

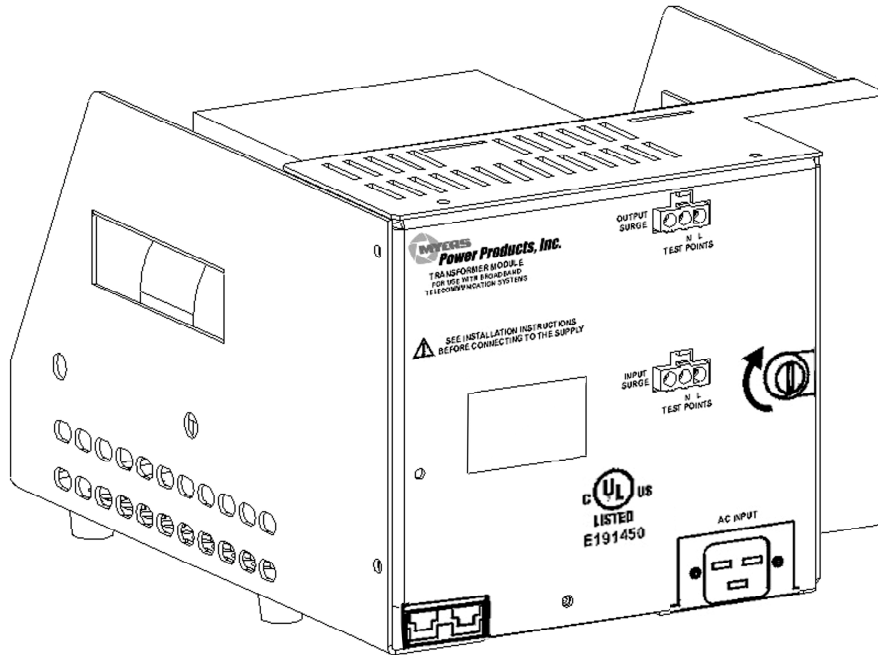


Power Products, Inc.

CTSPTM Series Transformer Modules

TSP Transformer Module 15/22 A

User Manual



Chapter 1 General Information

The Total System Power (TSP) Transformer Module (TM); CTSP-TM Series, can be used as a stand-alone, nonstandby power supply or combined with the TSP Electronics Module; CTSP-EM Series, and batteries to form an uninterruptible power supply.

Important Safety Instructions – Save These Instructions

This Safety Guide contains important instructions that should be followed during installation and maintenance of the Myers Power Products, Inc. (Myers) equipment and batteries. It is intended for Myers customers who setup, install, relocate, or maintain Myers equipment.



Electrical Warnings

Changes and modifications to this unit not expressly approved by Myers could void the warranty.

Failure to observe these warnings may result in serious injury, death or damage to the equipment.

- Do not work alone under hazardous conditions.
- Do not handle any metallic connector before the power has been disconnected.
- Servicing this equipment may require working with protective covers removed and utility power connected. Use extreme caution during these procedures.
- High current through conductive materials could cause severe burns.
- When grounding cannot be verified, disconnect the equipment from the utility power outlet before installing or connecting to other equipment. Reconnect the power cord only after all connections are made.
- Check that the power cord(s), plug(s), and sockets are in good condition.
- Replacement of fuses or other parts must be with identical types and ratings. Substitution of nonidentical parts may cause safety and fire hazards.

Overhead Warnings

Never stand below anything while it is hoisted. Always wear a hard hat.

Lifting Warnings

Transformer modules are heavy. Use proper lifting techniques and equipment to avoid injury.

Specifications*

Environmental Specifications

Operating Temperature	-40° F to 158° F (-40° C to 70° C)
Humidity	to 95% noncondensing within enclosure

Physical Specifications

Characteristic	Specification
Height	7.6" (19.3 cm)
Width	10.2" (26 cm)
Depth 3A, 6A, 15A 22 A	11.6" (29.5 cm) 12.6" (32 cm)
Weight 3A 6A 15A 22A	42 lbs (19 kg) 50 lbs (23 kg) 60 lbs (27 kg) 82 lbs (37 kg)

Electrical Specifications

Input Characteristic	Input Specification	
	120 VAC TM's	240 VAC TM's
Input Utility Inrush Current 3A, 6A, 15A 22A	<180 A peak @ 120 VAC n/a	<90 A peak @ 240 VAC <150 A peak @ 240 VAC
Input Voltage Range 3A, 6A, 15A 22A CTSPTM9156120-5 (15A, +/-30% Vin)	95 VAC – 134 VAC n/a 84 VAC – 144 VAC	190 VAC - 254 VAC 216 VAC - 254 VAC n/a

Output Characteristic	Output Specification
Output Voltage (nominal) 3, 6, 15Amp 60Hz units 22Amp 60Hz units 15Amp 50Hz units	60 / 75 / 87 VAC 87 VAC 48 / 60 VAC
Output Voltage Regulation 3A, 6A, 15A 22A	±3% @ 77°F (25°C): ±5% @ full temperature range ±4% @ 77°F (25°C) ±5% @ full temperature range
Short Circuit Current Max 15A 22A	30 A rms 50 A rms

*Note: Specifications are subject to change without notice.

Chapter 2 Installation and Maintenance

Unpacking

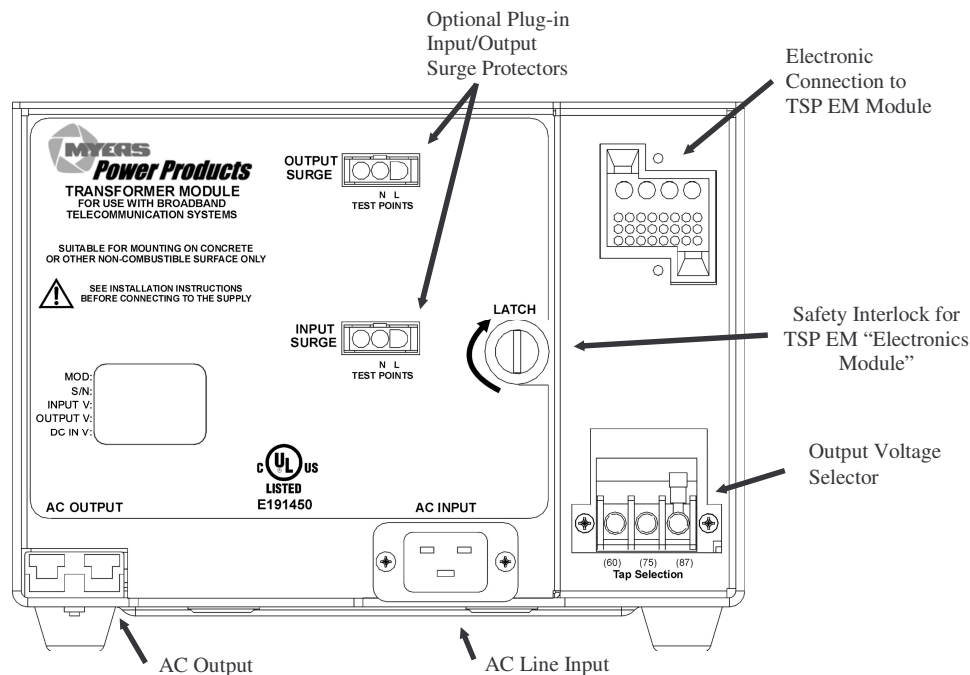
Inspect the module upon receipt. Notify the carrier if there is damage. The packaging is recyclable; save it for reuse or dispose of it properly. Check the package contents. The package contains the transformer module, a line cord and product documentation.

Models Supported

CTSPTM9036120-3	TSP TM Module, Input: 120 VAC @ 60 Hz Output: 60/75/87 VAC, 3A, Battery String: 36VDC
CTSPTM9066120-3	TSP TM Module, Input: 120 VAC @ 60 Hz Output: 60/75/87 VAC, 6A, Battery String: 36VDC
CTSPTM9156120-2	TSP TM Module, Input: 120 VAC @ 60 Hz Output: 60/75/87 VAC, 15A, Battery String: 48VDC
CTSPTM9156120-3	TSP TM Module, Input: 120 VAC @ 60 Hz Output: 60/75/87 VAC, 15A, Battery String: 36VDC
CTSPTM9156240-2	TSP TM Module, Input: 240 VAC @ 60 Hz Output: 60/75/87 VAC, 15A, Battery String: 48VDC
CTSPTM9156240-3	TSP TM Module, Input: 240 VAC @ 60 Hz Output: 60/75/87 VAC, 15A, Battery String: 36VDC
CTSPTM6156240-3	TSP TM Module, Input: 240 VAC @ 50 Hz Output: 48/60 VAC, 15A, Battery String: 36VDC
CTSPTM9226240-2	TSP TM Module, Input: 240 VAC @ 60 Hz Output: 60/75/87 VAC, 22 A Battery String: 48VDC
CTSPTM9156120-5	TSP TM Module, Input: 120 VAC @ 60 Hz Output: 60/75/87 VAC, 15 A Battery String: 36VDC, Extended AC Input Range +/-30%

Note: Model list is not exhaustive. The term "Battery String" is the battery string voltage supported by a connected TM and EM module only.

Transformer Module Overview



Installing the TSP TM



CAUTION

Caution: Only trained service personnel should perform installation, service and maintenance of the TSP Transformer Module. Failure to adhere to this caution may result in death, serious injury or equipment damage.

Prior to installing the TSP TM, an enclosure must be installed and utility AC line voltage must be routed to the enclosure, and that an appropriate AC circuit breaker has been installed in the AC line. Local, state, federal and/or National Electric Code (NEC) regulations regarding location, permits and electrical wiring must be adhered to.



Danger: Before placing the TSP TM on the enclosure shelf, ensure that the input utility circuit breaker is **OFF**.

Caution: When placing the TSP TM on the shelf ensure adequate space for proper airflow. Myers recommends that there be at least 3 inches of clearance on all sides and above the module.

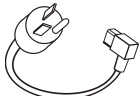
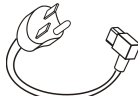
Always transport the TSP TM and TSP EM modules disconnected from each other. The connecting latch mechanism is not designed to support the weight of the modules.

Do not operate the TSP TM where the temperature and humidity are outside the specified limits. See *Specifications* in this manual.

Failure to adhere to these warnings may result in damage to equipment.

Installation Sequence

1. Verify that the line cord supplied is correct for your system configuration. Should special circumstances mandate that you supply your own cord, the power cord to the TSP must conform to the IEC 320 C-19 standard.

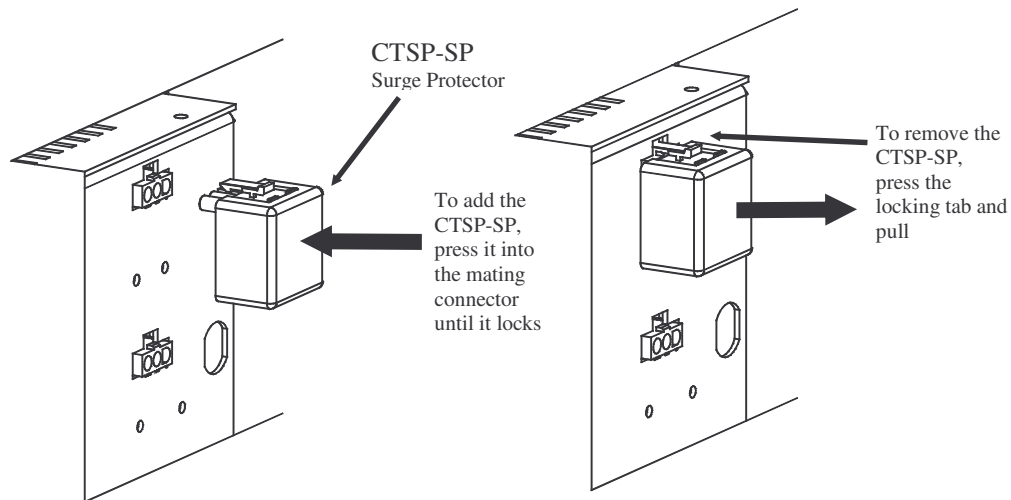
120VAC 15 A, 60 Hz Line Cord  Replacement Myers p/n: CT-960-0506	240VAC 22 A, 60 Hz Line Cord  Replacement Myers p/n: CT-960-0505
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2. When installing the TSP TM into an enclosure, ensure that the enclosure is wired to have the appropriate voltage and receptacle to accept the TSP TM utility line cord. If installing the unit into some other enclosure, it may be necessary to obtain the proper adapter plug. Please consult with Myers Power Products should this be the case.

3. The output voltage selector is located on the front panel of the TSP TM.
 - Select the desired output voltage by moving the output selection connector into the desired tap voltage:
For 60Hz units: Tap 1 (60 VAC), Tap 2 (75 VAC), Tap 3 (87 VAC)
For 50Hz units: Tap 1 (48 VAC), Tap 2 (not connected), Tap 3 (60 VAC)

Please ensure that the connection is *tight*.

4. Using the supplied line cord, connect the module to the utility line voltage at the appropriate AC line receptacle in the enclosure.
5. Add any of the optional CTSP-SP surge protectors to the “Input Surge” or “Output Surge” test points on the face of the TSP TM.



6. Apply power to the module by turning the input utility circuit breaker **ON**. Using a RMS voltmeter, verify correct output for your system configuration.
7. If output voltage is incorrect, immediately turn the input circuit breaker **OFF** and review the installation procedures to verify correct configuration.
8. Install the TSP EM, if it is being utilized. If a TSP EM is being installed, it is likely that batteries and status monitoring system elements will also be installed at this time. Refer to the TSP Electronics Module User Manual for installation instructions.
9. Close and secure the enclosure.

Chapter 3 Service, Contact and Warranty Information

Service

Myers Power Products makes every effort to ensure parts and equipment arrives in working condition. Occasionally, it may be necessary to return parts or equipment that are not in working condition.

If the unit requires service follow these steps:

- Note the product model number, the serial number, and the date purchased. If you call Myers Customer Support, a technician will ask you to describe the problem and try to solve it over the phone. If this is not possible the technician will direct you to provide the information needed so Myers can issue a Returned Material Authorization Number (RMA#).
- Shipping instructions will be included with the issuance of the RMA number.
- If the product is under warranty, repairs are free. If not, there is a repair charge.
- Procedures for servicing or returning products may vary internationally. Please contact Myers for country specific instructions.
- Pack the product in its original packaging.
- Pack the unit properly to avoid damage in transit. Never use Styrofoam beads for packaging as they may cause electro-static damage. Damage sustained in transit is not covered under warranty.
- Mark the RMA# on the outside of the package.
- Return the unit by insured, prepaid carrier to the address given to you by Customer Support.

How to Contact Myers Power Products:

Myers customer service can be reached by calling (610) 868-3500. Additional information may be obtained on the Myers Web site, www.myerspower.com.

Regulatory Approvals



Limited Warranty

Myers Power Products (Myers) warrants this product to be free from defects in materials and workmanship for a period of five years from the date of purchase. Its obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. To obtain service under warranty you must obtain a Returned Material Authorization (RMA) number from customer support. Products must be returned with transportation charges prepaid and should be accompanied by a brief description of the problem encountered and proof of date and place of purchase. This warranty does not apply to equipment that has been damaged by accident, negligence, or misapplication or has been altered or modified in any way.

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