

User Guide

SPS-2460-xx

External Power Supply (24-60 VDC and 24-42 VAC RMS) for:



- **SPS-2460-PS** Piggy-back for use with stand-alone media converters 3.25" wide
- **SPS-2460-SA** Stand-alone for use with all stand-alone media converters

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Introduction

Transition Networks’ wide input external power supplies allow you to provide a wide range of input voltages to power your stand-alone converters and chassis. Input voltages of 24-60 VDC and 24-42VRMS allow for installation of any of Transition Networks’ standalone media converters in most industrial, telecom and commercial applications, as well as HVAC and building controlled environments.

Multiple form factors allow flexibility to meet your application. The stand-alone (-SA model) can be used with all Transition Networks’ stand-alone media converters. The -PS model allows the power supply to attach directly to the converter and eliminate the power cable commonly found between the power supply and the converter. Once the piggy back supply is attached to the converter, the combined assembly is much easier to wall mount or attach to DIN Rail environments than using a separate supply.

Ordering Information

SKU	Description
SPS-2460-PS	Piggy-back for use with stand-alone media converters 3.25" wide
SPS-2460-SA	Stand-alone for use with all stand-alone media converters

Installation

All Installation and service must be performed by qualified service personnel. Read and follow all warning notices and instructions marked on the power supply or included in the manual.

Power Source Circuit Requirements

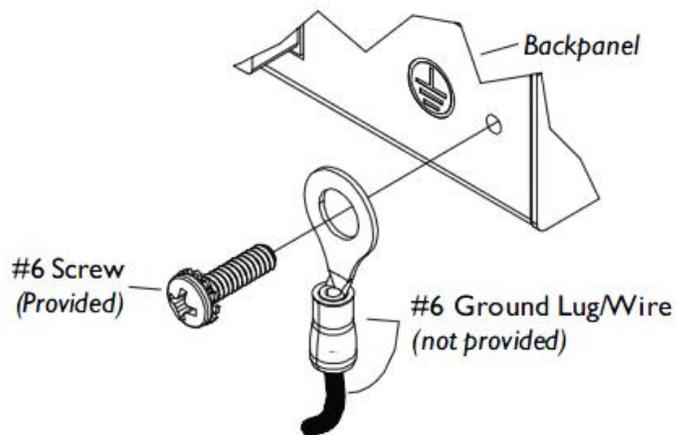
The SPS-2460-xx power supply must be connected to a Safety Extra Low Voltage (SELV) circuit. The installer must first determine the circuit's characteristics (limited current, hazardous energy levels, etc.) and then install the power supply in accordance with local and national electrical codes.

Grounding

WARNING: The power supply has a provision for grounding. Equipment grounding is vital to ensure safe operation. The installer must ensure that the power supply is properly grounded during and after installation. Failure to observe this warning could result in an electric shock.

Wire Size

The wire size of the Protective Earth (ground) conductor should be greater than or equal to the wire size of the power source conductors. The power-source conductor wire size is installation dependent and sized to accommodate an acceptable voltage drop between the power source and the device terminal block. The SPS-2460-xx terminal block accommodates a #6 wire lug. A #6 wire lug typically terminates #16 - #20 wire, with #18 being the most common.



Required Disconnect

WARNING: A readily accessible, suitable National Electrical Code (NEC) or local electrical code approved disconnect device and branch-circuit protector must be part of the building's installed wiring to accommodate permanently connected equipment. Failure to observe this warning could result in an electric shock, even death.

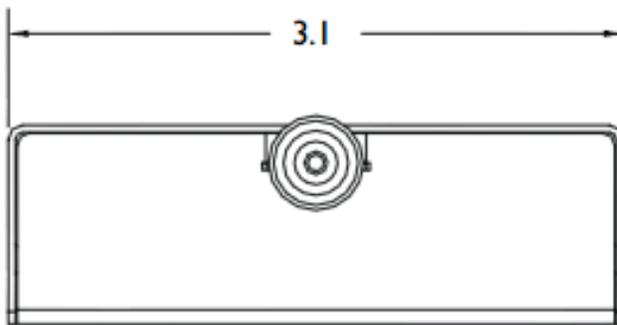
CAUTION: Ensure that the power source is NOT powered ON when connecting it to the SPS-2460-xx external power supply. Failure to observe this caution could result in damage to or failure of the SPS-2460-xx.

CAUTION: Wear a grounding device and observe electrostatic discharge precautions when installing or servicing the power supply module. Failure to observe this caution could result in damage to or failure of the power supply module.

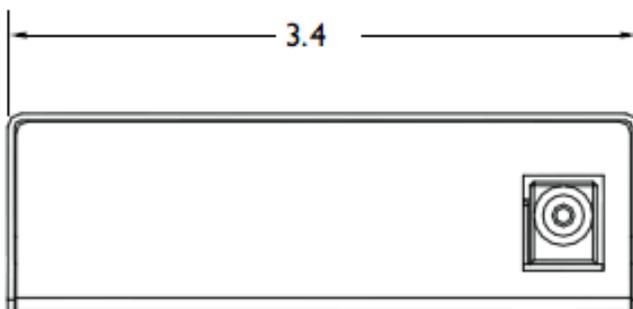
SPS-2460-SA and SPS-2460-PS Differences

The SPS-2460-SA, SPS-2460-CC, and SPS-2460-PS are designed for two different types of media converters. Each has slightly different dimensions and each has the barrel connector in a different location to ensure that each power supply is used for the proper application. Note the differences between the devices below.

The **SPS-2460-SA** (shown below) is designed to plug into any style Transition Networks stand-alone media converter.



The **SPS-2460-PS** (shown below) is designed to mate with Transition Networks stand-alone media converters 3.25" wide.

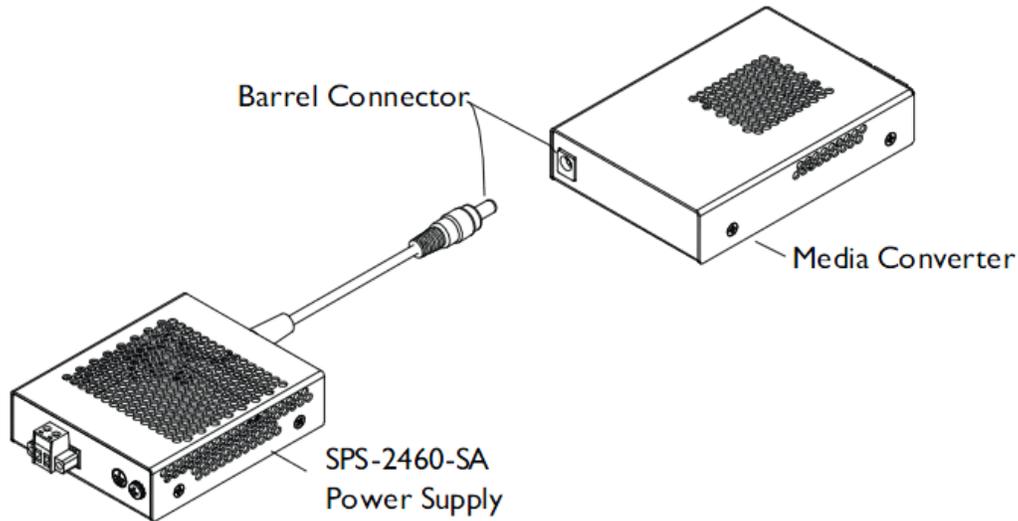


Install procedures for both models are provided in the following sections.

SPS-2460-SA (Stand Alone) Installation

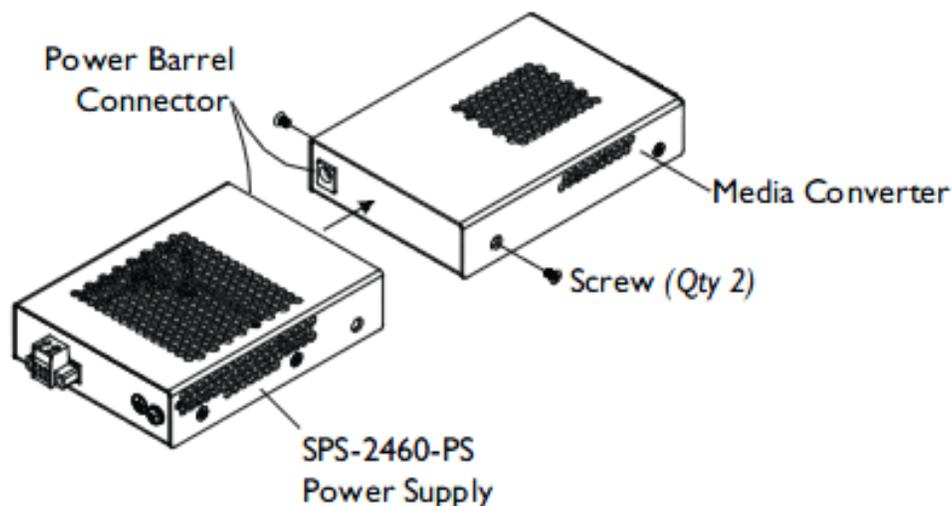
Note: All SPS-2460-xx external power supplies are shipped with four (4) rubber attached feet.

1. Place on any well-ventilated table-top or shelf with access to a power source with a range of 24-60 VDC or 24-42 VAC rms.
2. Connect the barrel connector on the SPS-2460-SA to the barrel connector of the media converter as shown below.



SPS-2460-PS (Piggy-Back) Installation

1. Remove the left-rear and right-rear screws from the media converter.
2. Connect the barrel connector on the SPS-2460-PS to the barrel connector of the media converter by sliding the SPS-2460-PS cover the rear of the media converter until the two devices connect. The screw holes on the left and right sides should align.
3. Secure the two devices together by reinstalling the screws removed in Step 1 into the screw hole on each side of the SPS-2460-PS power supply.



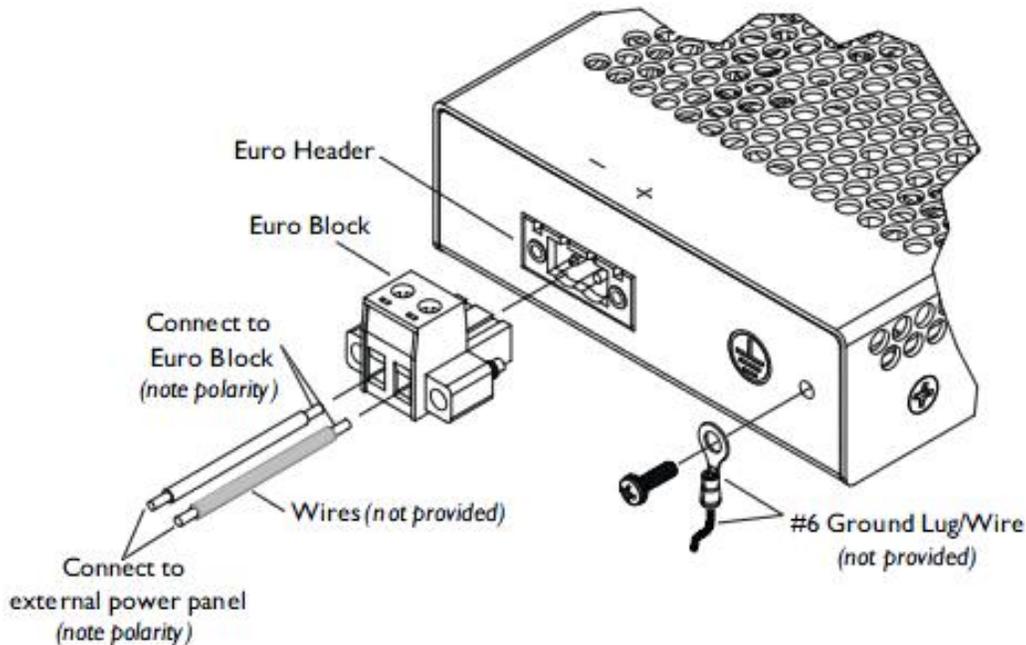
Supplying Power to the SPS-2460-xx

CAUTION: TURN OFF the main power source before making connection to the SPS-2460-xx external power supply. Failure to observe this caution could result in damage to or failure of the SPS-2460-xx power supply and any attached device.

WARNING: ONLY qualified person should connect power to the SPS-2460-xx power supply. Failure to observe this warning could result in an electrical shock or equipment damage.

To supply power to the SPS-2460-xx, see the drawing below and do the following:

1. Turn external power source OFF.
2. Connect the ground terminal of the power source to the ground terminal on the SPS-2460-xx power supply.
3. Connect the power wires to the DC (+) and (-) terminals on the main external power panel (note polarity).
4. Loosen the two screws on the keyed Euro block (Terminal block).
5. Insert the positive (+) power wire from the main power into the Euro block (note polarity on power supply) and tighten the screw to secure the wire.
6. Insert the negative (-) power wire from the main power into the Euro block (note polarity on power supply) and tighten the screw to secure the wire.
7. Orient the Euro Block as shown below and then insert it into the Euro Header on the power supply.
8. Tighten the two screws to secure the Euro block to the Euro header on the power supply.
9. Turn ON the external power source.



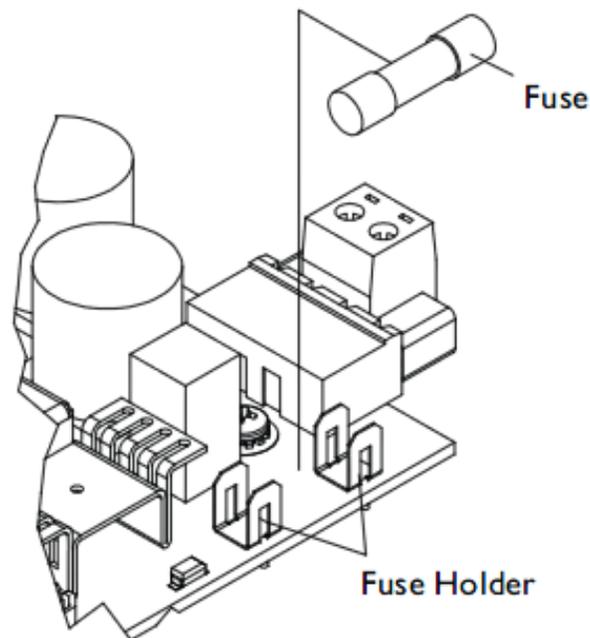
Maintenance

Replacing the Fuse

CAUTION: The external power source must be TURNED OFF when replacing the fuse to the SPS-2460-xx external power supply. Failure to observe this caution could result in damage to or failure of the SPS-2460-xx power supply and any attached device.

Note: Replace the fuse only with one of the same size and rating. To replace the fuse in the SPS-2460-xx external power supply:

1. Ensure that the external power source is turned OFF.
2. Remove and retain the four (4) screws that secure the cover to the SPS-2460-xx power supply.
3. Carefully lift the cover from the SPS-2460-xx power supply.
4. Locate the Fuse on the SPS-2460-xx (see below).



5. Carefully remove the Fuse from the Fuse Holder shown above.
6. Install a same physical size and rated replacement Fuse in the Fuse holder.
7. Carefully reinstall the cover over the SPS-2460-xx power supply.
8. Reinstall the four (4) screws from Step 2 that secure the cover to the SPS-2460-xx power supply.
9. Power UP the external power source.

Specifications

Output Voltage: 12.25 VDC Current: 1.0A

Load Regulation: ±5% at 10% load to full rated load

Noise and Ripple: ±40 mV peak-to-peak of output voltage

Output Voltage: 12.25 VDC at 1.0 A maximum

Input Voltage: 24 – 60 VDC; 24 – 42VAC RMS

Efficiency: 80 % (typical)

Isolation Voltage (Dielectric withstand) Meets IEC 950 for one minute 1500 VAC: Output/Input 1500 VAC: Input/Safety GND 1500 VAC: Output/CASE

Over Load Protection (OLP): When the average power rating exceeds 125%-150% of maximum power, output voltages reduced to a safe dissipation level; protects against short circuit of any output.

No Load Protection: No damage to power supply when operating at no load

Transient Protection: No voltage spike at power-on, power-off, or power failure

Dimensions:

SPS-2460-SA: Width: 3.75" [95 mm] Depth: 3.1" [79 mm] Height: 1" [25 mm]

SPS-2460-PS: Width: 4.5" [114 mm] Depth: 3.4" [86 mm] Height: 1" [25 mm]

Power Consumption: 3 Watts (max) @ 24 VDC input, 12.25 VDC output

Operating Temp: -20° to +65°C (-4 to +149°F)

Storage Temp: -40 to +85°C (-40 to +185°F)

Humidity: 5% to 95% (non-condensing)

Altitude: 0 – 10,000 ft.

Weight: 1 lb. [0.45 kg]

MTBF: greater than 250,000 MIL-HDBK-217F hours at 25°C (77°F)
greater than 687,500 Bellcore hours at 25°C (77°F)

Compliance: CISPR/EN55022, Class A, FCC Class A

Warranty: Lifetime

For More Information

Other related manuals are listed below.

- Product Documentation Postcard, 33504 (shipped with each media converter)
- M/GE-PSW-xx-0x User Guide (33398)
- WMBS, WMBL, WMBP, & WMBM Wall-Mount Brackets Install Guide (33393)
- Release Notes (firmware version specific)

For Transition Networks Drivers, Firmware, etc. go to the Product Support webpage at <https://www.transition.com/support/product-support/> (login required).

For Transition Networks Application Notes, Brochures, Data Sheets, Manuals, etc. go to <https://www.transition.com/support/library/> (no login required).

Compliance Information

Declaration of Conformity

<i>Declaration of Conformity</i>			
<i>Transition Networks, Inc.</i>			
<small>Manufacture's Name</small>			
<i>10900 Red Circle Drive, Minnetonka, Minnesota 55343 U.S.A.</i>			
<small>Manufacture's Address</small>			
Declares that the products:			
SPS-2460			
Conforms to the following Product Regulations:			
FCC Part 15 Class A, EN 55032:2010, EN 55024:2010			
Directive 2014/30/EU, Directive 2015/863/EU			
Low-Voltage Directive 2014/35/EU			
IEC /EN 60950-1:2006+A2:2013			
2011/65/EU EN 50581:2012			
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).			
<i>Minnetonka, Minnesota</i>	<i>Aug 4, 2020</i>		
<small>Place</small>	<small>Date</small>	<small>Signature</small>	
<i>Stephen Anderson</i>		<i>Vice President of Engineering</i>	
<small>Full Name</small>		<small>Position</small>	
			<small>28141B</small>

CE Mark

FCC Regulations

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 the user's own expense.

Canadian Regulations

This digital apparatus does not exceed the Class A limits for radio noise for digital apparatus set out on the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

European Regulations

Warning: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Achtung ! : Dieses ist ein Gerät der Funkstörgrenzwertklasse A. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen auftreten. In diesem Fall ist der Benutzer für Gegenmaßnahmen verantwortlich.



Attention ! : Ceci est un produit de Classe A. Dans un environnement domestique, ce produit risque de créer des interférences radioélectriques, il appartiendra alors à l'utilisateur de prendre les mesures spécifiques appropriées. In accordance with European Union Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003, Transition Networks will accept post usage returns of this product for proper disposal. The contact information for this activity can be found in the 'Contact Us' portion of this document.



CAUTION: RJ connectors are NOT INTENDED FOR CONNECTION TO THE PUBLIC TELEPHONE NETWORK. Failure to observe this caution could result in damage to the public telephone network.

Der Anschluss dieses Gerätes an ein öffentliches Telekommunikationsnetz in den EGMitgliedstaaten verstösst gegen die jeweiligen einzelstaatlichen Gesetze zur Anwendung der Richtlinie 91/263/EWG zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über Telekommunikationsendeinrichtungen einschliesslich der gegenseitigen Anerkennung ihrer Konformität.

Contact Us

Technical Support

Technical support is available 24-hours a day

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International: 00-1-952-941-7600

Main Office

tel: +1.952.941.7600 | toll free: 1.800.526.9267 | fax: 952.941.2322

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Minnetonka, MN 55343, U.S.A.

Record of Revisions

Rev	Date	Notes
A	6/14/10	Initial release.
B	10/14/20	Updated content, contact information, and format.

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