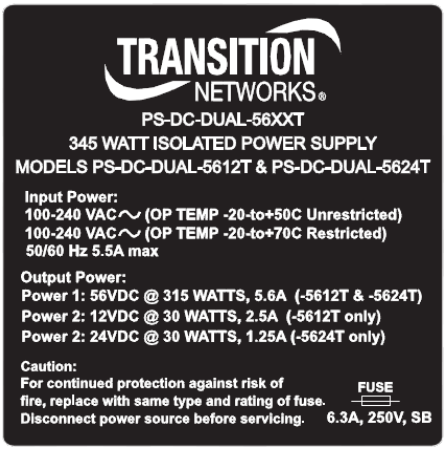
WARNING
HOT SURFACE
DO NOT
TOUCH

Input Power:

100-240 VAC ~ (Operating Temperature -20 to +50°C Unrestricted)
100-240 VAC ~ (Operating Temperature -20 to +70°C Restricted)
50/60 Hz 5.5A max

Output Power:

Power 1: 56VDC @ 315 Watts, 5.6 Amps
Power 2: 24VDC @ 30 Watts, 1.25 Amps



Unpacking

Carefully unpack the Power Supply. Verify you have received the items below. Save the packaging for possible future use.

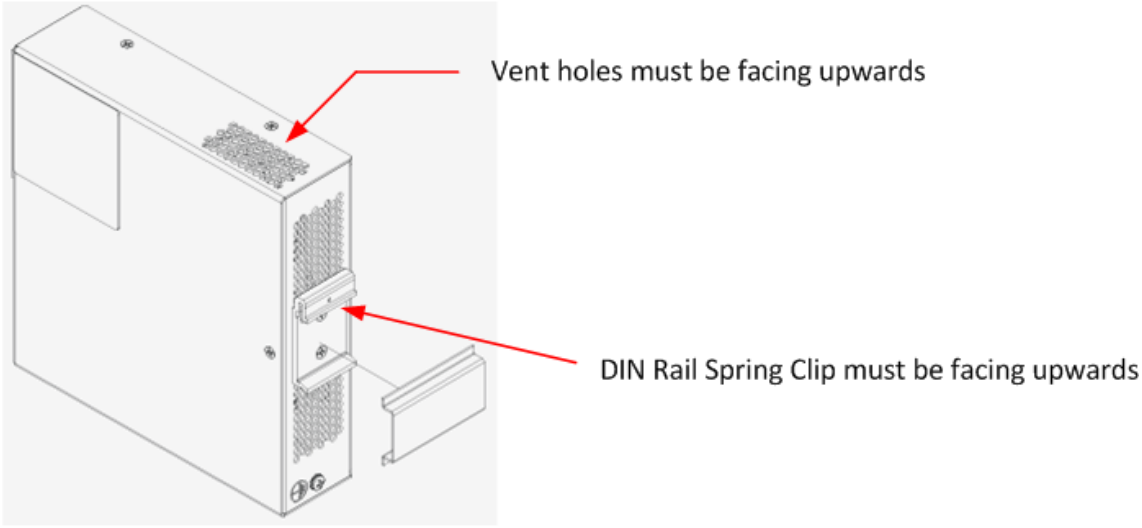
- One Power Supply
- One Postcard
- One printed Quick Start Guide, 33792
- One AC Power Cord (option)
- Four Rubber Feet
- One Snap-on Ferrite, TN 16210

Mounting

Desktop: You can attach the four adhesive-backed rubber feet to the bottom of the power supply for desktop mounting.

DIN Rail: The power supply ships with a rack DIN rail bracket attached. **Caution**: If mounted in a NEMA rated enclosure, either vertical direction is allowed. In a standard 19" rack, the side holes must face upward. To attach the power supply to a DIN rail:

1. General caution for Thermals: Make sure there is at least 2 inches of open space outside of at least one of the two vented sides. See below.
2. Hang the top of the DIN rail bracket on the DIN rail. **Caution**: The DIN Rail Spring Clip must be facing upwards, as shown below.
3. Click the bottom of the DIN rail bracket onto the DIN rail.



Caution: If mounted in a NEMA rated enclosure, either vertical direction is allowed.
If mounted in a standard 19" rack, the side holes must face upward.
General caution for Thermals: Make sure there is at least 2 inches of open space outside of at least one of the two vented sides.
Caution: The DIN Rail Spring Clip must be facing upwards, as shown below.

Grounding

Connecting POWER OUTPUT

Use 14 AWG stranded or better wire (typ.) to connect to 56 VDC@315W.

Use 20 AWG stranded or better wire (typ.) to connect to 24 VDC@30W.

Refer to the powered device documentation for specific connection information; see the Related Manuals section below.

Connecting AC INPUT

Connect the male end of the provided AC power cord to the power supply AC input first, and then connect the other end to a live 3-prong outlet.

PWR (Power) LED

When the bi-color green/yellow **PWR** LED is lit Green, the power being supplied is OK.

If the bi-color green/yellow LED is blinking yellow, a fan, voltage, or temperature event is occurring.

Fuse Replacement

The AC INPUT is 100-240VAC 50/60Hz 5.5A. The Fuse is a 5x20mm 6.3A/250V SB (slo blo) externally-accessible fuse.

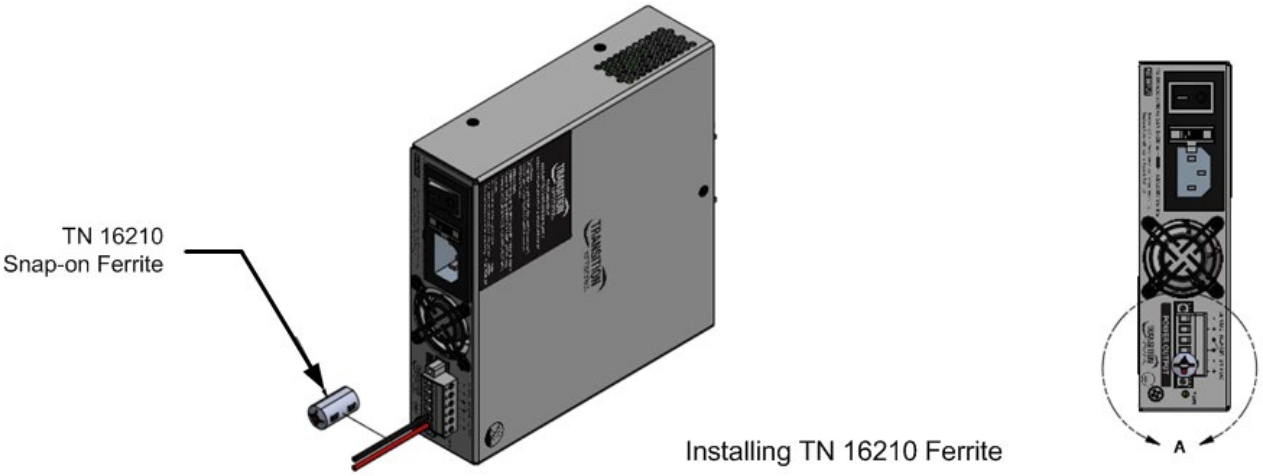
Warning: Disconnect all Power sources before servicing.

Caution: Replace fuse with same Type & Rating!

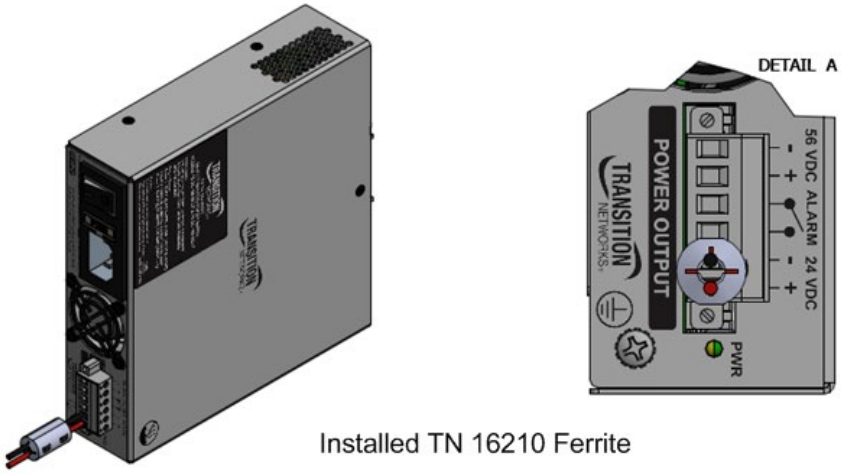
Installing TN 16210 Ferrite

For EMC reasons, install Snap-on Ferrite, TN 16210, over the 24 VDC (PS-DC-DUAL-5624T) output wires <u>after</u> installation.

1. Open Ferrite.
2. Place the Ferrite over the 24 VDC Outputs.
3. Snap Ferrite in place.



Installing TN 16210 Ferrite



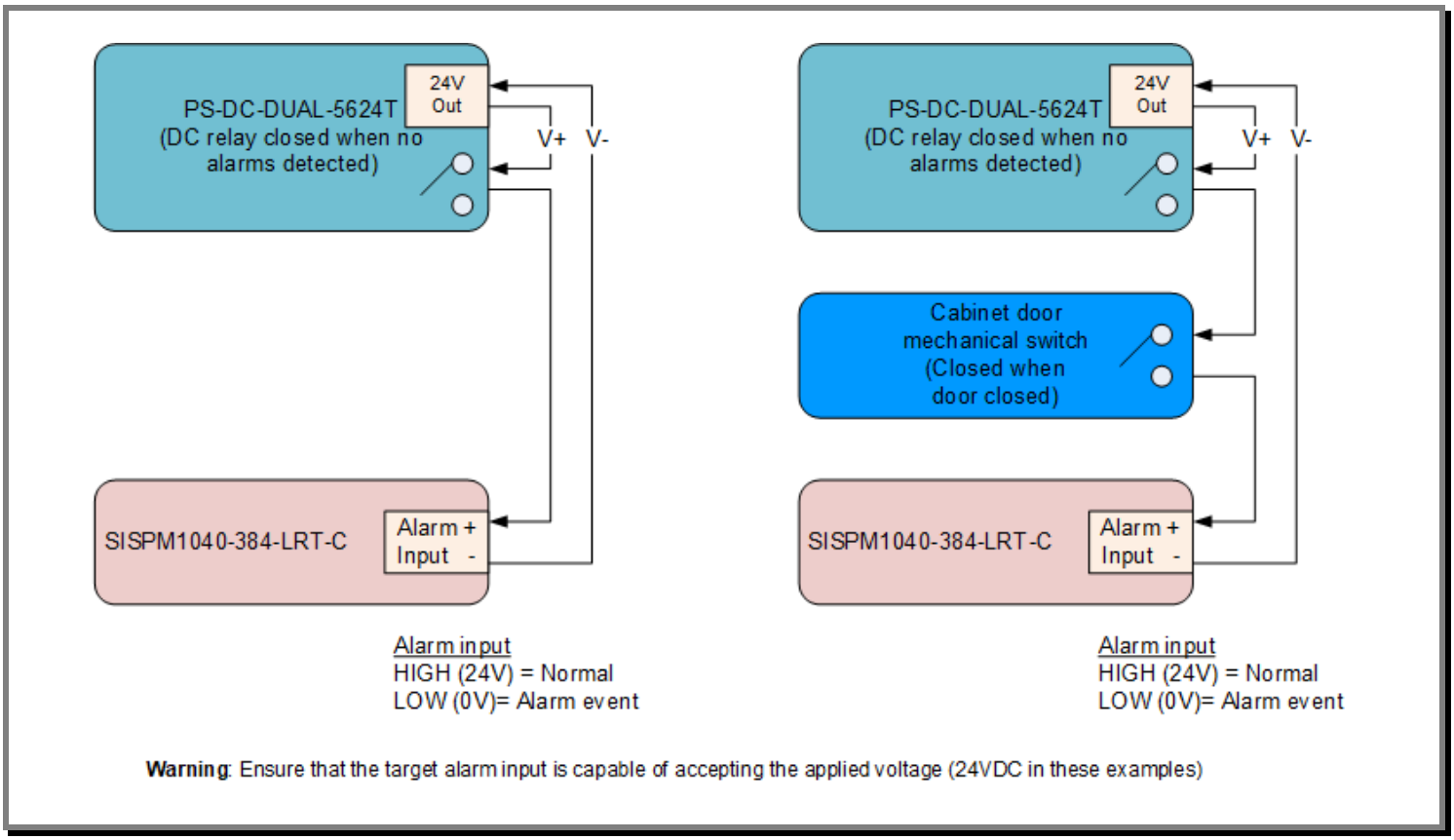
Installed TN 16210 Ferrite

Related Manuals

- PS-DC-DUAL-5624T Power Supply Quick Start Guide, 33792
- Quick Start Guide - SISPM1040-384-LRT-C and SISPM1040-362-LRT, 33726
- Install Guide - SISPM1040-384-LRT-C and SISPM1040-362-LRT, 33727
- Web User Guide - SISPM1040-384-LRT-C and SISPM1040-362-LRT, 33728
- CLI Reference - SISPM1040-384-LRT-C and SISPM1040-362-LRT, 33729

Application Example

The example below shows a SISPM1040-384-LRT-C switch, Enclosure Door sensor, and PS-DC-DUAL-5624T power supply in a single cabinet/enclosure. **Warning**: Ensure that the target alarm input is capable of accepting the applied voltage (24VDC).



To configure Digital I/O in the SISPM1040-384-LRT-C via the Web UI:

1. Click Configuration > System > Digital I/O.
2. Specify the DI Normal Mode.
3. Enter the desired Normal and Abnormal alarm text to display in Syslog.
4. Click the Apply button.

3 Related Information

Troubleshooting

1. Check the PWR LED for status; see the PWR (Power) LED description on page 15.
2. Check the LED for On or alarm event blinking:
   a. A short or overload of the 56V will be indicated by no power LED or possibly a quick On/Off cycling.
   b. A short or overload of the 24V output will be indicated by “24VDC output out of spec” blink rate.
3. Verify the AC power source is good (a live 3-prong outlet).
4. Make sure the fuse is not blown; replace if necessary.
5. Contact Technical Support; see Contact Us on page 11.

Compliance Information

Declaration of Conformity

Manufacture’s Name: Transition Networks, Inc.
Manufacture’s Address: 10900 Red Circle Drive, Minnetonka, Minnesota 55343 U.S.A.

Declares that the products:
PS-DC-DUAL-5624T Standalone Power Supply

Conforms to the following Product Regulations:
FCC Part 15 Class A, EN 55032:2012, EN 55024:2010
Directive 2014/30/EU
Low-Voltage Directive 2014/35/EU
IEC /EN 60950-1:2006+A2:2013
2011/65/EU EN 50581:2012
UL 60950-1

With the technical construction on file at the above address, this product carries the **CE Mark**

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standards(s).

Place: Minnetonka, Minnesota

Date: July 29,2019

Signature: *Stephen Anderson*

Full Name: Stephen Anderson

Position: Vice President of Engineering

FCC Regulations

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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 his own expense.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Electrical Safety Warnings

Electrical Safety

IMPORTANT: This equipment must be installed in accordance with safety precautions.

Elektrische Sicherheit

WICHTIG: Für die Installation dieses Gerätes ist die Einhaltung von Sicherheitsvorkehrungen erforderlich.

Elektrisk sikkerhed

VIGTIGT: Dette udstyr skal installeres i overensstemmelse med sikkerhedsadvarslerne.

Elektrische veiligheid

BELANGRIJK: Dit apparaat moet in overeenstemming met de veiligheidsvoorschriften worden geïnstalleerd.

Sécurité électrique

IMPORTANT: Cet équipement doit être utilisé conformément aux instructions de sécurité.

Sähköturvallisuus

TÄRKEÄÄ: Tämä laite on asennettava turvaohjeiden mukaisesti.

Sicurezza elettrica

IMPORTANTE: questa apparecchiatura deve essere installata rispettando le norme di sicurezza.

Elektrisk sikkerhet

VIKTIG: Dette utstyret skal installeres i samsvar med sikkerhetsregler.

Segurança eléctrica

IMPORTANTE: Este equipamento tem que ser instalado segundo as medidas de precaução de segurança.

Seguridad eléctrica

IMPORTANTE: La instalación de este equipo deberá llevarse a cabo cumpliendo con las precauciones de seguridad.

Elsäkerhet

OBS! Alla nödvändiga försiktighetsåtgärder måste vidtas när denna utrustning används.

Product Label and Box Label

You can find device information on the product label and box label.

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Sales Offices
For a current list of our domestic and international sales offices, go to the Lantronix web site at www.lantronix.com/about/contact.